

2023-2024

### BULLETIN

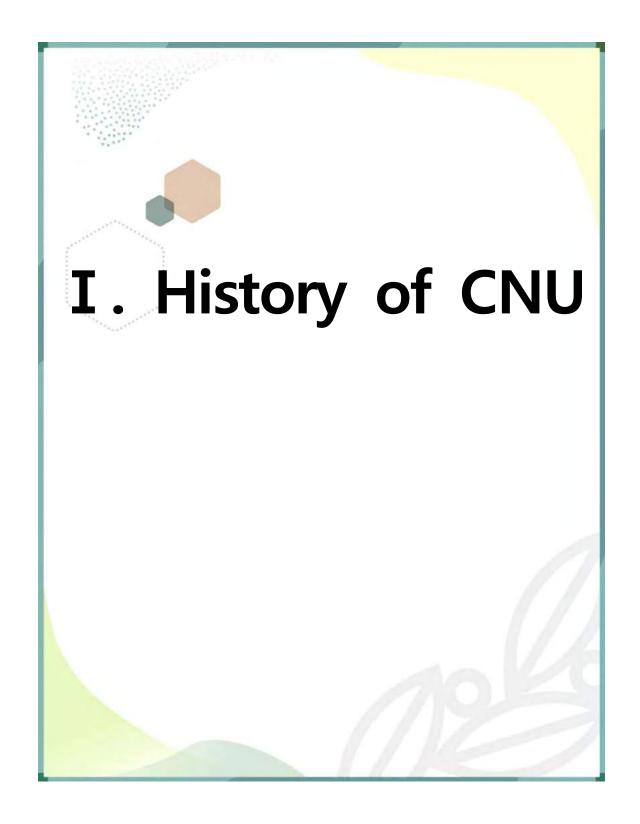




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### 1. History of CNU

### ■ The Establishment of CNU

The Honam region has long cherished its tradition of valuing justice (義) and artistry (藝). Based on this tradition, Jeonnam National University (CNU) set sail in Gwanjgu, at the center of the Honam region on June 9, 1952. The university emerged from the ashes of the Korean War with the support of local citizens who wanted to foster talented students. Even though CNU was established only about 60 years ago, it is celebrating more than 100 years of tradition because of the schools that were merged under CNU.

Before CNU came into existence, Honam was a home to several colleges and schools: Gwangju Agricultural College, for instance, which had been changed from Gwangju Agricultural School founded in 1909; Provincial Mokpo Commercial College, which evolved from Mokpo Commercial School founded in 1920; Provincial Gwangju Medical College, which developed from Gwangju Medical Professional School established in 1944; and Private Daesung College, which emerged from Daesung Boarding School founded in 1951. After the foundation of South Korea, the demand for competent and educated citizens escalated rapidly. Against this backdrop, local residents of Gwangju and Jeollanam-do yearned to establish a systematic institute for higher education. Their efforts bore fruit on September 16, 1951, with the creation of the Supporting Association for Establishing CNU.

To establish the university, the Association started by raising funds from local citizens. On October 6, 1951, it acquired the authorization to establish CNU as a national university. On January 1, 1952, CNU with five colleges was established: The College of Agriculture (formerly Gwangju Agricultural College), College of Business (formerly Mokpo Commercial College), College of Humanities (formerly Private Daesung College), College of Medicine (formerly Provincial Gwangju Medical College), and a newly opened College of Engineering. On June 1, 1952, the appointment of Dr. Choi Sang-chae as the first President, as well as eight Deans, superintendents, and a chief of the offices, gave CNU the structure and functions of a university. Finally, on June 9, 1952, the citizens of Gwangju witnessed CNU's historic opening ceremony.

When it started, CNU consisted of 2 administration offices (the Office of Academic Affairs and Student Affairs, and Office of Administrative Affairs), the five aforementioned colleges, and the Graduate School of Medicine, which had been authorized in May 1950 as the Provincial Gwangju Medical College.

### **■ The Development of CNU**

CNU quickly established itself as a reputable university. It enacted school regulations and a school press, built libraries, and founded the College of Law in 1954. However, in the 1960s, CNU became involved in political turmoil, such as the April Revolution in April 1960, which shook South Korea, and permanently changed the country's history. CNU was at the center of forming and leading public opinions, through the May 16 Coup (1961), the enforcement of theLaw for National Reconstruction (1961), and the protest against the summit meeting between South Korea and Japan (1964). Meanwhile, the Colleges of Agriculture and Business and the Department of Chemical Engineering were forced to shut down. They were revived between 1961 and 1965. Despite the chaos, CNU continued its efforts to stabilize itself. It founded the internship program at the medical college in 1960. The Language Research Center, Students' Guidance Institution, Honam Culture Institution, and other research centers opened in 1963. Furthermore, on July 6, 1965, the Professors' Committee came into existence. It actively participated in campaigns to achieve better conditions for faculty members, requesting a renovation in the system for research professors and more financial support for the local national universities from the government. The Graduate School of Business was established in 1969.

Throughout the 1970s and 1980s, CNU experienced not only rapid physical growth but also hardship due to the political upheaval. The administrative system, which consisted in 1969 of one office, one bureau, two centers, and six colleges with 28 departments, had grown to include one more office, two more centers, and two more colleges with 35 more departments. Around this time, the Experimental College System was introduced in 1972 with the aim of renovating higher education in Korea by recruiting freshmen according to their areas of study, decreasing the number of compulsory credits, and allowing the early graduation of elite students. At this time, the campus was energetic with the sound of construction as new classrooms and faculty buildings were constructed. Private residences on campus were eliminated and Yongji, the artificial pond on campus, was created to add beauty to the study environment.

In the 1980s, CNU faced a period of utmost political turbulence as the May 18 Democratization movement broke out at the CNU Main Gate. The national government's oppressive military regime brought about a widespread civil resistance. CNU students and professors rose up against the dictatorship and sacrificed themselves to restore the democracy in the country. In spite of the turmoil, which caused great casualties among students, CNU continued to push toward a competent system as an institution for higher education with autonomy in separate academic fields. The College of Humanities was divided into the College of Humanities and Social Studies and the College of Natural Sciences

in 1979. In 1987, the College of Humanities and Social Studies was divided into the College of Humanities and the College of Social Studies. The Colleges of Dental Medicine, Pharmacy, and Art were established in 1980, 1981, and 1981, respectively. The College of Veterinary Medicine was spun off from the College of Agriculture and Life Sciences in 1988, the College of Human Ecology from the College of Natural Science in 1989, and the College of Nursing from the Medical School in 2005. The Graduate School of Education opened in 1975, the Graduate School of Public Administration in 1979, and the Graduate School of Industry and Technology in 1989.

For the 21st century, CNU has gathered momentum to leap forward as a prestigious higher educational institution that fosters professional manpower required by the age of knowledge and information through systemized education and contributes to regional development. On March 1, 2006, CNU established the Graduate School of Culture and integrated with Yeosu University, which previously had a history of 90 years. Subsequently, CNU established Law School (2009), AI Convergence College (2019), Graduate School of Data Science (2022), and Graduate School of Plant Protection and Quarantine (2022).

As of 2023, CNU's administrative organization consists of five divisions, one office, six headquarters, 17 colleges, general graduate schools, six special graduate schools, five professional graduate schools, one educational basic facility, 12 affiliated facilities, 13 organizations under the President's direct control, and two corporate bodies. In particular, in 2023, to support data-driven university operations, the University Computing Center was expanded and reorganized into the Information Headquarters to maximize the efficiency of integrated information management. Also, the Offices of International Affairs and Public Relations were integrated into the Global Cooperation Division to establish a proactive strategy for nurturing global talents and handling external affairs.

### ■ "Confident and Free CNU People"

Following its slogans, "CNU Sheds Light on the World That Cherishes Truth" and "Global University for Cultivating Global Leaders," CNU aspires to foster "Confident and Free CNU People" as its ideal talent. The university's development plan established in 2022 presented 40 execution strategies in five major areas as follows:

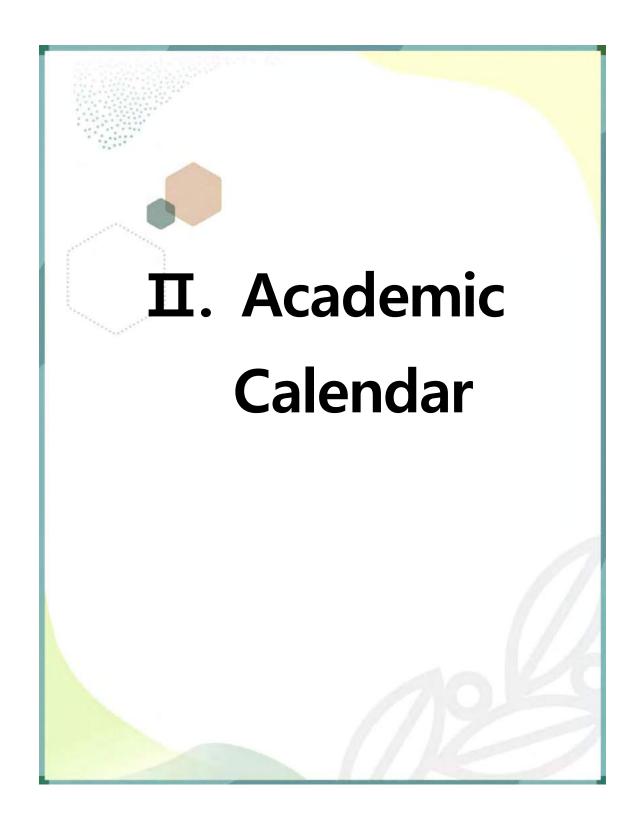
No.	Area	Slogan	Execution strategy
1	Education	Cultivating creative, emotional, collaborative, and competent individuals	<ul> <li>Strengthening competency-based liberal arts education</li> <li>Innovation in future-oriented major education</li> <li>Establishment of an educational innovation platform</li> <li>Enhancement of student-centered education support</li> <li>Strengthening competency-based</li> </ul>

No.	Area	Slogan	Execution strategy
			extracurricular education programs  - Enhancement of practical career-related skills and entrepreneurship education  - Expansion of global education programs  - Development of teaching-learning abilities
2	Research	Innovative research that creates sustainable future value	<ul> <li>Innovation in research-intensive education systems</li> <li>Enhancement of research competencies of graduate students</li> <li>Implementation of a lifelong research support system</li> <li>Expansion of support for young researchers</li> <li>Strengthening international competitiveness in research</li> <li>Promotion of sustainable research innovation systems</li> <li>Tailored administrative support for researchers</li> <li>Enhancement of management system of research-related information</li> </ul>
3	Specializati on and Industry-Ac ademia Cooperation	Leading higher education transformation and convergence through fostering innovative talent and cooperation with industries and institutions	<ul> <li>Cultivation of digital innovation talent</li> <li>Cultivation of experts customized for regional industries</li> <li>Specialized talent development to enhance national competitiveness</li> <li>Strengthening industry-academia cooperation for regional co-prosperity</li> <li>Establishment of future-oriented industry-academia cooperation platforms</li> <li>Promotion of mid- to long-term industry-academia cooperation plans</li> <li>Establishment of a successful system for CNU students</li> <li>Operation of a sustainable eco-campus</li> </ul>
4	Regional Cooperation	Leading the sustainable development of regional communities through future-oriented educational cooperation	<ul> <li>Strengthening support for regional youth education</li> <li>Strengthening lifelong learning support for local residents</li> <li>Operation of programs to activate local communities</li> <li>Establishment of global-local cooperative communities</li> <li>Establishment of cooperative communities for addressing regional issues</li> <li>Strengthening cooperative systems between universities</li> </ul>

No.	Area	Slogan	Execution strategy
			- Expanding university resource sharing tailored to local demand - Expanding contributions to local communities
5	University Operations	Establishing a flexible and open operation system through communication, innovation, and proactive administration	<ul> <li>Formation of communication-based administration and organizational culture</li> <li>Support for autonomous innovation in academic fields</li> <li>Strengthening welfare programs for university staff</li> <li>Establishment of an administrative system based on data analysis</li> <li>Balanced development of campuses considering the needs of regional communities</li> <li>Reorganizing of academic structure to achieve optimal size</li> <li>Implementation of the CNU Campus Master Plan</li> <li>Innovation in university financial management and enhancement of brand value</li> </ul>

By conducting futuristic convergence education that is ahead of the times, CNU nurtures future prospects equipped with imagination from humanities studies and creativity from scientific and engineering studies. It also supports outstanding researchers and strives to create a campus for research groups globally recognized for their accomplishment. In order to create a prestigious university loved by local people, CNU will actively contribute to the discourse of the local community, revitalize the economy, and focus on the spread of lifelong education. Also, CNU seeks a lively student culture and creates a culture of coexistence among faculty and staff to pursue happy companionship for university families. While respecting diversity and autonomy, it always maintains the foundation and direction of innovation, dreaming of a future of CNU as a national flagship university loved by local communities and a globally prestigious university.

CNU, which celebrates its 71st anniversary in 2023, is a global university that exchanges with 602 universities and institutions in 65 countries around the world. About 1,600 international students study at CNU every year, boosting its the excellence as a global campus. In addition, it carries out large-scale national projects such as local government-university cooperation-based regional innovation (RIS) projects, Semiconductor Joint Research Institute Projects, and Semiconductor Specialized University Projects. CNU not only revitalizes local communities, but also develops cutting-edge technologies necessary for the future such as semiconductors, software, new digital technologies, and intellectual property, focusing on nurturing talent in the field.



### 2. Academic Calendar

Events	Date
Start of Spring Semester	2023. 03. 02.
First quarter of Spring Semester ends	2023. 03. 28.
Submission of printed drafts of Master's theses for degrees to be conferred in August 2023	2023. 03. 20. ~ 2023. 03. 24.
Mid-term Examinations for Spring Semester	2023. 04. 17. ~ 2023. 04. 21.
Second quarter of Spring Semester ends	2023. 04. 24.
Third quarter of Spring Semester ends	2023. 05. 23.
Make-up Class Day for Substitute Holiday (May 5th)	2023. 06. 14.
Make-up Class Day for Substitute Holiday (May 19th)	2023. 06. 15.
Course evaluation	2023. 06. 16. ~ 2023. 07. 03.
Final Examination for Spring Semester	2023. 06. 16. ~ 2023. 06. 22.
End of Spring Semester Classes	2023. 06. 22.
Submission of Evaluations of Master's theses and doctoral dissertations for expected graduation in August 2023	2023. 06. 19. ~ 2023. 06. 23.
Summer School	2023. 06. 26. ~ 2023. 07. 20.
Last day for the Announcement of Grades for Spring Semester	2023. 06. 27.
Last day for the Revision of Grades for Spring Semester	2023. 06. 30.
Last day for the Submission of Grades for Spring Semester	2023. 07. 02.
Submission of Syllabi for Fall 2023	2023 .07. 10. ~ 2023. 07. 24.
Graduate School Comprehensive Examination	2023. 07. 26.
Graduate School Foreign Language Examination	2023. 07. 27.
Last day for the Submission of Grades for Summer School	2023. 07. 27.
Announcement of the submission procedure for theses for Spring 2023	2023. 08. 01.
Course registration/Class Preferences	2023. 08. 01. ~ 2023. 08. 02.
Course enrollment (Seniors: Aug. 4 / Juniors: Aug. 7 /	

Sophomores: Aug. 8 / Freshmen: Aug. 9, Common	
Registration: Aug. 10-11	
Allocation of Tutors/Thesis Supervisors for Graduate students in Fall 2023	2023. 08. 16. ~ 2023. 09. 01
Graduation ceremony	2023. 08. 25.
Enrollment period for the Fall Semester	2023. 08. 22. ~ 2023. 08. 25
Fall Semester begins	2023. 09. 01.
Course Add/Drop for Fall Semester	2023. 09. 01. ~ 2023. 09. 07
First quarter of Fall Semester ends	2023. 09. 27.
Submission of printed drafts of doctoral dissertations for degrees to be conferred in February 2024	2023. 09. 25. ~ 2023. 10. 02
Submission of printed drafts of Master's theses for degrees to be conferred in February 2024	2023. 10. 02. ~ 2023. 10. 06
Submission of Master's/Doctoral Theses plans for expected graduation n Fall 2024	2023. 10. 10. ~ 2023. 10. 13
Mid-term examination period	2023. 10. 23. ~ 2023. 10. 27
Second quarter of Fall Semester ends	2023. 10. 31.
Third quarter of Fall Semester ends	2023. 11. 27.
Make-up Class Day for Chuseok (Sep. 28th)	2023. 12. 12.
Make-up Class Day for Hangul Nal (Oct. 9th)	2023. 12. 13.
Make-up Class Day for Memorial Day (Oct. 4th)	2023. 12. 14.
Make-up Class Day for Temporary Holiday (Oct. 2th)	2023. 12. 15.
Course evaluation	2023. 12. 18. ~ 2024. 01. 03
Final exam period	2023. 12. 18. ~ 2023. 12. 22
Submission of Evaluations of Master's theses and doctoral dissertations for expected graduation in Fall 2024	2023. 12. 18. ~ 2023. 12. 22
End of Fall Semester Classes	2023. 12. 22.
Winter School	2023. 12. 26. ~ 2024. 01. 22
Last day for the Announcement of Grades for Fall Semester	2023. 12. 27.
Last day for the Revision of Grades for Fall Semester	2024. 01. 02.
Last day for the Submission of Grades for Fall Semester	2024. 01. 03.

Submission of Syllabi for Spring 2024	2024. 01. 08. ~ 2024. 01. 22.
Graduate School Comprehensive Examination	2024. 01. 25.
Graduate School Foreign Language Examination	2024. 01. 26.
Last day for the Announcement of Grades for Winter School	2024. 01. 29.
Course registration/Class Preferences	2024. 02. 05. ~ 2024. 02. 06.
Course enrollment (Seniors: Feb. 13 / Juniors: Feb. 14 / Sophomores: Feb. 15 / Freshmen: Feb. 16, Common enrollment: Feb. 19-20	
Announcement of thesis submission procedure for Fall 2024	2024. 02. 06.
Allocation of Tutors/Thesis Supervisors for Graduate students in Spring 2024	2024. 02. 13. ~ 2024. 03. 04.
Enrollment period for Spring Semester	2024. 02. 20. ~ 2024. 02. 23.
Graduation ceremony	2024. 02. 26.
Entrance ceremony	2024. 03. 04.

# **Ⅲ.** Statistics

### 3. Statistics

### **School Classification**

(As of April 1, 2023)

	Classification College/Graduate School	<b>Enrolled Students</b>	Attending Students	Degrees Awarded
	College of convergence	581	390	50
	College of Nursing	393	338	1,321
	College of Business Administration	2,333	1,642	19,847
	College of Engineering	4,997	3,680	34,695
	College of Engineering Sciences	1,845	1,203	3,770
	College of Agriculture and Life Sciences	2,376	1,859	20,607
	College of Culture and Social Sciences	1,160	764	3,605
	College of Education	1,712	1,411	18,215
	College of Social Sciences	1,497	1,095	9,353
Callean	College of Human Ecology	781	659	5,185
College	College of Fisheries and Ocean Sciences	1,155	777	3,279
	College of Veterinary Medicine	327	305	1,656
	College of Pharmacy	371	362	2,337
	College of Arts	911	718	6,756
	College of Medicine	744	729	9,525
	College of Humanities	2,025	1,532	18,192
	College of Natural Sciences	1,815	1,335	15,723
	College of Dentistry	-	-	1,775
	College of divisions governed	358	287	1084
	College of Law	-	-	7,782
	Total (Colleges)	25,381	19,086	184,757

		assification Graduate School	<b>Enrolled Students</b>	Attending Students	Degrees Awarded
	Graduate	Master's Degrees	2,006	1,680	23,038
	Programs	Doctoral Degrees	1,490	1,230	8,789
-	Graduate School of Business		125	104	696
	Graduate School of Culture		66	55	167
-	Law School	1	408	394	1,348
	School of M	Medicine			373
	School of I	Dental Medicine	402	396	997
	School of I	Data science	53	50	-
		Graduate School of Business			1,273
Special	te	Graduate School of Education	441	397	5,906
Graduate Programs		Graduate School of Agricultural Development			73
		Graduate School of Industry and Technology	192	172	1,660
		Graduate School of industrial Cooperation (Yeosu Campus)	143	140	327
		Graduate School of Fisheries and Ocean Sciences	14	14	33
		Graduate School of Public Administration	4	4	1,659
		Graduate School of Public Policy	190	157	374
		Graduate School of Plant Protection and Quarantine	18	17	-
Institute of	of Liberal Edu	ucation			
Innovation	n Center for l	Engineering Education			
Institute of	of Honam Stu	dies			
	Total (G	Graduate School)	5,552	4,810	46,713

Total (All)	30,933	23,896	231,470
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<sup>\*</sup> Excluding the following members: the President of university(1), Institute of Liberal Education (4), Institute of Honam Studies (1), Innovation Center for Engineering Education (1).

### **Degrees Granted**

(As of April 1, 2023)

Bachelor's	Master's	Doctorate	Honorary Doctorate	Total
192,997	37,988	8,725	77	239,787

### Faculty and Staff Members

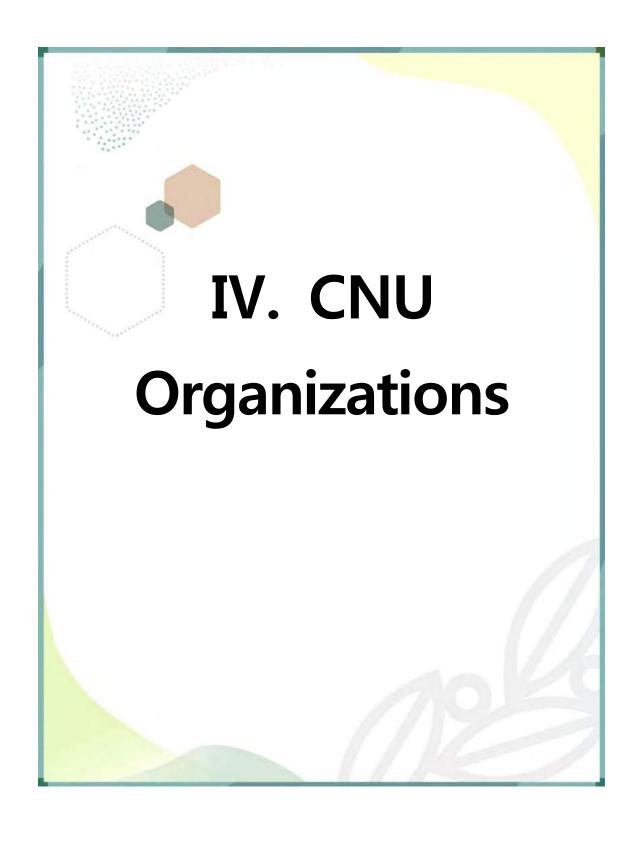
(As of April 1, 2023)

	Positions	Number of Staff Members	ı
	President	1	
	Professors	823	
	Associate Professors	199	
Faculty	Assistant Professors	167	
	Total	1,189	
	Assistants	246	
	Staff	807	
	Total	3,432	

### Current Status of Plots and Buildings on Respective Campuses

(As of April 1, 2023)

				Build		
	Cla	ssification	Plot Size	Number of Buildings	Floor Space	Remarks
		Yongbong Campus	1,003,984	152	607,787	
	Gwangju	Hakdong Campus	57,352	8	30,060	Excluding CNU Hospital
		Sub Total	1,061,336	160	637,847	
		Dundeok Campus	398,625	28	130,072	
Campus	Yeosu	Geukdong Campus and Others Facilities	61,321	8	20,862	
		IndustryUniversity Convergence Campus	4,078	2	8,376	
		Sub Total	464,024	38	159,310	
		Total	1,525,360	198	726,155	
	Gwangju	Jangseong Experimental Farm land	8,543,975	5	2,918	
		Naju Bonghwang District	295,259	12	4,194	
		Bogildo Experimental Farm land	17,468	2	446	
		Ora District, Jeju Province	16,529		-	
		Hwasun Hospital District	124,252	22	39,884	
other Lands		Jindo Natural Education Site	-	1	2,026	CNU Foundation Land (93,376 m²)
		Cheomdan District	-	2	5,973	
		Sub Total	8,997,483	44	55,441	
		Dolsan Geumbong District	15,720	2	4,913	
	Yeosu	Dolsan Training Center District	457	1	242	
		Sado Training Center	5,853	4	202	
		Sub Total	22,030	7	5,357	
		Total	9,019,513	51	60,798	
		Total	10,544,873	249	786,953	



## President Office of Academic Affairs Office of Student Affairs Office of Student Affairs Employment Support Office Research Administration Office Research Support Division Office of Planning and Coordination Office of Planning and Coordination Administration Office Future Strategic and Policy Office International Affairs Office of Academic Affairs Academic Affairs Student Affairs Employment Support Office Research Support Division Industry-University Liaison Support Office Planning and Coordination Future Strategic and Policy Office International Affairs Public Relations Office General Affairs Accounting and Finance Finance Finance Finance

	om c p l inc:	Service				
	Office for Research Affairs	Research Support				
		Division				
		Industry-University				
		Liaison Support				
		Office				
		Planning and				
	Office of Planning and	Coordination				
	Coordination	Future Strategic and				
		Policy Office				
		International Affairs				
	Global Cooperation Division	Public Relations				
		Office				
		General Affairs				
		Accounting and				
n	Office of Administrative Affairs	Finance				
		Facilities				
		Management				
		Admissions				
	Office of Admissions	Educational				
		Cooperation Office				
	Graduate School Innovation	Prospects Cultivatio				
	Headquarters	Office				
	Yeosu Campus Headquarters	Planning Division				
	Administrative Head Office	Administrative				
	Transmistrative freue Since	Support				
		Information				
		Technology Plannin				
	Information Technology	Office				
	Division	Information				
		Technology				
		Administration				
		Office				
		Center for Educatio				
		Innovation				
		Center for General Education				
	Office of Education Innovation	Center for Teaching				
		and Learning				
		Center for Distance				
		Education				
		Education				
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٦	Faculty Council					

	Consultation Board	Faculty Council Academic Affairs General Council			
		General Graduate Schools			
		Business Administration			
		Culture			
		Law School			
		Dental Medicine			
	Graduate	Graduate School of Data Science			
	Schools	Education			
		Industry and Technology			
		Industrial Cooperation			
		Fisheries and Ocean Sciences			
		Public Policy			
		Graduate School of Plant Protection and Quarantine			
		Nursing			
	Colleges	Business Administration			
		Engineering			
		Engineering Sciences			
		Agriculture and Life Sciences			
		Culture and Social Sciences			
		Education			

1	Basic	
4	Educational	Library
ı	Facility	
-		Center for Research Facilities
1		Veterinary Teaching Hospital
4		The CNU Museum
ı		Health Service Center
ı		Continuing Education Center
1		Institute for Agricultural Practice
ı		Education
ı		Language Education Center
ı		Student Residence Halls
ı		Press and Broadcasting Center
1	. 0011 . 1	Sports Center
ı	Affiliated	Laboratory Safety Management
1	Facilities	Center
ı		Global Education Center
ı		Legal Clinic
ı		CNU Teacher Training Center
ı		
ı		Ministry of Education
ı		Ship Training Operation Center
ı		Institute of Arts and Culture
ı		Education
ı		CNU Middle School
L		CNU High School
Į.		
1		Leaders in Industry-university
1		Cooperation 3.0 Initiative
I	Special .	Institutional Review Board
I	Special Committees	Human Rights Center
ı		Committee for the Future of CNU
ı		ROTC
ı		University Jobs Plus Center

Social Sciences
Human Ecology
Fisheries and Ocean Science
Veterinary Medicine
Pharmacy
Arts
Medicine
Humanities
National Sciences
College of AI Convergence
Faculty of Interdisciplinary Studies
Division of Creative Convergence

Research Institutes (74)

	Regional Leading University Promotion Group
	Gwangju Jeonnam Regional Innovatin Platform
	University Distance Education Cente
	Software Education Center
	Artificial Intelligence Innovation
	Fusion University Project Group
	Occupational Safety and Health
	Center
	Gwangju International Developmen Cooperation Center
	•
Legal	CNU Foundation
Bodies	University-Industry Liaison



### 5. Basic Educational Facility & University Facilities

### Library

The Chonnam National University Library (CNUL) was established in 1953 with the aim of building comprehensive collections in all research areas. Having established the digital library system in 1991, the Library provides support to university members and local residents.

Today, the CNUL comprises the main library, the Jeongbo-Maru library, the annex library, the Yeosu campus library, and three branch libraries(Legal, Dental, medical). The entire combined floor space of the library facilities totals an area of 41,242 m². It currently holds more than 6,100 seats, 2,000,000 books, 800 journals and periodicals and 65 electronic resources(Web DB etc.). CNUL also provides access to other organizations' resources for its users.

As a world-class university, CNUL is now making strides towards becoming a global research-oriented university library.

### ■ Services

- Book Loan / Return / Renewal / Reservation
- Inquiry Ill-DDS: As a service to users, CNUL will provide upon request materials not currently in possession, from domestic or overseas other university libraries or institutions.
- Book requests
  - \* Please refer to the library website for further details.

### **■** Opening Hours

- Jeongbo-Maru library Weekdays: 09:00~20:00 Saturdays: 09:00~13:00
- Main library/Yeosu campus library/branch libraries: 09:00~18:00 on weekdays

### **■** Websites

- http://lib.jnu.ac.kr/ (Gwangju campus library)
- http://yosulib.jnu.ac.kr/ (Yeosu campus library)

### **■** Contact Information

- (062) 530-3571~2/3551~2 (Gwangju campus library)
- (061) 659-6601 (Yeosu campus library)

### **Center for Research Facilities**

The education and research activities for science and technology of the university require well-managed high performance facilities and equipment. To satisfy the needs of the university members, two organizations, the Educational Equipment Service Center (established in 1993) and Public Experiment Center (established in 1997), were merged to form the Chonnam National

University Center for Research Facilities (CCRF) in 2001. Currently, the CCRF is located both at Gwangju and Yeosu campuses to provide specialized services to researchers of each campus. More than 80 kinds of the expensive and sophisticated equipment in the CCRF is operated and maintained by highly-trained staff, and the output of the analyses is supplied to the researchers. The CCRF also provides maintenance services for the educational equipment in individual laboratories.

### **■ Contact Information**

- Website: http://ccrf.jnu.ac.kr/ (Gwangju campus, Yeosu campus)

- Phone: 82-62-530-1371~2 (Gwangju campus), 82-61-659-6680 (Yeosu campus)

### **Animal Hospital**

The Animal Hospital was established in 1957 and provides medical services for animals in clinical areas such as internal medicine, surgery, obstetrics, radiology, and clinical examination. The Hospital has also contributed to the research and training of veterinary students and faculty members.

### **■** Contact Information

- Phone: +82-62-530-2882, 2883 Fax: +82-62-530-2881

- Opening Hours Weekdays: 09:30~17:30

- E-mail: cnu06806@jnu.ac.kr

### The University Museum

The University Museum was opened in the Geumho Building (university library) in April 1957 with collections of calligraphy, paintings, and pottery donated by Dr. Choi Sang-chae, the first president of the university. The museum moved to the enlarged space of Yongbong Cultural Center in June 2002 and has been developed as a key museum the Gwangju region.

The University Museum has a collection of more than 7,000 relics and over 20,000 excavated cultural assets, the main antiquities of which are exhibited in the seven permanent exhibition halls (Prehistory, Mahan Dynasty, Ceramics, Buddhist Art, Paintings, Folklore, and Dinosaurs). The University Museum operates a Special Exhibition Hall and Learning Experience Center as well. It also hosts a series of lectures on culture and art for students and the general public.

In addition, on June 27th, 2012, the Museum of University History was opened to mark the university's 60th anniversary. More than 450 items from the historical relics of university were selected from a collection of 5,000 to be displayed. The Special Collection Hall, Democratic Movement Hall, and Multimedia rooms are also open to visitors.

As an attached and affiliated organization, the Dinosaur Research Center was established in 2001.

### **■** Opening Hours Websites

- The University Museum: Weekdays, 1st and 3rd Saturdays / 09:00~17:00

- The Museum of University History: Weekdays / 09:00~17:00

### **■** Contact Information

The University Museum: (062)530–3583 ~ 5, 3581
 The Museum of University History: (062)530-3594

- Website: http://museum.jnu.ac.kr

### **Health Service Center**

The Health Center has actively provided health & medical services to faculty members, staff, and students since its establishment in 1957. The services include yearly physical check-ups for students, as well as non-credit courses on preventive medicine, health management, and campus environment management. It also offers mandatory insurance to students.

### **■** Contact Information

- Phone:  $062-530-3602 \sim 6$ 

### **Lifelong Education Center**

The center was established in 1997. The main aim of the center is to contribute to the improvement of the quality of life and to the national development by providing open education to residents of the regional and local community.

### ■ Educational goals

- Providing specialized education that meets the demands of the era characterized by information and communication technology and specialization
- Nurturing civilized citizens who can inherit and further develop the reputation of this region as the home of arts
- Offering human-oriented and community-centered education that contributes to bringing together all human beings with the spirit of love for humankind
- Providing open education that guarantees equal educational opportunities for everyone regardless of age, gender, race, educational background, social status, and culture
- Providing learner-centered education that helps materialize the lifelong learning society

### ■ Major Programs

- Gwangju Campus
- General Courses / Special Courses / Programs for Local governments / Courses for credit bank system

- Yeosu Campus

· General Courses

**■** Future Plans

- Offering programs in partnership with local governments and expansion of lifelong education networks

- Pursuit of relevance and excellence in the partnership programs and enhancement of participation

by local residents

- Enhancement of student satisfaction through quality control improvement

- Development of new specialized programs for the future

Provision of community-based lifelong learning opportunities and social participation activities

**■** Contact Information

- Tel: (062) 530-3873~6 (Gwangju Campus) / (061) 659-6551~3 (Yeosu Campus)

- Website: http://sle.jnu.ac.kr(Gwangju Campus) / http://yosu.jnu.ac.kr(Yeosu Campus)

Institute for Agricultural Practice Education

■ Plant Resources Section

The agricultural farm encompasses 45,199 m² of rice and dry fields, four greenhouses measuring 1,538 m² respectively on the Yongbong campus, as well as a farm measuring 187,506 m² in Naju. Together with its agricultural machinery, the farm provides experimental opportunities for both students and faculty members.

**■** Forest Resources Section

The Experimental Forest station consists of the Arboretum on the Yongbong campus  $(1,704\,\text{m}^2)$ , the Jangseong  $(9,175,461\,\text{m}^2)$ , and Bogildo  $(11,047,384\,\text{m}^2)$  Forest Experimental stations, each providing students and faculty with natural resources for experimentation and their related

research.

■ Animal Resources Section

The Animal Farm located on the Yongbong campus (7,307 m²) and Naju (81,854 m²) have contributed not only to research, experiments, and student training but also to the development of the local livestock industry.

**■** Contact Information

- Website: http://agrobio.jnu.ac.kr/user/indexMain.action?siteId=agrobio)

- Phone: 82-62-530-2015~6

### **Language Education Center**

The Language Education Center (the LEC) of Chonnam National University is one of the leading institutions in the field of language education and research in Korea. For over fifty years, the LEC has worked towards developing the foreign language abilities of university students, as well as the general public, by providing a broad range of language courses and conducting comprehensive research in the field of second language acquisition.

The LEC provides practical English and Korean language courses and programs, offers English and Korean language teacher training programs, and administers a variety of language proficiency examinations for a number of major languages.

### **■** Contact Information

- Phone: +82-62-530-3631, 3633 / Fax: +82-62-530-3629

E-mail: language@jnu.ac.krURL: http://lec.jnu.ac.kr

### **Student Residence Halls**

### ■ Gwangju Campus

Residence halls on the Gwangju campus have been established and are operated to accommodate approximately 4,000 people.

The halls are divided by gender, with each unit equipped with a shower room, bed, desk, chair, bookshelves, wardrobe, shoe rack, shelf, and refrigerator, alongside a central heating and cooling system. International students can apply for residence halls two months before the move-in day of each semester, benefiting from the opportunity to be selected as residents.

### • Contact Information

Phone: +82-62-530-3733, 3734E-mail: dormitory@jnu.ac.kr

- Website(ENG): https://dormitory.jnu.ac.kr/Eng/Main.aspx

### ■ Yeosu Campus

Three student residence halls —Pureun, Yeolin, and Mirae hall— at CNU Yeosu campus can accommodate up to 966 individuals in single and double occupancy cells (534 males and 432 females). Housing is assigned at the start of each semester, including summer and winter session. Housing is assigned at the start of each semester, including summer and winter school sessions. Inexpensive meals are provided for residence hall students. The dormitory rooms are equipped with desks, chairs, bookshelves, beds, wardrobes, and shower rooms. The halls feature communal facilities such as laundry rooms with washing and drying machines, reading rooms, convenience stores, lounges with cable TVs, vending

machines, hot & cold water purifiers, PCs and printing rooms, refrigerators, heating systems, meeting rooms, kitchens, halal food kitchens, and fitness rooms/gyms. International students and freshmen will be given priority for housing over other students in the CNU Yeosu campus dormitories.

### **O Contact Information**

Phone: +82-61-659-6813, 6814Website: https://house.jnu.ac.kr/

### ■ Hwasun Campus

The student residence hall located at Hwa-sun is specifically for medical students at CNU. The residence hall can accommodate up to 350 people in either single or double rooms. Housing assignments are made at the beginning of the medical school's academic semester for a period of one year, including summer and winter vacations.

Housing units in the dormitory are equipped with desks, chairs, bookshelves, beds, wardrobes, shower rooms, and refrigerators. The hall also provide amenities such as laundry rooms, study rooms, communal kitchens, lounges (with cable TVs and hot-cold water purifiers), stores, and gyms.

### **O Contact Information**

Phone: +82-61-379-6601, 6602Website: https://hsdorm.jnu.ac.kr/

### Press and Broadcasting Center

Established in 1995, the Press and Broadcasting Center (PBC) has continued to work towards promoting communication and generate public opinion on campus issues through the consolidation of three existing forms of campus media: The Chondae Shinmun, Chonnam Tribune, and Chonnam National University Broadcasting. The PBC also operates its website under the name "CNU Media" (cnumedia.jnu.ac.kr) to better communicate and respond to its audiences.

The Chondae Shinmun, a Korean newspaper, has been in circulation since 1954 and has held a literary contest every year since 1970. The Chonnam Tribune, an English magazine, has been published since 1968 and has hosted an annual English essay contest to enhance students' English proficiency. Chonnam National University Broadcasting Station (CUB) has produced a variety of programs such as campus news and music since 1967 and has held the CUB Campus Song Festival annually since 1972. The Yeosu Campus PBC was founded as a result of the integration of CNU and Yeosu National University on March 1, 2006.

As of 2023, the Center contributes to the University and local communities and plays an essential role in providing accurate, reliable news and useful information, initiating common agendas, and promoting open dialogue within the communities.

### **■** Contact Information

- Phone: +82-62-530-0521, 0523, 0525, 0526 (Gwangju) / +82-61-659-6655 (Yeosu)

- Fax: +82-62-530-0522

- E-mail: cnumedia1995@jnu.ac.kr

- URL: cnumedia.jnu.ac.kr

### **Sports Center**

Chonnam University Sports Center is located in Yong bong-dong, Buk-Ku in a densely populated residential area and commercial buildings. This center aims at meeting the needs of local citizens by offering regular exercise programs to improve their health and fitness. This center will provide high-end service to customers and is expected to contribute to elevating the image of Chonnam University.

### ■ Goals

- to build a space which can contribute to expand the population who participate in daily exercise

- to provide systematic and various programs

- to satisfy customers with quality service and facilities

- to stabilize independent management through normalizing the center organization

### ■ Courses

Fitness, Badminton, Band Stretching, Ballet Stretching, Yoga, Jazz Dance, Pilates, Tennis, Spinning, Cycle, Physical, Strength Measurement, Circle Training, Zumba Dance, Infant Ballet.

### **■** Contact Information

- TEL: (062) 530-2581-4 - FAX: (062) 530-2585

- URL: www.sports.jnu.ac.kr

### Laboratory Safety Management Center

The Laboratory Safety Management Center at Chonnam National University works to prevent accidents and ensure the safety of laboratories on campus according to the Act on Establishment of Safe Laboratory Environments.

The main business responsibilities are as follows:

1. Establish plans for creating a safe laboratory environment

2. Offer safety management training and health screening for researchers

3. Provide accident prevention and handling measures in case of accidents

4. Ensure laboratory safety checks and precise safety inspection

5. Manage wastewater and related facilities as well as pollution control facilities

6. Safety management service such as monitoring radiation levels, health & safety education, and health check-ups.

### **■** Contact Information

- Tel: 82-62-530-3885~7, 3908, 3768 - Location: Building #D15, Yongbong

### Global Education Center

The Global Education Center (GEC) is located on the Yeosu campus of Chonnam National University (CNU). The center aims to educate university students as well as the general public while supporting international students from various countries. The center has three departments: Language Education, International Affairs, and Liberal Education. The Language Education department provides English, Japanese, and Chinese language courses for CNU students to improve their foreign language proficiency.

From 2018, it also started the Korean language intensive program as a credit course for international students. The department of International Affairs is in charge of international students' successful study abroad and also provides settlement support. The Liberal Education department offers various curricula to cultivate talent with imagination from humanities while harnessing creativity from science and engineering.

To help students learn better the GEC is equipped with modern classrooms, multimedia classrooms, and a Global Zone for international students. We offer many kinds of convenient facilities for students to enjoy their daily lives at the Yeosu campus.

### **■** Contact Information

- Language Education Department: +82-61-659-7021, 7022 - International Affairs Department: +82-61-659-7024, 7025

- Liberal Education Department: +82-61-659-7026

- Fax: +82-61-659-7029 - E-mail: language@jnu.ac.kr

- URL: http://gec.jnu.ac.kr

### **CNU Teacher Training Center**

This training center aims to contribute to the development of education in South Korea by providing qualification training, job training, general training, and special training to enhance the professional knowledge and educational skills required for teachers in their professional roles.

### **■** Contact Information

- Phone: 062-530-2307

- Website: http://younsu.jnu.ac.kr/

### **Teaching Profession**

The Teaching Profession Department is responsible for the integrated operation and support of teacher training programs within the university's College of Education, Graduate School of Education, and general education programs. It was established under the Office of Academic Affairs in June 2013 and was transferred to the College of Education on July 1, 2021.

### **■** Contact Information

- Phone: 062-530-5922

- Website: https://www.jnu.ac.kr/MainUniLife/Licence/Academic\_Pro

### CNU Maritime and Oceanic University Ship Practice Center

### ■ Purpose

This center provides hands-on training to students majoring in marine and oceanic studies, engineering, fisheries, and maritime policing, using large stern trawlers and training vessels for marine and fisheries probes equipped with navigation, machinery, and equipment for fisheries and oceanic survey. In addition, by establishing a quality marine research and management system as a designated educational institution for marine personnel training, as well as conducting academic research in the marine and fisheries fields such as fisheries resources, marine environment, and marine safety, the development of new fishing technologies and systems and the basics of marine safety, etc. will be promoted. The center also provides basic and detailed data in the field of marine and oceanic studies, and contributes to the development of related industries in the local community.

### ■ Faculty

Category	Director	Professor	Fisheries and Ocean Sciences	Broadcasting and Communications	Cooking	Total	Note
Ship Training Center	1	1	3			5	
Saedongbaek -ho			20	1	4	25	Training Ship
Cheong-gyeong -ho			12		1	13	Vessel for Marine and Fisheries Probes
Total	1	1	35	1	5	43	

### ■ Specification of Training Ships and Major Equipment

Name of Ship	Ton T	n Ton	Cnood			(m)	Main Engine Horsepower	Capacity (persons)		Date of
			Speed (kt)	Overall Length (L)	Full Width (B)	Pivot Point (D)		Faculty	Student	Launching
Saedongbaek -ho	2,996	972	14	96.45	15	7.60	HHI HiMSEN 7H32 3,500KW HHI HiMSEN 6H17/28E × 3	28	82	2019. 3.
Cheong-gyeong -ho	485	_	13	46.10	9.20	5.90	HHI HiMSEN 5H22CDFP2,948HP SANIA DI13 075M/LSAM 376kW	12	20	2022.11.

### **■** Contact Information

- Phone: 061) 659–7111∼4 - Fax: 061) 659–7119

- URL: http://shiptc.jnu.ac.kr

### A. Legal Clinic of CNU Law School

### ■ Purpose

The Legal Clinic of CNU Law School was established for the purpose of public service and clinical legal education for graduate students in the field of law. Previously known as the CNU Legal Consultation Center before the establishment of CNU Law School, it has been reorganized as the Legal Clinic with additional functions aiming at equipping students with specialized knowledge and practical skills to foster legal professionals. It continues to provide legal consultation for the university community, as well as underprivileged populations in the local community.

### **■** Contact Information

- Phone: 062) 530–2291

- URL: http://lawschool.jnu.ac.kr/

### **CNU Institute of Arts and Culture Education**

The CNU Institute of Arts and Culture Education offers programs to obtain a level 2 Culture and Arts Education Instructor Certificate, as designated by the Ministry of Culture, Sports and Tourism. It was designated as such on February 1, 2013, and has been offering specialized courses since the fall semester of 2013, currently offering information on admission for the first semester of 2024.

The Cultural and Arts Education Instructor Certificate is issued to qualified individuals who perform

tasks related to planning, conducting, analyzing, evaluating, and teaching cultural and arts education, in addition to being educators in the field. The Cultural and Arts Education Instructors are required to complete a prescribed curriculum and are granted qualifications in accordance with the Cultural

Arts Education Support Act.

The CNU Institute of Arts and Culture Education provides specialized education in various fields, including traditional Korean music, music, fine arts, crafts, and design. To date, there are 1,126 students

who have completed the prescribed curriculum for each field.

The institute's educational programs aim to enhance the qualifications of cultural and arts education professionals, improve the quality of arts education, and contribute to the development of the local community by nurturing talented individuals in the arts and to foster professional talent to work in the field of art and culture.

The CNU Institute of Arts and Culture Education is headed by a director and has administrative staff. It also has an operating committee to deliberate on key matters related to its operation.

### **■** Contact Information

- Phone: (062) 530-3014

- URL: http://arte.jnu.ac.kr

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### 6. Research Centers at CNU

### 1. Research Institute of Nursing Science

Phone: +82-62-530-4939 URL: http://crins530.jnuac.kr/

The purpose of the Research Institute of Nursing Science at Chonnam National University is to promote sustainable growth of nursing discipline by systematically integrating nursing education, research, and practice associated with the academic advance of nursing science, the development and support of nursing educational programs fused and integrated with other relevant disciplines, mental health and general health promotion projects of communities, advisory services for health care policies, and research and development projects for general health care. Therefore, the Research Institute of Nursing Science focuses on the activities of reinforcement of research by multidisciplinary collaboration of the nursing faculty, clinical nurses, and other healthcare providers for community health, development and support of grant proposals for research funding from domestic and international organizations, maintenance of the accredited nursing educational program and development and support of educational services differentiated from the competition, while supporting the nurturing of nursing research manpower with global competitiveness.

Since its establishment in 1996, the Research Institute of Nursing Science has held nationwide academic conferences and seminars every year. The Institute has been publishing academic journals since 1996, and its journal 「Nursing & Health Issues (NHI)」 was selected as a KCI candidate journal by the National Research Foundation of Korea in 2021.

### 2. Management Research Institute

Phone: +82-62-530-1427 URL: cnu123.com

Chonnam National University's Management Research Institute was established in 1984 under the initial nomenclature of the Chonnam National University Industry-Academic Cooperation Group to contribute to the development of business administration and community development through academic and practical research related to the management of construction organizations.

Chonnam National University's Management Research Institute has established and operated four specialized research centers for various projects. There are management consulting centers, big data centers, management education centers, and ESG centers. Professors, researchers, and advisors with both expertise and practical skills are presenting practical and professional services at each research center.

### 3. Institute for Public Affairs

Phone: 82-62-530-2289 URL: http://jnupa.jnu.ac.kr (Community - Research Center)

The purpose of the Institute for Public Affairs is to contribute to the development of studies and practice of public administration through the study and research of these fields.

The following are the projects of the Institute for Public Affairs for the accomplishment of its purpose.

- Studying and conducting research in public administration and its practice
- Conducting paid research projects and services
- The publication of academic books and theses collections
- Hosting research announcement sessions, seminars, and lectures
- Exchange with domestic and international information on public affairs

### 4. Engineering Research Institute

Phone: +82-62-530-1618

Established in 1965, the Engineering Research Institute is dedicated to advancing engineering technology in Gwangju and the Jeonnam region. Utilizing eminent faculty members, researchers and cutting-edge research labs, the Institute is actively engaging in academic research as well as technical projects involving engineering examination, design, estimation, and training in the region.

### 5. The Innovation Center for Engineering Education

Phone: +82-62-530-1626 URL: http://icee.jnu.ac.kr/

The ICEE serves as an innovative institute for engineering education in general with a future-oriented focus on generating and implementing innovative ideas for education programs, systems, environments, and teaching methodologies. It is directing improvements to creative and integrated education systems, strengthening industy-university cooperation, developing Capstone Design commercialization model and introducing excellence in engineering education. In addition, the ICEE supports accredited engineering education to produce distinguished engineers who are qualified to meet the demands of international business. Its work is focused on producing creative and multi-skilled engineers who are equipped to compete in the field of global engineering education.

### 6. Optoelectronics Convergence Research Center

Phone: +82-62-530-0126

Optoelectronics Convergence Research Center (OCRC) was established for the successful development of new materials and devices focusing on optoelectronics convergence.

### 1. Purpose

- Worldwide climate change and energy problems are arising
- Responsible environmental and climate protection with energy management is an important issue
- Needs for sustainable and abundant alternative energy sources are high
- Energy conversion, stable supply of energy, next-generation light source/display devices are the core techniques for the creation of added value in the country
- A new research center is needed for the fulfillment on the source technology development on optoelectronics

### 2. Current condition

- Director: Professor Jin Hyeok Kim (Department of Materials Science and Engineering)
- Date of establishment: March 1, 2015

### 3. Research areas and features

- 1) Materials Development & Characterization
- New type of materials with specific function/properties
- Graphene, complex oxides and sulfides, etc
- Establish the new analysis tools and their applications

### 2) Photoenergy

- New type of flexible and energy conversion devices
- Supplementation for mobile accessibility
- Establish the new analysis tools and their application
- 3) Luminescence/Display
  - New type of growth techniques for III-V materials and phosphors
  - Extremely high-efficiency luminescence devices
  - Establish the physical background for the new process and device platform

# 7. The Institute of Educational Research

Phone: +82-62-530-2326 URL: ier.jams.or.kr

The Institute of Educational Research is dedicated to enhancing the quality of education and teacher training, promoting research and development in theory, methods and technology of teaching, and improving the education of the local community.

Since its establishment in 1973, the institute has sought ways to improve communication between teaching theory and practice.

The institute is based on the theories of pedagogy, which is the foundation of subject matter education. Raising issues related to theories in education is another role that the institute is playing. The Journal of Educational Research and New Horizons of Educational Research are published annually. For students pursuing teacher's certificates, the institute offers special lecture services.

- Research on university education: teacher education, educational contents, class assessment
- Academic conferences for regional development of education, focusing on virtual reality, career education, and future education
- Publication of The Journal of Educational Research and New Horizons of Educational Research
- Hosting Korea, China and Japan International Symposium on Educational Issues
- Edu-tech based research and practice: design and development of VR, AR educational contents
- Research on regional education

# 8. Center for Global Diaspora Studies

Phone: +82 - 62 - 530-2701 Homepage: http://www.hansang.or.kr/

Center for Global Diaspora Studies was established in 2002 to examine overseas Koreans and extend the research field through various activities. The main activities of the research center are holding domestic and international academic conferences, publishing books and articles, international cooperation with universities and institutes, training graduate students for future generations, and operating research projects.

In particular, the research center has been carrying out a research project on "Diaspora as Ethnic Dispersions and Global Communication" granted by National Research Foundation of Korea since 2010 that will continue until 2018. The objectives of this project are to analyze the characteristics of diasporas not only of overseas Koreans, overseas Japanese, and overseas Chinese, but also other diasporas in the world. Furthermore, we develop the analysis framework and develop the archives to preserve the database. Recently, with the theme of "Migration and public health in the post-COVID19 era-focusing on local health commons" the National Research Foundation of Korea is cinducing a humanities and social research institute support project (September 2021 to August 2027).

# 9. Kumho Life Science Laboratory

Phone: +82-62-530-4780 URL: http://kumho.chonnam.ac.kr

The Kumho Life Science Laboratory of Chonnam National University aims to contribute to the development of life sciences of Chonnam National University by conducting research in the fields of plant life science and biotechnology.

Kumho Life and Environmental Science Laboratory was established in 1995 as a research institute affiliated with a company by the maintenance of life science development and public interest by the late Park Seong-yong, the formal Chairman of the Kumho Asiana Group. In 2006, by the agreement between Kumho Asiana Group and Kumho Petrochemical Co., Ltd. and Chonnam National University, this institute made a new start as "Chonnam National University Kumho Life Science Laboratory". After relocating to Chonnam University, the research members of this laboratory were rebuilt to conduct research in the fields of life science and biotechnology focused on plants. In the meantime, this Laboratory makes a great contribution to the development of plant life science in Korea by performing intensive efforts in research in the field of plants.

# 10. AgriBio Institute of Climate Change Management

Phone: +82-62-530-2181

The goal of the AgriBio Institute of Climate Change Management is to contribute to the development of agriculture and sustainable environments by conducting various research projects and studies on agriculture, forestry and landscape, and ecosystems. In particular, the institute aims to play a leading role in developing new ideas and technologies to solve regional and international problems related to climate change in the

Honam district and Northeast Asia.

Experts from diverse research areas, such as crop production and environmental management, forestry and landscape, and natural disaster and ecology, are participating in the climate change-related research and education.

### 11. Research Institute for Basic Sciences

Phone: +82-62-530-3480

The Research Institute for Basic Sciences was established to enhance basic sciences by conducting research on the qualitative improvement of basic sciences. To this end, the Institute carries out the following activities:

- Conducting world-class research activities in each field thanks to basic science financial support from the Ministry of Education and Human Resources.
- Holding domestic and international academic conferences and discussion sessions on basic science issues.
- Conducting research requested by external parties, and joint studies between industry and the University

The Institute was established as a CNU-attached Applied Physics Institute in 1967, and changed its system and name to the Science and Chemistry Institute in 1970. In 1983, the CNU-attached Research Institute for Basic Sciences was born by incorporating the Marine, Science/Chemistry and Chemistry Institutes. It was designated as a central institute in Gwangju and the Jeonnam region in 1994, and is now actively working on research projects in Hydraulics, Physics, Chemistry, Biology/Environment and the global environment.

### 12. Institute of Aging Science

Phone: +82-62-220-6710 URL: aiagingscience.com

The Advanced Institute of Aging Science of Chonnam National University was established in April 2017 to lead the aging science and technologies through multidisciplinary convergence researches for active and smart healthy aging in the aging society. The research institute consists of an anti-aging/aging hormone research unit, a clinical aging research unit, an ICT healthcare research unit, and a management support unit. Professors and researchers from the College of Medicine, College of Engineering, College of Engineering Sciences, College of Natural Sciences, College of Nursing, and College of Human Ecology have been participating in multi-disciplinary researches.

In order to solve the problem of the aged society, we aim to lead the future aging science technologies through clinical and basic researches such as the Korean Centenarian cohort study, Artificial Intelligence (AI) in healthcare, ICT health convergence research, anti-aging and aging hormone research, and training programs for specialists in the field of age-friendly and wellness industries.

### ■ Field of Research

- Anti-aging and Aging Hormones
- Korean Centenarian Cohort Study
- Age-Friendly Healthcare Devices

- ICT Health Convergence
- AI in Healthcare

# 13. Institute of Agricultural Science and Technology

Phone: +82-62-530-2029 URL: http://asat.jnu.ac.kr/

The Institute of Agricultural Science and Technology's goal is to contribute to the development of agriculture by conducting various research projects and studies to develop agricultural technology and resources, and look for ways to increase profitability.

The Institute was originally launched as the College of Agriculture, Farm and Fishing Village Development Institute back in 1963, which changed its name to the Institute of Agricultural Science and Technology in 1991. It now performs studies on agricultural and science technology, agro-economy and agro-administration to maximize the income generated by the agricultural and fishing community. Currently the Institute has eight research departments, carrying out vigorous research activities.

# 14. Multi-cultural Society Center

Phone: +82-62-530-5132

The Center was established with the mission to seek proper paradigms for a multi-cultural society and to build a healthy multi-cultural community through education, support, and research activities. The Center is composed of a research, education, support and cooperation department.

The research department conducts research to re-establish traditional studies of humanities and social sciences with further accepting paradigms towards to multiculturalism.

The education department develops multi-cultural learning models and expands multi-cultural education (which focus on immigrants only) for the education of local Korean residents.

The support department strengthens the connections between immigrants and local residents, guides immigrants to create a proper identity, and resolves conflicts between immigrants and local residents. To support immigrants and their families more effectively, the department is running counseling programs for multi-cultural families. The cooperation department builds networks with related organizations to cooperate cooperation and joint research systems.

### 15. Dental 4D Research Institute

Tel: +82-62-530-5850, 5656

The Dental 4D Research Institute was established in 2012, for improvement of national health care services and welfare through accomplishments in digital-based research, education, publication, and developments about convergence and application in the field of dentistry. The Institute reflects requirements in the current era of computerization and leads the digitalization in dentistry.

The Dental 4D Research Institute has set its mission on global research and production of new industries

and pioneering digitalization in dentistry. The Institute has visions about convergence of digital technology with medical science related to dental clinics. Annual symposiums and exceptional seminars are held monthly.

The Dental 4D Research Institute categorized the Department of Digital Image, Department of Advanced Materials Development, and Department of Educational Publication, and also carries out efficient missions.

## 16. Veterinary Medicine Research Institute

Phone: +82-62-530-2805 URL: http://anis2med.jnu.ac.kr/

The Veterinary Medicine Research Institute was established in 1997 to conduct basic and applied research that can contribute to development in the field of veterinary medicine. It tries to improve the productivity of local hog raising and stock breeding, and to enrich the quality of life of the general public. To this end, it promotes the local industry utilizing livestock, and conducts research requested by external or national organizations on pets, companion animals, special, wild animals, and animals that need preserving such as Korea's Jindo dog. The Institute strives to seek practical ways to cure diseases and prevent epidemics, a main concern in related industries and livestock-breeding farms. It conducts various academic activities including holding seminars and publishing journals.

### 17. Institute for East Asian Studies

Phone: +82-61-659-7580 URL: http://www.east-asia.re.kr

Established in 2003, the Institute for East Asian Studies conducts academic research on issues related to the Korean Peninsula and the East Asian region.

The Institute, composed of a Director, and Divisions of Planning, Research, and Education, is engaged in the following activities:

- Research on East Asian countries
- Research on South and North Korea and unification of the two Koreas
- Academic symposiums, seminars, and lectures
- Publication of research papers
- Cooperation and exchange with other research institutes

## 18. The Asian Pear Research Institute

Phone: +82-62-530-2106 URL: http://www.kpear.kr/

### A. Introduction

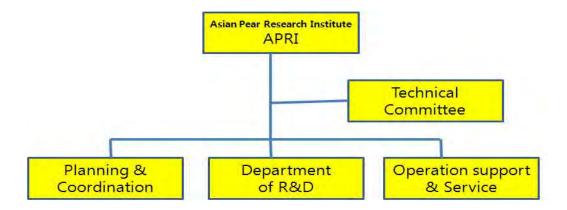
The Asian Pear Research Institute (APRI) strivers to research this fruit thoroughly with a special focus in developing the local pear industry through advanced techniques while balancing yield and sustainability.

### **B.** Related Research Fields

- Development of Agricultural Field Application Model of digital Transformation Technology -

- Development of production stabilization technology for responses to natural hazards
- Development of quality stabilization technology through prediction of harvest period in fruit growth model using AI technology
- Development of production information-based supply stabilization technology through analysis of big data information generated by APC
- Development of pear consumption stabilization technology using edible coating technology
- Development of environmental stabilization technology by developing high value-added technology of pear waste resources
- Establishment of a living lab for on-site utilization of research results

### C. Organization Chart



### 19. Robot Research Initiative

Phone: +82-62-530-0268

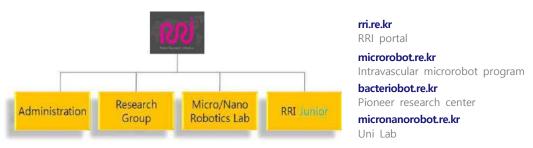
The Robot Research Initiative aims to represent the Honam area as well as Korea, and to become one of the top 5 robot centers in the world.

### [Missions]

- Develop national robot projects (research and development/building foundation/develop human resources)
- Conduct large scale projects for government/local government/corporations
- Specialize in robots and become the center of excellence

### [Current Conditions]

- Director: Professor Jong-oh Park (Department of Mechanical Systems Engineering)
- Date of establishment: March 31, 2008
- Organization chart



- Administrative office, Nano Robotics Lab: College of Engineering 1
- Bacterobot, service/medical robotics Lab: University-industry Collaboration Center 3

### [Areas of research]

Micro/Nano Robotics, Medical Robotics, Intelligent Robotics, Space Robotics [History of the Center]

Date	Content
March 31, 2008	Established as an affiliated research center
June 4, 2008	Chosen as a leading research center (CNU-XRC)
June 13, 2008	Signed an MOU with KIST Europe (Germany)
July 18, 2008	Held opening ceremonies for CNU-XRC
October 15, 2008	Hosted ISR 2008 conference
October 16, 2008	Participated in 2008 Robot World
October 20, 2008	Signed MOU with Scuola Superiore Sant`Anna (Italy)
October 21, 2008	Signed MOU with Carnegie Mellon University (USA)
January 29, 2010	Signed MOU with FUKUDA Lab (Japan)
May 13, 2010	Presented world's first microbot for blood vessel surgery
June 3, 2010	Held opening ceremonies for Bacte-robot Fusion Research Organization
July 20, 2010	Held opening ceremonies for Space Robotics Research
October 28, 2010	Participated in 2010 Robot World
November 25, 2010	Participated in Robot Expo
February 17, 2011	Hosted 1st International Space Robotics Symposium

# 20. Culture Technology Institute

Tel:+82-62-530-0360 URL:http://ct.jnu.ac.kr

In the 21st century, the Cultural Industry Institute receives a lot of attention as one of the highest value-added industries. Therefore, Culture Technology, as a result of supporting this industry, is being globally developed in advanced countries due to the importance of the technology. In Korea, the region of Gwang-ju city and Jeollanamdo-do is well known for maintaining the value of cultural items and their original forms. As a result, the Culture Technology Institute is more critical than any industrial things in this area.

This Institute was established to develop core technologies of the culture industry by combining advanced

sensors, imaging, and interface technology in the IT field, as well as design, human sensibility, and cultural properties in various fields. The main purpose of the institute is to contribute to the promotion of the national cultural contents industry by developing new technology which can be applied to future high-tech cultural industry through interdisciplinary fusion of engineering, humanities, sociology, culture, and art research. This institute conducts the various research activities as follows:

- Recovering traditional cultural original form and development of digital archiving technology
  - Excavation of tangible and intangible cultural original form related to traditional culture
  - High-level technology for digital archiving
  - Digital technology of converting cultural original form to digital contents
- Development of culture technology based on high-level technology
  - High-tech contents and expression technology with combination of image processing, signal processing, sensor engineering, and software programing technology
  - Intelligent interface technology for mobile and network games
  - Contents utilizing technology using the intelligent search function of web linkage
  - Contents utilization technology using the SNS and the cloud computing system
  - Production of large-scale play system by combination of gesture recognition, pattern recognition, and animation technology
  - Exhibition and education system using the tabletop display
- Supporting cultural content planning, creation, and marketing
  - Supporting expert groups for cultural content planning, creation, and marketing
  - Contract and implementation of business planning related to cultural events supporting various content creation and commercialization activities based on cultural technology
- Developing human training and commercialization technology related to cultural industry
  - Supporting cooperation-network of internal graduated researcher to cultural industry
  - Proposing national projects related to cultural industry
  - Holding seminars on culture technology
  - Maintaining industry-university collaboration for developing new cultural items
- Development of cultural industry technology with interdisciplinary co-work of humanities, sociology, culture art, design, and engineering
  - Supporting the cooperating system with culture technology institute, which will be established in the near future
  - Finding new research areas with interdisciplinary co-work
  - Developing new application technology using culture technology

# 21. Cultural Heritage Research Institute

Phone: +82-62-530-1336

The Cultural Heritage Research Institute is established under the R & DB Foundation of CNU to reinvent the value of cultural heritage based on the interdisciplinary program of cultural heritage in order to preserve the varieties of culture, to find sustainable values through the survey, conduct further research, and promote education of the cultural heritage. Furthermore, the Research Institute has increased its activities at the University and with Industry and Research Institutes to help revitalize the cultural industries. This institute conducts the various research activities as follows:

- 1. Conducting academic research for domestic and international cultural heritages
- 2. Collecting, recording, and preserving of research data of domestic and international cultural heritages
- 3. Publishing academic journals and research results
- 4. Holding academic conferences
- 5. Developing contents using cultural heritage and servicing academic information
- 6. Developing an educational program for training professionals about cultural heritage
- 7. Networking with other research institutes, public institution, and related organization

# 22. Cultural Convergence Research Institute

Phone: +82-62-530-4087

The Cultural Convergence Research Institute was founded to contribute to the development of national and regional cultures and related industries through convergence research, creative cultural contents, and related technology development. It was established for the purpose of establishing the identity of local culture and realizing globalization by systematic and long-term comprehensive research on urban and regional development strategies. In addition, it has striven to enhance its status as a national flagship university by conducting world-class research and developing cultural contents. The institute is conducting various research activities as follows.

- Convergence culture research combining culture, tourism, and media
- Research on urban and regional development models through culture
- Research on creative cultural contents based on imagination and fostering talent
- R&D project for industry-university-academia cooperation along with consultation and seminar events
- Operation of training programs for professionals in the field of cultural convergence
- Vitalization of domestic and international academic and cultural exchanges

# 23. Bio-energy Research Center

Phone: +82-62-530-0266 URL: http://www.bri.or.kr/

The Bio-energy research center has been established for the purpose of research and development of sustainable and environmentally-friendly cellulosic bioenergy production. Research activities of the Bio-energy research center span a range of biological and chemical disciplines, bringing together technical and scientific expertise and instrumentation from chemistry, molecular biology, and plant science and

wood sciences. The collaborative efforts are proving successful in achieving rapid advances in technologies for maximizing biofuel production from lignocellulosic biomass.

The research center is planning to become a global research center by acquiring fundamental technologies through active research collaboration with domestic and foreign research centers and companies.

- Chemistry Process Research Division: Specializes in the development of biomaterial and research on chemical procedures
- Biotechnology Research Division: Specializes in the development of new biotechnology by utilizing advanced biotechnology
- Protein Research Division: Specializes in research on enzyme gene cloning and genetic engineering techniques
- Plant Tissue Culture Research Division
- Commercialization Research Division: Specializes in the conveyance of developed technologies to the industry
- Administration: Overall operations and international cooperation

# 24. Biohousing Research Institute

Tel. +82-62-530-1914, Web: http://www.biohousing.kr

The biohousing research institute aims to develop and commercialize core technologies on biohousing for the low-carbon green growth.

Role of biohousing research institute

- Operation of biohousing research facilities (Structural lab and unit lab)
- Research on biohousing technology
- Cooperation and collaboration with other industries, governments, and academies on research and policy
- Other task relevant to the purpose of the institute

The biohousing research institute is operationg the biohousing research facilities (structural lab and unit lab) that were established through the regional base research institute fostering program funded by the Ministry of Education. Based on the equipment built in the facility, structural performance tests and material tests of concrete and related products are carried out. Through this, research tasks and related projects are carried out.

# 25. Institute for Legal Studies

Phone: +82-62-530-2292 URL: https://cnuils.org

The Institute for Legal Studies (ILS) was established in February 2009. ILS was derived from the Institute of Law and Public Administration. The present ILS is enlisted under the Law School and consists of several centers: the Center for Public Interest and Human Rights Law, the Center for East Asian Law, the Center for Health & Medical Law, the Center for Intellectual Property Law, the Center for Trust Industry Law, the Center for Uniform of Private Law, the Center for Information Law Center, the Center

for Criminal Justice Law, the Center for Law & Literature, the Center for Consumer law.

The subjects we touch upon are not only domestic law but also foreign law. Moreover, Chonnam Law Review, which is run by the institute, is famous as a journal of law.

ILS carries out the following activities:

- Holding research seminars and academic conferences.
- Publishing Chonnam Law Review and special thesis collections
- Conducting research and studies by external request
- Cooperating and forming exchanges with academic institutes at home and abroad
- Performing activities for law school research

# 26. Research Institute for North Korean Agriculture

Phone: +82-62-530-2177

The North Korean Agricultural Research Institute pioneers customized agricultural cooperation projects that enhance the effectiveness and sustainability of agricultural development cooperation projects in North Korea, and researches related effective measures.

The mission of the research institute is to develop customized technologies that can lead North Korea's agricultural development cooperation projects and to foster experts in North Korea for potential reunification. The major research areas are as follows.

- 1. Promote North Korea's major crop production and develop pest control technology based on environmentally-friendly agriculture
- 2. Development of on-site practical technology for producing customized crops in North Korea
- 3. The restoration of North Korea's devastated forests and herb cultivation technology development
- Nurturing North Korean agricultural specialists to promote agricultural exchange cooperation between the two Koreas.
- 5. Providing effective and sustainable customized agricultural cooperation models

### 27. Institute of Social Sciences

Phone: +82-62-530-2700 URL: http://jnuiss.jnuac.kr/

The Research Institute for Social Science at Chonnam National University is a specialized institution that continuously conducts research in order to support theoretical foundations for social science. The institute was founded in 1975 and has a meaningful history of over 40 years. It is composed of various departments related to the humanities and social sciences, including the Department of Political Science and Diplomacy, the Department of Sociology, the Department of Psychology, the Department of Geography, the Department of Cultural Anthropology and Archaeology, the Department of Journalism and Broadcasting, the Department of Literature and Information, and the Department of Public Administration. The goal of the Institute is to bring out the academic achievements and discussion of the College of Social Sciences. The purpose of the Institution is to conduct theoretical research and lay the foundation for social sciences

with pursuing interdisciplinary cooperation through various approaches required by modern social sciences. Furthermore, it is to seek social science solutions to contemporary social problems.

# 28. Research Institute for Human Ecology

Phone: +82-62-530-1315 URL: http://rihe.jnuac.kr/

Human ecology seeking the value and quality of individuals and families through the improvement of living conditions is becoming a more significant field of study in the modern society of globalization, informatization, and industrialization. Since it was established in 1991, the Research Institute for Human Ecology has functioned as a comprehensive research center for humanities, social sciences, and natural sciences through international cooperation and collaborative work with Korean organizations.

The Research Institute for Human Ecology annually publishes the Journal of Human Ecology, and hosts academic conferences at least 6 times a year. Also, it has been conducting comprehensive research projects to meet human desires for a quality life, changes in society that demand industrialization of households, and welfare policies of Korea. To name a few, the Research Institute has completed the T-gate Product Information Project, the Aging-friendly Product Test and Display Project, the Multi-cultural Family Survey, the Low-income Single Parent Family Survey, the Human Resources Development Project for Senior Industry, the Welfare Policy Moderation Project, Changes in Korean Body Type Project and Fashion Culture Product Development.

## 29. The Convergence Research Institute of Service Design

Phone: +82-62-530-3023 URL: http://www.index.or.kr

The Convergence Research Institute of Service Design is an intellectualized design convergence lab that enhances the quality of human living by discovering products and creating new services that reflect recent innovative technology (AI, Robots, IoT, Big data, AR/VR, 3D printing, etc.).

Demands for design are becoming stronger in the age of the modern Fourth Industrial Revolution as a creative catalyst for convergence among industries, and design convergence is being given the spotlight as a creative problem-solving method for the resolution of social problems as a convergence value of creative innovation focused on users.

This lab is cultivating convergence competence through various collaborative processes in and out of school and it conducts research to resolve ill-defined problems through various experiments and challenges based on design-based thinking. In other words, it analyzes problems of various industrial and social parties, presents creative solutions, and attempts to create innovative service models.

Through this, it connects studies and industries of various fields, fulfills its role as a leading research center of service design convergence that initiates research on design convergence, and furthermore, it attempts to drive the existence value of design future indicators through continuous design convergence research. Main research and activity fields

- Industrial and social problem resolution of the humanities, arts, engineering, deign convergence
- Service design research project performance
- Design convergence intellectualized project propulsion and performance
- The cultivation of service design convergence research professionals
- The development of service design convergence R&D systems
- The development of user-focused design convergence service platforms
- Support for the commercialization of design and ICT convergence technology

# 30. Equipment Diagnosis Design Engineering Research Center

Phone: +82-61-659-6937 URL: http://sdt.jnu.ac.kr

The Equipment Diagnosis design Engineering Research Center was established to improve human welfare by insuring a safe industrial working environment by securing the safety of industrial equipment through research on credibility evaluation, inspection, and design related to industrial equipment.

The center will contribute to the development of Chonnam National University and the local community through the release of leading research results, as well as diagnosing and developing prevention measures for problems with industrial equipment.

### 31. Sexual Medicine Research Center

Phone: +82-62-220-6710

This institute is dedicated to analyzing the physiology and pathology of sexual functions in both males and females through foundational and clinical research. Furthermore, we work to diagnose and prevent the causes of diseases that result in sexual dysfunction. Our goal is to produce leading research findings and to collaborate with both domestic and international research entities. This not only advances our academic mission but also benefits the local community. Our initiatives include:

- 1. Studying the prevalence rates of diseases related to sexual disorders.
- 2. Investigating the causes of sexual disorders and researching preventive measures.
- 3. Conducting basic research into the physiology and pathology of sexual functions.
- 4. Creating animal models to study various sexual disorders.
- 5. Analyzing sexual psychology and developing treatments.
- 6. Exploring the central nervous systems responsible for sexual function using functional imaging study
- 7. Designing testing equipment for diagnosing sexual disorders.
- 8. Developing and commercializing treatments for sexual disorders.
- 9. Undertaking clinical research related to medicines that address sexual functions.
- 10.Collaboration with domestic and international research centers focused on sexual health.

# 32. The Fisheries Science Institute

Phone: +82-61-659-6741, URL: http://jnufsi.jnu.ac.kr/

The mission of the Fisheries Science Institute at Chonnam National University, Yeosu Campus is to provide the comprehensive education and research needed by the fisheries and marine industries and to contribute to the development of fisheries science and technology in South Korea.

The major activities of the institute.

- Developing advanced technology and basic research on fisheries and marine science.
- Conducting planned research projects to promote business in fisheries and marine industries.
- Providing professional education and training.
- Collaborative research with government organization and businesses, and international studies.
- Providing technical training and education for fisherman and business manager.
- Collecting and managing fisheries and marine science information for the advancing fisheries technology.
- Hosting conferences, symposium, and seminars, and publishing periodical articles.
- Collection and exhibition of educational material, models, and specimens.
- Fundraising and managing the commissioned research and relevant business.

# 33. Aquatic Animal Hospital

Phone: +82-61-659-7177

Intensive culture practices, rapid environmental changes, and increased international trade of aquatic animals are causing high chances of widespread diseases these days. In order to control the spread of aquatic animal diseases, the 'Aquatic Animal Disease Control Act' has been reinforced since December 2008 in the Republic of Korea. The Aquatic Animal Hospital of Chonnam National University has been certified as a pathogen appraisal institute in accordance with the act.

In addition, the Aquatic Animal Hospital of Chonnam National University was registered as the university's research institute and primarily focuses on the diagnosis (or detection) of fish and shellfish diseases, recommending proper control and treatment methods. The institute accepts fish and shellfish samples showing clinical signs of disease (parasites, bacteria, viruses, fungi, etc.) for diagnosis by licensed fish doctors. A nominal fee is charged for these services. Additionally, we develop diagnostic techniques, immunization boosters, and strive to build systems for producing safe fishery products. The Aquatic Animal Hospital also conducts research projects through collaboration with other research organizations and companies.

### Services

- 1. Detection of pathogens in accordance with the guidelines of the Aquatic Animal Disease Control Act
- 2. Diagnosis of fish and shellfish diseases and recommendations for proper treatment
- 3. Antibiotic susceptibility testing
- 4. Identification of parasites, bacteria, and viruses

# 34. System Security Research Center

Phone: +82-62-530-3714 Homepage: http://ssrc.jnu.ac.kr

With the development of information and communication technology, people and people, people and things, and things are closely connected based on the Internet. At the same time, as cyber -attacks that threaten the security of personal information and information networks are increasing, a system for predicting and responding to cyber threats is required.

In response to these demands, the System Security Research Center conducts security research on computer network security technology and the Internet of Things devices using Artificial Intelligence algorithms. In particular, it is working with the information security industry and national security organizations to advance the Artificial Intelligence security technology.

In 2019, the center was selected as the Graduate School of Convergence Security by the Ministry of Science and ICT. The center will train security expert who specialize in the new energy industry over the next six years. Eleven companies and organizations including KEPCO, KEPCO Knowledge, Data & Network, Korea Power Exchange, AhnLab and Wins Technet will participate in the project. The center develops training courses and operates industry-academic cooperation projects with partner organizations in order to cultivate human resources in the field of energy security.

# 35. Asian Culture Research Center

Phone: +82-62-530-0907 URL: http://asia.jnu.ac.kr/

The Asian Culture Research Center was established for successful national projects and the development of the community through research on Asian culture and on central cities in Asia. The Center carries out the following projects:

- Areas of research
  - Policy making related to Asian culture
  - Developing and administering education systems related to Asian culture
  - Planning research on Asian culture in school systems
  - Collaborating with other organizations and industries related to Asian culture
  - Studying business opportunities for Asian culture
  - Other research activities
- The Research Center is composed of the Planning Department, Research Department, Education Department, Cultural Industry Department, Cultural Space Department, Cultural Art Department, and Cultural Tourism Department under the director of the Center.

### 36. Research Institute of Pharmaceutical Sciences

Phone: +82-62-530-2953

The Research Institute of Pharmaceutical Sciences was established to promote basic pharmaceutical

research, which is the basis for new drug development, to develop new pharmaceutical technologies, and to provide a basis for joint research by activating exchanges with pharmaceutical researchers and institutions in order to contribute to the improvement of human health. The center is focusing on the following projects to become a research institute that develops core original technologies in the field of new drug development based on joint research with domestic and foreign 'excellent research institutes' and companies and industry-university-research cooperation.

- Discovering new drug targets
- Drug research related to disease prevention and various diseases
- Development of bio-active materials
- Hold academic symposiums and research seminars
- Industrial technology transfer and product commercialization

# 37. Fishing Technology Institute

Phone: +82-61-659-7120 URL: http://marine.chonnam.ac.kr

Yeosu is a major fishing port, containing 30% of the fish caught in South Korea. Set nets, anchovy boat seines, and lift nets are some of the more popular fishing methods or tools in the Yeosu coastal waters.

The Fishing Technology Institute, located in Yeosu, trained human resources needed for far sea fishing during the 60's, 70's and 80's together with Chonnam National University. Recently, the Institute has been focusing on developing fishing technologies for coastal fisheries, especially the Southern coast of South Korea.

Electronic engineering and machine control technologies have recently been applied to fishing gears for more productivity and sustainability in the fishing industry.

# 38. Institute of Fishing Villages & Aquaculture

Phone: +82-61-659-7578 URL: http://www.ifva50.jnu.ac.kr/

The purpose of the Chonnam National University Fishing Village Aquaculture Research Center is to contribute to the sustainable development of the fishery and marine industry by promoting the balanced development of fishing villages and carrying out the necessary R&D and human resource training projects. For this purpose, both tangible and intangible resources such as fishery products, nature, and the culture of specialized fishing villages for the 6<sup>th</sup> wave of industrialization are utilized to converge manufacturing and processing industries such as seafood production and processing, service industries such as distribution and tourism, and related fishery information and technological services. From these aforementioned fields, we will play a leading role in resolving the problems faced by fishing villages and the wider fisheries industry.

### Field of research activities

 Comprehensive industrialization of fishing village resources and creation of specialized amenity environment for fishing villages

- Provision of marine environmental and spatial information, and fisheries restoration technology
- Environmental capacity management of fishing grounds and aquaculture Industry technology development
- Development of resource management models & technology through marine ecological monitoring and fisheries resource information analysis
- Development of technology for damage reduction of natural disasters and control of harmful organisms in ecosystems.
- Development of capacity enhancement program for fishing villages and specialized training in fisheries technology and aquaculture
- Consultation for government agencies and industrial bodies and the conducting of cooperative research between industry and academia, coupled with commissioned research

# 39. The Yeosu Area Studies Institute

Phone: +82-61-659-6236 URL: http://www.yeosu.re.kr

The Yeosu Area Studies Institute conducts multidisciplinary and interdisciplinary research on the culture, politics, economics, society, and environment of Yeosu. Its goal is to establish comprehensive Yeosu studies and contribute to the development of the local community.

The institute engages in various activities such as academic research on local issues, exchanges with related research institutions, organizing academic conferences, publishing academic journals, developing and operating educational programs, and more.

The institute engages in various activities such as projects that meet the researcher's goals, comprehensive and systematic academic research on local issues, regional and common cultural areas, exchanges with related research institutions, holding academic conferences, publishing academic journals, and developing and operating educational programs.

Since its establishment in 2022, the institute held (1) an inaugural symposium that examined the significance and prospects of the launch of the Yeosu Studies Institute, and (2) three Yeosu Studies forums to come up with the direction for resolving local issues through exploration of previous cases.

# 40. Research Center for History and Culture

Phone: +82-62-530-0788 URL: http://cafe.daum.net/history0788

The Research Center for History and Culture conducts comprehensive studies on Korean history, as well as Asian and Western history. It strives to build an organic and comprehensive research system with related fields of study, and to develop history education programs and content for various demands. It also attempts to contribute to the popularization of historical content and creation of a new culture. To achieve these goals, the Center carries out the following activities:

- The study of Korean, Asian, and Western History comprehensively and systematically
- The investigation of methods tying in with related fields of studies and academic exchanges
- Operating a stable research support program for future generations of scholars and researchers
- Operating various educational programs to teach history and culture in step with the popularization of history study

# 41. Institute of Coastal Environment Research

Phone: +82-61-659-6970 URL: http://icer.re.kr

After its establishment in 1992 as the Environmental Research Institute, the Institute was renamed the Coastal Environment Research Institute in March 2007. The Institute aims to develop environmental technology to overcome pending issues in the environment, improve the environment in all aspects, and to promote the development of the local community and the nation by researching region-specific environmental problems.

As an endeavor to fulfill this goal, the Institute develops environmental technology, provides education and training on environmental conservation, holds academic seminars and workshops to present research findings, collects research data and materials, publishes papers, conducts research projects commissioned to the Institute, and provides consulting. The Coastal Environment Research Institute is composed of the research divisions of Coastal Environment Management, Industrial Complex Environmental Management, Environmental Safety and Disaster Prevention, and Natural Environment Management.

The Coastal Environmental Research Institute has achieved remarkable achievements such as solving environmental problems and developing environmental technologies centered on the Gwangyang Bay area, including 20 publications of academic papers (226 articles), 109 research projects, 95 seminars and workshops, and 152 policy consultations.

### 42. The British/American Studies Institute

Phone: +82-62-530-3120 URL: http://altair.chonnam.ac.kr/~eculture/

The British/American Studies Institute was established to improve the understanding of American and British culture through various academic activities involving English-speaking nations. To this end, the Institute invites scholars at home and abroad to hold open lectures and seminars on the history, politics, society, literature, and the arts of English-speaking nations. In addition, the Institute collects books and material for the study of these areas, and holds study sessions on a regular basis to deepen understanding of these cultures.

In the future, the Institute will strengthen ties with the Korean studies institutes working in English-speaking countries. To realize these goals, it will increase academic exchanges with English Studies institutes in foreign countries to invigorate the study of American and British cultures.

### 43. Art Research Institute

Phone: +82-62-530-3007

The goal of the Art Research Institute is to revitalize the local art community and promote development of culture through information exchange, data collection, and public relations. Since its establishment in 1992, the Art Research Institute has conducted comprehensive research on regional art, culture of art and music, and classical Korean music. The Institute also publishes an academic journal, Collected Papers on Art, biennially. The detailed list of activities of the Art Research Institute is as follows:

- Publication of papers and resource books
- Promotion of regional and international art exchanges
- Study and production of pieces of art in the city
- Joint musical performances with other regions and international exchanges
- Research of the music of the Jeonnam region planning of lectures by invited guests
- Popularization and globalization of Korean music
- Research of different characteristics of Korean music in various regions

# 44. Space Particle Research Center

 $Phone: +82-62-530-3484 \quad URL: \ http://168.131.177.72/g5/bbs/group.php?gr\_id=ceplone: +82-62-530-3484 \quad URL: \ http://168.131.177.72/g5/bbs/group.php.gr\_id=ceplone: +82-62-530-3484 \quad URL: \ http://168.131.177.72/g5/bbs/group.php.gr\_id=ceplone: +82-62-530-3484 \quad URL: \ http://168.131.177.72/g5/bbs/group.ph$ 

Space particles invoke curiosity and provides key information to understanding the standard theory and modern physics. The discovery of neutrino vibration through the study of atmosphere neutrino and solar neutrino has made a quantum leap beyond the grand unified theory based on the standard theory. Therefore, this Center intends to conduct research on key issues of modern physics such as the characteristics of space particles, the development of space particle detectors, dark matter, and the origin of space.

The Center also aims to expand the research capacities of graduate school students and promote Chonnam National University through joint research projects with the world's best space research centers: Fermi National Accelerator Laboratory of the USA, CERN (Conseil Europeen pour la Recherche Nucleaire) of Europe, DESY (Deutsches Elektronen Synchrotron) of Germany, KEK (The High Energy Accelerator Research Organization) of Japan, and the Spaceship Center at Tokyo University.

# 45. Institute of Eurasian Studies and Digital Humanity

Phone: +82-62-530-2460

The purpose of the Eurasian Institute is to promote interdisciplinary research amongst different fields of study related to the culture of the European and Asian regions. The institute contributes to the academic development of Gwangju and the South Jeolla Province, and also Korea by establishing a sound research structure, cooperating with related domestic and international research institutes to study the different aspects of the cultures and societies of the two continents.

### Major projects of the institute include:

- Structuring focused research on boundary and methodology
- Conducting research projects
- Digital Humanity research projects
- Publication of the Chonnam University Eurasian Studies series
- Holding seminars and forums on Eurasian Studies
- Holding domestic and international conferences
- Exchange with domestic and international research organizations and the invitation of scholars
- The research, sorting, and evaluation of data and database structuring

# 46. Research Institute of Medical Sciences

Phone: +82-61-379-2881 URL: http://medicine.jnu.ac.kr/

The Research Institute of Medical Sciences came into existence on November 21, 1979, and contributes to the development of medical sciences and the improvement of public health by studying cooperatively pressing issues.

The Center is composed of the Director, General Manager, and research departments, focusing on the following activities:

- Developing research tasks in basic and clinical medicine and offering financial support
- Hosting domestic and overseas academic symposia and delivering presentations of research results sponsored by the Institute
- Publishing journals, newsletters, and medical education materials
- Nurturing competent researchers, offering them chances to study abroad, and supporting discussion sessions
- Providing high-tech equipment for various analysis activities

### 47. Yi Sunshin Marine Culture Research Center

Phone: +82-61-659-6580(Director), 6583(office) URL: http://ymcri.jnu.ac.kr/

The Yi Sunshin Marine Culture Research Center was established in July 2007, after the 2006 merger between Chonnam National University and Yeosu University, to contribute to the distribution of marine culture and its development through comprehensive research on marine culture.

The center will comprehensively and systematically study the marine culture of the Jeolla region, East Asia and the world to transform it into a cultural and spiritual asset, utilizing it as a foundation of creating new culture.

The center will firmly establish the position of Chonnam National University as a leading school in East Asian and global marine culture research and support the success and legacy of the Expo Yeosu 2012 academically.

For the above purpose, the research center conducts comprehensive research on marine culture, collecting research data, publishing academic magazines including the Marine Culture Research, or Marine Culture Studies, holding academic conferences and exchanges in various ways including ideas and human resources with domestic and international research organizations and societies.

## 48. Artificial Intelligence Convergence Research Institute

Phone: +82-62-530-0430 URL: http://aicri.jnu.ac.kr

The Artificial Intelligence Convergence Research Institute(AICRI) was established in January 2019, and has 17 AI expert professors from the Engineering College, Natural Science College, and Medical College, including the Director Prof. Hyung-Jeong Yang. This Institute tries to apply AI and machine learning technologies to various applications, such as medical, healthcare, finance, automobile, military, mass

production, electronic marketing, agriculture, arts, entertainment, energy, legal application, and so on, with the purpose of leading a nationwide 4th industrial revolution. In addition, this Institute focuses on the development of multi-modal AI technologies which combining visual, speech, linguistic, and emotional intelligences, education of AI convergence experts, establishing domestic as well as international cooperative networks among AI convergence experts, and hosting several leading research centers.

### 49. Research Institute for Humanities

Phone: +82-62-530-3119 URL: http://ioh.jnu.ac.kr

This Institute aims to contribute to the humanities locally and globally through interdisciplinary research and joint research on humanities. In particular, the Institute carries out the following tasks in order to review current studies of humanities and to plan ways of practicing and applying research results.

- Building up and intensifying interdisciplinary and convergence research.
- Leading future humanities after the 4th industrial revolution.
- Training humanities experts and extending the outcomes.
- Creating and fulfilling models of the popularization of humanities.

# 50. Institute of Humanities

Phone: +82-62-530-5218 URL: http://jnuinmun.org

The Institute of Humanities was founded in 2017 as a consortium of five research institutions (Research Institute for Humanities, Research Center for History and Culture, Korean Language and Literature Studies Institute, the British/American Studies Institute, Center for Philosophical Studies). Through the inter-disciplinary and muti-disciplinary collaboration, it systematically explores and develops urgent and pressing agendas and seeks to engage in open, informed and nonpartisan dialogues on historically relevant issues.

The Institute has been selected by the National Research Foundation of Korea to be included as part of the National Strategies Research in Humanities Korea (HK+). Accordingly, the Institute has initiated a 7-year research project with the agenda, "Family-Community Humanities for the Integration and Communications in the Trans-Individual Era", funded by the National Research Foundation of Korea. During the first 3-year period (2018~2020), the Institute published various books including *The Re-signification of the Family and the Challenges of the Community, What is Community Studies?*, Family Humanities: Who Am I Going To Live With?, Family-Community Humanities Index Research, and Analytical Report of Comprehensive Regional Family Satisfaction Index. For the second 4-year period (2021~2024), the Institute will expand and deepen its research project.

In the face of the increasing disintegration of traditional communities including family and local community, and of unprecedented upsurge of individualism, the Institute focuses on diagnosing and analyzing the ground-changing transformation and tries to develop humanities discourses that have explanatory power as well as the capacity to entail ethical and political practice. Specifically, it imagines coming communities in the age of the 4th industrial revolution, investigates possibilities of new family forms that embrace

multi-cultural determinations, and tries to suggest specific family-community policies that the state can utilize to resolve various family-related social problems. It ultimately aims to propose family-community discourses in Humanities that will suggest a new way of thinking politics on the level of State and also on the level of everyday life.

The Institute, while enhancing collaborative research among multiple disciplines along with Research Institute for Human Ecology and the Big Data Center, mediates theory and practice to re-vitalize Humanities Studies. Its visions and mottos are:

- to accumulate and systematize inter-disciplinary and muti-disciplinary collaboration
- to explore agendas that are relevant to the current Korean society and develop discourses accordingly
- to nurture Humanities scholars and to disseminate research achievements
- to develop and implement Humanities programs for general public

# 51. Research Center for Japanese Studies

Phone: +82-62-530-3288 URL: http://jjss.jnu.ac.kr/

The goal of the Research Center for Japanese Studies is to develop Japanese studies in Korea, to contribute to a greater understanding between Korea and Japan, and initiate cultural exchanges. It also strives to develop the local community at the same time by building a database of Japanese studies and conducting comprehensive and systematic studies on Japan in terms of language, culture, folklore, history, politics, economics, and society.

To achieve this goal, the Center plans to host domestic and international academic conferences, publish academic journals, collect research material, and perform an increasing amount of exchanges on this topic with domestic and foreign universities and academic institutes.

### 52. Automobile Research Center

Phone: +82-62-530-1980 URL: http://motors.jnu.ac.kr

The Automobile Research Center(ARC) was established in 1995, fueling the research of advanced automobile technologies, building an automobile infrastructure, and promoting collaboration between industry and academia in automobile research. ARC is carrying out the following actions as of below

- Holding International Conference on Advanced Automotive Technology(ICAT)
- Promoting collaboration with industry, academia in automobile research, research institute and regional government
- Supporting technical items for automobile related industries
- Revitalizing research in automotive technology related to industry
- Development of policy issues for specialized automotive technology
- Publishing the Journal of Machinery & Automobile Research and technical information service

# 53. Information Technology Research Institute

Phone: +82-61-659-7434 URL: http://isrc.chonnam.ac.kr

The Information Technology Research Institute was established to manage research projects in the fields of information technology and related comprehensive research toward qualitative improvement and development of information technology. The main objective of the Institute is to oversee organization and operation of research in information technology.

Among the Institute's major activities are:

- Data collection and analysis of information technology
- Research on applications of information technology, technology development, and education
- Commissioning research on applied information technology and joint research of industry and academia
- Policy research for consulting information technology
- Lectures, presentations of research findings, academic seminars
- Publication of research reports and papers

# 54. Information Technology Research Institute

Phone: +82-61-659-1796

The Information Technology Research Institute was established to manage research projects in the fields of information technology and related comprehensive research toward qualitative improvement and development of information technology. The main objective of the Institute is to oversee organization and operation of research in information technology.

Institute's major activities

- Data collection and analysis of information technology
- Research on applications of information technology, technology development, and education
- Commissioning research on applied information technology and joint research of industry and academia
- Policy research for consulting information technology
- Lectures, presentations of research findings, academic seminars
- Publication of research reports and papers

### 55. Gender Research Institute

Phone: +82-62-530-2615 URL: https://women.jnu.ac.kr/women/index.do

The Institute of Women's Studies aims to bring about ways to prompt gender equality, to develop potential female talent, and to improve women's social status. To achieve these goals, it has conducted studies and activities to increase the role of women in the society since its establishment in 2000.

In terms of gender-related study, the Institute holds regular academic conferences and discussion sessions, and conducts interdisciplinary joint research projects, thereby creating chances for domestic and foreign scholars to exchange information and thoughts and broadening their academic horizons. In the local community, the Institute collects data on the current situation of female rights in this region and provides programs

that can enhance the ability and possibility to work in cooperation with the Gwangju Metropolitan Government, women's rights organizations, and the Ministry of Gender Equality and Family. In addition, it also hosts leadership camps targeting CNU female students to nurture them into leaders for future generations, and an employment-enhancing program for women.

# 56. Institute for Religion and Culture

Phone: +82-62-530-3910 URL: http://www.rcicnu.jnu.ac.kr/

The Institute for Religion and Culture conducts research and studies on primitive religions, historical religions, new-emerging religions, Asian and Western religions, and the cultural phenomena accompanying the rises and falls of these religions using research methods in the colleges of humanities and social studies. Through these activities, the Institute expects to contribute to the development of these fields of study, and increase the exchanges and understanding among people, religions, and cultures.

To this end, the Institute publishes academic journals, and holds academic seminars and conferences on a regular basis. Through cooperation and exchanges with research centers at home and abroad, it pursues the evolution of studies of religion and culture.

# 57. Center for Regional Development

Phone: +82-62-530-1428 URL: http://crd.chonnam.ac.kr/

The Center for Regional Development (CRD) was founded in May 1968 as a policy research institute and based at Chonnam National University in Gwangju. It has since played a leading role as a research center for regional development in Southwestern Korea. It focuses on solving general issues of the local region through research and analysis of the local economy, society, city planning, environment, and transportation.

Through comprehensive research and analysis of the current economy, society, city planning, environment, and transportation, the Institute strives to solve related issues through the suggestion of a regional development model.

It has published its research results in the form of reports, press releases, web-site access, bulletins, and a semi-annual research journal, Studies in Regional Development, generating a steady series of books and reports on special topics. In step with globalization, it hosts an international academic conference in cooperation with Fudan University in China, Saga University in Japan, and Kasetsart University in Thailand.

The institute is making greater efforts along with businesses and public organizations to nurture development in Gwangju and the Jeonnam region. It aims to become a central institute linking industry and academia in this region.

# 58. Research Institute for Creativity Education

Phone: +82-62-530-3905

This research institute was established in 2019 to take a leading role in researching and spreading science creativity, fostering the competent truth-seekers in the field and serving the local community. The institute aims to actively respond to the diverse needs of the local community and the university

by researching, developing, and implementing talent development programs based on the experience and expertise of the Science Education Institute for the Gifted.

Accordingly, research and development of programs for STEM+I Class (2020~present), Creative Design Camp (2020-2021), and Science and Engineering Career Camp for talented (2021) are being carried out, contributing to nurturing local communities and creative talents.

- Development and research of creativity education/gifted education/science museum education programs
- Selection and education of students gifted in science
- Training and support in creativity education for professionals

# 59. Center for Philosophical Studies

Phone: +82 - 62 - 530 - 3291 URL: http://sophia.jnu.ac.kr/

The Center focuses on maximizing the efficiency of the study of philosophy by conducting systematic, professional, and comprehensive studies of Asian and Western philosophical thoughts. Also the Center has a will to strengthen and expand its educational functions by running post-doctoral support programs, developing philosophy education content and programs, offering open lectures, setting up philosophy camps for local residents. By deepening academic level of study and working for the popularization of philosophy at the same time, the Center aims to contribute acceptable norms in modern society and normal and create future cultural trends.

- Studying on Asian and Western philosophical thoughts systematically, professionally and comprehensively
- Considering of interdisciplinary approach between humanities & social sciences and natural sciences
- Running research-supporting programs for future generations
- Developing educational philosophy education content and conducting programs for a wider audience

### 60. Research Institute for Catalysis

Phone: +82-62-530-1769

This Institute was established in December 1977 under the presidential decree 8841 as an affiliated research center to the College of Engineering. In December 1982, it changed its name to the Catalysis Research Institute under the presidential decree 11018. Since then, the Institute has studied general technologies related to catalysis.

The Institute has contributed to the development of industry and the promotion of knowledge by conducting research, hosting conferences, and by publishing journals.

In 2007, the institute was chosen as by Priority Research Centers Program through the National Research Foundation of Korea to carry out "Clean Energy Catalyst Development Project for Next Generation" and successfully undertook three stages of project on development and process of eco-friendly catalyst for 9 years.

- Developing functional catalysis for clean energy
- Developing clean energy manufacturing process using photons
- Developing nano-based clean energy manufacturing process

Based on the research achievement obtained from Priority Research Centers Program through the National Research Foundation of Korea, we have carry out research collaborations with local governments and many companies to solve environmental issues, such as;

- Development and fabrication process of fuel oil catalyst from daily wastes
- Development of concrete pavements block with photocatalyst and evaluation of its performance for removal of nitrogen oxides
- Development of photocatalyst paint and monitoring reduction of nitrogen oxides at sites
- Development and evaluation of customized photocatalyst products requested by companies

### 61. Dental Science Research Institute

Phone: +82-62-530-4800 URL: http://dsri.chonnam.ac.kr

The Dental Science Research Institute was established in 1992, aiming to create leading, world-class research in dental sciences. The researchers of the institute are made up of professors of Chonnam National University Dental School and other personnel. They are actively conducting diverse research with funding from both the government and industry. It also contributes to the development of dental sciences by publishing a dental journal, providing continuing education programs, and holding academic meetings. Moreover, the institute awards prizes to outstanding researchers and supports its staff in many other positive, motivating ways.

# 62. Institute of Environmentally-Friendly Agriculture

Phone: +82-62-530-0397 URL: http://iefa.jnuac.kr/

The Institute of Environmentally-Friendly Agriculture is a premier institute that develops environmentally-friendly agro-materials which can be used as effective and safe crop protectants, and educate organic farmers to use the developed products and technology for sustainable food and agricultural systems.

The Institute was established in 2011 in response to requests by Jeollanamdo and Ministry of Agriculture, Food, and Fishery and supporters to provide science-based on information to Korea's existing organic farmers and to newcomers to organic agricultural production. The institute consists of Chonnam National University Professors and Scientists, Jennam farmers, and five agricultural companies which relate to develop and commercialize materials and technology of CNU scientists. This interdisciplinary team works together to develop research related to plant pest control by environmentally-friendly means, and the invented materials and technology are transferred to industrials and are used to train organic farmers and students. The ultimate goal of the institute is to enhance the vitality of organic agriculture using the developed cost and efficiency effective means and technology in Korea.

### 63. Institute of French Cultural & Regional Studies

Phone: +82 (062) 530-3190

The purpose of the institute is to promote multi-disciplinary and scholarly research and education about Francophone countries including France, their cultures, language, politics, economies, and society. The institute was founded by the necessity of research on French cultural and regional studies which can be a part of the sustainable growth engine of Korea in the 21st century.

The institute would like to play a major role in crossing forging links between France with Quebec, Belgium, Switzerland, and African francophone countries. To achieve this goal, we have the following major business plans.

Major projects of the institute include:

- Publication of journals
- Organizing and sponsoring academic conferences
- Published Francophone books
- Exchange with domestic and foreign institutes and organizations
- Development of a French Regional Studies education program
- Construction of a Digital archiving system

# 64. Student Independence Movement Institute

Phone: +82-62-530-0610

Efforts to establish the Korean independence movement in the recorded history of world independence movements are desperately needed through specialized research institutes for intellectual understanding of modern social movements in the Asian region, centering on the student movement. This research institute aims to lead detailed and in-depth research on the past and present of student independence movements in various places before and after the Gwangju Student Independence Movement, especially at home and abroad under Japanese colonial rule. In addition, it aims to contribute to the development of talent and academic development that will lead the future of the nation by revealing the situation and specificity of the student independence movement in the context of world history.

The main activities as follows:

- The development and implementation of interdisciplinary cooperative research projects for student independence and student civil rights movements
- Academic events related to student independence and national movements
- Development of historical records and cultural contents related to the student independence movement
- Academic exchanges with domestic and foreign student independence movement education and research institutes
- Collection, compilation, and publication of research materials related to the student independence movement
- · Other projects deemed necessary in relation to the purpose of establishment of the research institute

### 65. Korea Cardiovascular Stent Research Institute

Phone: +82-61-392-6243 URL: http://koreastent.com/

Since its inception in April 2010, the Korea Cardiovascular Stent Research Institute has been making

ceaseless efforts to be the best in the world, in the same vein as a heart that works ceaselessly. Cardiovascular disease is the leading cause of death in the world and the cardiovascular stent tops the list of imported medical devices in Korea.

In order to meet the growing demand, our institute has developed a novel coronary stent for the first time in Korea, validated its safety and efficacy through a large number of bench and animal experiments, and published the related technologies in many domestic and international papers.

The Korea Cardiovascular Stent Research Institute will make its best endeavors to develop new technologies and product innovations and to contribute to the advancement of biotechnology by promoting domestic and international research networking as well as collaboration.

# 66. Korean Language and Literature Studies Institute

Phone: +82-62-530-3299 URL: http://eomun.jnuac.kr

The Korean Language and Literature Studies Institute is composed of professors and researchers from the Department of Korean Language and Literature at in the College of Humanities and the Department of Korean Education at the College of Education. Through its extensive academic researches on both Korean language and literature, the institute aims to foster human resources required by the contemporary knowledge-based society, share and spread the research results, and ultimately contribute to the development of Korean language and literature. The institute also aims to contribute to the development of Korean language education by combining education and research activities to improve Korean language skills. The main activities are as follows:

- Operation of a comprehensive research program on Korean language and literature
- Support various academic research on Korean language and literature
- Research on Korean language and literature education and the operation of related programs
- Facilitate joint research and cooperative exchanges with other disciplines
- Operation of research support programs for the next generation in the discipline

In addition, the institute has continued to organize domestic and international academic conferences in cooperation with related academic societies and research institutes, plan and publish of research collections, including the publication of the Journal of EOMUNNONCHONG.

## 67. Experimental Center for Coastal & Harbor Engineering (ECCHE)

Phone +82-61-659-6957 URL: https://www.koced.or.kr/facility/sub61

# 1. Purpose

- Laboratory facilities equipped with the naiton's largest coastal harbor test centers
- Marine renewable energy(offshore wind, wave power, tidal power, etc.): regarding the construction and design of facilities; also cooperation between academia and industry
- International scale workshops, seminars and graduate students and researchers in the study of high-quality human resource straining tailored industry

- International coastal harbor engineering
- Local industrial development and sustainable coastal environment

### 2. Research areas and features

- 1) Coastal & harbor structures, develop a disaster mitigation and disaster response
  - New types of coastal & harbor structures
  - Stability of coastal & harbor structures
  - Establish disaster reduction technologies and measures derived measures, etc.
- 2) Wave test
  - Spread of wave variants
  - Agitation within harbors
  - Wave structure interaction evaluation
  - Evaluation of hydraulic characteristics of harbor structures
  - Nearshore currents
- 3) Sediment experiments
  - Beach modification
  - Establishment of coastal erosion measures
- 4) Ocean energy
  - Tidal power
  - Wave power
  - Offshore wind farms
- 5) Fisheries experimental facility test
  - Cultural stability testing and artificial reefs

# 68. Smart City Institute

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Phone: +82-61-659-6916, Fax: +82-61-659-6917
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The Research Institute of Ocean Civil Engineering Technology aims to advance engineering technologies regarding regional development, disaster prevention, and construction safety by conducting research and education projects on issues related to the ocean civil engineering industry. Major activities of the Institute include (1) data collection and analysis for the leading technologies in the construction industry, (2) conducting research and education projects for the construction technology, (3) providing technical consultation for the revitalization of the local and national construction industry, (4) hosting of lectures, presentation of research findings, seminars, and (5) publication of research reports and papers.

## 69. Overseas Resource Development Research Center

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Phone: +82-62-530-1720 Homepage: http://oversee.jnu.ac.kr
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Countries of the world have already entered the never-ending competition to secure natural resources. Natural resource exporting countries in South America, Southeast Asia, and Africa are raising their prices through resource nationalism while newly industrialized countries such as China and India are practically becoming black holes of resources. This leads to predictions that the competition among countries to win resources will become fiercer.

Korea depends on imports for 97% of its natural resources and cannot pull back anymore when it comes to securing natural resources.

With the current economic structure, which focuses on exporting manufactured products, price increases in materials are having a much greater impact on Korean than some other countries. This is why the development of overseas natural resources is important.

The center was established for the following reasons: to research and develop related technologies that enable Korea to compete with leading countries, to engage in resource exploring, and develop technology that can be commercialized through joint research with related companies. Through these courses, the center also trains graduate students and those from the industry.

# 70. Research Center for Healthcare Convergence Technology

Phone: +82-61-659-7360

The Research Center for Healthcare and Biomedical Engineering at Chonnam National University has been established to promote the biomedical breakthrough and public healthcare enhancement through education, research, and collaboration with Industry and Academia. We are committed to integrating multidisciplinary technologies to develop innovative biomedical technologies and further ensure national technological competitiveness in extensive biomedical research. To accomplish this, the center currently consists of three major research divisions:

- Research division for Biomaterials: The division aims to provide solid research results for the delivery of high-quality medical care for animals and humans. Research interests include biocompatible materials, health-related functional food, natural cosmetics, natural antibiotics, and intelligent drug delivery systems.
- Research division for digital healthcare-wellness: The division aims to develop cutting-edge medical/health care systems for ultimately providing a better quality of life. Research interests include Big data analytics,
   Data-driven medicine, Mobile healthcare, Population health management, and Smart hospitals for future personalized medicine by creating, managing, and analyzing various vital data of life information.
- Research division for medical equipment: The division aims to develop innovative diagnostic and therapeutic technologies for early diagnosis, real-time monitoring, and target-therapy in various incurable diseases in a personalized Medicare system. Research interests include in-vivo and in-vitro medical equipment, morphological/functional/molecular imaging modalities, wearable medical devices, and point-of-care systems.

### 71. Honam Buddhism Culture Research Center

Phone: +82-62-530-3235 URL: https://www.kbpf.org/134938/134938/

The Honam Buddhism Culture Research Center was established to enable experts to conduct research

and share their results with the general public.

The following are the projects being conducted by the center:

- Discovering and Organizing Buddhist Cultural Assets
- Research on Buddhism
- Lectures on Buddhism for the general public
- Holding of conferences

## 72. Institute of Honam Studies

Phone: +82-62-530-2710 Homepage: http://www.homun.or.kr

The Institute of Honam Studies was formed as a result of the merger of the former Honam Culture Research Center and the Honam Studies Research Group. The former was established in 1963 to study traditional Korean culture from a local point of view and the latter was established in 2005 for the purpose of searching through the abundant history and culture of the Jeolla region. The merger has allowed for a transformation of cultural content that successfully utilizes both centers.

Academically, the research institute has worked to uncover the issues on Korean culture that are worth discussing in an academic manner. In a practical way, it developed Korean culture to become content that can be communicated to the international population. By doing so, the Institute of Honam Studies has become a comprehensive research center, positioning itself as one of the main humanities research institutes at Chonnam National University. Along with research, the center is active in publishing its work, which includes more than 72 editions of 'The Journal of Honam Studies' Series.

The Journal of Honam Studies, an academic magazine, is published biannually. The magazine was selected as a candidate to be registered in the Korea Research Foundation's list in 2006.

The center's current research on the sensibility of Honam, and in a wider perspective, of Korea under the name of Establishment of Korean Sensibility as an International Communication Code was selected by the National Research Foundation's Humanity Korea Support Project 2008.

Furthermore, the Institute of Honam Studies was selected for the 'Humanities Korea Plus (HK+) Project' in 2018, the project is being carried out under the agenda of 'Emotion-Humanities for Transversal Universality in the Age of Decentralization: Place, Medium, and Narrative.'

In 2020, the Institute of Honam Studies established a graduate school department of Honam Studies to serve as an educational institution specializing in regional studies.

2023 marks the 60th anniversary of the establishment of the Institute of Honam Studies.

The Institute of Honam Studies is seeking fundamental innovation and transformation of regional studies research methodology under the theme of "Honam Studies that encompasses the region and the world, tradition and modernity."

In addition, with the goal of "Globalization of Honam studies" for the next 60 years, we are working hard to create new theories and horizons for Honam studies based on the vast amount of data and achievements accumulated so far.

The following are the research and academic activities of the center:

- Research in traditional Korean culture focusing on the Honam Area
- Research of arts and culture policies and comparative culture
- Data gathering
- Publishing of research papers and journalistic series
- Holding announcements on research and conferences
- Concentrating research capacity
- Fortifying the ability to publish research results
- Increasing educational activities on Korean studies and the spreading of Honam culture
- Uploading gathered data into a digitized database (creation of a center homepage and installation of a Honam Area Studies repository)
- Conducting research supported by the National Research Foundation's Humanities Korea Project

# 73. May 18 Institute

Phone: +82-62-530-3916 URL: http://cnu518.jnu.ac.kr/

In order to further explore the consequences and significance of the 5.18 Democratic Movement and to contribute to the evolution of democracy and the general improvement of human rights in Korea, the May 18<sup>th</sup>Institute has continued to carry out the following activities since its establishment on December 10<sup>th</sup> 1996:

- The research of material and documents related to the 5.18 Movement
- Publishing and advertising research results, as well as presenting them to the public
- Offering information on the 5·18 Movement to foreign countries as well as to the general public in Korea
- The study and application of ideologies on democracy, human rights, and peace

Every May, the Institute hosts large-scale domestic and overseas academic conferences, publishes research & thesis collections, creates an anthology, and produces brochures on the 5·18 Movement in Gwangju. To support these activities, the Institute strives to emphasize democratic values. The Institute's journal, *Democracy and Human Rights*, issued quarterly, has been designated as one of the Korea Research Foundation's Registration Journals, giving it the status of a nationally acclaimed periodical. In the future, the Institute will operate various educational programs on democracy and human rights, and establish a database of materials pertaining to the 5·18 Movement. It seeks ways to become a democratic human rights and peace center in Asia through vigorous exchanges and cooperation with research institutes both at home and abroad.

# 74. Fishery Resource Mangement Research Center Based on ICT

Phone: +82-61-659-6920 URL: http://fmrc.jnu.ac.kr/

The purpose of this institute is to provide systematic educational services for field research and basic research for sustainable fishery resource management, for the development and education of comprehensive fishery resource management technology including technology closely related to 4th industrial revolution, and for the training of fishery resource management experts. For this purpose, the institute carries out the following projects:

■ Development and operation of educational curricula and contents

- Core technology research and field application service development
- Fostering fishery experts
- Support and management of the "Professional Manpower Certification System"
- Conducting industry-university-academy-public agency cooperative projects
- Other tasks that meet the purpose of the research institute

# VII. Graduate Schools

Nursing

\_\_Contact Information

Phone: +82-62-530-4939 Fax: +82-62-220-4544 E-mail: a1045@jnu.ac.kr URL: http://nursing.jnu.ac.kr/

# Graduate Studies in Nursing

The goals of the graduate program in Nursing are:

- To empower students to conduct nursing research for the purpose of generating and testing nursing knowledge.
- 2. To acquire professional nursing knowledge and skills, and to develop problem-solving competency in practice.
- 3. To demonstrate leadership roles appropriate for nursing and the healthcare system in general.
- 4. To prepare for expanding nursing roles contributing to the health of human beings.

# **■** Degree Requirements

- Master of Science degree candidates must complete 3 core courses (9 credits) and five electives (15 credits). To be awarded the degree, all students must pass a qualifying exam and a foreign language exam prior to submitting a thesis. Students must deliver a presentation, successfully complete a defense, and provide all required documents to the thesis committee.
- PhD candidates must complete 6 core courses (18 credits) and 6 electives (18 credits). To be awarded
  the degree, all students must pass a qualifying exam and a foreign language exam before submitting
  a dissertation. Students must deliver a presentation, successfully complete a defense, and provide all
  required documents to the dissertation committee.

# ■ What Do You Study?

### **Core Courses**

■ Master of Science Program Nursing Theory (3) Nursing Research (3)

Health Statistics (3)

■ PhD Program
Nursing Science (3)

Nursing Theory Development (3) Quantitative Research 1 (3) Qualitative Research in Nursing (3) Quantitative Research 2 (3) Nursing Research Seminar (3)

### **Elective Courses**

Family Nursing and Family Therapy (3)

Concept Development in Nursing (3)

Trauma and Healthcare (3)

Analysis for Nursing Research (3)

Nursing Profession (3)

Organizational Management in Nursing (3)

Development of Nursing Interventions (3)

Philosophy of Nursing Science (3)

Methodology and Application in Evidence-based

Nursing (3)

Seminar for Older People's Health Problem (3)

Nursing for patients with chronic diseases (3)

Advanced Health Assesment (3)

Bioethics and Nursing Issue (3)

Seminars in Stress & Symptom Management (3)

Faculty Development (3)

Theory of Human Behavior (3)

Biophysiological measurement and evaluation (3)

Clinical Physiology (3)

Process of Decision Making in Clinical Nursing(3)

Advanced Nursing Administration and Practice (3)

Advanced Adult Nursing and Practice (3)

Advanced Child Health Nursing and Practice (3)

Advanced Women's Health Nursing and Practice (3)

Advanced Community Health Nursing and Practice (3)

Advanced Community Mental Health Nursing and

Practice (3)

Health Related Theory (3)

Advanced Health Statistics (3)

Nursing Policy (3)

Scale Development and Psychometric Evaluation (3)

Methodology in Nursing Education (3)

Nursing Leadership Development (3)

Clinical nursing informatics seminar (3)

Qualitative Research Seminar (3)

Nursing and Technology (3)

Experience-Based Nursing Service Design (3)

Social inequality and health equity (3)

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#### Laboratories

- Center for Supporting Field-Specific Technology
- Center for Evidence-Based Nursing Education & Research
- CARE Center
- Center for Mental Health Promotion
- Center for Multicultural Family Health Promotion

# Department of Business Administration

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#### **■** Graduate Studies in Business Administration

The goal of the Business Administration Graduate Studies Program is to train students to be business professionals with both leadership and managerial capabilities. We provide advanced theories and techniques of management applicable to all management environments. Consequently, we not only teach students the general theories and techniques of management but also endeavor to cultivate the skills needed to solve crucial practical problems in business. The topics covered include Human Resource Management and Organizational Behavior, Marketing, Financial Management, Production and Operations Management, and Management Information Systems.

# **■** Degree Requirements

- Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.
- Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to publish an article in a journal listed in National Research Foundation of Korea as a first author, also have to present a related paper at an Academic conference, pass a comprehensive exam and a foreign language exam as well as submit a thesis.

# ■ What Do You Study?

Advanced Industrial Relations (3)

Advanced Statistics (3)

Advanced Study on Regional Corporate Strategies (3)

Advanced Study on Strategic Management (3)

Advertising Promotion (3)

Asset Pricing Theory (3)

Business Innovation and Change Management (3)

Channel Management (3)

Consumer Behavior (3)

Consumer Behavior Seminar (3)

Customer Relationship Management (3)

Decision Science (3)

Derivatives (3)

E-Business Management (3)

E-Business Project (3)

E-Business Research Methodology (3)

E-Business Strategy (3)

Empirical Research in Corporate Finance (3)

Empirical Research in Financial Institutions (3)

Empirical Research in Investments (3)

Environmental Management: Theory and Practice (3)

Environment · Climatic Change and business

Management (3)

Financial Econometrics (3)

Fixed income Securities (3) Organizations and Interpersonal Relationships (3) Global Operations Management (3) Pricing Management (3) Human Resources Development (3) Human Resources Management (3) Information Policy and Evaluation (3) Information Technology and Management Innovation (3) Information Technology Management (3) Intelligence Information Systems (3) Intermediate Business Statistics (3) Internet Marketing (3) Leadership and Motivation Theory (3) Service Marketing (3) Management Information System (3) Service Operations Management (3) Management Innovation Case Study (3) Service Science (3) Management of Financial Institutions (3) Management of Technology (3) Societal Marketing (3) Management Theories on Corporate Social Responsibility (3) Manufacturing Strategy (3) Marketing Research (3) Marketing Seminar (3) Marketing Strategy and Planning (3) Studies in Investments (3) Marketing Theory (3) Merchandise planning and brand management (3) Multimedia Applications Study (3) Operations Management: Special Topics (3) Optimization Theory (3) Organizational Behavior and Theory (3) Organization Change and Development (3) Finance (3)

# Professors

Organization Theory (3)

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• Min-Jung Kim, Ph.D. [Professor, Human Resource Management and Production Innovation Theories and Practices (3) Production planning and control (3) Research Methods in Business Administration (3) Research Methods in Organizational Behavior (3) Retailing Management (3) Seminar of Management Information System (3) Seminar in Organization Theory (3) Seminar I in Organizational Behavior (3) Seminar II in Organizational Behavior (3)

Simulation and Application (3)

Solution Applications and Programming (3) Special Topics in Corporate Finance (3)

Special Topics in Human Resources? Management (3)

Special Topics in Industrial Relation (3)

Strategic Quality Management (3)

Structured Finance and Securitization (3)

Studies in Organizational Culture (3)

Supply Chain Management (3)

System Development Methodology (3)

Technology and Innovation Study (3)

Theoretic Approach to the Theory of Corporate

Theory of Corporate Finance (3)

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# Department of Economics

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#### ■ Graduate Studies in Economics

The Major of Economics places great value on practical applications of economic theories and strives to provide market economy-oriented education. The instructional focus is on cultivating the students' problem-solving skills in an effort to better prepare them for the 21st century. In the Economics major track, courses are offered to develop the students' ability to understand and analyze a wide variety of economic phenomena.

# **■** Degree Requirements

- Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.
- Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

# ■ What Do You Study?

Game Theory (3)

Economic Development (3)

Economic History (3)

Economic Philosophy (3)

Mathematics for Economists (3)

History of Economic Thoughts (3)

Econometrics (3)

Advanced Microeconomic (3)

International Finance (3)

Labor Economics (3)

Industrial Organization (3)

Mathematical Economics (3)

Regional Economy Analysis (3)

Macroeconomy Analysis (3)

International Economy Analysis (3)

Microeconomy Analysis (3)

Advanced Macroeconomics (3)

Seminar on Political Economy (3)

Seminar on Industrial Organization (3)

International Trade (3)

Seminar on International Economics (3)

Financial Economics (3)

Seminar on Monetary Theory (3)

Analysis of Industrial Relations (3)

Seminar on Labor Economics (3)

Seminar on Public Economics (3)

Semma on Tuone Economics

Law and Economics (3)

Seminar on History of Economic Thoughts (3)

Political Economy (3)

International Political Economy (3)

Monetary Theory (3)

Public Economics (3)

Economics Seminar (3)

Special Lectures on Economics (3)

Public Economy Analysis (3)
Statistical Method for Economic Analysis (3)
Information, Risk, and Uncertainty (3)
Energy and Resource Economics (3)
Environmental Economics (3)
Microeconomics Seminar (3)
Macroeconomics Seminar (3)
Industrial Economy Analysis (3)

Economics Research (3)
Economics of Taxation (3)
Financial Economy Analysis (3)
Seminar on Resource and Environment (3)
Advanced Econometrics (3)
Seminar on Economic History and Development (3)

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# Department of Regional Development

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# ■ Graduate Studies in Regional Development

The Department of Regional Development aims to provide students with knowledge and skills in the field necessary to cope with trends in globalization, localization, and information technology.

Graduate programs in Regional Development aim to help students gain an understanding of economic theories and their implications on urban planning, regional development, and the environment. The programs guide students' understanding of modern

methods of urban planning that will reduce the gap among different cities and regions, producing regional development experts with thorough theoretical and practical knowledge.

The graduate programs equip students with research ability and teaching skills in the field. The subjects taught in the program comprise theory and methodology, which provide the basic tools necessary in solving the problems in the field of Urban and Regional Development.

# **■** Degree Requirements

- Master's course: Master's degree candidates must earn a minimum of 24 credits.
- Doctoral course: Ph.D. candidates must earn a minimum of 36 credits.
- Students are required to pass both the qualifying examination and the foreign language examination.

# ■ What Do You Study?

Advanced Macroeconomics

Advanced Theory of Economic Development

Advanced Study on Economic Geography

Advanced Study on Planning Laws

Advanced Planning Theory

Planning Statistics

A Study on Spatial Econometrics Analysis

Advanced Public Economics

Advanced Public Investment and Policy

Advanced Transportation Economics

Advanced Study on Transportation Policy

Case Studies on International Development

Advanced National and Regional Planning Theory

Global network and economic geography

Technology innovation and regional development

Seminar On Rural Development Planning

Rural Development Research

Introduction to City and Regional Tourism Development

Advanced City and Regional Tourism Policy

Advanced Urban Development

Advanced Urban Development Policy

Advanced Urban Economics

Special Topics in Urban Economics A Study on Urban Metrology Economics Urban Planning Process Advanced Histroy of Urban Planning Advanced Study on Urban Planning Theory Advanced Urban Management Urban Transportation Planning Advanced Study on Urban & Regional Regeneration A Study on Real Estate Development A Study on Real Estate Econometrics Advanced Study on Real Estate Real Estate Appraisal Project Evaluation Theory Social Economy Advanced Social Economy Industry cluster theories and cases Industry-University-Research Partnership and Intellectual Property Research Advanced Housing Economics

Small and Medium Sized City Development Geographic Information System Advanced Local Public Finance Advanced Regional Development Theory Advanced Regional Development Policy Econometric analysis for regional development Advanced Regional Economic Analysis Seminar in Regional Economic policies Special Topics in Regional Economics Advanced Regional Community Development Theory Regional innovation system and IP management Advanced Community Business Advanced Land Economics Advanced Urban Land Use Planning Introduction to Statistical Analysis and Research Methodology

#### Professors

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Advanced Environmental Planning

SOC and Investment Analysis

 Il-Won Seo, Ph.D.
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# Department of Accounting

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# ■ Graduate Studies in Accounting

The most common aspiration of a graduate in accounting is to pursue a career as a university educator and researcher in the field. Accounting educators teach and conduct research across a wide variety of specializations, including financial reporting, management accounting, auditing, taxation, and accounting information systems.

# **■** Degree Requirements

- At least 24 course units of graduate level credit in Accounting courses are required for the master's degree, and further 60 course units for doctor's degree (including units completed in master course).
- 2) Students have to pass qualifying examination and the foreign language examination.
- Students must fulfill presentation, defense, and document requirements in the department thesis committee.
- 4) A thesis advisor can be any faculty member from the department.

# ■ What Do You Study?

Intermediate Business Statistics (3)

Research for the Master's or Doctoral Degree ( I )

Advanced Business Statistics (3)

Research for the Master's or Doctoral Degree (I)

Financial Accounting Seminar (3)

Managerial Accounting Seminar (3)

Market-based Accounting Research Seminar (3)

Income Determination and Asset Valuation Seminar (3)

Information Economics Seminar in Accounting (3)

Behavioral Research Seminar in Accounting (3)

Advanced Financial Accounting (3)

Financial Statements Analysis & Investment Theory (3)

Advanced Management Accounting (3)

Advanced Tax Accounting (3)

Tax Accounting Seminar (3)

Advanced Accounting Information System (3)

Research Methodology in Accounting (3)

Auditing Seminar (3)

Special Topics in Accounting (3)

Study of Advanced Financial Accounting (3)

Study of Advanced Auditing (3)

Study of Advanced Managerial Accounting (3)

Experimental Research in Accounting (3)

Research Methodology in Tax Accounting (3)

Study of Tax Compliance (3)

Study of Tax Planning & Management (3)

Study of Advanced Accounting Information System (3)

Study of Accounting Disclosur Systemse (3)

Accounting Research Methodology (3)

Accounting Trend (3)

#### Professors

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# Interdisciplinary Program of Digital Future Convergence Service

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#### ■ General Introduction in Digital Future Convergence Service

The Interdisciplinary Program of Digital Future Convergence Service aims to train professionals who can discover and commercialize future-oriented digital services that adapt to rapid changes in hardware (web, mobile, smartphones, etc.), network (client/server environment, web, cloud, edge computing, etc.), service areas (applications, apps, open source, O2O [online to offline] activation), cultural environment (rapid change to online content, real-time video, and "untact" setting) in the field as well as the advent of the era of the fourth industrial revolution and artificial intelligence. The master's and doctoral degree programs in the Interdisciplinary Program of Digital Future Convergence Service set the following goals.

- Continuous educational research on digital business (O2O, sharing economy, platform business)
- Introduction of social sciences of futurology (study to prepare for futures and create desirable futures)
- Attempt to combine social responsibility, appropriate business models, and use of ICT tools for operating an industrial society
- Dealing with social issues (social economy, sharing economy, regional development policy, free e-service, corporate social responsibility, etc.) and future studies (future sociology, sociology of science and technology, etc.)
- Latest global trends in ICT (AI, IoT, Cloud, Bigdata, Blockchain, Digital Twin, Mobile, VR, Robot, etc.)
- Convergence innovation (convergence system, management innovation, etc.)

# **■** Degree Requirements

#### The Master's degree program

For master's degree applicants, requirements include:

- ① Acquisition of 24 credits: Applicants for a master's degree must take 24 credits, including 9 credits from the Interdisciplinary Program of Digital Future Convergence Service. Students can take 9 credits each semester.
- 2 Candidates must pass the comprehensive exam and foreign language test.
- ③ There must be a record of presenting at academic conferences or publishing in academic journals (where the candidate is the author while the advisor professor is the co-author) prior to the submission date of the thesis copy.

All requirements above must be met and the candidate must successfully defend the thesis before a thesis committee in order to graduate.

#### The Doctorate program

For doctoral degree applicants, requirements include

- ① Acquisition of 36 credits: Applicants for a doctoral degree must take these 36 credits, including 15 credits from the Interdisciplinary Program of Digital Future Convergence Service. Students can take 9 credits each semester.
- 2 Candidates must pass the comprehensive exam and foreign language test.
- 3 Before the submission date of the copy of dissertation, the candidate must a publish research paper as the first author in an academic journal registered by the National Research Foundation of Korea or in an international journal and a related paper must be presented at an academic conference.
- All requirements above must be met, and the candidate must successfully defend the thesis before a thesis committee in order to graduate.

# ■ What Do You Study?

Fourth Industrial Revolution and Customer Service

Center

Virtual Reality

Management Information Systems

Customer Relationship Management in Customer

Service Center

Technology Management in Customer Service

Center

Customer Service Center Seminar

Customer Service Center Operations Management

Customer Service Center Organizational

Management

Customer Service Center Projects

Advanced Statistical Data Analysis

Sharing Economy Free E-Services

Sociology of Science and Technology

Special Topics in Global Digital Business

Technical Document Writing

Digital Economy

Digital Convergence Services Technology

Case Studies in Digital Convergence Services

Seminar 1 in Digital Convergence Services

Seminar 2 in Digital Convergence Services

Digital Business and Intellectual Property Rights

Management

Research Methodology in Digital Services

Capstone Design in Digital Services

Digital Twins

Robotics Engineering

Machine Learning Theory and Applications

Multimedia Applications Research

Metaverse

Data Analysis in Cultural Management

Future Sociology

Futurology

Venture Entrepreneurship

Blockchain Applications

Introduction to Big Data

Advanced Big Data Analysis

Internet of Things

Cyber Trade

Social Science Methodology

Special Topics in Social Economy

Service Science

Service Science Seminar

Special Lecture in Software Engineering

Systems Development Methodology

Research Internship 1

Research Internship 2

Research Guidance 1

Research Guidance 2

Research Guidance 3

Web Programming

Understanding Convergent Systems

Introduction to Artificial Intelligence and

Programming

Reliability of Artificial Intelligence

Special Topics in Artificial Intelligence

Internet Security

Special Lectures in E-Commerce Security

Special Topics in Electronic Payment Systems

Information Technology and Management

Innovation

Introduction to Information and Communication

Technology Convergence

Intelligent Information Systems

Sustainable Development Goals (SDGs) and

Management Research

Knowledge Management and Artificial Intelligence

Special Topics in Regional Strategic Industries

Next-Generation Cloud Computing

Project Management

Environmental Management

Introduction to E-Business

E-Business Strategies

IT Service Management

#### **■** Professors

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# Department of Architecture and Civil Engineering

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# ■ Graduate Studies in Architecture and Civil Engineering

Architecture and Civil Engineering is a comprehensive science and engineering field which is combined with natural science, social science, engineering, and art to create spaces for human living. There are three divisions in the Department of Architecture and Civil Engineering: architectural and urban design, architectural engineering, and civil engineering. The graduate program is committed to training researchers and engineers with advanced knowledge of architectural design, urban design and regional planning, building services engineering, structural engineering, geotechnical engineering, transportation, hydraulic and hydrologic engineering, construction engineering and management, environmental engineering.

# **■** Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields. In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree as well as pass one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

#### ■ What Do You Study?

Advanced Value Engineering
Advanced Steel Structures
Construction Network Scheduling( I )

Theory of Architectural Space Architectural Theory Theory of Architectural Form Theory in Architectural Evaluation Seismic Engineering

Analysis of Water Distribution System Fundamental of Acoustical Design

Advanced Transportation Engineering Advanced Construction Production Engineering

Advanced Structural Analysis

Theory of MultiDimensional Consolidation Advanced Construction Productivity Management
Advanced Urban Planning Advanced Construction Management &

Advanced Construction Risk Management

Urban Structure Theory Engineering

Urban Design Theory Sustainable Architecture Design

Theory of Plasticity Methodology of Architectural Research

Principles of Noise Control Soil Dynamics

Water Resource Engineering Research Guidance 1
Numerical Analysis Research Guidance 2
Contunuum Mechanics Research Guidance 3
Finite Element Method Smart Concrete

Advanced Decision Analysis

Urban disaster prevention

Dimensional Analysis

Seismic design theory

Theory of Survey Error Ground improvement theory

Advanced Geodesy Advanced Construction Data Analysis
Advanced Reinforced Concrete Structures Construction Information Technology

Instruction and Measurement for Civil Engineering Advanced Computational Methods in Stuructural Mechanics

Advanced Soil Mechanics Construction Materials
Fracture Mechanics Advanced Drone Surveying

Advanced Pavement Engineering Advanced Road Construction Management
Advanced Theory of Contemporary Architecture Advanced Road.IT Convergence System

Theory of Deformation for Soils Research Training 1

Fundamentals of Acoustics and Noise Control in Building

Research Training 2

Reliability Engineering Architecture & Urban Field study

Environmental Impact Assessment Theory in Architectural Regeneration
Architectural Aesthetics Advanced Architectural Design Studio 1
Structural Dynamicss Advanced Architectural Design Studio 2

Advanced Street and Highway Design Wind-resistant design of structure
Advanced Transportation Planning Theory in Site Planning

Advanced Traffic Operation

Urban regeneration theory

Advanced Traffic Safety

Urban Regeneration Strategies and Technique

Theory of Plasticity for Soils Research Methods in Urban Planning and Design

Advanced Water and Wastewater Engineering Theory in Housing planning
Architectural Criticism Smart City and Building

Water Quality Modelling and Control Studies on Modern Urban Architecture

Structural Control Disaster Impact Assessment

A Higher Rising Building Structure Design Advanced geographic information system

Energy method Advanced site investigation

Design of Geotechnical Structures River Environmental Engineering Advanced Coastal Engineering Disaster Prevention Engineering in Coastal Fields Advanced Probability-Based Design Structure Dynamics Advanced Building Physics and Building Energy Simulation Exergy Analyses for the Built Environment Data-driven Building Energy Technologies Theory of advanced acoustical data process Theory of advanced evaluation of acoustics Design of Renewable Energy Systems Integrated Architectural Design Studio Theory of BIM Design Architectural Presentation Parametric Architecture Digital Fabrication Theory of Elasticity Energy Geostructures High Performance Structural Materials

Introduction to Energy Infrastructure Disaster Management Zero Energy Technologies for the Built Environment Methodology in History of Korean Architecture Seminar in History of Korean Architecture Seminar in History of Asian Architecture Conservation and Utilization of Historical Architecture

Integrated Architectural Design Theory in Digital Architecture Urban Research Methodology Urban Design Studio 1 Urban Design Studio 2

Advanced Safety management Engineering Theories of Urban Cultural Landscape Urban Cultural Landscape Design Workshop

Advanced Hydrodynamics Advanced Hydraulics Coastal Hydraulic Models

Advanced Foundation Engineering

Advanced Remote Sensing

Socio-Cultural Theory of Architectural Space

#### Professors

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#### **Civil Engineering Division**

· Tae-Jun Ha, Ph.D.

Laboratories

#### .... \_..g....g \_..

- Architecture & Housing Design Lab
- Research of Architectural Design
- Architectural Design and Evaluation Lab
- Sustainable Architecture Design Studio
- Urban Design Lab
- Urban Architecture and Regeneration Lab
- Integrated Design Lab
- Architectural history Lab

- [Professor, Highway and Traffic Engineering, tjha@jnu.ac.kr]
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- Construction Engineering & Management Lab
- Concrete Structural System Lab
- Structure Vibration & Control Lab
- Advanced Building Materials Lab
- Architectural & Environment Acoustics Lab
- Construction Informatics Lab
- Building Energy Technology Lab
- Traffic Engineering1 Lab.

- Traffic Engineering2 Lab.
- Geotechnical Engineering Lab.
- Structural Engineering1 Lab.
- Structural Engineering2 Lab.
- Coastal Engineering/Spatial Information
- Engineering Lab.
- Hydraulic Engineering Lab.
- Road Engineering Lab.
- Geo-Innovation Research Laboratory

# Department of Artificial Intelligence Convergence

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# ■ Graduate Studies in Artificial Intelligence Convergence

Artificial Intelligence Convergence deals with various fields, such as artificial intelligence technology, healthcare, computer vision, intelligent robots, emotion recognition, energy security, intelligent software, big data analysis, smart factories, and intelligent networks. Globally, the artificial intelligence convergence industry has been nurtured at the national level as one of the major national industries crucial to the 4th industrial revolution and new technology industry. In line with this, the world's leading universities and global companies are also keen to secure new technologies for artificial intelligence.

Therefore, it is an urgent task to nurture professionals, who will lead the AI convergence industry, through efforts such as development of AI convergence technology knowledge and AI systems that will lead future developments. Accordingly, the Department of Artificial Intelligence Convergence at CNU intends to play a leading role in researching cutting-edge artificial intelligence technology and nurturing future prospects.

#### **■** Degree Requirements

#### Master's Program

Students in the master's degree program must acquire 24 credits, including required courses in the fields of artificial intelligence, AI projects, and healthcare, energy, and mobility studies. Students must pass a foreign language test and qualification exam before applying for a thesis examination for the master's degree.

#### Ph.D. Program

Students in the doctoral program must acquire 36 credits, including required courses in the fields of artificial intelligence, AI convergence, advanced convergence, and healthcare, energy, mobility studies. Students must pass a foreign language test and qualification exam and satisfy the minimum research requirement before they apply for a dissertation examination for the doctoral degree.

#### ■ What Do You Study?

3D Multimedia
Abnormal Detection
Advanced Automatic Speech Recognition

Advanced Big Data Analysis Advanced Computer Vision Advanced Deep Learning Advanced Distributed System

Advanced Information Retrieval

Advanced Natural Language Processing

Advanced Project for AI Convergence

Advanced soft robotics

AI Convergence Field Practice

AI for Medical Imaging

Automatic Speech Recognition

Autonomous Driving Artificial Intelligence

Big Data Analysis Bio-Mechatronics

Computer and Network Security

Computer Vision
Deep Learning

Digital Video Processing

Distributed AI System

Distributed Application System

Distributed Object System Energy Artificial Intelligence

Healthcare Artificial Intelligence

Information Security

Internet Security and Intrusion Detection

IoT Sensor Data Analysis

Machine learning

Natural Language Processing

Principles of Programming Language

Project for AI Convergence

Reinforement Learning

Research Guidance 1

Research Guidance 2

Research Training 1

Research Training 2

Robot Vision

SmartGrid

SmartGrid Data Analysis

Technical Writing

Topic in Intelligent Systems

Topics in Data Mining

Topics in Artificial Intelligence

Topics in Software Engineering

Topics on Web Mining

Types and Programming Languages

Vital Signal Analysis

#### Professors

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#### **■** Laboratories

- Advanced BioMedical Imaging Lab
- Advanced Network Lab
- Augmented & Virtual Reality Lab
- Biomedical Imaging & Engineering Lab
- Computer Vision Lab
- Distributed Network and Systems Lab

- Human-Media Lab
- Pattern Recognition Lab
- Smart Computing Lab
- Software Languages and Systems Lab
- Visual Intelligence Media Lab

# Department of Biotechnology and Bioengineering

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# ■ Graduate Studies in Biotechnology and Bioengineering

Biotechnology and Bioengineering is the field of study that applies the engineering principles to biology, which is a basic science, and is believed to be one of the key disciplines leading the 21<sup>st</sup> century that seeks to contribute to the happiness of mankind by engineering the excellent functions of living organisms. The department of Biotechnology and Bioengineering aims to foster field-oriented engineers with overall problem-solving ability in the field of biotechnology by understanding the basic theories of living organisms and acquiring the ability to design and perform engineering experiments using organisms.

# **■** Degree Requirements

- Students in the master's degree program are required to earn 24 credits to graduate.
- Students in the doctoral program must acquire 36 credits in major courses to graduate.
- · All of students must pass a foreign language exam, a major exam, and a thesis submission for graduation.
- · Applicants from other backgrounds may also apply if they have appropriate qualifications and interests.
- In order to submit a graduation thesis, master's students must have at least one poster (or oral presentation) presentation at a domestic or international conference, and doctoral students must have at least two papers published in a KCI academic journal (or more then one paper in SCI journal)

# **■** What Do You Study?

Advanced Fermentation Technology

Advanced Microbial Biotechnology

Advanced Environmental Biological Engineering

Advanced Bioseparation & Purification

Energy Environmental Engineering
Design and Operation of Bioreactor

Cell Culture Engineering

Special Topics in Enzyme Processes Engineering

Bio Big Data

Advanced Biostatistics

Advanced Topics in Biopharmaceuticals/Biomedicines

Biotechnology and Bioengineering Seminar1

Biotechnology and Bioengineering Seminar2

Biotechnology and Bioengineering Seminar3

Biotechnology and Bioengineering Seminar4

Scientific Writing in Biotechnology and Bioengineering

Advanced Membrane Engineering

Biomass Conversion

Advanced Systems Biology

Research Training 1

Research Training 2

Research Guidance 1

Research Guidance 2

Research Guidance 3

Biosensing engineering

Molecular diagnostics and instruments

Methods in Protein Engineering

Advanced Molecular Bioology & Biochemistry

Advanced Bioresource engineering

Advanced Microbiological Geochemistry

Electrochemistry

Advanced Programming Language

Advanced Soil Microbiology

Advanced Marine Microbial Ecology

Advanced Environmental Microbiology

Advanced Intelligent Biosystems Engineering

Microbial Genetics

Advanced Electrochemistry

Microbial Electrochemical System

Bioinorganic Chemistry

Trends in Bioenergy Technology

Advanced Bioreaction and Engineering

Biomaterials Chemistry 1

Biomaterials Chemistry 2

Advanced Biopolymers

Advanced Cell biology

Enzyme Chemistry

Environmental Microbiology Seminar

Advanced Industrial Microbiology

Cell Technology

Analysis of Microbial Secondary Metabolites

Biochemical Sensor Optical Biosensor

Biofilm Engineering

Analysis of Bioaerosol

Science Illustration in Biotechnology

Programming in Biotechnology

Gene editing technology

Biochemical machine learning

Advanced Gene Recombination

Bioanalysis technology and application Industrial Development in Bioengineering

Synthetic Biology

Application of Omics Technology

Advanced Biopharmaceutical Discovery Process

#### Professors

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• Kibaek Lee, Ph.D.

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#### Laboratories

- Biomolecules Engineering Lab.
- Metabolic Engineering Lab.
- Protein Biochemistry & Engineering Lab.
- Bioprocess Engineering Lab.

- Water & Environmental Biotechnology Lab.
- Applied Microbiology and Biotechnology Lab.
- Diagnosis Sensor & Materials Lab.

# Department of Chemical Engineering

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# **■** Graduate Studies in Chemical Engineering

The Chemical Engineering Graduate Studies Department offers advanced degree programs to prepare its students for research and technical careers in industry, academia, and government. The program strikes a balance between the science of chemical engineering and its implementation, by synthesizing a blend that bases itself upon the fundamentals of the discipline whilst encouraging students to develop the skills to apply these core abilities to solving significant contemporary engineering problems.

#### **■** Degree Requirements

#### Master's Program

The graduate program aims at the instruction of the highest level of academic theory and developing capabilities to perform original research work. Applicants for the master's program should have achieved a good standard in an undergraduate degree course in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Assessment of M.S. students includes a combination of at least 24 credit hours coursework and a thesis based on the research project. These requirements should be fulfilled between two and three years of enrollment.

#### Ph.D. Program

Students who pursue a Doctor of Philosophy degree undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields. The dissertation is examined by at least five committee members. In addition, students are required to take at least 60 credits in coursework including the master's degree, and must pass one foreign language test. Degrees are conferred to those who fulfill the requirements between two and five years of enrollment.

# ■ What Do You Study?

4th Industrial Revolution and ICT convergence textiles
Advanced Transport Phenomena
Advanced Polymer Physics
Advanced Course Of Polymer Chemistry
Process Data Analytics

Advanced Process Modeling Advanced Process Control Advanced Photo-Electronics Opto-Electronics Advanced Photocatalysis Introduction to Machine Learning

Advanced Course of Instrumental Analysis

Functional Polymers

Functional Polymer Materials Functional porous materials

and it is a

Synthesis and processing of nanomaterials

Nano Materials Chemistry Nanocarbon Engineering

Display Engineering

Advanced Membrane Separation Process and Engineering

Physics-based Impedance Spectroscopy Selected Topics in Material Patents

Advanced Biophotonics

Thin Film Fabrication Process

Semiconductor Materials and Processing

Advanced Chemical Reaction Engineering

Reactor Modeling

Advanced Separation Process

Seminar on Engineering for Research & Industrial

Application

Advanced Bioprocess Engineering

Advanced Bioanalysis

Advanced Biochemical Engineering

Bioinspired Engineering Biochemical Sensors

Smart Advanced Process Design

Adv. System Engineering System Engineering New Energy Technology Intro to Sustainable Energy Renewable energy and IP

Advanced Quantum Mechanics

Advanced Energy Engineering

Energy Materials Engineering Advanced material analysis for IP

Energy Policy Development Seminar on Research Topics 1

Seminar on Research Topics 2

Research Training 1
Research Training 2

Research Guidance 1

Research Guidance 2

Research Guidance 3

Fuel Cell Technology

Advanced Combustion Engineering

Advanced Organic Synthesis
Advanced Organic Chemistry

Release Reduction Technology of Toxics

Industry Field Placement 1
Industry Field Placement 2

Internship

Electrochemical Energy Conversion and Storage:

Fundamentals, Materials and Applications

Advanced Electrochemistry Advanced Battery Materials

Special theory of Quantitative Risk analysis Advanced Manufacturing of Smart Materials

Advanced Clean Technology

Advanced Catalysis Design Chemistry

Advanced Catalysis Capston Design

Materials for Solar Cell Technical Writing 1

Advanced Chemical Engineering Design

Advanced Numerical Analysis in Chemical Engineering

Advanced Chemical Safety Engineering

Advanced Chemical Engineering Thermodynamic Advanced Chemical Process Optimization

Chemical Engineering Seminar

Special Topics in Chemical Engineering (I) Special Topics in Chemical Engineering (II)

Chemicals Control Act

Regulation of Chemicals, Radiation, and Biotechnology

Advanced Chemical Accidents Response Special Topics in Chemical Facilities Safety

Chemical Safety Seminar 1 Chemical Safety Seminar2

Advanced Artificial Intelligence and Digital Process Design

ICT convergence technology

#### Professors

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#### Laboratories

- Inorganic Materials Chemistry Lab
- Multiphysics Multiscale Modelling Lab
- Chemical Process Lab. for Advanced Materials
- Functional Porous Materials Lab
- Conductivity high-molecular lab
- Organic Synthesis Lab
- Molecular Engineering Lab
- Process Safety System Lab
- Energy, environment, and chemical process engineering Lab
- Functional Nanomaterials Lab
- Semiconductor Materials & Optoelectronic Devices Lab
- Process Solution Lab
- Electrochemical Energy Materials Lab
- Polymer Hybrid Materials Lab

- Nanoscale Phenomena and Materials Lab
- Energy Conversion and Storage System Lab
- Biochemical Engineering Lab
- Nano Energy Materials lab
- Photonic Materials and Devices Lab
- Separation and Energy Conversion/Storage Process Lab(SEPL)
- Clean Energy Technology Lab
- Nano Materials Lab
- Nano Photonic Devices Lab
- Smart Materials Processing Lab
- Opto-electron Research Lab
- Nanocarbon Convergence Materials Lab
- Polymer Energy Materials Lab

# Department of Electrical Engineering

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# **■** What is Electrical Engineering?

Electrical engineering is based on sciences such as mathematics, physics, and chemistry, and studies how to transform fossil, hydraulic, atomic, wind, solar light or heat, and tidal energy into electric energy. Students also study how to transport the transformed energy efficiently and steadily to distant places. One primary focus of the Department is on transforming these into other types of energy such as light, heat, and power. The Department maintains high standards of research and development of electrical energy to benefit society.

#### **■** Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory, towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Students who pursue a Doctor of Philosophy degree undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields and will be examined by at least five committee members. In addition, students are required to take at least 60 credits in coursework including the credits already earned for the master's degree and they must pass one foreign language test. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

#### ■ What Do You Study?

Topics of Special Electric Machinery Advanced Analysis for Electric Machinery Optimal Control Theory Applied Electrostatics Advanced Electrical Power Engineering I Advanced Electrical Power Engineering II Solar Energy Generation Engineering Power System Analysis I

Power System Analysis II

Advanced Power System Operations

Advanced Power System Control

Power System Control Power System Planning Theory of Light Sources

Lighting System Design and Applications

C Programing
Digital Processor
Embedded Program
Filter Circuit Design

High Integrated Power Circuit

Advanced Power Electronic Engineering

Optimization Theory

Advanced Servo Control of Electric Machinery

Power Communication Network Special Topics in Solid-State Lighting Color Science & Its Applications Power System Dynamic Simulation

Application of Energy Storage Systems on Power

System

Digital Control Theory
Sensor Interfacing

Automatic Measurement System

Mechatronics

Automatic Guided Vehicle System Electric Vehicle Technology Automation of Industrial Process

Topics of Management for Electric Machinery

Advanced Applied Power Electronics

Design Projects of Power Electronic Converter

System

Lighting Calculations and Computer Modeling

Lighting Design

High Voltage Power Apparatus Power System Protection Power IT Engineering

Advanced Electromagnetic Field Theory Computer-Aided Problem Solving Techniques

Electrodynamics

Power Communication Theory Power Communication Systems Digital Processor Applications

Illumination Optics & Its Applications

Power System Modeling Renewable Energy Systems

Applied Numerical Method of Engineering

Microprocessor Applications Automatics Devices and Apparatus Adv. Electric Machinery Design Power System Operations

Data Visualization and Analysis Techniques

Advanced Power Communications

Advanced Power Communication Systems Advanced Power Communication Networks

Advanced Optimization Research Guidance 1 Research Guidance 2 Research Guidance 3 Research Training 1 Research Training 2

#### Professors

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#### ■ Laboratories

- Control & Instrumentation Lab
- Electric Machine Design Lab
- Superconductivity Applications Lab
- Power System & Electrical Apparatus Lab
- Design of Electronic System based on Micro Processor Lab
- LabWired/Wireless Innovative Technologies and Hybrid Lab (WITH Lab)

# Department of Electronics and Computer Engineering



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### **■** Graduate Studies in Computer Science

A focal point for graduate-level research and education, strong research groups exist in areas of software engineering, database, computer graphics, multimedia communication, theory of computation, mobile computing, Internet application technology, image information processing, information retrieval, and smart computing. Basic work in computer science is the main research goal of these groups, but there is also a strong emphasis on interdisciplinary research and on applications that stimulate basic research.

# **■** Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in a computer science discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree.

# ■ What Do You Study?

3D Multimedia

Advanced Computer Graphics

Advanced Computer Vision

Advanced Database System

Advanced Multimedia Systems

Advanced Object-oriented Systems

Client Server System

Computer and Multimedia Society Computer and Network Security

Cryptography
Database Design

Design and Analysis of Algorithms

Distributed Application System

Distributed Database
Distributed Object System
Distributed Systems Design

Graph Theory
High-speed Networks

Human Computer Interaction

Image Analysis

Image Information Processing
Image Synthesis Theory

Information Extraction and Integration Information Protection Systems

Information Retrieval

Integrated Networks Operations and Management

Internet Protocols
Internet Security

Introduction to Computer Vision
Introduction To Data Mining

Machine Learning

Mathematics for Computer Graphics

Mathematics for computer scientist

Medical Imaging and Applications

Methodologies for Development of Program

Mobile Interface

Mobile IP

Multimedia Data Mining

Multimedia Information Storage and Retrieval System

Network Programming Parallel Processing Project Management Real-time System Security Protocol Sensor Networks

Software Engineering Environment

Software Process Software Reuse

Statistical Language Processing

TCP/IP

Technical Writing
Theory of Computation

Topics in Artificial Intelligence Topics in Computer Networks Topics in Context Inferencing Topics in Data Communication

Topics in Data Mining
Topics in Deep Learning
Topics in Distributed Systems
Topics in Image Processing
Topics in Intelligent Systems

Topics in Internet

Topics in Mobile Computing

Topics in Natural Language Processing

Topics in Pattern Recognition
Topics in Software Engineering

Topics in Theoretical Computer Science

Topics on Web Mining

Transaction Processing Systems

Ubiquitous Computing

Virtual Reality

Visual Information Processing

Web Engineering

#### Professors

- Hyeong-Seok Lim, Ph.D.
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- Hyuk-Ro Park, Ph.D.
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- Hyung-Jeong Yang, Ph.D.

- [Professor, Multimedia Data Mining, hjyang@jnu.ac.kr]
- Kyungbaek Kim, Ph.D.
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- Kwanghoon Choi, Ph.D.
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- HeiYong Jeong, Ph.D.
   [Associate Professor, Intelligent robot control & Signal processing, h.jeong@jnu.ac.kr]

#### Laboratories

#### **Database Lab**

Research is carried out on transaction management, data mining, mobile transaction management, and XML. In addition, research is conducted on X3D in the 3D field. The main research topics of Distributed Networks and Systems Laboratory are bigdata processing platform and algorithms, social networking systems, software defined network, content distribution networks, and grid/cloud systems.

#### **Computer Graphics Lab**

Research is conducted on soft rendering and efficient velocity of radiosity rendering.

#### Internet@Information Security Lab

Research is carried out on information security including secure operating systems, intrusion detection, security in ubiquitous computing, privacy protection, cyber forensics and the recent security issues such as botnet detection.

#### Multimedia and Image Processing Lab

Research is conducted on image processing and commputer vision. Recent research has been focused on document image processing, face tracking, object tracking applications. Especially deep learning approaches with convolutional neural networks are explored.

#### Theory of Computation Lab

The Theory of Computation Lab is involved in the study of graph theory applied to the parallel or distributed process, network algorithm, information security, and bioinformatics.

#### **Mobile Computing Lab**

The Mobile Lab conducts research on a mobile agent which improves performance of the distributed Object System.

#### **Advanced Network Lab**

Research is carried out on ubiquitous computing, particularly the ubiquitous computing environment consisting of sensor layers, middleware layers, and application layers, which sense information, collect and analyze information, and apply information, respectively.

#### **Pattern Recognition Lab**

Research is carried out on artificial intelligence techniques related to image processing and pattern recognition to implement human thinking and learning mechanisms. Research is also conducted on human emotion recognition, gesture recognition, medical image analysis, and so on.

#### **Information Retrieval Lab**

Research is carried out on information retrieval and natural language processing development which utilizes human language processing and artificial intelligence technology. Major research includes all major intelligent software and natural language processing technologies such as information retrieval, information extraction, text and multimedia classification, text summarization, speech recognition, text-to-speech, natural language dialog, intelligent agents, and bio-informatics.

#### **Smart Computing Lab**

Research is conducted on multimedia data mining, e-learning, collaborative product development, and bio-image analysis. The main direction of research is to support intelligent computing in many applications such as multimedia information retrieval, e-health, and e-product design by employing data mining and machine learning techniques.

#### Smart Mobile & Media Computing Lab

The Smart Mobile & Media Computing Lab, performs research in the field of next generation computing, broadcasting & telecommunication convergence media, human-oriented IT convert- gence services.

#### Software Language & System Lab

The main research themes of Software Languages and Systems Laboratory are programming languages, compilers, and software engineering. The laboratory has studied on the design and implementation of programming languages, program analysis, and software testing for efficient development of defect free software in the areas of mobile computing and Internet-of-Things computing.

#### **Distributed Networks and Systems Lab**

The main research topics of Distributed Networks and Systems Laboratory include Software Defined Network/Infrastructure, Bigdata Platforms (distributed data collecting/processing architecture), GRID/Cloud

network/systems, Social networking systems, AI applied Cyber Physical Systems, BlockChains, and other issues in the field of Distributed Systems.

#### Care Science and Technology (CST) Lab

The interest of CST Lab is a science and technology to enhance a quality of life. It helps our past research understand CST Lab; screening technology of sleep disorder and sudden infant death syndrome, noninvasive measurement technology of respiration rate/depth and emotion, remote measurement and analysis of human posture, human and robot interaction based on machine learning and deep learning, musculoskeletal simulation, capillaries and so on.

# Major of Computer Engineering

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# ■ Graduate Studies in Computer Engineering

As the role of computers in our lives continues to expand dramatically, it has become even harder to imagine engineering, natural science or society in general without such devices. In the emerging future information society, computer engineering will become one of the most important fields of expertise. Computer engineering is a branch of engineering that studies various problems occurring in information acquisition, processing, storage, and transmission. Computer engineering is classified into two major areas: software and hardware. The software branch includes artificial intelligence, multimedia network programming, database and convergence. The hardware branch includes computer architecture, SoC design, embedded systems, computer networks and communication.

#### **■** Degree Requirements

#### Master's Program

The graduate program aims at the instruction of the highest level of academic theory and the development of capabilities to perform original research work. Applicants for the Master's Program should have achieved a good grade in an undergraduate degree course in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Assessment of M.S. students includes a combination of at least 24 credit hours of course work and a thesis based on the research project. These requirements should be fulfilled between two and three years of enrollment.

#### Ph.D. Program

Students who pursue Doctor of Engineering degrees undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields and it will be examined by at least five committee members. In addition, students are required to take at least 54 credits in coursework including the credits already earned for the master's degree, and they must pass one foreign language test. Degrees are conferred to those who fulfill the requirements between two and five years of enrollment.

# ■ What Do You Study?

Three Dimensional Vision
Object-Oriented System
Advanced Machine Learning
Advanced Network Security

Advanced Mobile Computing Systems

Modern coding theory

Advanced Artificial Intelligence

Machine Vision

Advanced Network Programming Advanced Network Protocols

Studies in DBMS Digital Systems Design

Digital Signal Processor Architecture Linear Algebra for Deep Learning

Microcontroller Architecture and Low Power

Design

Advanced Microprocessors

Machine Learning with Programming

Topics in multimedia Systems

Multimedia Applications

Simulation of Deformable Objects Advanced coding applications

Coding Theory

Distributed Processing

Advanced Big Data Analysis

**Bioinformatics** 

Performance Evaluation

Advanced Performance Evaluation Smart Sensors and Application

Advanced Smart NUI

Special Topics In System Semiconductor Test

Special Topics in Neural Networks

Real Time Internet Protocol

Deep Neural Networks and Deep Learning

Advanced Algorithm Design Special Topics on Cryptography

Research Training 1

Research Training 2
Research Guidance 1
Research Guidance 2
Research Guidance 3

Visual Information Processing and Recognition

Application VLSI Design Principle of Medical Imaging Medical Image Processing

Special Topic on Mobile Internet Mobile Communication Engineering

Artificial Intelligence Theory

Internet Engineering

Natural Language Processing Low Power Design Methodology Advanced Information Retrieval

Information and Communication Security Knowledge and Information System Next Generation Cloud Computing

Next Generation Protocol

Advanced Next Generation Mobile NUI Special Topics in the computer Engineering Advanced Computer Architecture Design

Advanced Computer Graphics

Computer Vision

Advanced Computer Image Processing

Computer-Aided Ic Design Client Server System

Types and Programming Languages
Design For Testability Methodology
Advanced Communication Engineering

Pattern Recognition

Advanced Pattern Recognition Advanced Programming Project Management Introduction to Haptic Human Interface System

#### Professors

- Young-Chul Kim Ph.D.
   [Professor, System on Chip Design, yckim@jnu.ac.kr]
- Ji-Seung Nam Ph.D.
   [Professor, Computer Network, jsnam@jnu.ac.kr]
- Chil-Woo Lee Ph.D.
   [Professor, Computer Vision/Intelligent Human Interface, leecw@inu.ac.kr]
- Yonggwan Won Ph.D.
   [Professor, Computational(Artificial)
   Intelligence, Biomedical Engineering,
   Healthcare System, ykwon@jnu.ac.kr]
- Jaehyung Park Ph.D.
   [Professor, State-of-the-Art of Network
   Technology and Security, hyeoung@jnu.ac.kr]
- Jin-Sul Kim, Ph.D.
   [Professor, Multimedia, QoS/QoE, Edge
   Computing, Intelligence Platform, Metaverse, AI,

- Digital Content, IT Convergence Technologies, jsworld@jnu.ac.kr]
- Hosung Park, Ph.D.
   [Associate Professor, Coding theory,
   Communications systems, Information theory,
   hpark1@jnu.ac.kr]
- Sunyong Yoo, Ph.D.
   [Assistant Professor, Bio and medical informatics, Artificial intelligence, Bigdata analysis, syyoo@jnu.ac.kr]
- Suhyung Park, Ph.D.
   [Assistant Professor, Medical Signal and Image Processing, suhyung@jnu.ac.kr]
- Young-woo Lee, Ph.D.
   [Assistant Professor, VLSI/SoC design, ylee@jnu.ac.kr]
- Myeongjin Kim, Ph.D.
   [Assistant Professor, VR&AR, Haptic, Artificial intelligence, Computer Graphics, Computer vision, myeongjin@jnu.ac.kr]

- IT SoC Lab. Young-Chul Kim Ph.D. http://soc.jnu.ac.kr
- Multimedia Data Communication Lab. Ji-Seung Nam Ph.D.
- Intelligent Image Media/Interface Lab. Chil-Woo Lee Ph.D. http://image.jnu.ac.kr
- Intelligent Computing & Bio-Medical Engineering Lab.
   Yonggwan Won Ph.D.
- Network Technology & Security Lab. Jaehyung Park Ph.D.
- Hyper Intelligent Media Network Platform Lab.
   Jin-Sul Kim, Ph.D.
   https://hi-iot.github.io

- Coding & Intelligent Communications Lab.
   Hosung Park, Ph.D.
   http://cctl.jnu.ac.kr
- Bio and Medical Informatics Lab.
   Sunyong Yoo, Ph.D.
   http://bmil.jnu.ac.kr
- Intelligent Medical Imaging and Signal Processing Lab.
   Suhyung Park, Ph.D.
   https://sites.google.com/view/sparks-lab/home
- System IC Design Technology Lab.
   Young-woo Lee, Ph.D.
   http://soc.jnu.ac.kr
- Visuo-haptic Mixed Reality Lab.
   Myeongjin Kim, Ph.D.
   https://sites.google.com/view/vhmrlab/vhmr-lab

Major of Electronics Engineering

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# Graduate Studies in Electronics Engineering

Electronic engineering is making rapid progress in a variety of research areas ranging from electronic materials and electron devices to the design of ultra-large-scale computers, information processing systems, and software. Education in the Department of Electronic Engineering is aimed at the development of versatile research scientists and engineers with a wide field of vision based on mathematics and physics.

# **■** Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and the development of capabilities to perform original research work. Applicants for the Master's Program should have achieved a good standard in an undergraduate degree course in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Assessment of Electronics Engineering students includes a combination of at least 24 credit hours of course work, and a thesis based on the research project. These requirements should be fulfilled between two and three years of enrollment

#### Ph.D. Program

Students who pursue Doctor of Engineering degrees undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields and will be examined by at least five committee members. In addition, the students are required to take at least 54 credits in coursework including the credits already earned for the master's degree. Degrees are conferred to those who fulfill the requirements between two and five years of enrollment.

# ■ What Do You Study?

Reinforement Learning
Robust Control
Advanced Display Engineering
Advanced Digital video compression
Advanced MODEM Theory

Advanced semiconductor design methodology Advanced Analogue Circuit Design Advanced Antenna Design Advanced image communication systems Advanced mobile communication Engineering Advanced Control Engineering Advanced Signal and System Mathematics

Advanced integrated fabrication **Estimation Theory** 

methodology Analog Electronic Circuits

Advanced Integrated Circuit Design Antenna Engineering Broadband Convergence Network Research Training 1 Optical Wireless Communications Research Training 2 Research Guidance 1

Optical Internet

Optical Communication System Research Guidance 2 Research Guidance 3 Optical Communication SoC Design

Local-area Wireless Communications Image Communication Systems

Machine Learning Control Image Processing and Analysis Special Topics on Machine Learning

Visual Processing System

Nano-scaled semiconductor applied Satellite Communication System sensor

engineering Organic Electronics Nanoelectronics Digital Processing of Speech Signal Network Protocols Advanced Speech Signal Processing

Multi-antenna Communication Systems Automatic Control Multi-Dimensional Signal Processing Adaptive Signal Processing

Digital Broadcasting Engineering Power Semiconductor Engineering Advanced Digital System Power Electronics

Digital Signal Processing Programming for Electrical Engineering

Advanced Digital Signal Processing Wave Propagation Theory Advanced Visual System Advanced Electronic Circuits

Digital Image compression Information Theory

Digital Image Processing Control Application Engineering

Digital Control Applications Intelligent Robot

Advanced Digital Communication Intelligent Control Engineering Digital Filter Theory Integrated-Circuit System

Next generation memory semiconductor design Deep Learning **Robotics** Next Generation Convergence Wireless

Multimodal Signal Processing Communication Engineering

Multimedia Signal Processing Next Generation Convergence Mobile

Wireless Transceiver Systems Communication Engineering

Semiconductor Device Process Engineering Next Generation Convergence Information and

Semiconductor Device Physics and Technology Communication Engineering

Coding Theory Next Generation Intelligent?Wireless

Random Variables Communication Engineering

Next Generation Intelligent Convergence Wireless Linear System Theory

Smart Sensor Engineering Communication Engineering

Spectral Estimation Theory Next Generation Intelligent Convergence Signal Detection Theory Information and Communication Engineering

Signal and System Mathematics Next Generation Intelligent Mobile Communication Engineering

Next Generation Intelligent?Information and Communication Engineering Microwave Engineering Microwave Circuit Design Statistical Signal Processing and Modeling

Communication

System

Engineering

Introduction to Pattern Recognition
Compound Semiconductor Devices
Probability and signal processing
ICT Convergence Technology based Start-ups
RF Circuit Design

#### Professors

Introduction

 Jin-Young Kim, Ph.D.
 [Professor, Signal Processing, beyondi@jnu.ac.kr]

to

- Dae Jin Kim, Ph.D.
   [Professor, Digital Communication, djinkim@jnu.ac.kr]
- Sung-Hoon Hong, Ph.D.
   [Professor, Image Processing, hsh@jnu.ac.kr]
- Sung-June Baek, Ph.D.
   [Professor, Digital Signal Processing, tozero@jnu.ac.kr]
- Dong-Kook, Kim Ph.D.
   [Professor, Audio Signal Processing & Pattern Recognition, dkim@jnu.ac.kr]
- Tae-Jin Jung, Ph.D. [Professor, Wireless Communication, tjjung@jnu.ac.kr]
- · Su-il Choi, Ph.D.

[Professor, Optical Communication Systems, sichoi@jnu.ac.kr]

- Intae Hwang, Ph.D.
   [Professor, Next-generation AI convergence information/wireless/mobile/vehicle communication, hit@jnu.ac.kr]
- Taeksoo Ji, Ph.D.
   [Professor, Semiconductor & Electronic device, tji@jnu.ac.kr]
- Myoung-Jin Lee, Ph.D.
   [Professor, Intelligent semiconductor device & circuit design, mjlee@jnu.ac.kr]
- Hyun-Duk Choi, Ph.D.
   [Assistant Professor, Next Generation Intelligent Control, ducky.choi@jnu.ac.kr]
- Jinseok Park, Ph.D.
   [Assistant Professor, RF/Analog Semiconductor Circuit Design, jinseok131@jnu.ac.kr]

#### Laboratories

- Intelligent Electronics Lab. Jin-Young Kim, Ph.D.
- Digital Communication Lab.
   Dae Jin Kim, Ph.D.
- Visual Information Processing System Lab.
   Sung-Hoon Hong, Ph.D.
   https://jnuvipslab.wixsite.com/vips
- Digital Signal Processing Lab.
   Sung-June Baek, Ph.D.
- AI Signal Processing Lab.

Dong-Kook Kim, Ph.D.

- Broadband Wireless Communication Lab. Tae-Jin Jung, Ph.D.
- Optical Communication Lab. Su-il Choi, Ph.D.
- Information and Telecommunication Research Lab.
   Intae Hwang, Ph.D.
   http://itrl.jnu.ac.kr
- Semiconductor Device Research Lab.

Taeksoo Ji, Ph.D. http://sdrg.jnu.ac.kr

- Intelligent Semiconductor and Circuit Lab.
   Myoung-Jin Lee, Ph.D.
   https://blog.naver.com/idclab
- Next Generation Intelligent Control Lab.

Hyun-Duk Choi, Ph.D. https://chlgusejr87.wixsite.com/aics

 High Speed Integrated Circuit & System Lab. Jinseok Park, Ph.D. https://jinseok131.wixsite.com/jnu-hsic Department of Energy and Resources Engineering

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# ■ Graduate Studies in Energy & Resources Engineering

These days, natural resources are essential for developing domestic economies. Each country is trying to secure natural resource stability. Currently, the Korean government is making efforts to develop the technology of resource extraction and to encourage resource engineers, as many other developed countries have, because the matter of resources is based not only on geopolitical situations. In order to meet the demands of these times, the Department of Energy & Resource Engineering deals with Applied Geology & Applied Geochemistry, Resources Geology Engineering, Geophysical Prospecting, Resource Development Engineering, Petroleum Engineering, Mineral Processing, Resources Development Safety & Environment, Drilling Engineering, and Resource Economics.

# **■** Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project.

#### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn a minimum of 36 credits. Students should pass a foreign language test and a qualifying examination to present their thesis.

# ■ What Do You Study?

Advanced AI for CCUS Advanced applied mineralogy

Advanced applied petrology Advanced Carbon Geochemistry Advanced Chemical Treatment

Advanced Electrical and Electromagnetic

Prospecting

Borehole geophysics Clay Mineralogy

CO2 Utilization and Processing
Deep learning unsupervised learning

Engineering of mineral processing in north korean

Enhanced Oil Recovery

Advanced Engineering for CO2 Geological Storage

Advanced Environmental Geochemistry

Advanced Flotation Treatment Advanced Geochemistry

Advanced Geochemistry Exploration

Advanced Geology for Carbon

Advanced Gravity and Magnetic Prospecting

Advanced Groundwater Geochemistry Advanced Microbiological Geochemistry

Advanced Ore Deposits

Advanced Petroleum Drilling Engineering Advanced Petroleum Production Engineering

Advanced Physical Separation

Advanced recovery of valuable minerals

Advanced Reservoir Engineering Advanced Resources Recycling

Advanced Rock Blasting

Advanced Rock Mechanics for Underground

Strorage

Advanced Seismic Prospecting

Advanced Smart Excavation Engineering

Advanced Smart Mining

Advanced Unconventional Oil and Gas Engineering

Advanced Well Test Analysis

Applied Geostatistics
Experiments and Analysis

Geomicrobiological Engineering Seminar

Geophysical signal processing

**GPR** Prospecting

Hydrocarbon Phase Behavior

Information of Mineral Resources in North Korea

Instrumental Chemical Analysis

Interfacial Phenomena Inversion theory

Materials Analysis Technology Metallic Mineral Processing Non-Metallic Mineral Processing

Potential Theory

Reserve Estimation and Energy Economics

Reservoir Simulation
Rock Slope Engineering
Rock Structure Design
Separation Process Design
Special Issues on Smart Miningt

Special topics in environmental geochemistry

Special topics in geomicrobiology

Special Topics in Geotechincal Engineering Specialized solutions for applied geology

Statistics of Rock mass

#### Professors

 Kim Myungjun, Ph.D.
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 Lee Jong-Un, Ph.D.
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Lee Jeonghwan, Ph.D.
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 Kil Youngwoo, Ph.D.
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 Yoon Daeung, Ph.D.
 [Assistant Professor, Geophysical Prospecting, duyoon@jnu.ac.kr]

- Applied Geology & Geochemistry Lab
- Rock Mechanics & Blasting Engineering Lab
- Geophysical Prospecting Lab
- Mineral Processing & Recycling Lab
- Microbial Geochemistry Lab
  - Petroleum & Natural Gas Engineering Lab

# Department of Environment and Energy Engineering

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# ■ Graduate Studies in Department of Environment and Energy Engineering

Environmental researchers deal with interactions between human beings and their environment, to protect each from the harmful effects of the other. The broad scope of this course provides graduate students with unique opportunities to specialize in areas best suited to their background and research interests. The objectives of the graduate program in Environmental Engineering are to mold students into highly competent environmental engineers and scientists, and to research pollution abatement technologies. The Environmental and Energy Engineering Program covers the areas of water supply and water resources, wastewater treatment, environmental systems modeling, air pollution control engineering, air quality management, solid and hazardous waste management, environmental biotechnology and microbiology, fuel cell & battery, and novel renewable energy systems such as microbial fuel cells (MFC).

# **■** Degree Requirements

The Department offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees in Environmental and Energy Engineering. The Master's Program emphasizes the enhancement of professional knowledge and skills, including research techniques. The doctorate is a research degree emphasizing more extensive and original approaches to problem solving. Students may work directly toward the doctorate, but must earn a master's degree first.

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory, towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an Environmental and Energy engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Students must pass a foreign language and a qualifying examination. Master's degree candidates are required to earn a minimum of 24 credits and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields.

In addition, students are required to earn a minimum of 36 credits. Students should pass a foreign language test and a qualifying examination to present their thesis. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

# ■ What Do You Study?

Advanced Environment and Safety Engineering

Advanced Air Pollution Control

Advanced Chemical Substance Safety

Advanced Construction Noise & Vibration Engineering

Advanced Control of Underground Water Pollution

Advanced Coping Engineering with Air Pollution

& Climate Change

Advanced Eco-Toxicology

Advanced Environmental Aerosol Engineering

Advanced Environmental Biological Engineering

Advanced Environmental Chemistry

Advanced Environmental Ecology

Advanced Environmental Impact Assessment

Advanced Environmental Microbiology

Advanced Environmental Toxicology

Advanced Hazardous Gases Treatment

Advanced Micrometeorology

Advanced non-point pollutant treatment

Advanced Organic Waste Recycling Engineering

Advanced Soil Chemistry

Advanced Wastewater Treatment Engineering

Advanced Water Environmental Microbiology

Advanced Water Quality Management

Advanced Water supply and Sewerage Planning

Advanced Water Treatment Engineering

Air quality management seminar

Atmospheric Chemistry of Air Pollution

Bioenergy Seminar

Biological Engineering Seminar

Bioremediation Engineering

Clean Energy Technology

Design and Operation of Bioreactor

Eco-Energy Storage Systems

Environmental GIS

Environmental Microbiology Seminar

Environmental Polymer Design

Environmental Risk Assessment

Experiment for Eco-Toxicity Assessment

Fuel Cells

Industrial Waste-water Treatment Engineering

Introduction to Korea REACH and ACC

Microbial Electrochemical Systems

Patent Mapping

Remediation Engineering of Polluted Soil

Research Guidance 1

Research Guidance 2

Research Guidance 3

Secondary Battery

Seminal for Air Pollution and Climate Change

Seminar for Air Pollutant Protection Design

Seminar for water environment technologies

Seminars in Chemical Risk

Soil Remediation Seminar

Trends in Bioenergy Technology

Trends in Modern Renewable Energy Technology

Waste Management Seminar

#### Professors

• Yong-Woon Lee, Ph.D.

[Professor, Water Quality Management System, ywlee@jnu.ac.kr]

• Sung-Yong Cho, Ph.D.

[Professor, Eco-Energy and Air Pollution Engineering,

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· Seong-Jun Kim, Ph.D.

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· Jeong-Hun Park, Ph.D.

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• Ho-Young Jung, Ph.D.

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·Sok-Hee Jung, Ph.D.

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 Yong-Gyun Park, Ph.D.
 [Assistant Professor, Smart Water Grid and Water Digitalization, ygpark7@jnu.ac.kr]

- Water Quality Management System Lab
- Air Pollution Control and New Energy Lab
- Environmental Biotechnology Lab
- Hazardous Waste and Soil Lab
- Environmental Energy Materials Lab
- Environmental Fusion Energy Technology Lab
- Smart Water Lab
- Sustainable Energy & Environment Technology Lab

ICT Convergence System Engineering

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# ■ What is ICT Convergence System Engineering?

ICT convergence system engineering, which encompasses fields related to semiconductors, information and communication, control engineering, and computer engineering, and which represents cutting-edge high-tech industries, is developing at a faster rate than other academic fields. Therefore, the department aims to provide various programs to acquire practical skills and theories suitable for rapidly developing industries and to cultivate creative and liberal engineering thinking skills.

It also provides an education that prioritizes the autonomy of students, which is appropriate for the abilities and aptitudes of students and cultivates prospective scholars equipped with both basic and advanced ICT convergence knowledge. ICT convergence system engineering, which combines new, future-oriented technologies into various applicable areas such as smart cities, smart factories, and smart energy, and provides specialized knowledge to solve problems in ICT convergence systems, is expected to motivate students in various interesting ways. This program provides educational programs to nurture professional manpower for various fields, such as smart cities and factories, and by systematically educating basic knowledge and theories of electronic and computer engineering based on intelligent ICT convergence to cultivate scientific thinking ability and creativity.

Also, by designing and conducting experiments through the fusion of cutting-edge engineering methods, the program intends to cultivate high-level technical manpower with the ability to systematically solve problems in this emerging field.

# **■** Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory, towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Students who pursue a Doctor of Philosophy degree undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation must make a substantial contribution to the scientific or engineering fields and will be examined by at least five committee members. In addition, students are required to take at least 54 credits in coursework including the credits already earned for the master's degree and they must pass one foreign language test. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

# ■ What Do You Study?

Channel Coding for 5G/6G Processing

Advanced Machine Learning Understanding Smart City and Disaster data

Advanced Computer Graphics Special Topic in Smart City Application Project

Machine Learning Management & Practice

Technology Startup Special Topics In System Semiconductor Test

Entrepreneurship for Engineers Signal Detection and Estimation

Signal Detection and Estimation

Nano Semiconductor Physics Analog circuit design

Practice on Data Structure and Algorithm Research Training 1

Data Mining Research Training 2

Studies in DBMS Research Guidance 1

Digital signal processing and its applications Research Guidance 2

Digital Image compression Research Guidance 3

Digital Image Processing Image Communication Systems
Digital Information Theory Image analysis and understanding

Digital circuit design Flexible Semiconductor Device Engineering

Deep Learning Discrete Time Signal Processing

Mathematical Basics for Deep Learning

Artificial Neural Network

Deep learning for semiconductor vision processing Artificial Intelligence

Simulation of Deformable Objects Mathematics for AI and Communications

Special Topics on Code and Cryptography CAD Experiment of Artificial Intelligence

Coding Theory Semiconductor

Big Data Analysis Mathematics for Artificial Intelligence

Advanced Big Data Analysis Artificial Intelligence programming
Big data system Low-Power, High speed IC Design

Bid Data Signal Processing

Low-power electronic circuit design

Smart City(IOT) Sensor Circuit

Information Display Engineering

Seminar on Smart City Public Safety Information Estimation Theory

Machine Learning Programming for Smart City Intelligent Control

Seminar on Smart City Intelligent Communications Engineering

Practice and Project on Smart City High-speed, Highly Integrated Memory

Understanding Smart City and Medical Signal Architecture

Intelligent System Semiconductor Design Intelligent video surveillance system Intelligent IoT Computing Platform Business Model Planning using Intellectual Property Integrated Circuit Process Engineering Integrated Circuit CAD Experiment CAD Experiment for Vehicle Semiconductor Next Generation Wireless Communication Engineering Specialized design for next-generation semiconductor testing Special Topic in Next Generation Software Engineering Application Next Generation Convergence Mobile Communication Engineering Next Generation Intelligent?Wireless Communication Engineering Next Generation Intelligent Convergence Wireless Communication Engineering
Next Generation Intelligent Mobile Communication
Engineering
Next Generation Intelligent?Information and
Communication Engineering
Next Generation Cloud Computing
Next Generation AI Integrated Circuit
Optimal Control
The fundamentals of python and machine learning
Data and signal processing using Python
Machine learning using pytorch
Introduction to Haptic
Pattern Recognition
Co-Op(Internship)

#### Professors

- Yonggwan Won Ph.D.
   [Professor, Computational(Artificial)
   Intelligence, Biomedical Engineering, Healthcare
   System, ykwon@jnu.ac.kr]
- Jaehyung Park Ph.D.
   [Professor, State-of-the-Art of Network
   Technology and Security, hyeoung@jnu.ac.kr]
- Jin-Sul Kim, Ph.D.
   [Professor, Multimedia, QoS/QoE, Edge
   Computing, Intelligence Platform, Metaverse, AI,
   Digital Content, IT Convergence Technologies,
   jsworld@jnu.ac.kr]
- Hosung Park, Ph.D.
   [Associate Professor, Coding theory,
   Communications systems, Information theory,
   hpark1@jnu.ac.kr]
- Sunyong Yoo, Ph.D.
   [Assistant Professor, Bio and medical informatics, Artificial intelligence, Bigdata analysis, syyoo@jnu.ac.kr]
- Suhyung Park, Ph.D.

- [Assistant Professor, Medical Signal and Image Processing, suhyung@jnu.ac.kr]
- Young-woo Lee, Ph.D.
   [Assistant Professor, VLSI/SoC design, ylee@jnu.ac.kr]
- Jin-Young Kim, Ph.D.
   [Professor, Signal Processing, beyondi@jnu.ac.kr]

Special Topics on IoT Security

IOT Intelligent Sensor System Engineering

IOT Compound Semiconductor Device Engineering

- Sung-Hoon Hong, Ph.D.
   [Professor, Image Processing, hsh@jnu.ac.kr]
- Sung-June Baek, Ph.D.
   [Professor, Digital Signal Processing, tozero@jnu.ac.kr]
- Tae-Jin Jung, Ph.D.
   [Professor, Wireless Communication, tjjung@jnu.ac.kr]
- Intae Hwang, Ph.D.
   [Professor, Next-generation AI convergence information/wireless/mobile/vehicle communication,

hit@jnu.ac.kr]

- Taeksoo Ji, Ph.D.
   [Professor, Semiconductor & Electronic device, tji@jnu.ac.kr]
- Myoung-Jin Lee, Ph.D.
   [Professor, Intelligent semiconductor device & circuit design, mjlee@jnu.ac.kr]
- Hyun-Duk Choi, Ph.D.
   [Assistant Professor, Next Generation Intelligent

Control, ducky.choi@jnu.ac.kr]

- Myeongjin Kim, Ph.D.
   [Assistant Professor, VR&AR, Haptic, Artificial intelligence, Computer Graphics, Computer vision, myeongjin@jnu.ac.kr]
- Jinseok Park, Ph.D.
   [Assistant Professor, RF/Analog Semiconductor Circuit Design, jinseok131@jnu.ac.kr]

- Intelligent Computing & Bio-Medical Engineering Lab.
- · Yonggwan Won Ph.D.
- Network Technology & Security Lab.
- · Jaehyung Park Ph.D.
- Hyper Intelligent Media Network Platform Lab.
- · Jin-Sul Kim, Ph.D.
- · https://hi-iot.github.io
- Coding & Intelligent Communications Lab.
- · Hosung Park, Ph.D.
- http://cctl.jnu.ac.kr
- Bio and Medical Informatics Lab.
- · Sunyong Yoo, Ph.D.
- http://bmil.jnu.ac.kr
- Intelligent Medical Imaging and Signal Processing Lab.
- · Suhyung Park, Ph.D.
- https://sites.google.com/view/sparks-lab/home
- System IC Design Technology Lab.
- · Young-woo Lee, Ph.D.
- http://soc.jnu.ac.kr
- Intelligent Electronics Lab.
- · Jin-Young Kim, Ph.D.
- Visual Information Processing System Lab.
- · Sung-Hoon Hong, Ph.D.
- https://jnuvipslab.wixsite.com/vips

- Broadband Wireless Communication Lab.
- · Tae-Jin Jung, Ph.D.
- Digital Signal Processing Lab.
- · Sung-June Baek, Ph.D.
- Information and Telecommunication Research Lab.
- · Intae Hwang, Ph.D.
- http://itrl.jnu.ac.kr
- Semiconductor Device Research Lab.
- · Taeksoo Ji, Ph.D.
- http://sdrg.jnu.ac.kr
- Intelligent Semiconductor and Circuit Lab.
- · Myoung-Jin Lee, Ph.D.
- https://blog.naver.com/idclab
- Next Generation Intelligent Control Lab.
- · Hyun-Duk Choi, Ph.D.
- https://chlgusejr87.wixsite.com/aics
- Visuo-haptic Mixed Reality Lab.
  - · Myeongjin Kim, Ph.D.
- https://sites.google.com/view/vhmrlab/vhmr-lab
- High Speed Integrated Circuit & System Lab.
- · Jinseok Park, Ph.D.
- https://jinseok131.wixsite.com/jnu-hsic

# Department of Industrial Engineering

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# **■** Graduate Studies in Industrial Engineering

Industrial Engineering deals with various issues such as software design, system management, statistical application and artificial intelligence. Studies undertaken at the graduate level are firmly based on undergraduate curricula. Qualified students perform advanced cutting-edge research. Under the supervision of faculty members, students are offered the opportunity to apply their knowledge and to lead many research projects supported by academic institutes and the private sectors.

# **■** Degree Requirements

#### Master's Program

The Master's Program generally takes two years to complete and requires students to earn 24 credits and submit a master's thesis. In the Department of Industrial Engineering, there are eight Laboratories for master's students to take part in: Reliability & Communication Management Lab, Autonomous Vehicle Research Lab, HCI & Design Lab, Stochastic Systems & Creative Problem Solving Lab, Knowledge Service Engineering Lab, Data Mining Lab, Management of Technology Lab, and Optimization Lab.

#### Ph.D. Program

Ph.D. candidates are required to earn 60 credits including credits already earned during master's courses and present a dissertation that offers academically significant contributions and new findings. It will be carefully examined by five committee members. Ph.D. candidates must demonstrate their excellence in research and understanding of leadership in various fields of society.

# ■ What Do You Study?

#### **Major Courses**

Advanced Computer Vision Advanced Data Mining Advanced Decision Analysis Advanced Design Engineering

Advanced Design and Analysis of Experiments

Advanced Evolutionary Algorithms

Advanced Human Interface Engineering

Advanced Inventory Management
Advanced Knowledge Engineering
Advanced Linear Programming
Advanced Logistics Management
Advanced Probability and Statistics

Advanced Programming Language

Advanced Project Management Advanced Quality Management

Advanced Supply Chain

Advanced Technology Management

Advanced Topics in Service Engineering

Advanced Topics in Systems Safety Engineering

Advanced Topics on Product and Technology

Innovation

Advanced product development engineering

Application of Image Processing

Applied Probability

Case Study of Industrial Engineering
Case Study of Systems Engineering
Cognitive Systems Engineering
Collaboration and Interaction Design

Complex Systems Engineering
Computer Application to I.E

Creative Problem Solving Project

**Evolutionary Algorithms** 

Graphics and Visualization Design

HCI Research Methodology

Human Decision Making and Support

Information Design and Visualization

Metaheuristics

Multivariate Statistical Methods

Neural network algorithms and Applications

Optimization Theory

Production Innovation Methodology

Queueing Theory

Reliability Engineering and Maintenance Theory

Research Guidance 1 Research Guidance 2 Research Guidance 3 Research Training 1 Research Training 2

Simulations

Special Topics in Industrial Engineering Special Topics on Machine Learning

TOC Constraint Management

TOC Thinking Process

Technological Innovation Policy

Theory and Practice of Creative Problem Solving

UX and Service Design

#### Professors

- Chung, Sang Wook, Ph.D.
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- Lee, Jae Yeol, Ph.D.
   [Professor, HCI Design, jaeyeol@jnu.ac.kr]
- Kim, Nam Ki, Ph.D.
   [Professor, Stochastic Systems & Creative Problem Solving, freedom@jnu.ac.kr]
- Ham, Dong-Han, Ph.D.

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- Jeong, Young-Seon, Ph.D.
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- Joo, Si-Hyung, Ph.D.
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- Joung, Seul Gi, Ph.D.
   [Assistant Professor, Optimization under uncertainty & Applications of OR, sgjoung@jnu.ac.kr]

- Reliability & Communication management Lab
- Autonomous Vehicle Research Lab
- HCI & Design Lab
- Stochastic Systems & Creative Problem Solving Lab
- Knowledge Service Engineering Lab
- Data Mining Lab
- Management of Technology Lab
- Optimization Lab

# Department of Intelligence Information Convergence

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# ■ Graduate Studies in Intelligence Information Convergence

Our graduate school deals with artificial intelligence and ICT technologies (IoT, Cloud, Big data, Cybersecurity), which are core technologies in the era of the 4th Industrial Revolution. Based on AI and ICT convergence technology, we acquire new future technologies in the field in five fields (Mobility, Healthcare/Medical, Cultural Contents/Arts, and Production/Manufacturing/Management).

We pursue nurturing talent that discovers challenging technologies, new technologies, and safety technologies and conducts joint research and development with domestic and foreign innovative organizations.

# **■** Degree Requirements

Students must acquire 12 credits for the master's program, 15 credits for the doctoral program, and 27 credits for the integrated master's and doctoral program in the Department of Intelligence and Information Convergence curriculum.

- · Applicants with a similar department\* history can have credits earned in a similar or related department\* recognized as credits earned in the Department of Intelligent Information Convergence.
- \* Similar departments: Department of Electronic and Computer Engineering, Department of ICT Convergence System Engineering

To submit a graduation thesis, master's students must present at least one paper at a domestic academic conference, and doctoral students must present at least one SCI paper or two papers as the lead author in a domestic academic journal.

# ■ What Do You Study?

The fundamentals of python and machine learning (3)

Introduction to ICT Convergence (3)

IoT Computing Basics (3)

Mathematical Basics for Deep Learning (3)

Data Mining (3)

Special Topic in Next Generation Software

Engineering Application (3)

Next Generation Cloud Computing (3)

IoT Data Analysis (3)

Machine learning using pytorch (3)

Linear Algebra for Deep Learning (3)

Big Data Computing (3)

machine learning (3)

Data Science Application security (3)

Probability and Statistics (3)

Mathematics for AI and Communications (3)

Artificial Neural Network (3)

Artificial Intelligence Innovation Project Design 1,2 (3)

Mobility Control System Security (3)

Intelligent Control (3)

Optimal Control (3)

Next Generation Convergence Mobile Communication Engineering (3)

Next Generation Intelligent Mobile Communication

Engineering (3)

Distributed Object System (3)

Intelligent Mobility Project Design 1,2 (3)

SmartGrid (3)

Advanced Power Communications (3)

Advanced Power Communication Systems (3)

Energy Artificial Intelligence (3)

Intelligent Energy Project Design 1,2 (3)

Medical Bioinformatics (3)

Understanding Smart City and Medical Signal

Processing (3)

Pattern Recognition (3)

Information Display Engineering (3)

IOT Intelligent Sensor System Engineering (3)

Intelligent Healthcare/Medical Project Design 1,2 (3)

Culture Technology Seminar (3)

Human Media Interaction Research (3)

Bid Data Signal Processing (3)

3D Multimedia (3)

Intelligent cultural contents/art project design 1,2 (3)

Data Science SW Platform (3)

High-speed, Highly Integrated Memory

Architecture (3)

Special Topics in Digital Twin Production (3)

Special Topics in System Semiconductor Test (3)

DC-based Smart Distribution Power Semiconductor (3)

Data Science Application security (3)

Computer-aided IC design (3)

Technology management of

small-and-medium-sized company (3)

Intelligent production manufacturing management

project design 1,2 (3)

Special Topic in Cloud CRM administrator (3)

Industrial safety technology management (3)

Advanced Machine Learning /Deep Learning (3)

data analysis & visualization using R (3)

#### Professors

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· Chansoo Kim, ph.D.

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chansoo.kim@jnu.ac.kr]

• Chunhwan Lee, ph.D.

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chunhwan@jnu.ac.kr]

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[Professor, Mechanical Engineering,

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• Myungjin Lee, ph.D.

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• Sangjun Lee, ph.D.

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#### Laboratories

- Intelligent Innovation G5-AICT Research Center

# Department of Materials Science and Engineering

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# ■ Graduate Studies in Materials Science and Engineering

Materials Science and Engineering (MSE) is an interdisciplinary field that deals with the discovery and design of new or high-performance materials, constituting modern civilization and industrial developments. The field involves studying materials through the materials paradigm? synthesis, structure, properties, and performance. It incorporates elements of physics and chemistry and is at the forefront of nanoscience and nanotechnology research. The mechanical, electrical, optoelectronic, and electrochemical properties of metals and ceramic materials are utilized for transportation machinery, semiconductor devices, energy and environmental devices such as batteries, fuel cells, solar cells, and medical applications.

Eminent large-scale national projects, such as WCU, BRL, Get-Future, and BK21+, along with numerous individual government and industrial projects, indicate the high-level research activities in Graduate Studies in MSE at Chonnam National University. The graduate students are trained for R&D career paths in industrial laboratories, research institutes, and also for faculty positions at colleges and universities.

# **■** Degree Requirements

#### Master's Program

Applicants should have an undergraduate degree in an engineering discipline. Candidates from other backgrounds should take the required undergraduate courses during the graduate course. Master's degree candidates are required to earn a minimum of 24 credits, pass the foreign-language and qualifying examinations, and prepare a thesis evaluated by a 3-member committee.

#### Ph.D. Program

Ph.D. candidates should hold a master's degree in an engineering or natural science discipline. Students are required to earn at least 36 credits, pass the foreign-language and qualifying examinations, and submit a thesis. The dissertation, examined by at least 5 committee members, must make a substantial contribution to the field of Materials Science and Engineering.

#### **Combined Degree Programs**

Combined degree programs allow qualified candidates to earn a bachelor's/master's degree in as little as five years or to focus directly on the Ph.D. dissertation without submission of Master's thesis.

# ■ What Do You Study?

Advanced Ceramics Processing

Advanced Course of Inorganic Materials

Advanced Course of Instrumental Analysis

Advanced Crystallography
Advanced Electron Microscopy

Advanced Energy Materials Engineering

Advanced Ferrous Alloys Advanced Foundry Metallurgy Advanced Materials Characterization

Advanced Materials Science

Advanced Mechanical Behavior Of Materials

Advanced Metallography
Advanced Non Ferrous Alloys
Advanced Quantum Mechanics
Advanced Solid Thermodynamics
Advanced Solidification Theory
Advanced Transport Phenomena

Amorphous Materials

Battery Interface Engineering

Battery Materials

Battery Materials Science

**Bio-ceramics** 

Computational and AI Assisted Materials Science

Corrosion and Protection of Materials

Crystal Structure Analysis

Electrochemical Energy Conversion and Storage

Electrochemistry
Electronic Materials

Industry-academia Seminar on Materials Science

and Engineering

Kinetic Processes in Solids Light Metals and Materials

Material Design for Secondary Batteries

Materials for Rechargeable Batteries

Materials Science and Engineering Capston Design Materials Science and Engineering Field Practice

Mechanical Properties of Thin Films

Metallic Biomaterials

Metals and Alloys for Medical Use

Nanointerface Engineering

Nano-processing for Energy Materials

Nonstoichiometry of Materials Optical Properties of Materials Optoelectronic Materials Engineering Physics-based Impedance Spectroscopy

Plasma Processing of Materials Research Guidance 1/2/3 Research Training 1/2 Semiconductor Physics

Sensor Materials and Devices Solid State Electrochemistry

Solid State Ionics

Solid State Lighting Device

Special Lecture of Nanomaterials Engineering Special Lecture of Semiconductor Materials and

Devices

Strengthening and Fracture of Metals Surface Phenomena of Materials

Technical writing in materials science & engineering Theory and Practice of Electron Microscopy Theory of Phase Transformation in Metal Alloys

Thin Film Materials and Processing Ultra-precision Measurement Physics 1/2

Vibrational Spectroscopy X-Ray Analysis of Materials

#### Professors

- Ho-Sung Kim, symmetry@jnu.ac.kr
   [Crystal Structure Analysis & Crystal Growth]
- Kwangmin Lee, kmlee@jnu.ac.kr
   [Nano- & Bio-materials]

- Youngman Kim, kimy@jnu.ac.kr
   [Mechanical & Thermal Characterizations of Thin
   Films]
- Sung-Kil Hong, skhong@jnu.ac.kr

- [Light Metals, Mold & Automotive Parts Materials]
- Jin-Hyeok Kim, jinhyeok@jnu.ac.kr
   [Photonic Electronic Thin Film Growth & Characterization]
- Jaekook Kim, jaekook@jnu.ac.kr
   [Design, Synthesis, Characterization of Nano Energy Materials]
- June Key Lee, junekey@jnu.ac.kr
   [Semiconductor Process Design]
- Jong-Sook Lee, jongsook@jnu.ac.kr
   [Electroceramics]
- Sun-Ju Song, song@jnu.ac.kr
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- Chan-Jin Park, parkcj@jnu.ac.kr

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   [Biomaterials]
- Yeongho Kim, ykim2023@jnu.ac.kr [Next-generation Semiconductor]
- Tae-Hoon Kim, thk@jnu.ac.kr
   [Multiscale Microstructure Analysis]
- Kootak Hong, kthong@jnu.ac.kr
   [Advanced Electronic Materials and Devices]

- Single Crystal Growth Lab
- Nanomaterials Processing Lab
- Mechanical Metallurgy Lab
- Light Metal Materials Lab
- Photonic and Electronic Thin Film Lab
- Nano Energy Lab
- Semiconductor Process Design Lab
- Electroceramics Lab

- Ionics Lab
- Materials Electrochemistry Lab
- Green Energy Materials Lab
- Nanodevices and Materials for Energy Lab
- Advanced Biomaterials Lab
- Next-generation Semiconductor Devices Lab
- Multiscale Microstructure Analysis Lab
- Advanced Electronic Materials and Devices Lab

# Department of Mechanical Engineering

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# **■** Graduate Studies in Mechanical Engineering

Mechanical Engineering is a broad and dynamic discipline that encompasses a wide range of technological fields. It encompasses the complete spectrum of activities involving the design, manufacturing, and control of mechanical systems. With rapid advancements in technology, Mechanical Engineering is continuously pushing its boundaries, venturing into modern and high-tech domains. These cutting-edge areas include robotics, hydrogen energy, fuel cells, optics, composites, nano-technology, smart materials, automotive engineering, and AI. As a field that constantly evolves, Mechanical Engineering remains at the forefront of innovation, driving progress in various industries.

# **■** Degree Requirements

#### Master's Program

The graduate program is designed with the primary goal of providing top-tier academic instruction and fostering advanced research skills among students. Prospective applicants should possess an undergraduate degree in environmental engineering or a related field, demonstrating a solid academic foundation. However, individuals from diverse academic backgrounds will also be taken into consideration, provided they exhibit appropriate qualifications and a genuine interest in the program's focus.

Candidates pursuing a Master's degree are expected to complete a minimum of 24 credit hours and culminate their studies by submitting a thesis centered around an original research project. The successful fulfillment of these requirements is anticipated within a time-frame of two to three years from the start of enrollment. This program is tailored to cultivate a deep understanding of environmental engineering principles while encouraging the development of valuable research capabilities.

#### Ph.D. Program

Ph.D. candidates embark on a personalized research endeavor guided by an appointed supervisor, channeling their efforts into a comprehensive individual project. The culmination of their work and discoveries is presented in the form of a meticulously prepared dissertation. This document undergoes examination by a committee comprised of a minimum of 5 members, each contributing their expertise to assess the significance of the candidate's contributions within the scientific or engineering domains.

Furthermore, students are expected to engage rigorously in coursework, amassing a total of no less

than 60 credits. This credit requirement encompasses the credits acquired during the pursuit of a master's degree, in addition to successfully passing a foreign language examination.

Degrees are conferred upon those who satisfactorily fulfill these requisites within a span of two to five years from the initiation of their enrollment. This Ph.D. program is structured to foster profound scholarly advancement, while also ensuring a comprehensive grasp of the relevant subject matter.

# ■ What Do You Study?

Adv. Control Engineering Continuum Plasticity

Adv. Mechanical Vibration Convective Heat Transfer

Adv. System Engineering Design and fabrication of microsystems

Advanced Automotive and Environment Finite Element Method
Advanced Combustion Engineering Fracture Mechanics
Advanced Course of Applied Mathematics Fuel Cell Power System

Advanced Course of Composite Materials Future Transportation System Engineering

Advanced Design Engineering Interfacial Fluid Mechanics

Advanced Dynamics Introduction to Mechatronics and Measurement

Advanced Eco-friendly vehicles Systems

Advanced Electrochemical Power Systems Medical Robotics

Advanced Energy Conservation and Transfer Micro Thermal and Fluid System

Advanced Fluid Mechanics Microfluidics
Advanced Fluid Mechanics Modern Robotics

Advanced Internal Combustion Engine Nano process and measurement

Advanced Material Strength Optical Engineering
Advanced Mechatronics Optimal Control

Advanced MEMS Optimal Design of Thermal System

Advanced Microrobotics Plastic Molding Technology and Its Application

Advanced mold design Precise Sensor and Metrology

Advanced Nonlinear Control Production Technology
Advanced Robotics Research Guidance 1
Advanced Signal Processing Research Guidance 2

Advanced Solid Mechanics Research Guidance 3
Advanced Thermodynamics Research Training 1
Aerosol Technology Research Training 2

Application of Hydrogen Energy Seminar on Mechanical Engineering

Applications of ultrashort pulse lasers Structural Dynamics

Autonomous Mobile Robot Surface Energy and Nano Mechanics

Biomaterials Turbulence
Biomechanics Two-Phase Flow

Biomimetics Ultra Light Metal Structures

Computational Fluid Dynamics Viscoelasticity

Conduction Heat Transfer

#### Professors

- Ki-Ju Kang, Ph.D.
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- Bo-Seon Kang, Ph.D.
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- Hyun Wook Kang, Ph.D.
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- Wonoh Lee, Ph.D.

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- Soonwook Hong, Ph.D.
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- Ayoung Hong, Ph.D.
   [Assistant Professor, Autonomous Intelligent Robotics, ahong@jnu.ac.kr]

- Active Structures and Dynamics Laboratory
- Advanced Combustion Control Lab
- Advanced Fluidics & Nanotechnology Lab
- Aerosol and Surface Lab
- Autonomous and Intelligent Robotics Lab
- Building Self-monitoring, Analysis & Reporting Technologies Lab.
- Composites & Mechanics Lab
- Electrochemical Power Lab
- Building Self-monitoring, Analysis & Reporting Technologies Lab
- Integrated Control and Robotics Lab(iCARL)

- Intelligent Robotics and Vehicle Lab
- Material Strength Lab
- MeRIC-Lab(Medical Robotics and Intelligent Control Laboratory)
- Micro/Nano Robotics Lab
- MNTL (Micro/Nano Technology Laboratory)
- Multiscale Flow Control Lab
- Multiscale Molding & Manufacturing (M3) Lab
- Renewable Energy Prototyping Lab
- Ultraprecision Photonics (UP) Lab
- X-Lab

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# ■ Graduate Studies in the Department of Polymer Engineering

Polymer engineering is an academic field dealing with the synthesis, properties, processing, and application of polymers. Polymers are giant molecules that have significance not only in terms of products such as plastics, rubber, fiber, adhesives, and coatings, but also less obviously though none the less importantly, in many leading industries (new materials, biochemistry, biomedical, environments, aerospace, electronics, automotive, etc.). The Department is dedicated to producing high-quality graduates who are able to make significant engineering contributions toward enhancing the quality of life of human beings. The objectives of our academic functions are the practical application of scientific and engineering principles to generate new material and processing concepts, and the enhancement of technical problem-solving capabilities related to the production and use of polymers.

# **■** Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in a polymer engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### Ph.D. Program

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields. In addition, students are required to earn at least 60 credits in coursework including the credits already earned for the master's degree as well as pass one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

# ■ What Do You Study?

Sensitive Polymer

Advanced Surface Chemistry

High performance functional fibers

Advanced Polymer Processing (1)

Advanced Polymer Processing (II)

Advanced Polymer Engineering (1)

Advanced Polymer Engineering (II)

Structure and Properties of Macromolecules

Advanced Instrumental Analysis of Polymer (1)

Advanced Instrumental Analysis of Polymer (II)

Advanced Polymer Rheology

Advanced Physical Chemistry of Polymer

Advanced Polymer Reactions

Organic Composite Materials

Membrane Separation

Advanced Polymer Testing Method

Advanced Polymer Solution

Polymers in Electronics

Advanced Polymer Chemistry ( I )

Advanced Polymer Chemistry (II)

Advanced Functional Polymers (I)

Advanced Functional Polymers (II)

Functional Dyestuffs

Functional Carbon Materials

Nanostructured Organic Materials for Electronics

and Photonics

Special topics of Nanostructured techniques for

Nanofabrication

Multicomponent Polymer Materials

Organic Electronic Materials and Devices for Displays

Microcapsule

Hair Science

Advanced Course of Fiber Formation

Structural Mechanics of Non-woven Fabrics

Advanced Course of Industrial Textile Materials Advanced Course for Color Science

Advanced Biopolymers

Introduction of Petroleum Chemistry

Fiber Modification

Chemical Reaction of Fibrous Polymers

Advanced Course of Fiber Function Design

Physical Properties of Fibers

Advanced Course of Fibrous Materials

Advanced Water-soluble Polymers

Special Seminar1

Carbon Materials for Energy and Environment

Advanced Elastomer Engineering

Advanced Course of Physical Chemistry of Dyeing

Organic-Inorganic Hybrid Materials

Advanced Organic Chemistry

Polymer Colloids

Advanced Transport Phenomena

Low dimensional carbon materials

Conducting Polymers

Computer Applications in Textile Engineering

Kinetics of Polymerization

Natural Polymers

Advanced Course of Natural Fibrous Polymers

Structure and Properties of Carbon Fibers

Technical Writing

Texturing

#### Professors

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- Changhun Yun, Ph.D.
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- Yeongun Ko, Ph.D.
   [Assistant Professor, Polymer Interfacial Engineering, yeongunko@jnu.ac.kr]

- PM[Polymeric Materials/Polymeric Membranes) Lab
- Nanocarbon Lab
- Functional Polymer System Lab
- Functional Nanomaterials Lab
- Energy and Electronics Materials Lab
- Functional Organic Materials Synthesis Lab
- Theory and Simulations for Soft Matters Lab
- Polymer Composites and Processing Lab
- Energy Materials Lab
- Integrated Electronic Materials Lab
- Polymer Interfacial Engineering Lab

# Interdisciplinary Program of Bioenergy and Biomaterials

\_\_Contact Information
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# ■ Graduate Studies in Bioenergy and Bio-materials

The interdisciplinary Graduate program of Bioenergy & Bio-materials is an academic discipline that researches and educates profound knowledge of bioenergy and bio-material. Bioenergy and bio-materials have become a very active and vital area of research which is rapidly developing in industrial sectors and spreading to almost every field of science and engineering. Bioenergy, a renewable energy, is derived from biomass including wood, straw, sugar cane, plant parts, garden waste, animal waste and other agricultural materials. Bioenergy is a research field to produce biofuel derived from biological sources in its most sense. Bio-materials research encompasses area such as design of biomolecules, biopolymer and biosensor resulting in exciting developments in bio-materials-based technologies over the last decade. Graduate students in our program will learn the theory and applications of biology, chemistry and engineering as it pertains to bioenergy and bio-material science and engineering. The diverse faculty members from several colleges and departments are participated in the interdisciplinary masters program of bioenergy and bio-materials. It should give a chance to students exposing to a wide range of projects and viewpoints on the cutting edge of the field. The program will accept both part-time and full-time students. Full-time graduate students typically receive financial support. Regardless of strong backgrounds, we have a place for students to grow in our program. Our alumni fulfil leadership roles in industry, research centers, and academia across a wide variety of sectors including bioenergy, bio-material, biotechnology, and bioengineering.

# **■ Degree Requirements**

The master of interdisciplinary program of bioenergy and bio-materials requires 24 credits of coursework. A student studying for Ph.D. degree must earn an additional 36 credits. All of students in the programs must pass a foreign language exam, a qualifying exam, and a thesis submission for graduation.

# ■ What Do You Study?

Research for the Master's or Doctoral Degree Climatical Change Agreement Special Topics in Process Design Scientific Writing Advanced Biomass Conversion Bioproducts
Biosystem Engineering
Advanced Bioenergy Plant Design
Advanced Bioenergy Engineering
Advanced Bioenergy Microbial

Biotechnology

Advanced Bioenergy Fermentation

Technology

Bioenergy Production Processes &

Practices I (Biodiesel)

Bioenergy Production Processes &

Practices [] (Bioethanol/Biogas)
Bioenergy Production Processes &

Practices **■** (Biodiesel)

Bioenergy Production Processes &

Practices IV (Bioethanol/Biogas)

Bioenergy Seminar 1

Bioenergy Seminar 2

Bioenergy Seminar 3

Bioenergy Seminar 4

Advanced Bioenergy Materials

Bioenergy Quality Analysis & Practices I

Bioenergy Quality Analysis & Practices II

Bioenergy Quality Analysis & Practices III Bioenergy Quality Analysis & Practices IV

Advanced New & Renewable Energy

Advanced Energy Engineering

Advanced Energy Materials Analysis

Advanced Energy Materials Synthesis

Energy Policy

Advanced Energy Catalystic Chemistry

Advanced Environmental Biological Engineering

Environmental Energy Engineering

Advanced Technologies in Combustion Control

Advanced Microbial Biotechnology

Advanced Plant Metabolism

Advanced Plant Tissue Culture I

Advanced Plant Tissue Culture II

Advanced Plant Metabolism Advanced So

Special Topics in Protein Separation & Purification

Advanced Fermentation Technology

Cell Culture Engineering

Advanced Bioprocess Engineering

Advanced Bioprocess Control

Advanced Bioreactor Design

Advanced Bioseparation & Purification

**Bioinfomatics** 

Advanced Plant Molecular Biology

Advanced Plant Physiology

Plant Tissue Culture

Special Topics in Metabolic Engineering

Biochemistry & Molecular Biology

Special Topics in Biochemistry

Biomedical Engineering

Advanced Carbohydrate Materials

Special Topics in Enzyme Process Engineering

Advanced Inorganic Material Chemistry

Advanced Catalyst Design Chemistry

Advanced Catalystic Chemistry

Advanced Crop Physiology Crop Seed Physiology

Seminar in Seed Production

Advanced Energy Materials

Materials Analysis Technology

Advanced Synthesis Technology

Advanced Process Control

Acid Base Catalysts

Energy Environmental Engineering

Advanced Combustion Engineering

Advanced Solid Waste Treatment Engineering

Design & Operation of Bioreactor

Advanced Aquatic Chemistry

#### Professors

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- [Bioprocess Development & Optimization, chekimtw@jnu.ac.kr]
- Kibaek Lee, Ph.D.
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• Tae Wan Kim, Ph.D.

- Catalytic Chemical Lab.
- Environmental Biotechnology Lab.
- Biomolecules Engineering Lab.
- Metabolic Engineering Lab.

- Wood Chemistry Lab.
- Protein Engineering Lab
- Bioprocess Engineering Lab.
- Water & Environmental Biotechnology Lab.

# Interdisciplinary Program of Cultural Properties

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# **■** Graduate Studies in History

The Interdisciplinary Program in Cultural Properties was established to develop creative and original cultures by cultivating the experts and professionals who excavate and conserve Korean culture in the 21st century, the age of culture. For the program, interdisciplinary cooperation was made with nine related departments including Architecture, Korean Music, Korean Language Education, Korean Literature, Fine Arts, History, Food and Nutrition Science, Clothing, and Anthropology. We have offered a master's degree since 2003 and doctorate degrees since 2005.

Cultural Properties Studies is a convergence science covering researches on all kinds of culture, cultural assets or national properties, tangible, intangible and/or lost heritages, and cultural technologies. This interdisciplinary program aims to develop knowledgeable professionals and experts in cultural heritage studies who are equipped with related expertise and skills through our field-centric systematic educational approach, studying general topics related to culture and cultural properties.

# Degree Requirements

Through the program, we expect to see our future scholars, experts, and professionals cultivated with research capabilities in cultural heritage or knowledge in national cultural properties for the related institutes, international and domestic museums, and art galleries.

# ■ What Do You Study?

Research for the Master's or Doctoral Degree

#### **Generals**

Appraisal of Cultural Properties (3)
Study on Cultural Heritage Protection Act (3)
Methodology of Cultural Properties (3)
Cultural Heritage Policy Research (3)
Methodology Designated as Cultural Properties (3)
Festival Cultural Heritage Tourism Research (3)
Cultural Heritage Content Development (3)
Methods and Theory in Excavation (3)
Methodology of Preservation Science (3)

Methodology of Heritage Restoration (3)
Methods and Theory in Site Survey (3)
Study on Korea a Cultural Area (3)
Korea Cultural History Research (3)
Seminar in Korean Historical Records (3)
A Study on the Religion Culture in Korea (3)
Theory of Cultural History (3)
A Study on the Regional Historical and Cultural Resources (3)
A Study on the Traditional Culture in Korea (3)

#### **Tangible Cultural Heritage**

Study of Architectural Heritage (3)

The Study of Public Documents (3)

Modern Cultural Heritage (3)

Studies in Cultural Relics of Mahan (3)

The Study of Anthology (3)

The Study of Buddhist Documents (3)

Study on Buddhist art (3)

Study of Pagoda (3)

The Study of Private Documents (3)

Studies of Cultural Stone-Constructed Heritage (3)

Studies in Underwater Cultural Relics (3)

Studies in Cultural Relics of Tombs (3)

Research in Korean Traditional Costume and Craft (3)

Traditional Calligraphy Study (3)

The Study of traditional paintings (3)

Research on royal cultural assets (3)

#### Intangible Cultural Heritage

Study of Metalcraft (3)

Ceramic Craft (3)

Study of Woodcraft (3)

Study on Traditional Folk Play (3)

Study of Stonecraft (3)

Studies in Musical Books (3)

#### Professors

- Dae-Hyun Kim, Ph.D.
   [Professor, Korean Classical Literature, Ancient and Old Documents, kdh@jnu.ac.kr]
- Byoung-In Kim, Ph.D.
   [Professor, Medieval Korean History, Honam Studies, Historical Culture Design, kimbi36@inu.ac.kr]
- Yong-Ui Kim, Ph.D.
   [Professor, Japanese Culture, yukim@jnu.ac.kr]
- Eun-Jung Kim, Ph.D.
   [Professor, Traditional Clothes Culture kimej@jnu.ac.kr]

Study oninstrumental genres of Korean music (3)

Study on vocal genres of Korean music (3)

Studies of traditional cooking methods (3)

Study on Korean Costume Constuction (3)

Theory of Performance (3)

Arts and Publicness (3)

Cultural Study of Music (3)

#### Monument

Study on the Traditional Occupations (3)

Study on Annual Customs (3)

Studies on dietary life (3)

Research in Clothing Life (3)

Studies in Living Life (3)

Study of scenic beauty Heritages (3)

Studies in Historic Relics (3)

Study on the Korea Natural Heritage (3)

Capstone Design for Cultural Heritage Field Work (3)

Ritual Culture Research (3)

#### **World Culture**

Studies in World Heritage (3)

Study on the World Natural Heritage (3)

The Study of Human Recording Inheritance (3)

Study on the Intangible Cultural Heritage of Humanity (3)

- Cheol-Woo Kim, Ph.D. [Professor, Craft, dogong63@hanmail.net]
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- Yong-Shik Lee, Ph.D.
   [Professor, Theory of Korean Music, yongshiklee@hanmail.net]
- Lan-Hee Jung, Ph.D. [Professor, Food Science, lhjung@jnu.ac.kr]
- Jin-Sun Cho, Ph.D.

- [Professor, Northeast Asia Archaeology, jojs@chonnam.ac.kr]
- Yu-Jun Choi, Ph.D. [Professor, Local Culture, hoggenug@jnu.ac.kr]

 Seung-Hoon Han, Ph.D.
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# Interdisciplinary Program of Information Security Convergence

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#### ■ Graduate Studies in Department of Information Security Convergence

The Department of Information Security Convergence has a vision of fostering convergence security talents who can research and implement security requirements for each convergence industry.

Our educational goals are: The goal of the educational aspect is to develop essential subjects for learning core security technologies in the ICT convergence industry, and to design an intensified curriculum for majors to acquire specialized security technologies for products and services.

In terms of research, it is to strengthen ICT convergence security research capabilities based on the convergence industry and to provide customized research capabilities through reflection for industrial coefficients.

In addition, our educational goal is to promote international exchange by fostering experts in convergence ICT field practice type convergence security.

Our major competencies include practical expertise through the ability to provide practically applicable technologies based on core security technologies, such as vulnerability checks and security measures.

The second is consilient problem-solving ability, which is the ability to solve problems and propose alternatives through the application of convergence security technology, not fragmentary problem-solving.

Finally, the third is creative development ability, which is the ability to develop new technologies by leading and utilizing convergence security technologies from new and diverse perspectives.

In the world now, with the advent of the large-scale digital market of the 4th industrial era, the door to infinite possibilities in the field of cyber security has opened. In the Department of Information Security Convergence, you will design your future and move beyond employment to a larger global stage and prepare a foothold as a member of society leading the digital era.

#### **■** Degree Requirements

To complete the master's degree program, students must earn at least 24 credits in their major courses. (Including 15 credits of Information Security Convergence Department curriculum)

Doctoral applicants must acquire at least 36 credits in major courses (including 24 credits in information security convergence department curriculum)

In addition, for the integrated master's and doctoral course, students must acquire at least 54 credits in their major courses. (Including 39 credits of Information Security Convergence Department curriculum) Graduate students must pass or be exempted from the comprehensive exam and foreign language exam, and must complete the research performance score in order to receive the thesis review for graduation.

The master's program graduate must earn at least one research performance point. The doctoral course and the combined master's and doctoral course must acquire a research performance score of 4 or higher.

Candidates who satisfy all of the above conditions can receive thesis review, and thesis review candidates must make a public presentation on the thesis topic at the system security conference held every semester. Candidates for review must submit evidence of research achievements prior to the final dissertation review.

#### ■ What Do You Study?

Advanced Database System SmartGrid

Advanced Distributed System SmartGrid System Security
Graph Theory System Cyber Security
Machine Learning Renewable Energy Systems

Applied Machine Learning for Cybersecurity Real Time System

Technical Writing Cryptography and Access Control
Network Cyber Security Application Cyber Security

Network Programming Introduction of Energy ICT

Introduction To Data Mining Research Training 1
Topics in Data Mining Research Training 2

Digital forensics Image Processing Applications

Topics in Deep Learning Image Analysis
Ransomware Virus Research Web Engineering
Software Analysis Techniques for Security Topics on Web Mining
Cyber Security Assessment Methodology Ubiquitous Computing

Security Protocol Topics in applied abstract algebra

Distributed Object System Mobile IP

Distributed Application System Topics in Mobile Computing
Distributed AI System Topics in discrete mathematics

IoT Security Topics in Artificial Intelligence
Practice of Cyber Terror Responses Internet Security

Automation of Industrial Process Internet Protocols
Industrial Control System Cyber Security Embedded program

Topics in Context Inferencing Automatic Measurement System
Performance Evaluation SmartGrid Data Analysis

Sensor Networks Power Communication Network
Sensor Data Analysis Advanced Power Communication Networks

Sensor Interfacing Power Communication Ststems

Topics in Software Engineering Advanced Power Communication Systems

Power Communication Theory

Advanced Power Communications

Power IT Engineering
Information Hiding Theory

Information and Communication Security

Information Security Management

Industry-Academic field Project with Information

Security

Information Security Seminar Information Security System Cyber Security Consulting Information Security Project

Information Protection System policy design

Information System Security Policy

Advanced Information Theory

Number Theory

Topic in Intelligent Systems

Cyber Security for intelligent Control System

Topics in Computer Networks

Computer Security

Computer and Artificial Intelligence

Cloud Computing Security

Client Server System

Types and Programming Languages Transaction Processing Systems

Pattern Recognition

Topics in Pattern Recognition

Principles of Programming Language

Methodologies for Development of Program

Project Management
Project Management
FinTech Security
Probability Theory(I)

Cyber Security of DCS &Digital Control System Social Network Service and Cyber Ethics

TCP/IP

#### Professors

- Ieck-Chae Euom, Ph.D.
   [Professor, Data Driven Security, Privacy Security, ICS-OT, iceuom@jnu.ac.kr]
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- Deok-Jai Choi, Ph.D.
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- Hyuk-Ro Park, Ph.D. [Professor, Information Search, hyukro@jnu.ac.kr]
- Hyung-Jeong Yang, Ph.D. [Professor, Application Software, hjyang@jnu.ac.kr]
- Yong-Min Kim, Ph.D
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- Dong-Kook Kim, Ph.D
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- Seung-Won Kim, Ph.D.
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- Tae-June Park, Ph.D.
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# Interdisciplinary Program of Photonics Engineering

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#### **■** Graduate Studies in Photonics Engineering

The Interdisciplinary Program of Photonics Engineering offers opportunities to perform basic and applied research at the frontier of optical communications and networking, optoelectronic semiconductor devices, and harnessing solar energy. Faculty members from Department of Materials Science and Engineering, Applied Chemical Engineering, Chemistry, and Physics constitute the interdisciplinary program.

#### **■** Degree Requirements

#### Master's Program

Master's degree candidates are required to earn 24 credits minimum, to pass the foreign-language and qualifying examination, and to prepare a thesis evaluated by a 3 member committee.

#### Ph.D. Program

Students are required to earn at least 36 credits and pass the foreign-language and qualifying examination for the thesis submission. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to Photonic Science and Engineering.

#### ■ What Do You Study?

Applied Optics I/I Amorphous Photonic Materials

Advanced Course of Inorganic Materials For Special Display Engineering
Use Electrochemistry

Advanced Course of Instrumental Analysis Electromagnetic Engineering

Advanced Course Of Polymer Chemistry Electronic Materials

Advanced Electronic Materials Experiments for Optical Materials Fabrication

Advanced Instrumental Analysis Process

Advanced Photocatalyst Functional Polymer Materials

Advanced Photonic crystals

Advanced Polymer Physics

Laser Engineering

Laser Materials Processing

Advanced Solid State Physics Low Temperature Plasma Process
Advanced Solid Thermodynamics Mechanical Properties of Thin Films

Microfabrification of polymers Nanocarbon Engineering Nanotechnology Engineering Optical Communication System

Optical Fiber Theory Optical Materials

Optical Materials Fabrication Process & Characterization

Optical Polymers

Optical Sensor Engineering

Optical Telecommunication Experiments

Optical Telecommunication Devices

Optical Thin Film Fabrication Process

Optics Experiments
Opto-Electronics

Organic Conductive Materials
Organic Electronic Materials

Photoelectrochemistry
Photofunctional Polymers

Physical Chemistry of Polymers Plasma Processing of Materials

Plastic Optical Fibers Polymer Optical Devices

Polymers for Electronics and Photonics

Quantum Mechanics Research Guidance 1/2/3 Research Training 1/2

Semiconductor Device Physics

Semiconductor Materials and Processing

Semiconductor Physics

Semiconductor process design Sensor Materials and Devices

Special topics in optic & electronic materials Strengthening and Fracture of Materials Theory and Practice of Electron Microscopy Thin Film Fabrication Process

#### Professors

- Jin-Hyeok Kim, jinhyeok@jnu.ac.kr [Photonic Electronic Thin Film Growth & Characterization]
- Do-Heyoung Kim, kdhh@jnu.ac.kr [Metal Organic Chemical Vapor Deposition]
- Hyun-Yong Lee, hyleee@jnu.ac.kr [Photonic Materials & Devices]
- June Key Lee, junekey@jnu.ac.kr
- [Semiconductor Process Design]
- Sang Wan Ryu, sangwan@jnu.ac.kr [Semiconductor Physics]
- Jun-Seok Ha, jsha@jnu.ac.kr[Nano Photonic Devices]
- Jong-Hoon Han, jhhan@jnu.ac.kr [Nano Carbon Convergence Materials]
- Chang-Kook Hong, hongek@jnu.ac.kr

[Solar Cells, Energy Engineering, Polymer Materials]

- Soon-Hyung Kang, skang@jnu.ac.kr [Analytical Chemistry]
- Jaeyeong Heo, jheo@jnu.ac.kr

[Nanodevices and Materials for Energy]

• Joong Wook Lee, leejujc@jnu.ac.kr

[Terahertz Photonics]

• Eun-Mi Han, emhan@jnu.ac.kr

[Opto-electronic Materials]

• Yung Ho Kahng, yhkahng@jnu.ac.kr

[Emerging Materials Devices]

• Seokho Cho, jsh818@jnu.ac.kr

[Wearable Electronics]

• Moo Sung Lee, moosung@jnu.ac.kr

[Polymer Hybrid Materials Lab]

• Yeongho Kim, ykim2023@jnu.ac.kr

[Next-generation Semiconductor]

• Kootak Hong, kthong@jnu.ac.kr

[Advanced Electronic Materials and Devices]

#### **■** Laboratories

- Photo and Electrochemical Energy Room
- Chemical Process Lab
- Photonics oriented leading study Lab
- Photonic and Electronic Thin Film Lab
- Nano Photonics Lab
- Semiconductor Process Design Lab
- Terahertz Photonics Lab
- Photonic Materials & Devices Lab
- Nano Photonic Devices Lab

- Nanocarbon Convergence Materials Lab
- Nanodevices and Materials for Energy Lab
- Polymer Energy Materials Lab
- Opto-electric device lab
- Emerging Materials & Devices Lab
- Wearable Electronics and Smart Textile Lab
- Polymer Hybrid Materials Lab
- Next-generation Semiconductor Lab
- Advanced Electronic Materials and Devices Lab

# Interdisciplinary Program of Software

\_\_Contact Information
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#### ■ Graduate Studies in the Interdisciplinary Program of Software

The goal of the Interdisciplinary Program of Software is to cultivate skills to accept cutting-edge information and communication paradigms such as distributed computing networking, next-generation Internet, and multimedia content development, and to train software development and maintenance personnel with practical skills in each field of society.

#### **■** Degree Requirements

The graduation credits for the master's program are 24 credits, of which 12 credits must be taken from courses offered in the department of Interdisciplinary Program of Software. The graduation credits for the master's program are 36 credits, of which 18 credits must be taken from courses offered in the department of Interdisciplinary Program of Software.

#### ■ What Do You Study?

3D Multimedia

Abnormal Detection

Advanced Big Data Analysis Advanced Distributed System

Advanced Material Flow Management Advanced Statistical Quality Control

Advanced Visual Programming

ARVR

Bioinformatics Bio-Mechatronics

Component based Software Engineering

Computer and Network Security
Computer Integrated Manufacturing

Cybersecurity Trends

Data Mining
Deep Learning

Digital Video Processing Distributed AI System Distributed Object System

E-commerce System Design and Constrution

Edge Computing

Energy Artificial Intelligence Foundations of Multimedia

Graph Theory

High Speed Networks Information Retrieval Intelligent Database System

Internet-based Client/server System Design and

Construction machine learning

Management Information System Analysis Management Strategic and Information Multimedia Communication and Applications

Network Programming

Object-Oriented Development Method Theory

Pattern Recognition Theory

Principles of Programming Language Production Information System Design

Project Management

Quality Engineering and Application

Real Time System Requirement Engineering

Robotics

Shared Data Analysis

Simulations SmartGrid

Software Development Method Theory

Software Development Project Software Engineering Environment

Software Process

Software Quality Management

Software Reuse

Statistical Data Analysis Technique Statistical Language Processing Statistical Methods for Life Sciences Survey Method

Theory of Computation

Theory of Statistical Inference Topic in Intelligent Systems

Topics in Algorithm

Topics in Artificial Intelligence Topics in Computer Networks Topics in Database Design Topics in Distributed Systems Topics in Electronic Commerce

Topics in Multimedia

Topics in Pattern Recognition Topics in Software Engineering Topics in Time Series Analysis

Web DataBase Web Programming

#### Professors

• Il Sang Ko, Ph.D.
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 Seung-won, Kim, Ph.D.
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 Hyuk-Ro Park, Ph.D.
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• Hyung-Jeong Yang, Ph.D.

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 Seok-bong, Yoo, Ph.D.
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 Hieyong Jeong, Ph.D.
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 [Assistant Professor, Computer vision, yj.cho@jnu.ac.kr]

Deok-jai Choi, Ph.D.
 [Professor, Advanced network, dchoi@jnu.ac.kr]

#### Laboratories

- Advanced Network Lab
- Augmented & Virtual Reality Lab
- Computer Vision Lab
- Distributed Network and Systems Lab
- Human-Media Lab
- Pattern Recognition Lab
- Smart Computing Lab
- Visual Intelligence Media Lab

# Interdisciplinary Program of Urban Disaster Prevention Safety Engineering

\_\_Contact Information

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#### **■** Graduate Studies in Architectural Engineering

Develop the ability to solve all problems that may arise in the city, including urban planning, roads, traffic, landscaping, and the environment, in a complex manner in various fields based on engineering judgment skills, and study in academic fields such as urban planning and transportation engineering. The purpose is to contribute to the development of the local community by improving application capabilities in actual fields.

#### **■** Degree Requirements

#### Master's Program

Master's degree candidates are required to earn 24 credits minimum, to pass the foreign-language and qualifying examination. Credits earned at domestic or foreign graduate schools (including research courses) prior to admission to graduate school may be recognized up to 9 credits for a master's program. The dissertation, which is examined by at least 3 committee members.

#### Ph.D. Program

Ph.D. candidates should have a master's degree. Students are required to earn at least 36 credits and pass the foreign-language and qualifying examination for the thesis submission. Credits earned at domestic or foreign graduate schools (including research courses) prior to admission to graduate school may be recognized up to 12 credits for a doctoral's program. The dissertation, which is examined by at least 5 committee members, but at least one of the doctoral program reviewers is external.

When submitting a requested thesis, at least one thesis must be published jointly with the advisor in a journal that is a candidate for academic registration or higher, and a printed copy must be submitted. However, one paper published in a journal of SCI level or higher is recognized as one paper published in a domestic academic journal candidate.

#### ■ What Do You Study?

Advanced Transportation Engineering Advanced Site Planning Advanced Urban Planning Advanced Study on Urban Renewal Restoration Engineering of Urban Research Guidance 1 Research Guidance 3

Theory of Disaster Management

Urban disaster prevention

Theory of Safety Management

Fundamental sof Disaster Prevention Regulations

Theory of Disaster Prevention

Theory of Disaster Humanities

Theory of Road Safety Management

Theory of Disaster Economics

Theory of Disaster Ethics

Theory of Disaster Psychology

Theory of Urban Disaster Prevention

Administration

Theory of Urban Risk Analysis

Theory of Urban Disaster Prevention System

Engineering

Disaster Prevention Safety Research Methodology

Disaster Statistics(Survey Methodology)

Theory of Disaster Safety in the 4th Industrial

Revolution Era

Theory of Disaster Analysis

Corporate Disaster Mamagement

Earthquake disaster management

Theory of Disaster Psychology/Behavior Analysis

Natural disaster reduction technology

Theory of Disaster Prevention Policy

Theory of Crisis Management

#### Professors

• Tae-Jun Ha, Ph.D.

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 Jejin Park, Ph.D.
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 Kanghyeok Yang, Ph.D.
 [Associate Professor, Construction Informatics, kyang@jnu.ac.kr]

• Eun-Il Kim, Ph.D.

[Professor, Environmental green space design, kyang@jnu.ac.kr]

#### Laboratories

- Traffic Engineering1 Lab.
- Traffic Engineering2 Lab.

- Hydraulic Engineering Lab.

### Department of Applied Plant Science

\_\_Contact Information

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#### ■ What is Applied Plant Science?

Applied Plant Science deals with scientific theories and applied techniques in plant production harmonized with nature and agro-ecosystems, which ultimately serve as the basis of the lives of human beings. Its goal is the clarification of the plant life phenomena from plant molecular levels to those of the community through understanding of heredity, environments, and their inter-relationships, in order to secure both the productivity and quality of crop plants.

#### Degree Requirements

Master's degree candidates are required to earn at least 24 credits. Ph.D. candidates are required to earn additional 36 credits.

#### ■ Department of Applied Plant Science at Chonnam National University

The Department of Applied Plant Science educates students with an interest in agronomic crops. It conducts research and offers courses in the subjects of Crop Science, Agro-Ecology, Crop Breeding, Industrial/Medicinal Crops, Crop Physiology, and Plant Biotechnology. The Department has progressed into exciting new and nontraditional areas in recent years. Environmental concerns have redirected much of the emphasis on both teaching and research. Faculty members are involved in active research projects in crop production and ecology, genetic improvement of crops for environmental reclamation, best management practices, and developing advanced bio-techniques in industrial/medicinal crops. Agronomy is a blend of teaching and research in the basic and applied, traditional and nontraditional aspects of agriculture. Students with graduate degrees will have an opportunity to go on to rich and rewarding careers, being challenged to contribute to the world in which they live.

The Department of Applied Plant Science that houses the Agronomy Program, offers students hands-on training. Learning is enhanced by practical training in the campus fields and campus greenhouses as well as in the facilities at Naju. Faculty members who teach and supervise students are also devoted to meaningful scientific progresses, enabling students to participate in significant research projects in various areas of research.

#### ■ What Do You Study?

Advanced Agricultural Meteorology (3)

Advanced Agricultural Ecology (3)

Advanced Agricultural Genetics (3)

Advanced Crop Breeding (3)

Advanced Crop Ecology (3)

Advanced Crop Molecular Breeding (3)

Advanced Crop Physiology (3)

Advanced Crop Production (3)

Advanced Crop Stress Physiology (3)

Advanced Environmental Vegetation

Management (3)

Advanced Industrial Crop Science (3)

Advanced Medicinal Plant (3)

Advanced Molecular Biology (3)

Advanced Plant Genetic Engineering (3)

Advanced Plant Tissue Culture (3)

Advanced Rice Culture (3)

Advanced Upland Crop Science (3)

Arableland Ecology (3)

Bio-metrical Breeding (3)

Crop Seed Physiology (3)

Experimental Design (3)

Metabolism in Crop Plant (3)

Metabolism of Natural Products (3)

Plant Breeding for Unfavorable Environment (3)

Plant Cell Engineering (3)

Plant Growth Regulation (3)

Plant Physiological Genetics (3)

Plant-water Relationships (3)

Production of Functional Materials in Plants (3)

Research Guidance 1 (3)

Research Guidance 2 (3)

Research Guidance 3 (3)

Research Training 1 (3)

Research Training 2 (6)

Seminar in Crop Breeding (3)

Seminar in Crop Environment (3)

Seminar in Crop Growth and Development (3)

Seminar in Rice Culture (3)

Seminar in Seed Production (3)

Special Studies in Crop Ecology (3)

Special Studies in Crop Science (3)

Special Topics to Crop Physiology (3)

Specific Topics in weed Science (3)

#### Professors

• Han-Yong Kim, Ph.D.

[Rice Crop Science, Principles of

Crop Cultivation, Agricultural meteorology,

hyk1020@jnu.ac.kr]

• Jonghan Ko, Ph.D.

[Crop Ecology, Agricultural Remote Sensing,

Crop Growth Modeling, jonghan.ko@jnu.ac.kr]

• Ok Ran Lee, Ph.D.

[Special Crop Science,

Secondary Metabolite Biosynthesis and Transport, Plant Growth and Development, mpizlee@jnu.ac.kr]

• Bo-Keun Ha, Ph.D.

[Crop Genetices & Breeding,

bkha@jnu.ac.kr]

· Jaeil Cho, Ph.D.

[Climatological Crop Physiology,

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#### Laboratories

- Rice Crop Science Lab
- Crop Environmental Ecology Lab
- Special Crop Science Lab

- Crop Breeding Lab
- Climatological Crop Physiology Lab

## Department of Horticulture

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#### ■ Graduate Studies in Department of Horticulture

Laboratories in the Department of Horticulture provide an opportunity for students to learn knowledge and technology required to be a horticultural specialist in the horticulture industry. The main areas of research are greenhouse horticulture, floriculture, pomology, plant propagation, plant breeding and plant physiology. The combination of theories and practical training enables students to experience advanced and applied technologies prevalent in the horticulture industry.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits.

#### **■** What Do You Study?

#### **Major Courses**

Advanced agro-healing (3)

Advanced Floriculture (3)

Advanced General Genetics (3)

Advanced Greenhouse Horticulture (3)

Advanced Horticultural Crop Breeding (3)

Advanced Horticultural Field Crops (3)

Advanced horticulture science (3)

Advanced landscape and management of

floricultural plant (3)

Advanced Molecular Breeding of Horticultural

crops (3)

Advanced Nutrition (3)

Advanced Plant Physiological Ecology (3)

Advanced Plant Tissue Culture (3)

Advanced Postharvest Physiology of Horticultural

Crops (3)

Advanced quality management of floricultural plant (3)

Advanced Seed Sciences and Technology (3)

Advanced Technology for hydroponic culture (3)

Advanced Vegetable Crops (3)

Crop Growth Modeling in Greenhouse Crops (3)

Global Trend in GMO technology and market (3)

Grapes and Wine Science (3)

Greenhouse Climate Control (3)

Horticultural Industry Field trip (3)

Horticultural Production System (3)

Horticultural Therapy (3)

Introductory Cource of Flower Breedomics (3)

Introductory Course about Risk Assessment of

GMOs (3)

Methodology of Molecular Marker Developmen (3)

Organic Horticulture (3)

Physiology of Environmental Stress in Horticultural

Crops (3)

Plant Factory system (3)

Plant Functional Compound Sciences (3)

Plant Metabolomics (3)

Plant Propagation (3)

Plant Resources (3)

Presentation tips and writing skills (3)

Propagation of floricultural plant (3)

Research Guidance 1 (3)

Research Guidance 2 (3)

Research Guidance 3 (3)

Research Training 1 (3)

Research Training 2 (6)

Seed production of F1 hybrid varieties (3)

Small Fruit Production (3)

Special Topics in Applied Ornamentals (3)

Special Topics in Horticultural Statistics (3)

Special Topics in Plant Physiology (3)

Tropical Fruit Science (3)

#### Professors

• Tae-Ho Han, Ph.D. [Ornamental Plant Science, hanth@jnu.ac.kr,

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· Sung-Gil Kim, Ph.D.

[Horticultural Crop Breeding & Genetics,

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• SangHyeon Lee, Ph.D.

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• Kang-Mo Ku, Ph.D.

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• Young Boon Lee, Ph.D.

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#### Laboratories

This Lab meets the demands of horticultural specialists and students in ornamental and pomological areas. Among the research conducted is in regards to eco-physiological mechanisms of individual responses for the adaptive and ecological capacity of any given plant population. Plant breeding theories and basic laboratory principles are also taught.

## Department of Applied Biology

#### \_\_Contact Information

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#### ■ Graduate Studies in Department of Applied Biology

The Department of Applied Biology at Jeonnam National University is composed of 3 main fields: Plant Pathology, Entomology, and Stress Biology. The educational goal at Department of Applied Biology is to foster professional individuals who learn both basic and applied sciences on plant response to pathogens, agricultural pests, and environmental stresses that significantly diminish plant and crop productivity.

Plant Pathology field focuses mainly on plant-pathogen (bacteria, fungi, virus) interactions, molecular genetics to understand mechanisms and biological control of plant diseases, and ecology and evolutionary biology of plant-associated microbes. Entomology field focuses mainly on the damage analysis and integrated pest management by the fundamental studies of classification, phylogeny, chitin biotechnology, and ecology of insect pests. Interactions between microbial natural enemy and insect pests are also studied for the eventual biological control of agricultural insect pests. Stress Biology field focuses mainly on the identification and determination of potential genes involved in plant responses to environmental stresses (drought, high and low temperatures, salt, UV), which would provide novel means to develop stress-tolerant agronomic crops.

The Department's curricula cover all necessary subjects for basic and applied sciences. We will educate students with a vision of becoming leading scientists in future agriculture.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits.

#### ■ What Do You Study?

#### **General Courses**

Advanced Scientific Communication and Writing Scientific Papers (3)

#### **Major Courses**

Microbial Genetics (3)
Advanced Plant Virology (3)
Biological Control Of Plant Pathogens (3)
Biological Control of Insect Pest (3)
Insect Natural Enemy (3)

Plant Molecular Biology (3)
Plant Pathogenic Bacteriology (3)
Physiological Plant Pathology (3)
Advanced Plant Environmental Stress (3)
Nucleic Acid Biochemistry (3)
Protein Biochemistry (3)
Plant Functional Genomics (3)
Plant Nematology (3)
Fungal Diseases of Plants (3)

Plant Growth Regulator (3)

Advanced plant molecular biotechnology (3)

Insect Molecular Genetics (3)

Insect Molecular Systematics (3)

Microbial genetics (3)

Molecular Biology Lab. (3)

Insect Immunology (3)

Insect Protein Purification (3)

Plant Biochemistry (3)

Research Techniques in Plant Pathology (3)

Diagnosis of Plant Diseases (3)

Insect Molecular Ecology (3)

Biological Statistics and Field Experiment (3)

Plant Disease Control (3)

Disease of Crop Plants (3)

Plant Pathology Lab. (3)

Advanced Molecular Plant Pathology (3)

Seminar in Plant Pathology (3)

Vector Biology (3)

Insect Molecular Physiology (3)

Insect Integument Biology (3)

Gene Sliencing and Functional Genomics in Insect

Integrated Pest Management (3)

Plant Volatile Compound and Natural Enemy

Biology (3)

Advanced Industrial Entomology (3)

Advanced Insect Biochemistry and Molecular

Biology (3)

Crop Protection Colloquium (3)

Crop Protection and Plant Quarantine Seminar (3)

Advanced Crop Production and Management (3)

Research Guidance 1 (3)

Research Guidance 2 (3)

Research Guidance 3 (3)

Plant Disease Epidermiology (3)

Advances in Insect Molecular Diagnosis (3)

Methods in Plant Pathology (3)

Advanced Plant Microbe Interactions (3)

#### Professors

- Young-Cheol Kim, Ph.D.
   [Plant Pathology, yckimyc@jnu.ac.kr]
- Hun-Seung Kang, Ph.D. [Plant Molecular Biology, hskang@jnu.ac.kr]
- Yeon-Soo Han, Ph.D. [Insect Pathology, hanys@jnu.ac.kr]
- Cheol-Soo Kim, Ph.D.
   [Plant Functional Genomics, cskim626@jnu.ac.kr]

- Kwang-Yeol Yang, Ph.D.
   [Molecular Plant Pathology, kyyang@jnu.ac.kr]
- Iksoo Kim, Ph.D.
   [Insect Molecular Phylogenetics and Ecology, ikkim81@jnu.ac.kr]
- Yasuyuki Arakane, Ph.D.
   [Insect Chitin Biothecnology, Yasuyuki Arakane@jnu.ac.kr]
- Rae-Dong Jeong, Ph.D.
   [Plant Virology, jraed2@jnu.ac.kr]

#### Laboratories

- · Plant Pathology Lab
- · Plant Molecular Biology Lab
- · Insect Pathology Lab
- · Plant Molecular Biology Lab

- Plant Functional Genomics Lab
- Insect Molecular Phylogenetics and Ecology Lab
- Insect Chitin Biothecnology Lab
- Plant Virology Lab

# Department of Forestry

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#### **■** Graduate Studies in Forestry

Forests occupy 65% of the land area in Korea. The mission of the Department of Forestry is to educate and engage the next generation of scholars, practitioners, and users of forests, to conduct distinctive problem-solving and fundamental research on the nature and use of forests and related resources, and to share discoveries and knowledge with others. The Department of Forestry is committed to enhancing understanding, effective management, and sustainable use of forests to support the national economy and public welfare, and to conserve the forest ecosystem.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Students will normally take 2 years to complete a Master's Program, during which they must pass a comprehensive exam in 3 subjects and a foreign language exam (English). Master's theses may be submitted in English or Korean. Ph.D. Candidates are required to earn 36 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Students will normally take a minimum of 3 years to complete a Ph.D. program, during which they must pass a comprehensive exam in 4 fields and a foreign language exam (English). Ph.D. theses may be submitted in English or Korean.

#### ■ What Do You Study?

Advanced Economic Plants (3)

Advanced Mycorrhizae (3)

Computer Science of Agriculture (3)

Advanced Erosion Control (3)

Advanced Forest Management (3)

Advanced Forest Measurement (3)

Advanced Forest Entomology (3)

Advanced Forest Protection (3)

Advanced Forest Ecology (3)

Advanced Forest Plant Systematics (3)

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Advanced Seed Science of Forest Plant (3)

Advanced Forest Genetics (3)

Advanced Forest Policy (3)

Advanced Forest Soils (3)

Advanced Forest Valuation (3)

Advanced Dendrology (3)

Experimental Design (3)

Advanced Forest Economics (3)

Advanced Silviculture (3)

Regression Analysis (3)

Animal Population Ecology (3)

Advanced Tree Pathology (3)

Seminar in Forestry (3)

Advanced Administration (3)

Advanced Tree Physiology (3)

Advanced Urban Forestry (3)

Advanced Forest Civil Engineering (3)

Advanced Forest Zoology (3)

Advanced Biochemistry (3)

Seminar in Forest Policy (3)

Advanced Forest Cooperatives (3)

Advanced Global Forestry (3)

Advanced Law of Forest Environment (3)

Advanced Mycology (3)

Advanced Mushroom Cultivation (3)

Advanced Geographical Information Systems (3)

Advanced Landscape Planning (3)

Forest Influences (3)

Ecotourism (3)

Forest Hydrology and Watershed Management (3)

Advanced Warm-temperate Forests Tending (3)

Forest Soil Conservation (3)

Forest Recreation Planning and Management (3)

Research for the Master's or Doctoral Degree (3)

#### Professors

 Ki-Wan An, Ph.D.
 [Professor, Forest Policy, kiwan@jnu.ac.kr, 062-530-2085]

 Kye-Han Lee, Ph.D.
 [Professor, Forest Ecology, khl@jnu.ac.kr, 062-530-2087]

Young-Sang Ahn, Ph.D.
 [Associate Professor.

Forest Environment Conservation Engineering, ysahn@jnu.ac.kr, 062-530-2081]

 Mi-Young Noh, Ph.D.
 [Assistant professor, Forest Protection, annemi@jnu.ac.kr, 062-530-2083]

 Hyun-Jun Kim, Ph.D.
 [Assistant professor, Silviculture, hjkim0837@jnu.ac.kr, 062-530-2082]

#### Laboratories

#### **Forest Policy Lab**

Research is carried out on forest resource management, related policies, planning of forest village development, usage pattern of recreation forests, and development of forest cooperatives.

#### Forest Ecology Lab

Research is carried out on soil carbon inventory, soil-plant available water, and forest water budgets. Other research areas include Riparian Forest Buffer, Agro-forestry, and Urban forestry.

#### Forest Environment Conservation Engineering Lab

Our laboratory goal is to elucidate the forest landscape functions as major environmental resources of forest biosphere with integration of natural and social scientific base, to build theory for renovation of disturbed and ruined environment to develop practical technologies.

# Department of Wood Science and Engineering

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#### ■ Graduate Studies in the Department of Wood Science and Engineering

In an era that focuses on lowered carbon emission and environmentally friendly construction materials, the study of wood science is becoming increasingly important. Wood science and engineering is a comprehensive field that combines wood anatomy, chemistry, physics, mechanics and wood architecture disciplines for the study of resource development, education, research and training of talented individuals.

Our field is divided into wood engineering and wood chemistry subfields. The wood engineering field specializes in the study of processing, producing and mechanical analysis of wood resources for green construction. We provide the techniques and theories needed to analyze the physical and mechanical characteristics of lumber in order to evaluate its quality for market pricing. We also research different methods for utilizing wood.

The wood chemistry field studies the mechanism involved in the physical and chemical damage of lumber as well as the structure and composition of wood for the use of renewable energy production. Furthermore, we research and analyze wood composition and the industrial application of timber. There are many different career paths available to our students after graduation. Work opportunities exist in various green industries involved in wood architecture, furniture, instruments and pulp production.

#### Degree Requirements

Students must complete 24 credits and submit a master's thesis in order to receive their degree.

#### ■ What Do You Study?

History of Furniture (3)

Design of Wood Structure (3)

Advanced Wood Processing (3)

Advanced Wood Industry Management (3)

Advanced Wood Physics (3)

Advanced Wood Preservation (3)

Wood-Water Relationship (3)

Advanced Wood Anatomy (3)

Advanced Course of Composite Materials (3)

Electron Microscope in Wood Science (3)

Advanced Chemistry Of Wood (3)

Applied Mechanics of Wood & Wood-based

Material (3)

Maintenance of Woody Cultural Properties (3)

Advanced in Bioenergy Science (3)

Furniture Design (3)

Musical Instruments Design (3)

Advanced plant and wood science Biotechnology (3)

Advanced Pulp and Paper Technology (3)

Advanced Pyrolysis of Wood (3)

Extractive chemistry (3)
Paper Processing, Packaging and Logistics (3)
Topics in Forest Microbiology (3)
Topics in Biorefinery (3)
Combustion of Forest Biomass (3)

Advanced Wood Mechanics (3)
Wood engineering (3)
Green Wood construction (3)
Academic writing in wood science (3)
Chemical Analysis of Wood (3)

#### Professors

- Hyoung-Woo Lee, Ph.D.
   [Professor, Wood Processing and Machineries, hwlee@jnu.ac.kr]
- Jae-Won Lee, Ph.D.
   [Professor, Wood Chemistry, Bioenergy, ljw43376@jnu.ac.kr]
- Gi-Young Jeong, Ph.D.
   [Professor, Wood Engineering, gjeong1@jnu.ac.kr]
- Jongsik Kim, Ph.D.
   [Wood Anatomy and Preservation, jongsik.kim@jnu.ac.kr]

#### Laboratories

- Wood Processing System Engineering Lab (Phone: +82-62-530-2095)
- Wood Chemistry Lab (Phone: +82-62-530-0289)

- Timber Engineering Lab (Phone: +82-62-530-2107)
- Wood Anatomy Lab (Phone: +82-62-530-2103)

# Department of Agricultural Chemistry

\_\_Contact Information

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#### **■** Graduate Studies in Agricultural Chemistry

The Department of Agricultural Chemistry focuses on studies in chemical and biological applications to agricultural and environmental systems. The Department is composed of seven main Laboratories: Soil Science and Microbiology (Professor Kil-Yong Kim), Environmental Pesticide Science (Professor In Seon Kim), and Environmental Microbiology (Professor Hyang Bum Lee) and Plant Resources Science (Professor Woo Jin Jung), and Plant Growth Regulators Science (Professor Jin-Cheol Kim) and Biofertilizer (Professor Yeonjong Koo), and Agricultural Environment (Professor Eun Hea Jho).

#### Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn 60 credits including credits earned in a Master's Program. Students are allowed to transfer up to 9 credits into the master's program. Master's theses should be submitted by May or October of each year. Doctoral theses should be submitted by March or September.

Graduate students must achieve a grade of C or better for all courses, and earn a cumulative average of B or better to be awarded a degree. Candidates will be awarded a degree upon fulfilling all requirements, including the foreign language requirement, and submitting a thesis for approval. The foreign language and comprehensive examinations are held in August or February.

#### ■ What Do You Study?

Advanced Course of Instrumental analysis (3)

Advanced Agricultural Environment Chemistry (3)

Advanced Analytical chemistry (3)

Molecular Cell Biology (3)

Advanced Fertilizers (3)

Advanced Pesticide Science (3)

Pestcide Residue Analytical Chemistry (3)

Biopolymer Chemistry (3)

Advanced Biotechnology (3)

Experimental Design (3)

Advanced Organic Chemistry (3)

Advanced Soil Microbiology (3)

Soil Biochemistry (3)

Soil Organic Matters (3)

Environmental Toxicology (3)

Advanced Enzyme Chemistry (3)

Pheromone Chemistry (3)

Advanced Industrial Microbiology (3)

Biochemistry of Plant Pathology (3)

Advanced Plant Growth Regulators (3)

Advanced Biochemistry (3)

Advanced Environmental Ecology (3)

Advanced Natural Material Science (3)
Seminar in Agricultural Chemistry 1 (3)
Seminar in Agricultural Chemistry 2 (3)
Advanced in Biological and Environmental
Chemistry (3)
Advanced Environmentally-Friendly Agriculture (3)
Advanced Plant Resources Science (3)
Biopesticide Science (3)

Applied Plant Resources Science (3)
Environmental Soil Science (3)
Applied Environment Agriculture Science (3)
Mycotoxicology (3)
Advanced Plant Diseases (3)
Plant Nutrition Physiology (3)
Startup Bussiness of Agricultural Chemistry 1 (3)
Startup Bussiness of Agricultural Chemistry 2 (3)

#### Professors

 Kil-Yong Kim, Ph.D.
 [Professor, Soil Microbiology, kimkil@jnu.ac.kr]

 In Seon Kim, Ph.D.
 [Professor, Environmental Pesticide Science, mindzero@jnu.ac.kr]

• Hyang Burm Lee, Ph.D. [Professor, Environmental Microbiology, hblee@jnu.ac.kr]

Woo Jin Jung , Ph.D.
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 Jin-Cheol Kim, Ph.D.
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Yeonjong Koo, Ph.D.
 [Associate Professor, Biofertilizer, yeonjong@jnu.ac.kr]

 Eun Hea Jho, Ph.D.
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#### Laboratories

- Soil Microbiology Lab (Phone: +82-62-530-2138)

- Plant Growth Regulators Science Lab (Phone: +82-62-530-2132)

- Plant Resource Science Lab (Phone: +82-62-530-3960)

- Environmental Pesticide Science Lab

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- Environmental Microbiology Lab (Phone: +82-62-530-2136)

- Biofertilizer Lab

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- Environmental & Ecological Systems Lab

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## Department of Animal Science and Biotechnology

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#### ■ Graduate Studies in Animal Science and Biotechnology

The graduate program in Animal Science and Biotechnology is designed to provide training at the master's degree level for those who wish to continue graduate work at the doctoral levels and for those who wish to seek employment in various fields in the animal industry. The major areas include animal breeding, reproduction, transgenic animals and molecular biochemistry. The program focuses on the development of transgenic animals using biotechnological tools. In addition, the division also emphasizes the research work on the screening of functional ingredients from animal resources by molecular biological and microbiological tools and applies these to animal derived foods such as meat and dairy products.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits.

#### ■ What Do You Study?

Advanced Animal Biotechnology (3)

Advanced Animal Biotechemistry (3)

Advanced Tissue Culture (3)

Advanced Molecular Genetics (3)

Advancede Cell Biology (3)

Advanced Livestock Management and Economics (3) Advanced Animal Molecular Biology (3)

Research Method of Animal Molecular Cell Biology (3)

Research Method of Ahlmal Molecular Cell Biology (5)

Advanced Transgenic Animal (3)

Population Genetics in Animal Breeding (3)

Advanced Animal Breeding (3)

Research Methods in Animal Reprodution (3)

Reprodutive Failure in Animal (3)

Controlled Breeding in Animal (3)

Advanced Reprodutive Physiology in Animal (3)

Advanced In Vitro Fertilization (3)

Distributed Component Specialism (3)

Experimental design special theory (3)

Animal quantitative genetics (3)

Animal cell signalling (3)

Advanced Animal Molecular Biochemistry (3)

Advanced Animal Food Analysis (3)

Gene targeting (3)

Advanced Embryo Technology in Animal (3)

Evaluation of Functional Food of Animal Resources (3)

Advanced Muscle Food Science and Biotechnology (3)

Advanced Muscle Food Analysis and Technology (3)

Advanced Functional Ingredients of Muscle Foods (3)

Soluble protein (3)

Biological application statistics (3)

Animal experimental design (3)

Method for evaluating the genetic ability of animals (3)

Individual Model Analysis Method (3)

Special Theory of Functional Components Analysis (3)

An animal engineering seminar (3)

Linear Model Specialism (3)

Advenced Poultry Sciences (3)

Advenced Animal Selection Methods (3)

Master guide laboratory animal practice (3)

Animal Pedigree Analysis (3)

Advanced animal immunology (3) Topics in Animal Transcriptomic analysis (3) Advanced animal functional genomics (3) Animal Breeding Scheme (3) Animal metabolic physiology (3)

#### Professors

- Kang, Man-Jong, Ph.D.
   [Transgenic Animals, mjkang@chonnam.ac.kr]
- Lee, Ji-Woong, Ph.D.
   [Animal Breeding and Genetics,

jwlee@jnu.ac.kr]

 Kim, Sung-hak, Ph.D.
 [Molecular Biochemistry, sunghakkim@jnu.ac.kr]

## Department of Animal Science and Bioindustry

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#### ■ Graduate Studies in Animal Science and Bio-Industry

Graduate programs leading to the Master of Science degree in either Animal Science or Dairy Science are offered in the general area of livestock production including dairy foods. Courses in the department such as animal physiology, ruminant nutrition, animal production, meat science, dairy microbiology, grassland science and statistics are basically provided. The courses of relevant departments provide in-depth training and laboratory works. These programs are flexible enough to interest students who may want to consider the master's degree as a terminal and practical degree. They are also designed to accommodate those graduates who want to use the master's degree as a preparatory step towards the doctoral degree.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits.

#### ■ What Do You Study?

Dry and Concentrated Dairy Products (3)

Advanced Genetics of Dairy Microbiology (3)

Advanced Dairy Microbiology (3)

Advanced Animal Endo- crinology (3)

Advanced Animal Physiology (3)

Growth and Development of Pasture Plants (3)

Advanced Utilization of Pasture Plants (3)

Engineering of Fermented Milk (3)

Advanced Milk Processing (3)

Advanced Quality Control of Dairy Product (3)

Dairy Chemistry and Physics (3)

Advanced Pasture Mana- gement (3)

Grassland Ecology and Productivity (3)

Advanced Animal Wastes Management (3)

Advanced Turf Grass Science (3)

Metabolic Physiology of Pasture Plants (3)

Advanced Meat Processing (3)

Advanced Meat Hygiene (3)

Advanced Quality Control of Animal Foods (3)

Nutriginomics and proteomics (3)

Manipulated Animal Nutrition (3)

Animal nutrient requirements (3)

Hygiene of Milk & Dairy Products (3)

Functional Probiotics (3)

Advance in Animal Microbial Technology (3)

Hazard Analysis Critical Control Point System of

Animal-Origin Food (3)

Foodborne Pathogens of Animal Resources (3)

Advanced Animal Feeding and Nutrition (3)

Methodology in Animal Feeding and Nutrition (3)

Advanced Swine Production (3)

Sustainable Livestock Production (3)

Advanced Animal management (3)

Experimental Design and Statistical Analysis (3)

Advanced Meat Science (3)

Rumen Microbiology (3)

Advanced Feed Science (3)

Advanced Gastrointestinal Microbiology in Animal (3)

Advanced Animal Nutrition (3)

Evaluation of Functional Food of Animal Resources (3)

Advance Beef Cattle Production (3)

Animal Welfare Topics (3)

Advanced Muscle Food Science and Biotechnology (3)

Advanced Muscle Food Analysis and Technology (3)

Advanced Functional Ingredients of Muscle Foods (3)

Advanced Animal Food Analysis (3)

#### Professors

- Sun, Sang-Soo, Ph.D. [Animal Physiology, ssun@chonnam.ac.kr]
- Kim, Tae-Hwan, Ph.D.
   [Forage Physiology & Biochemistry, grassl@chonnam.ac.kr
- Chin, Koo-Bok, Ph.D.
   [Meat Science,kbchin@chonnam.ac.kr]
- Oh, Se-Jong, Ph.D.
   [Animal Microbial Technosoh@chonnam.ac.kr]

- Jeon, Tea-Il, Ph.D.
   [Animal Metabolomics, tjeon@jnu.ac.kr]
- Kim, Min-seok, Ph.D. [Animal nutrition, mkim2276@jnu.ac.kr]
- Yun Jinhyeon, Ph.D. [Pig production, pilot9939@jnu.ac.kr]

## Department of Rural and Biosystems Engineering

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#### ■ Graduate Studies in the Department of Rural and Biosystems Engineering

The Department of Rural and Bio-systems Engineering, aim to build a climate-intelligent regional system that integrates regional infrastructure (design and construction), water environment (water management and non-point pollution control), and soil environment (soil qualtiy and carbon storage), atmospheric environment (fine dust and air pollution management), and policy/planning for sustainable agriculture to realize climate-smart agriculture. After graduating from the department, graduates can play a pivotal role in national and societies by taking jobs in national and regional government, public corperation (e.g., Korean Rural Community Corporation and K-Water), and research institute (e.g., National Institute of Agricultural Science, National Institute of Crop Science, National Institute of Animal Science, Rural Research Institute, and National Institute of Environmental Research). The graduate students in the department are financially supported by Brain Korea 21 Project of the Ministry of Education of Korean government.

#### **Rural System Engineering Track**

- Rural Environmental Water
- Environmental Soil Science
- Rural Infrastructure Engineering

- Rural Water Resources Engineering
- Agricultural Facilities and Environment

#### Degree Requirements

The master's degree requires students to complete advanced coursework, pass a foreign language proficiency test and preliminary qualifying exams, and become accustomed to research methodologies. Students are required to plan, conduct, and analyze a comprehensive research project, and report findings in a thesis.

Master's degree candidates learn to express ideas clearly and forcefully in both oral and written communication. They are also encouraged to develop teaching skills through formal study of pedagogical methods and supervised classroom teaching experience.

The Ph.D. degree is designed to provide students with a thorough understanding of their professional field and training in research methods. Students acquire a strong grasp of a broad field of study and are able to conduct independent research.

Students are required to complete advanced coursework and pass an advanced foreign language exam.

A preliminary qualifying examination, covering all fields of study included in the degree program, is also required. Ph.D. candidates will prepare a dissertation, an original thesis, and scholarly reports of independent research.

#### ■ What Do You Study?

#### **Rural System Engineering Track**

Advanced Irrigation and drainage engineering (3)

Elastic Stability of Structures (3)

International Rural Water Resources Management (3)

Advanced Foundation Engineering (3)

Foundation Analysis (3)

Climate change hydrology (3)

Climate-Smart Agriculture and Soils (3)

Environmenl control for agricultural buildings (3)

Decision-making Analysis and Application for

Rural Development (3)

Advanced Rural Tourism (3)

Design of Rural Survey and Analysis Methods (3)

New Local Rural Development Theory (3)

Rural Land Use Planning (3)

Topics in Water-Energy-Food Nexus (3)

Nonpoint Source Pollution Control Engineering (3)

Theory of Slope Stability (3)

Watershed Environmental Modeling (3)

System Analysis and Planning (3)

Experimental Design and Analysis (3)

Topics in Remediation of Polluted Land (3)

Discrete Event Systems Control (3)

Social · Spatial Mixed Countryside Planning (3)

Advanced Information of Structures on Design and

Construction (3)

Advanced Intelligent Biosystems Engineering (3)

Advanced Design of Ground Improvement (3)

Advanced Design of Soil Structures (3)

Sustainable Nutrient Management (3)

Rural Ecological Engineering (3)

Rural water disaster prevention engineering (3)

Rural water resources management (3)

Rural Water Resources and Information

Engineering (3)

Rural Systems Engineering Research (3)

Rural and peri-urban environmental planning and

design (3)

Rural Environmental Engineering (3)

Soil Carbon Engineering (3)

Environmental Soil Chemistry (3)

Stability Analysis (3)

Advanced Soil Mechanics (3)

Environmental Isotope (3)

#### Professors

#### **Rural System Engineering**

- Kwang-Sik Yoon, Ph.D.
   [Professor, Rural Environmental Water, ksyoon@jnu.ac.kr]
- Woo-Jung Choi, Ph.D.
   [Professor, Environmental
   Soil Science, wjchoi@jnu.ac.kr]
- Won-Jin Baek, Ph.D.
  [Professor, Rural Infrastructure]

Engineering, bwj215@jnu.ac.kr]

- Seung-Hwan Yoo, Ph.D.
  - [Associate Professor, Rural Water Resources Engineering, yoosh15@jnu.ac.kr]
- Se-Woon Hong, Ph.D.

[Assistant Professor; Ag. Facilities and Environment, hsewoon@jnu.ac.kr]

#### Laboratories

#### **Rural System Engineering**

#### **Irrigation and Drainage Lab**

- 1. Supervisor: Kwang-Sik Yoon, Ph.D.
- 2. Research Interests
  - · Water resources conservation in rural area
  - · Nonpoint pollution modeling and monitoring
  - · Water quality control in rural watershed
  - Engineering hydrology application
  - Rural stream restoration

#### Land Remediation and Reclamation Lab

- 1. Supervisor: Woo-Jung Choi, Ph.D.
- 2. Research Interests
  - Exploring C and N cycling in ecosystems using stable isotope techniques
  - Development of technology for enhanced soil
     C sequestration
  - Prevention and remediation of soil and water pollution
  - Dendrochronology study using tree ring for tracing historical changes in ecosystem under climate change

#### **Rural Infrastructure Lab**

- 1. Supervisor: Won-Jin Baek, Ph.D.
- 2. Research Interests
  - Effect of creep on the settlement-time relation during primary consolidation of clay.
  - An Analysis of secondary consolidation behavior of soft clayey ground
  - · A characteristics of ground improvement method

- A study on the stability of land slope by PANDA-cone penetration test results
- A creep behavior of over-consolidated clay including secondary consolidation and influence of over-consolidation ratio

#### **Rural Water Resources Engineering Lab**

- 1. Supervisor: Seung-Hwan Yoo, Ph.D.
- 2. Research Interests
- Modeling of Agricultural water resources
- · Analysis of Agricultural drought
- · Climate change impact in rural area
- Estimation of water footprint and virtual water
- Development of Water-Energy-Food Nexus platform

#### **Agricultural Facilities and Environment Lab**

- 1. Supervisor: Se-Woon Hong, Ph.D.
- 2. Research Interests
- Environmental controls in agricultural buildings
- Gas, aerosol and disease dispersions in local atmospheres
- Wind engineering in rural areas
- · Fluid dynamic analysis for agricultural structures
- Application of new & renewable energy to agriculture

### Department of Agricultural Economics

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#### ■ What is Agricultural Economics?

The purpose of the Agricultural Economics (AE) major is to enable students to think like economists in solving problems related to the agricultural sector. Thinking like an economist involves using chains of deductive reasoning to help understand phenomena as well as problem-solving and creative skills in the agricultural sector.

Our goals are to increase understanding of economic behavior and improve students' ability to understand and predict agricultural economic phenomena.

The main subjects of the Department of Agricultural Economics are agricultural economics, farm management, agricultural product price analysis, farm statistics, and resource and environmental economics.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Students will normally take 2 years to complete a Master's Program, during which they must pass a comprehensive exam in 2 subjects and a foreign language exam (English). Master's theses may be submitted in English or Korean. Ph.D. Candidates are required to earn 36 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Students will normally take a minimum of 3 years to complete a Ph.D. program, during which they must pass a comprehensive exam in 3 fields and a foreign language exam (English). Ph.D. theses may be submitted in English or Korean.

#### ■ What Do You Study?

#### Core Courses

Seminar in Agricultural Product Price(3)

Agricultural Marketing(3)

Seminar on Agricultural Marketing(3)

Advanced Farm Management(3)

Research Methods in Farm Management(3)

Advanced Farm Management(3)

Seminar on Agricultural Economics(3)

Advanced Agricultural Economics(3)

Advanced Agricultural Finance(3)

Advanced Agricultural Development(3)

Advanced Agricultural Production Economics(3)

Seminar on Agricultural Policy(3)

Advanced Agricultural Policy(3)

Seminar on Farm Statistics(3)

Advanced Farm Appraisal and Planning(3)

Advanced Food Economics(3)

Research Methodology(3)

Seminar on Resource Economics(3)

Advanced Regional Economic(3)

Regional Development(3)

Advanced Statistics(3)

Econometrics I (3)

Econometrics II(3)

Advanced Econometrics I (3)

Advanced Econometrics II (3)

Advanced Microeconomics I (3)

Advanced Microeconomics [] (3)

Advanced Mathematical Economics I (3)

Advanced Mathematical Ecomomics II (3)

Advanced Production Economics(3)

Advanced Resource Economics(3)

Theory Of Public Choice(3)

Project Appraisal(3)

Advance International Agricultural Marketing(3)

Survey of Farmer Production Cost(3)

Advanced Agricultural Marketing Management(3)

Advanced Agricultural Marketing(3)

Advanced Agricultural Marketing Survey(3)

Seminar on Agricultural Finance(3)

Advanced Agricultural Cooperative

Management(3)

Systems Analysis(3)

Seminar on Food Economics(3)

Applied Mathematical Programming(3)

Input-Output Analysis(3)

Advanced International Agricultural Marketing

Development(3)

Advanced Farm Accounting(3)

Research Guidance 1(3)

Research Guidance 2(3)

Research Guidance 3(3)

Advanced Food Consumption Economics(3)

Advanced agricultural price Theory I (3)

Advanced agricultural price Theory II (3)

Advanced Resource & Environmental

Economics(3)

#### **■** Electives

Rural Sociology (3)

Micro-analysis of Agricultural Economics (3)

Agricultural Accounting (3)

Regional Agricultural Economics (3)

Statistics for Agricultural Economist (3)

Agricultural Production Economics (3)

Study of Korean Economy (3)

Agricultural Extension Service (3)

Korean Agricultural History (3)

Agricultural Math Economics (3)

Agricultural Project Appraisal (3)

Agricultural Product Trade (3)

Agricultural Econometrics (3)

Agricultural Systems Analysis (3)

Farm Finance (3)

Rural Survey (3)

Cooperatives (3)

Farm Management Analysis (3)

Agricultural Development (3)

Practice in Economics (3)

Agricultural Marketing (3)

Agricultural Information (3)

Macro-analysis of Agricultural Economics (3)

Globalization and Food Security (3)

Big data analysis and research in Agricultural

economics (3)

#### Careers

Possible careers extend to a multitude of organizations including the Rural Development Administration, Agricultural Research and Extension Services, government public institutions, research center, Agricultural Cooperative Association, Agricultural Technology Center, and other private sector firms.

It is also possible to enter graduate school or study abroad.

#### Professors

- Gue-Dae Cho, Ph.D.
   [Professor, Agricultural Policy, Agricultural Product Trade gcho6011@jnu.ac.kr]
- Hye-Jung Kang, Ph.D.
   [Professor, Farm Management,
   Production Economics, Food Consumption
   Economics, hjkang@jnu.ac.kr]
- In-Seok Kim, Ph.D.

- [Professor, Agricultural Marketing and Agribusiness, i.kim@jnu.ac.kr]
- Yoon-Hyung Kim, Ph.D.
   [Professor, Benefit-cost Analysis, Agricultural Development, yonhk@jnu.ac.kr]
- Hanpil Moon, Ph.D.
   [Associate Professor, Applied Econometrics hanpil@jnu.ac.kr]

### Department of Landscape Architecture

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E-mail: a4723@jnu.ac.kr URL: http://jnula.jnu.ac.kr/

#### **■** Graduate Studies in Landscape Architecture

The educational aim of Landscape Architecture is to train landscape architects who have detailed knowledge and understanding of landscape planning, design, construction, and management. Through theoretical study and practice, they are able to create and conserve aesthetically beautiful natural landscapes with concern for ecological stability, social pleasantness, and the artificial environment. Landscape study at Chonnam National University offers the following courses: regional ecosystem planning and management, open space planning, leisure space planning, urban planning, site planning, park planning, detailed design of outdoor space of buildings, roads, and plazas. We also offer research on the methodology for design and planning to analyze visual, functional, human behavioral, and social factors, and on the history of landscape architecture, ecology, landscape engineering, construction technology, landscape plants, and landscape plant design. Students develop traditional landscape techniques of planning, design, and management studied in undergraduate courses. They are also provided an opportunity to study advanced environmental planning, design, and management based on advanced computer graphics and GIS.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits and submit a thesis, normally over a period of 4 semesters.

#### ■ What Do You Study?

#### **Major Courses**

Advanced Site Planning (3)

Advanced Landscape Engineering (3)

Landscape Architectural Structure (3)

Research Methods in Lnadscape Architecture (3)

Environmental Planning and Management with GIS (3)

Landscape Architectural Construction (3)

Advanced Theories on Landscape

Maintenance (3)

Advanced Urban Open Space Planning (3)

Advanced History of Oriental Landscape

Architecture (3)

Advanced History of Western Landscape

Architecture (3)

Ecology in Landscape Plants (3)

Landscape Planting Design (3)

Advanced Landscape Gardening (3)

Advanced Forest Recreation Planning (3)

Advanced Urban Landscape Planning (3)

Urban and Regional Ecosystem Planning (3)

GIS Programming (3)

Water Pollution and Environmental Impact

Assessment (3)

Park Planning and Ecological Engineering (3)

Advanced Planning of Natural Environment Restoration (3) Natural Landscape Planning and Management (3) Urban Landscape Planning and Management (3) Universal Design (3) Advanced Issues in Landscape Design (3)
Participating Landscape Design Theory (3)
Integrated Environmental Design (3)
Advanced Ecological Restoration and
Ecological Engineering (3)

# Professors

- Tong-Buhm Cho, Ph.D.
   [Professor, Landscape Design, tobcho@jnu.ac.kr]
- Ki-Yeol Lee, Ph.D.
   [Assistant Professor, Landscape Engineering, kylee@jnu.ac.kr]
- Eun-Il Kim, Ph.D.
   [Professor, Environmental Design, eikim@jnu.ac.kr]

- Yoon-Ku Kwon, Ph.D.
   [Assistant Professor,
   Landscape and Regional Planning,
   ykkwon@jnu.ac.kr]
- Sang-Wook Park, Ph.D.
   [Assistant Professor,
   Landscape Planting Design,
   psw04@jnu.ac.kr]

### Laboratories

- Environment Planning Lab (Phone: +82-62-530-2105)
- Landscape Design Lab (Phone: +82-62-530-2102)
- Landscape Architecture Engineering Lab

(Phone: +82-62-530-2108)

- Landscape and Regional Planning Lab
- (Phone: +82-62-530-2101)
   Landscape Planting Design Lab
- (Phone: +82-62-530-2104)

Department of Integrative Food, Bioscience and Biotechnology

\_\_Contact Information
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URL: http://ifbb.jnu.ac.kr

# ■ Graduate Studies in Department of Integrative Food, Bioscience and Biotechnology

First of all, with the vision of "Creative convergence talent development of human resources for leading future research and Industry of food and biotechnology", we set and pursue the educational goal of "Establishing and operating a food and biotechnology specialized education system at the level of top 200 universities in the world in 2030", the research goal of "Empowering basic research and problem-solving practical research for the convergence of food and biotechnology using agricultural life resources", and the internationalization goal of "Roles of world bridge for the convergence of food and biotechnology by activating international exchanges in 2030"

In order to achieve these goals, the curriculum reform has been carried out through benchmarking of world-renowned research universities. We are establishing a new graduate education system. Moreover, in response to changing educational and research environments, we are establishing a new graduate education system in advanced and proactive manners; for example, operation of Graduate Committee Program for each graduate student.

In the future, we will provide students with programs that allow them to experience various majors rather than being limited to specific ones (cultivation of fusion talents), operation of programs that give creativity and challenge to become professional researchers (cultivation of creative and problem-solving talents), talent-training programs tailored to industrial demand (cultivation of industry-matching talents), participation in international joint research programs to strengthen internationalization capabilities (cultivation of global talents), and various career choice programs for students (activation of employment and start-up).

# Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn 60 credits including credits earned in a Master's Program. Students are allowed to transfer up to 9 credits into the master's program and 12 into the Ph.D. program. Master's theses should be submitted by May or September of each year. Doctoral theses should be submitted by March or September.

Credits will be recognized when students earn a C or higher in the Master's program and a B or higher in the Ph.D. program. Graduate students must earn a cumulative average of B or better to be awarded a degree. Candidates will be awarded a degree upon fulfilling all requirements, including the

foreign language requirement, and submitting a thesis for approval. The foreign language and comprehensive examinations are held in April or October.

# ■ What Do You Study?

Advanced Bioenergy Science(3)

Advanced Seminar in Plant Systems Biology(3)

Advanced Molecular Genetics and Breeding(3)

Protein Engineering(3)

Protein Biochemistry(3)

Metabolic Engineering(3)

Fundamentals of Animal Biotechnology(3)

Animal cell culture1(3)

Animal cell culture2(3)

Advanced Animal Genetic Engineering I (3)

Advanced Animal Genetic Engineering II (3)

Study on the membrane proteins(3)

Advanced Microbial Biotechnology(3)

Advanced Bioenergy Engineering(3)

Advanced Fermentation Engineering(3)

Special topics in Fermentation Sitology(3)

Advanced Analytical Chemistry(3)

Molecular farming(3)

Advanced Molecular Biotechnology(3)

Advanced Plant Pathology(3)

Advanced Molecular Genomics(3)

Advanced Molecular Mycology(3)

Introduction to Bioprocess Engineering(3)

Advanced Biotechnology(3)

Advanced Bioseparation Processes(3)

Advanced Biochemical Engineering(3)

Methodology in Biochemistry(3)

Special Topics in Biochemistry 1(3)

Special Topics in Biochemistry 2(3)

Seminar on the biogenesis of subcellular

organelles(3)

Systems and Synthetic Biology Seminar(3)

Advanced Plant Metabolism(3)

Current topics in plant biomass research(3)

Advanced plant Developmental Genetics(3)

Special Topics in Plant Physiology(3)

Fundamentals of Plant Biotechnology(3)

Current Trends in Plant Biology(3)

Advanced Plant Biochemistry(3)

Trends in Plant Signaling Seminar(3)

Plant-Water Relationships(3)

Advanced Plant Genetic Engineering I (3)

Advanced Plant Genetic Engineering **I** (3)

Advanced Plant Tissue culture(3)

Plant Seed Physiology(3)

Research Seminar in Molecular Biology of Plant

Hormones(3)

Plant Environmental Stress 1(3)

Plant Environmental Stress 2(3)

Food Processing and Preservation(3)

Food Functional Chemistry(3)

Metabolic engineering in Food(3)

Advanced Food Microbiology(3)

Food Virology(3)

Seminar in Food and Bio Technology1(3)

Seminar in Food and Bio Technology2(3)

Advanced Food Biotechnology(3)

Food and Biostatistics(3)

Advanced Food Chemistry(3)

Food Ingredient Technology(3)

Advanced Food System Engineering(3)

New product development(3)

Advanced Food Hygiene(3)

Advanced Food Packaging(3)

Chemistry of Food Chemistry(3)

Advanced Food Chemistry(3)

Special Topics in Signal Transduction(3)

Applicable Instrumental Analysis(3)

Advanced Food 1(3)

Advanced Food 2(3)

Research Training 1(3)

Research Training 2(6)

Research Guidance 1(3)

Research Guidance 2(3)

Research Guidance 3(3) Nutritional Physiology(3)

Advanced Nutrition Chemistry(3)

Advanced Food Lipids(3)

Basics for Convergence of Food and Bio

Technology(3)

Application Design for Convergence of Food and

Bio Technology(3)

Colloquium for Convergence of Food and Bio

Technology(3)

Advanced Applied Molecular Microbiology(3)

Advanced Molecular Endocrinology(3)

Advanced Molecular Immunology1(3) Advanced Molecular Immunology2(3)

Recent Technology for Food Processing(3)

Carbohydrate Foods(3)

Special Topics in Nutrition(3)

Current Topics in Ocean Biomass(3)

Special Topics in Chemical Biology(3)

Plant Environmental Stress(3)

Advanced Seminar in Environmental Chemistry(3)

Advanced enzyme biotechnology(3)

Enzymology(3)

### Professors

- · Oksoo Han, Ph.D. [Professor, Genetic Biochemistry, oshan@jnu.ac.kr]
- · Kyoungwhan Back, Ph.D. [Professor, Plant Genetic Engineering, kback@jnu.ac.kr]
- · Jeong-Il Kim, Ph.D. [Professor, Protein Biochemistry, kimji@jnu.ac.kr]
- Suk-Whan Hong, Ph.D. [Professor, Molecular Genetics and Breeding, sukwhan@jnu.ac.kr]
- Jun Ho Lee, ph.D. [Associate Professor, Neuro Biotechnology, leejunho@jnu.ac.kr]
- · Don-Kyu Kim, ph.D. [Associate Professor, Molecular Endocrinology, dkkim2@jnu.ac.kr]
- · Hyunkyu Sang, ph.D. [Assistant Professor, Molecular Microbiology]
- · Jong-Bang Eun, Ph.D. [Professor, Food Processing and Preservation, jbeun@jnu.ac.kr]
- Jae-Hak Moon, Ph.D. [Professor, Nutrition and Functional Chemistry, nutrmoon@jnu.ac.kr]

- Du-Woon Kim, Ph.D. [Professor, Food Microbiology and Food Biochemistry, dwkim@jnu.ac.kr]
- Young-Min Kim, Ph.D. [Associate Professor, Food Fermentation and Enzyme Engineering, u9897854@jnu.ac.kr]
- Jeong-Yong Cho, Ph.D. [Assistant Professor, Food and Natural Product Chemistry, jyongcho17@jnu.ac.kr]
- Soo-Jung Kim, Ph.D. [Assistant Professor, Food System Engineering, bioksj@jnu.ac.kr]
- Kim, Jungmook, Ph.D. [Professor, Plant Molecular Cell Biology, jungmkim@jnu.ac.kr]
- Ahn, Sung-ju, Ph.D. [Professor, Energy Crop Physiology, asjsuse@jnu.ac.kr]
- Bae, Hyeun-Jong, Ph.D. [Professor, Bioenergy & Biotechnology, baehj@jnu.ac.kr]
- Lee, Won-Heong, Ph.D. [Professor, Microbial Engineering wonhlee@jnu.ac.kr]
- Cho, Chul-Woong, Ph.D. [Associate Professor, Environmental Chemical Engineering, choicejoe@jnu.ac.kr]

• Lee, Dong Wook, Ph.D.

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### Laboratories

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- Plant Genetic Engineering Lab. (Phone: +82-62-530-2165)

- Protein Biochemistry Lab. (Phone: +82-62-530-2189)

- Molecular Genetics and Breeding Lab. (Phone: +82-62-530-2180)

- Neurobiotechnology Lab. (Phone: +82-62-530-2164)

- Molecular Endocrinology Lab. (Phone: +82-62-530-2166)

- Molecular microbiology Lab. (Phone: +82-62-530-2168)

- Food Processing and Preservation Lab (Phone: +82-62-530-2145)

- Food Microbiology Lab (Phone: +82-62-530-2144)

- Food Nutrition and Functional Chemistry Lab. (Phone: +82-62-530-2141)

- Food Fermentation and Enzyme Engineering Lab. (Phone: +82-62-530-2142)

- Food and Natural Product Chemistry Lab. (Phone: +82-62-530-2143)

- Food System Engineering Lab. (Phone: +82-62-530-2146)

- Plant Cell Signaling & Biomass Control Lab. (Phone: +82-62-530-2042)

- Energy Crop Physiology Lab. (Phone: +82-62-530-2052)

- Bioenergy & Biotechnology Lab. (Phone: +82-62-530-0266)

- Microbial Engineering Lab. (Phone: +82-62-530-2046)

Environmental Biotechnology Lab.
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Plant Cellular Systems Lab.

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# Department of Convergence Biosystem Engineering

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# Graduate Studies in the Department of Convergence Biosystems Engineering

The Department of Convergence Biosystems Engineering deals with machinery, artificial intelligence, electricity, electronics, robots, diverse materials, and bioengineering for biosystems such as those pertaining to plants, animals, and humans. In other words, it deals with the knowledge necessary for the unmanned and intelligent production of biological resources, advanced bio-materials, and digital informatization, while nurturing convergence-type professional talents equipped with both agricultural and life science and engineering knowledge. Through this, we aim to contribute to the development of the future agricultural and bio industries. Graduate students in the Department of Convergence Biosystems Engineering enjoy small class sizes and frequent one-to-one contact with Professors. Faculty members are very keen to help and encourage students to develop their careers, from advising upon research activities to providing job opportunities.

Students entering one of the Department's graduate programs may select a research topic from a broad array of research fields.

- Agricultural Machine Control
- Sensors and Intelligent Biosystems
- Human-Centered Robotics and Automation
- Nanoengineered Biomaterial Systems
- Bio-manufacturing Systems
- Off-road mobility system

# Degree Requirements

The master's degree requires students to complete advanced coursework, pass a foreign language proficiency test and preliminary qualifying exams, and become accustomed to research methodology. Students are required to plan, conduct, and analyze a comprehensive research project, and report findings in a thesis.

Master's degree candidates learn to express ideas clearly and forcefully in both oral and written communication. They are also encouraged to develop teaching skills through formal study of pedagogical methods and supervised classroom teaching experience.

The Ph.D. degree is designed to provide students with a thorough understanding of their professional field and training in research methods. Students acquire a strong grasp of a broader field of study and are able to conduct independent research.

Students are required to complete advanced coursework and pass a higher proficiency foreign language exam. A preliminary qualifying examination, covering all fields of study included in the degree program, is also required. Ph.D. candidates will prepare a dissertation, an original thesis, and scholarly reports of independent research.

# ■ What Do You Study?

Engineering Cell Biology (3)

Dynamics of Farm Machinery (3)

Advanced Design of Agricultural Machinery (3)

Vibration of Agricultural Machinery (3)

Agricultural Fluidpower System (3)

Advanced Farm Machinery I (3)

Advanced Farm Machinery II (3)

Micro- and Nanoengineering in Agriculture (3)

BioMEMS (3)

Biosensor (3)

Advanced Measurement Engineering for Biosystems (3)

Special Topics in Biosystems Mathematics 1 (3)

Special Topics in Biosystems Mathematics 2 (3)

Topics in Biosystems Engineering I (3)

Topics in Biosystems Engineering [] (3)

Special Topics in Biosystems Robotics (3)

Special Topics in Biosystems Machine Learning (3)

Advanced Image and Signal Processing for

Biosystems (3)

Advanced Electrical and Electronic Engineering for

Biosystems (3)

Biosystem Control I (3)

Biosystem Control Ⅱ (3)

Topic in Biological Thermodynamics (3)

Advanced Mechanics for Biosystems (3)

Advanced data communication and networking for

biosystems (3)

Advanced Bio-Resources Process Engineering (3)

Topic in Biomaterials and Tissue Engineering (3)

Advanced Statistics of Bioinformation (3)

Biologically Inspried Engineering Systems (3)

Advanced mechatronics for biosystems (3)

Plant Factory Automation (3)

Engineering Thesis Writing in English (3)

Telerobotics and Its Applications (3)

Fluid Power Control System (3)

Advanced Human-Robot Interface (3)

Advanced precision Agricultural Engineering (3)

Topics in Tractor Engineering (3)

Haptics and Virtual Reality (3)

### Professors

- Young-Soo Choi, Ph.D.
   [Professor, Biosystems Machine Control, y-choi@jnu.ac.kr]
- Kyeong-Hwan Lee, Ph.D.
   [Professor, Sensors and Intelligent Biosystems, khlee@jnu.ac.kr]
- Hyoung Il Son, Ph.D.
   [Professor, Human-Centered Robotics and Automation, hison@jnu.ac.kr]
- Jangho Kim, Ph.D.
   [ Professor, Nanoengineered Biomaterial Systems,

rain2000@jnu.ac.kr]

- Hee-Gyeong Yi, Ph.D.
   [Associate Professor, Bio-manufacturing Systems, hgyi@jnu.ac.kr]
- Jooseon Oh, Ph.D.
   [Associate Professor, Off-road mobility system, jooseon.oh@jnu.ac.kr]

# Department of Education

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URL: http://educate.jnu.ac.kr

### Overview of Graduate Studies in Education

The main educational goal of the Department of Education is to empower graduate students to become competitive researchers through cutting-edge interdisciplinary research and practices of education. The department offers the following graduate programs: Counseling Psychology (Career Counseling), School Psychology, Educational Psychology, Educational Evaluation, Educational Technology, Educational Administration, Educational Philosophy, Educational History, Curriculum, Educational Sociology, and Lifelong Education. Two levels of graduate degrees are awarded at the Department of Education; the Master's of Education, and the Doctorate of Philosophy in Education (Ph.D.). Prospective students are advised by a faculty member to decide upon their specialization area at the initial stage of application for admission.

# **■** Degree Requirements

Master's degree candidates are required to earn at least 24 credits. Ph.D. candidates are required to earn an additional 36 credits. Students in the combined master's/Ph.D. program must earn 54 credits. Greater requirements may be enforced through internal regulations in specialized areas of study or upon agreement between academic advisors and the Chair of the Department of Education.

Before applying for the comprehensive examination, all graduate students must fulfill course requirements (18 credits for master's students, 27 credits for Ph.D. students, and 36 credits for master's/Ph.D. students) and receive recommendations from their academic advisors. They must also have participated in at least two-thirds of all faculty-graduate student seminars held by the department, submitted their thesis/dissertation proposals on time (and received passing scores), and published a research article in a peer-review journal.

Graduate students should submit a thesis proposal or a dissertation proposal along with recommendations from their respective academic advisors six months ahead of the due date for submission of their thesis or dissertation to the thesis/dissertation committee for review and evaluation. Before theses or dissertations are referred to the committee for review and evaluation, students must have fulfilled course requirements and passed the foreign language test and comprehensive examination.

Both master's and Ph.D. students are assigned to an academic advisor upon entry into their programs. If needed, students can change their academic advisors during their first year. Another co-advisor can be available if a student wants.

# ■ What Do You Study?

#### **General Courses**

Qualitative Research Methods in Education
Quantitative Research Methods in Education
Intermediate Course in Statistical Methods for
Educational Research
Foundation Seminar of Flourishing
Flourishing Research Seminar
Flourishing Advanced Seminar
Educational Design and Flourishing for Future
Introduction to Research Design and Research
Ethics

#### Electives

Development

# [Division of Counseling Psychology, School Psychology, & Educational Psychology]

Positive Psychology and Positive Education

Developmental Psychopathology Social and Emotional Development School Psychological Intervention and Prevention Research Seminar in School Psychology School Psychological Consultation School Psychological Assessment Planning School Psychological Intervention Programs Theories and Practices of Family Counseling Counseling Case Study and Supervision Research Seminar in Counseling Psychology Practice in Counseling and Ethics Theories of Counseling Life and Career Counseling of Children & Adolescents Mental Health and Abnormal Psychology Theories and Practices of Career Counseling Theories and Practices of Group Counseling Seminar in Educational Psychology Seminar in Strategy of Positive Motivation to learn Current Issues in Motivation Social Psychology and Education Theories ofHuman Characteristics and

School Issues and Educational Psychology

Learning Theories
Happiness and Education

#### [Division of Educational Evaluation]

Advanced Educational Statistics
Theories of Educational Measurement and
Assessment
Seminars in Educational Evaluation
Educational Program Evaluation

#### [Division of Educational Technology]

Virtual Reality and Instruction
Theory of Instructional Design and Development
Theories of Instruction and Learning
Research Methods of Instructional Technology
Policy Development for Educational Informatization
Learning Design for Digital and Flourishing
User Interface Design
Theory and Practice of Performance Technology
Neuroscience and Learning Design
Case Studies of Distance Education
Artificial Intelligent and Education
Design and Application of AR and MR

# [Division of Educational Administration] Theories in Educational Administration

Case Studies of Educational Administration
Research Methods in Educational Administration
Educational Policy
Educational Reforms
Comparative International Education
Theories of Educational Organization
Financing of Education
Personnel Administration in Education
Core Competence Development for Educators
Educational Leadership
Big data & Educational Policy Research Seminar

# [Division of Educational Philosophy & Educational History]

Study of Educational Classics

History of Educational Issues
Philosophy and Theory of Education
Seminar: Inquiry in Educational Philosophy
A philosophical approach to pedagogy
Study on Critical Pedagogy
Intercultural Education and Philosophy
Studies in the Western Educational Thoughts
Study on Korean Educational Thought
Study on Modern Educational Philosophy

### [Division of Curriculum]

Theory of Liberal Curriculum Curriculum Development Research Methods in Curriculum Studies In Theory Of Curriculum Philosophy of Curriculum Theories of Latent Curriculum

# Professors

- Hoisoo Kim, Ph.D.
   [Professor, Educational Technology, kimh@jnu.ac.kr]
- Sichang Yum, Ph.D.
   [Professor, Educational Evaluation, sichang@jnu.ac.kr]
- Hyeonsook Shin, Ph.D.
   [Professor, School Psychology, shinphd@jnu.ac.kr]
- Min-ho Yeom, Ph.D.
   [Professor, Educational Administration, minho@jnu.ac.kr]
- Jeeheon Ryu, Ph.D.
   [Professor, Educational Technology, jeeheon@jnu.ac.kr]
- Sung-Hyun Cha, Ph.D.
   [Professor, Educational Finance, shcha@jnu.ac.kr]
- Ju Ri Joeng, Ph.D.
   [Associate Professor, Counseling Psychology,

Contemporary Curriculum Theories I
Contemporary Curriculum Theories II

# [Division of Educational Sociology & Lifelong Education]

Education and Social Mobility
Research Practice of Educational Sociology
Theories in Sociology of Education
Demographic Approach to Education
Theories of Life-long Education
Research Methodology of Lifelong Education

#### Other Courses

Students from other areas of study may need to take additional undergraduate courses in the Department.

jjoeng@jnu.ac.kr]

- Jumi Lee, Ph.D.
   [Associate Professor, Educational Psychology, jlee@jnu.ac.kr]
- Eun-young Hong, Ph.D.
   [Associate Professor, Philosophy of Education, aporia@jnu.ac.kr]
- Haram Jeon, Ph.D.
   [Associate Professor, Sociology of Education, haraming@jnu.ac.kr]
- Ji Hae Lee, Ed.D.
   [Assistant Professor, Counseling Psychology, leeji@jnu.ac.kr]
- Kyunghee Shin, Ph.D.
   [Associate Professor, Curriculum, khshin5@jnu.ac.kr]
- Robert Otto Davis, Ph.D.
   [Assistant Professor, Educational Technology, rdavis@jnu.ac.kr]

# Laboratories

- Cognitive Science & Learning Research Lab
- Center for Immersive Learning Technology
- Instructional Media Design & Development Lab
- Counseling Psychology Lab
- Educational Policy Lab

- School/Educational Psychology Educational Evaluation Lab
- Philosophy of education Sociology of education Curriculum theory Lab

# Early Childhood Education

\_\_Contact Information
Phone: +82-62-530-2360

Fax: +82-62-530-2369

URL: http://ecedu.jnu.ac.kr/

# ■ Graduate Studies in Early Childhood Education

Programs for the master's degree and doctoral degree provide advanced professional training in early childhood education. Programs broaden and deepen graduate students' knowledge in the field of early childhood education and/or enable certified early childhood teachers to improve their professional competence in teaching young children.

The department provides diverse lectures and seminar courses as well as research-oriented courses for students in master's and doctoral programs. Our graduates have taken positions as early childhood education center directors, research professionals, university professors, and so on.

# Degree Requirements

Master's degree students are required to earn 24 credits and to complete a thesis in order to graduate. Doctoral students are required to earn 36 credits and to complete a dissertation in order to graduate.

# ■ What Do You Study?

### **General Courses**

Study on Early Childhood Curriculum

Educational Statistics and Research

Design in Early Childhood Education

Research for Master's or Doctoral Degree

#### Other requirements

Students from other undergraduate majors may need to take a certain number of prerequisite classes from the undergraduate and postgraduate courses in the Department.

### Professors

- Mi-Sook Choi, Ed.D.
   [Professor, Child Development and Evaluation, mschoi@jnu.ac.kr]
- Kyung-Sook Kim, Ph.D.
   [Professor, Early Childhood Inclusive Education, kim2366@jnu.ac.kr]

- Kyee-Yum Kwon, Ed.D.
   [Professor, Early Childhood Teacher Education, kwon0301@jnu.ac.kr]
- Hyo-Jin Kim, Ed.D.
   [Assistant Professor, Early Childhood
- Curriculum and Instruction, kimhyoj@jnu.ac.kr]
- Jeong-Ae Lee, Ed.D.
   [Assistant Professor, Early Childhood Social Education, jalee2021@jnu.ac.kr]

# Laboratories

Seminar rooms are available for graduate students to facilitate their research activities.

# Social Studies Education

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Phone: +82-62-530-2370

Fax: +82-62-530-2379

### ■ Graduate Studies in Social Studies Education

This program is designed to strengthen educators' theoretical knowledge as well as to provide experience in educational research. The Ph.D. Program is designed to prepare students to become educational scholars in areas of history education, geography education, ethics education, and social science education.

# Degree Requirements

Master's degree candidates are required to earn 24 credits (a minimum of 12 credits in this department). They must also pass a comprehensive exam (in 2~3 other subjects) and a foreign language exam.

Ph.D. candidates are required to earn 36 credits (minimum of 18 credits in this department). They must also pass a comprehensive exam (in 4 subjects) and a foreign language exam. Furthermore, students must present a thesis proposal and a research paper at a scholarly conference at least once before submitting a thesis.

All students are assigned a supervisor based on research interests and major.

### ■ What Do You Study?

#### **General Courses**

Education Theory for Social Studies
Text Analysis for Social Studies
Methods and Assessment in Social Studies
Education

Seminars in Social Studies Education

#### **History Education Major Courses**

Development of History Texts
History teaching
Theory of History Education
Studies of History Classrooms I
Studies of History Classrooms II
Studies of Korean History Texts
Recent Studies of Korean History
Studies in Ancient History of Korea
Studies in Medieval History of Korea

Studies in Pre-modern History of Korea
Studies In Modern History Of Korea
Studies of Asian History Texts
Recent Studies of Asian History
Studies of European History Texts
Recent Studies of European History
Studies In Ancient Western History
Studies in Medieval Western History
Studies In Modern Western History
Studies in Contemporary Western History

#### **Ethics Education Major Courses**

Studies of International Politics
Topics in Oriental Thought
Studies in Unification Education
Studies on Korean Ethical Thought
Studies in British and American Ethical Thought

Readings on Korean Ethical Thought Studies in North Korean Society Studies on Anthropology Seminar in Economic Education Democracy & Citizenship Education Seminar in Social Culture Education Studies in Modern Ethical Thought Studies in North Korean Education Applied Ethics Seminar

Studies on Ethics and Values Education Studies in Theories of Moral and Ethics Education Topics in Logic and Essay of Moral and Ethics

Education

Studies in Teaching evaluation of Moral and Ethics Education

Studies in Confucian Ethics Studies in Buddhist Ethics Readings of Western Ethics Writings Studies in Western Ethical Thoughts Seminar on Moral Psychology Study of Moral Curriculum and Method

### **Geography Education Major Courses**

Advanced Lecture of Geosystem Education Advanced Lecture of Structural Geomorphology Education

Contemporary Development of Geography Thought Education

Education of Field Survey for Geomorphology Information

Geostatistical Analysis GIS & Remote Sensing

Practices in Geographic Curriculum

Research Methodology in Physical Geography Research Methodology in Urban Geography

Research Methodology in Economic geography Research of Quaternary Environment Research on Education of Contemporary Cultural Space Research on Education of Cultural Geography Research on Education of Migration and Diaspora

Seminar in Climatic Geomorphology

seminar in climatic geomorphology and climatic changes

Seminar in Development Studies

Seminar in Economic Geography Education

Seminar in Location Theory Seminar in Physical Geography

Seminar in population Geography Education Seminar in Rural settlement Planning Education

Seminar in Urban Geography Education Seminar in Urban Structure Theory Education Seminar in World Urban Region Education Seminar on Education of Social Geography Seminar on education of contemporary human

Seminar on Education of Critical Geography Seminar on Education of Feminist Geographies Seminar on Education of Historical Geography Seminar on Education of Social Space in the City Seminar on Research Methods of Geographic Education

Studies in Curriculum of Geography Education

Studies in Industrial Region

geographic issues

Studies of Cartography and GIS

Studies of Environmental Geography Education

Studies of System Analysis if Pedology

Studies of World Grography Education

Topics on History of Geography Education Thoughts

### Professors

#### **History Education**

- Young-Hyo Lee Ph.D. [Professor, Western History/ History Education, leeyh678@hanmail.net]
- · Young-Ok Lee Ph.D. in History [Professor, Ming & Qing China, youngok@jnu.ac.kr]
- Kyong-Tae Kim Ph.D. in History

[Assistant Professor, History of Chosun Dynasty, kimkt@jnu.ac.kr]

Yeongkwang Jo Ph.D. in History
 [Assistant Professor, Ancient Korean History, joyk@jnu.ac.kr]

### **Ethics Education**

- Kee-Hyeon Kim, Ph.D.
   [Professor, East Asian Ethics, 47korea@hanmail.net]
- Young-Ran Roh, Ph.D.
   [Professor, Western Ethics, yrroh@hanmail.net]
- Tak-Joon Jung, Ph.D.
   [Professor, Moral Education, jungtj1@hanmail.net] 1
- · Gu-Sup Kang, Ph.D.

[Professor, Unification Education, gusupkang@gmail.com]

### **Geography Education**

- Jin-Kwan Kim, Ph.D.
   [Associate Professor, Physical Geography, Geomorphology, jinkwankim77@gmail.com]
- Kyong-Hwan Park, Ph.D.
   [Professor, Social and Economic Geography, kpark3@gmail.com]
- Su-Jeong Kim, Ph.D.
   [Assistant Professor, Urban and Cultural Geography, sjkim108@jnu.ac.kr]
- Yong-Gyun Lee, Ph.D.
   [Professor, Regional and Population Geography, yonggyunlee@hanmail.net]

### Laboratories

- Research Center for Regional Geographic information
- Multimedia classroom, GIS & Physical Geography Laboratories

# Ethics Education

# \_\_Contact Information

Phone: +82-62-530-2400 Fax: +82-62-530-2409 URL: http://ethicsedu.jnu.ac.kr

### ■ Graduate Studies in Ethics Education

Graduate programs in Ethics Education prepare educators by broadening and deepening students' knowledge in the field of ethics education, and enabling secondary school teachers to enrich their background in teaching and to improve their professional competence. The coursework contains studies in Western ethics and Eastern ethical thoughts, together with studies of North Korea in preparation for national reunification.

# ■ What Do You Study?

- Topics in Oriental Thought
- · Studies in Unification Education
- · Studies on Korean Ethical Thought
- · Studies in British and American Ethical Thought
- · Readings on Korean Ethical Thought
- · Topics in Political and Social Thought
- Studies in Practical Philosophy
- · Studies on Korean- Chinese Contemporary Philosophy
- Studies on Anthropology
- · Studies in Ethics on the Principle of Gender Equality
- Studies in Modern Ethical Thought
- · Studies in North Korean Society
- Studies in North Korean Education
- Applied Ethics Seminar

- Studies on Ethics and Values Education
- · Studies in Theories of Moral and Ethics Education
- Topics in Logic and Essay of Moral and Ethics Education
- Studies in Teaching evaluation of Moral and Ethics Education
- · Studies in Confucian Ethics
- · Studies in Buddhist Ethics
- · Seminar in Theories of Ethics Education in Korea
- · Readings of Western Ethics Writings
- · Studies in Western Ethical Thoughts
- Seminar on Moral Psychology
- · Study of Moral Curriculum and Method

### Professors

- Kee-Hyeon Kim, Ph.D.
   [Professor, East Asian Ethics, 47korea@hanmail.net]
- Young-Ran Roh, Ph.D.
   [Professor, Western Ethics, yrroh@hanmail.net]

- Tak-Joon Jung, Ph.D.
   [Professor, Moral Education, jungtj1@hanmail.net]
- Gu-Sup Kang, Ph.D.
   [Professor, Unification Education, gusupkang@gmail.com]

### Laboratories

- Graduate Seminar Room

English Education

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Phone: +82-62-530-2430

Fax: +82-62-530-2449

URL: http://engedu.jnu.ac.kr

**■** Graduate Studies in English Education

The Department of English Education offers a well-organized training program and in-depth MA and Ph.D. postgraduate courses in English Education. The graduate program of the Department aims to prepare graduates to take a leading role in fields related to English education, English language, and English literature. They will become experts in the interrelated areas of English education. The courses focus on concepts, principles, and theories of English education and provide a general background in English language and literature, with a special focus on ELT. The department's curricula are tailored and structured to appeal to those who are interested in exploring all areas of linguistics and literature. Successful graduates who obtain the degree of Master of Arts in English Education or Doctor of Philosophy

in Education are expected to take the role of researchers and specialists in the fields of English language,

English literature, and English education.

**■** Degree Requirements

Part-time students are limited to earning less than 9 credits per semester. Ph.D. candidates who require supplementary credits (aside from those who hold Master's degrees in English Language and Literature or English Education) may earn more than 9 credits.

All students must pass a qualification examination prior to presenting a thesis or dissertation and must also pass a foreign language test. All theses must be handed in for perusal before a thesis is officially submitted for examination. A total of 6 faculty members shall sit on the thesis examining board.

Master's degree candidates must earn 24 credits(15 from Department courses) with a GPA of 3.0 or higher and Ph.D. candidates must earn 36 credits (21 from Department courses) to graduate. A supervisor is assigned to all students.

All doctoral students enrolled since 2005 must publish at least 1 paper in a KCI journal (co-publications with supervisors are also acceptable).

■ What Do You Study?

**Major** 

Research Method in TEFL (3)

Testing in TEFL (3)

TEFL Methodology (3)

ELT Materials Development (3)

Theoretical Foundation of TEFL (3)

Applied Linguistics (3)

English Discourse Analysis (3)

Second Language Acquisition (3)

Sociolinguistics and TEFL (3)

Psycholinguistics and TEFL (3)

English Pedagogical Grammar (3)

Topics in TEFL Methodology (3)

Seminar on TEFL (3)

English Applied Phonetics (3)

English Phonology (3)

English Syntax (3)

English Semantics (3)

English Pragmatics (3)

Topics in English Linguistics (3)

English Linguistics and TEFL (3)

Seminar on British and American Poetry (3)

Seminar on British and American Novel (3)

Seminar on British and American Drama (3)

Seminar on British and American Criticism (3)

Seminar on EAP(English for Academic Purposes (3)

British and American Literature Education (3)

British and American Culture and English

Education (3)

Feminist British and American Literature (3)

The Western Classic and Its Pedagogy (3)

### Professors

- Byung Kyoo Ahn, Ph.D.
   [Professor, English Education, ahnbk@jnu.ac.kr]
- Chul Joo Uhm, Ph.D.
   [Professor, English Education, cjuhm@jnu.ac.kr]
- Hui Sok Yoo, Ph.D.
   [Professor, 19th Century American Novels, yoohuisok@yahoo.com]
- Jee Hyun Ma, Ph. D.
   [Professor, English Education, jeehyun@jnu.ac.kr]
- Mun-Hong Choe, Ph.D.
   [Professor, English Education, munhong@jnu.ac.kr]
- Seung-a Ji, Ph.D.
   [Associate Professor, English Drama, shange@jnu.ac.kr]

# Physical Education

# Contact Information

Phone: +82-62-530-2550 Fax: +82-62-530-2569

URL: http://physicaledu.jnu.ac.kr/

# ■ Graduate Studies in Physical Education

The Department of Physical Education was established in March 1973 with the aim of fostering physical education teachers. In the 33 years since its inception, the Department has produced over 1,000 physical education teachers. The Department has 7 Professors in various branches of learning and there are currently over 100 students enrolled.

# Degree Requirements

Students are required to earn the required number of credits to graduate. Students must also pass a comprehensive test, a foreign language exam, and fulfill computer certification requirements.

# ■ What Do You Study?

Basis in Kinesiology

Research in the Aged Sports Psychology

Fitness Prescription for the Aged

Research for Master's or Doctoral Degree

Topics in Leisure Sport Culture

Topics in Public Health Crash Course

Research in Social Problem and Sports

Topics in Social Problem and Sports

Research in Biomechanics

Topics in Biomechanics

Research in Sports for All

Topics in Sports for All

Research I in Sports Management and Marketing

Seminar II in Sports Management and Marketing

Research in Sports Tourism

Topics in Sports Tourism

Research in Sports Pedagogy

Topics in Sports Pedagogy

Research in Sports Marketing

Topics in Sports Marketing

Sports Culture of Walk Literature

Research in Social Psychology of Sports

Topics In Social Psychology of Sports

Research in Sports Sociology

Topics in Sports Sociology

Topics in Counseling Psychology of Sport

Research in Sports Vital Dynamics

Research in Sport Psychology

Experiments in Sport Psychology

Topics in Sport Psychology

Sports History and Phenomenon

Topics in Sports History

Communication of Sports and Culture

Topics in Sports Ethics

Research in Sports Medicine

Topics in Learning of Sports

Sports Philosophy Search

Topics in Philosophy of Sport Education

Research in Exercise Test and Exercise

Exercise and Healthcare

Exercise and Neuromuscular Physiology Motion and Senility Exercise and Physiology for the Aged Exercise and Obesity Exercise, Metabolic and Lifestyle Disease Research in Exercise and Geriatric Disease Exercise and Cardiopulmonary Function Exercise and Ergonomics Exercise and Weight Management Analyzed Method in Sports Technique Research in Exercise Physiology Topics in Exercise Physiology Experiments in Kinesiology Research in Kinesiology Topics in Exercise Science of Nutrition Research in Exercise Hygiene Research in Motor Control Topics in Motor Control Research in Motor Learning Topics in Motor Learning Applied Biomechanics I Application Exercise Dynamics Topics in Teaching Theory of Physical Education

Research in Teaching Method of Physical Education

Research in Curriculum Methods of Physical Education

Topics in Curriculum Theory of Physical

Education

Topics in History of Physical Education

Thought

Criticism of Physical Education Classes Special Lecture for Criticism of Physical

**Education Classes** 

Measurement Estimation Experiment I Measurement Estimation Experiment II Research in Measurement and Evaluation of

Physical Education

Topics in Physical Education Measurement Estimation

Statistics in Physical Education I

Statistics in Physical Education II

Research Method in Physical Education I Research Method in Physical Education II

Topics in Training Theory Modern Society Sports Value

### Professors

- Jong-Soo Baek, Ph.D.
   [Professor, Sports Pedagogy, bjs0508@jnu.ac.kr]
- Young-Kwan Kim, Ph.D.
   [Professor, Motor Mechanics, ykkim01@jnu.ac.kr]
- Jun Kim, Ph.D.
   [Associate Professor, Sports Sociology,

aquaspo@jnu.ac.kr]

- Dae-yeol Kim, Ph.D.
   [Associate Professor, Exercise Physiology, kimdaeyeol@jnu.ac.kr]
- Park Saengryeol, Ph.D.
   [Assistant Professor, Sports Psychology, elebpark@gmail.com]

# Special Education

# \_\_Contact Information

Phone: +82-62-530-5400 Fax: +82-62-530-5409

URL: http://spededu.jnu.ac.kr/

# **■** Graduate Studies in Special Education?

Special Education is a form of education that arranges special curricula that fits the characteristics of physically and mentally challenged students who have trouble learning in mainstream schools.

# **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn 36 credits.

# ■ What Do You Study?

Seminar in Health Impairments (3)

Advanced Statistics for Educational Research (3)

Statistics for Educational Research (3)

Deaf culture and Deaf Social (3)

Single-Subject Design (3)

Research in Augmentative & Alternative

Communication (3)

Teaching-Learning Theory for Children with

Visual Impairments (3)

Education for Children with Visual Impairments (3)

Seminar in Education for Children with Visual

Impairments (3)

Research in Language Development (3)

Assessment and Evaluation of Children with

Language Disorders (3)

Research Training 1 (3)

Research Training 2 (3)

Advanced Seminar in Early Childhood Special

Education (3)

Seminar in Managing Early Childhood Special

Education Institutions (3)

Seminar in Early Childhood Special Education (3)

Advanced Seminar to Applied Behavior Analysis (3)

Seminar to Applied Behavior Analysis (3)

Communication and Attachment (3)

The study of Education for Language Disorders (3)

Evaluating Research in Communication Disorders (3)

Trends and Issues in Communication Disabilities (3)

Study on Reading and Writing Disabilities (3)

Seminar to Autism and Developmental Disabilities (3)

Communication Intervention for Students with

Autism Spectrum Disorder (3)

Seminar in Early Childhood Education Curriculum (3)

Theory of lifelong education for the disabled (3)

Disability Studies Seminar (3)

Seminar in Education for Children with Severe &

Multiple Disabilities (3)

Advanced Seminarin Children with Moderate

Disabilities (3)

Seminar in Education for Children with Severe &

Multiple Disabilities (3)

Research in Education for Children with Severe

Intellectual Disability (3)

Education for Children with Intellectual Disability (3)

Seminar in Education for Children with Intellectual Disability (3)

Research in Psychology of Children with Intellectual Disability (3)

Qualitative Research Method I (3)

Qualitative Research Method [] (3)

The study of Education for Hearing-Language Impairments (3)

Audiology (3)

Seminar in Inclusive Education (3)

Seminar in Special Education Professionals (3)

Research in Special Education Technology (3)

Teaching and Learning in Special Education (3)

Research Methods in Special Education (3)

Seminar on Special Education Policy (3)

Seminar on Special Ecucational System (3)

Family counseling for children with disabilities (3)

Seminar in Counseling for Children with

Counseling Theory and Practice for the Children

with disability (3)

Assessment of Children with Disabilities (3)

Seminar in Special Parent Education (3)

Practice of psychological tests for children with disabilities (3)

Instructional and Learning Strategies for Students with Learning Disabilties (3)

Seminar of Learning Disabilities I (3)

Seminar of Learning Disabilities 

(3)

Mathematics Education for students with Learning Disabilities (3)

Study on Psychology of Students with Learning Disabilities (3)

Research Trends and Challenges for Learning Disabilties (3)

Diagnosis and Assessment of students with Learning Disabilities (3)

Indroduction to Korean Sign Language Linguistics (3)

### Professors

Disabilities (3)

- Hyun-Jong Song, Ph.D.
   [Educational Psychology and Counseling Psychology, hjsong@jnu.ac.kr]
- Doohyoo Lee, Ph.D. [Educational Policy, doohlee@jnu.ac.kr]
- Hongjoong Cho, Ph.D.
   [Education of Children with Physical Disabilities, chohj@jnu.ac.kr]
- Soon-Ja Lee, Ph.D.
   [Methodology of Early Childhood Education, jelmana@jnu.ac.kr]
- Eun Ko, Ph.D.
   [Education of Language Auditory Children with Language and Auditory Impairments, eunko@jnu.ac.kr]

- Hyeseung Choi, Ph.D.
   [Autism Spectrum Disorder, Emotional and Behavioral Disorders, hchoi2004@jnu.ac.kr]
- Sook-Hyun Oh, Ph.D.
   [Curriculum for Early Childhood Education, shoh04@jnu.ac.kr]
- Tae-Su Lee, Ph.D.
   [Learning Disabilities, Subject Education, taesu811@jnu.ac.kr]
- Woo-ri Kim, Ph.D.
   [Teaching and Learning Methods in Special Education, rnell777@jnu.ac.kr]
- Chung-Eun Lee, ph D.
   [Education of Children with intellectual disability, Family support, celee@jnu.ac.kr]

# Science Education

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### **■** Graduate Studies in Science Education

The Doctoral Program of science education confers Doctor of Philosophy in Science Education candidates. The program aims to develop professionals in the research and practice of science education. It consists of six majors: physics education, chemistry education, earth science education, biology education and mathematics education, and Science Gifted Education.

# **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn 36 credits. The academic year consists of two semesters, each comprising 15 weeks of instruction. A maximum of 12 credits earned at other universities or colleges with doctoral degree programs, prior to entering the Graduate School may be transferred for the doctoral degree program. For doctoral students of the program at least 18 credits are required, consisting of 6 credits in science or mathematics education courses, and 12 credits in science or mathematics content courses. Doctoral students must publish at least one publication in international or nationwide (KCI indexed) academic journals before presenting their doctoral thesis. Doctoral degrees shall be conferred upon the candidate who has fulfilled all of the above conditions, passed the comprehensive examination, fulfilled the one foreign language requirement, and have submitted a thesis for approval.

# ■ What Do You Study?

### Common

Teaching and Learning Theory in Science Education
Learning Theory for Scientific Inquiry I
Learning Theory for Scientific Inquiry II
Psychology Methods in Science Education
Research Methods in Science Education
Issues in Science Education Research
History of Science and Science Education
Philosophy of Science and Science Education
Teaching and Learning Theory for the Gifted in
Science

Development of Learning Materials for the Gifted in Science
Teaching Science, Technology and Society
Seminars in Science Education I
Seminars in Science Education II
Study in Science Education I
Study in Science Education II
Multimedia and Science Education
History of Mathematics and Mathematics
Education
Topics in Mathematics Education

Philosophy of Mathematics Education

**Physics Education Courses** 

Topics in Mathematical Physics

Assessment of Physics Learning

Physics Learning and Context

Teaching Physics Experiment

Advanced Statistical Physics Education

Advanced Modern Physics Education

Understanding Contemporary Physics

Relativity Education

Condensed Matter Physics Education

Advanced Optics Education

Advanced Mechanics Education

Advanced Electromagnetism Education

Topics in Quantum Physics

Advanced Thermal Physics Education

Analysis of Physics Curriculum and Development

of Teaching Materials

Special Topics in Physics Education

Advanced Physics Experiment

Physics Education and Computers

Physics Education and Electronics

Seminar on Physics Education

Secondary school physics Experiment Research

Mechanics Education

Electromagnetism Education

Quantum Physics Education

### **Chemistry Education Courses**

Curriculum and Evaluation in Chemical Education

Teaching Methods and Material Development in

Chemical Education

Research Methodology in Chemical Education I

Research Methodology in Chemical Education II

Teaching and Learning Theories in Science

Education

Advanced Analytical Chemistry

Teaching Methods and Development of

Chemical Experiments

Special Topics in Instrumental Analysis

Electrochemistry

Advanced Organic Chemistry

Spectroscopy in Organic Chemistry

Special Topics in Organic Reactions

Advanced Inorganic Chemistry

Special Topics in Coordination Chemistry

Organometallic Chemistry

Advanced Physical Chemistry

Advanced Quantum Chemistry

Inquiry Teaching in Chemistry Education

Seminar in Chemistry Education

Special Topics In Physical Chemistry

Special Topics in Chemistry Education

Special Topics in Inorganic Chemistry

### **Biology Education Courses**

Theory and Practice in Biology Education

Research Methodology in Biology Education

Biology Curriculum Study

Evaluation in Biology Education

Seminar in Biology Education

Biology Teaching Methods and Materials

Inquiry Teaching in Biology Education

Data Analysis in Research of Biology Education

Biology Education Using Science History

Systematic Zoology Education

Animal Physiology Education

Ecology Education

Leology Education

Microbiology Education

Molecular Biology Education

Vertebrate Anatomy Education

Genetics Education

Cell Biology Education

Systematic Botany Education

Plant Molecular Genetics Education

Plant Physiology Education

Developmental Biology Education

Environmental Biology Education

Seed Plants Anatomy Education

Immunology Education

Virology Education

### **Earth Science Education Courses**

Advanced Topics in Earth Science Education Advanced Teaching Materials in Earth Science Education

Teaching Methodology in Earth Science Education Curriculum & Evaluation of Earth Science Research Method of Earth science education Inquiry in Cosmology Education Advanced Mineralogy and Educational Experiment Petrogenesis and Educational Experiment Educational Study in Stratigraphy Educational Study in Paleontology Inquiry in Igneous Petrology Educational Methodology on the History of the Earth Study on Geological Structure Education Educational Seminar on Geological Resources Topics on Geology of Korea Inquiry in Synoptic Meteorology Studies on Micrometeorology Advanced Climatology and Education Practice Oceanography Education Geophysics Education Educational Study on Atmospheric Science Atmospheric Science in Ocean Inquiry of Optical Crystallography

### **Science Gifted Education Courses**

Teaching and Learning Theory for the Gifted in Science
Development of Learning Materials for the Gifted in Science
Evaluation of Gifted Education in Science
Curriculum for Gifted in Science
Creativity and Science Education

Study of Teaching Material for Gifted in Science Research of Gifted Education in Science Leadership of Gifted in Science

Development of Physics Program for Science Gifted Development of Chemistry Program for Science Gifted

Development of Biology Program for Science Gifted

Development of Earth Science Program for Science Gifted

#### **Mathematics Education Courses**

Science History and Creativity

Teaching of Secondary School Mathematics
Curriculum in Mathematics Education
Psychology of Mathematics Education
Assessment of Mathematics Education
Research Methodology in Mathematics Education
Mathematically Gifted Education
Mathematics Educational Technology
Teaching Analysis in Secondary School
Teaching Algebra in Secondary School
Teaching Geometry in Secondary School
Teaching Probability and Statistics in
Secondary School
Teaching Discrete Mathematics in Secondary

School
Topics in Algebra and Education
Topics in Analysis and Education
Topics in Geometry and Education
Artificial Intelligence and Mathematics education
Research for the Doctoral Degree I
Research for the Doctoral Degree I

### Professors

#### **Physics Education**

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- Yung Ho Kahng, Ph.D.
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- Su-man Kim, Ph.D.
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### **Earth Science Education**

• Jong-Hee Kim, Ph.D.

# **■** Laboratories

#### **Physics Education**

- Physics Education Laboratory
- Emerging Materials & Devices Laboratory

# **Chemistry Education**

- Chemistry Education Laboratory
- Photo and Electrochemical Energy materials Laboratory (PEEL)
- Organic Materials Laboratory

- [Earth Science Education, earthedu@jnu.ac.kr]
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- Chang-Pyo Jun, Ph.D.
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#### **Mathematics Education**

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- Sik Lee, Ph.D., [Topology, slee@jnu.ac.kr]
- Sungmo Kang, Ph.D., [Geometry and Topology, skang4450@jnu.ac.kr]
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- Injo Hur, Ph.D., [Analysis, injohur@jnu.ac.kr]
- Keunyoung Jeong, Ph.D.,
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- Functional Materials Design Laboratory
- Coordination Chemistry Laboratory

#### **Biology Education**

- Plant Molecular Genetics Laboratory
- Biology Education Laboratory
- Animal Embryology Laboratory
- Plant Taxonomy Laboratory
- Immunology Laboratory

# Mathematics Education

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### ■ Graduate Studies in Mathematics Education

The aim of the Master's course is to educate professionals and researchers so that they can carry out academic investigations into the issues relevant to mathematics education such as teaching and learning, curriculum, psychology, philosophy, technology, and mathematics history. In order to achieve the goals, the curriculum of the course consists of basic and intensive subjects with extensive theories of mathematics education coupled with social sciences and mathematics.

# Degree Requirements

Master's degree candidates are required to earn 24 credits. They must also pass a comprehensive exam (3 subjects) and a foreign language exam, and present a thesis proposal before submitting a degree-seeking thesis or dissertation. All students are assigned a supervisor based on research interests and major

# ■ What Do You Study?

Teaching Materials for Algebra
Teaching Materials for Analysis

Pedagogy of Mathematics

Teaching Materials for Geometry

Topics in Algebra I Topics in Algebra II

Topics in Analysis I

Topics in Analysis Ⅱ

Topics in Geometry Topics in Topology

Topics in Mathematical Statistics Topic in Discrete Mathematics

Topics in Applied Mathematics Mathematics Using Computers

Psychology of Learning Mathematics

Ethnomathematics Education

Studies in Mathematics Education

Mathematics Teaching and Learning materials

History of Mathematics and Mathematics Education

Philosophy of Mathematics Education

Teaching of Secondary School Mathematics

Curriculum in Mathematics Education
Psychology of Mathematics Education
Assessment in Mathematics Education

Mathematically Gifted Education

Research Methodology in Mathematics Education

Mathematics Educational Technology
Teaching Analysis in Secondary Schools
Teaching Algebra in Secondary Schools
Teaching Geometry in Secondary Schools

Teaching Probability and Statistics in Secondary

Schools

Teaching Discrete Mathematics in Secondary

Schools

Topics in Algebra and Education Topics in Analysis and Education

Artificial Intelligence and Mathematics education

Topics in Geometry and Education Topics in Mathematics Education

### Professors

- Bomi Shin, Ph.D., [Professor, Mathematics Education, bomi0210@jnu.ac.kr]
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- Sungmo Kang, Ph.D.,
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  Keunyoung Jeong, Ph.D.,
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### Laboratories

- Highly modernized lecture rooms Lecture on theory of mathematics and mathematics education using various multimedia
- Computer laboratory
- Practice of mathematical theory and teaching and learning of mathematics
- Materials room for teaching and learning of mathematics Articles, Reports, Books, Software, Teaching Aids, etc.
- Materials room for gifted education Materials for gifted education and the practice of gifted education

# Korean Education

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### ■ Graduate Studies in Korean education

The Ph.D. program in Korean Education was established in March 2002 through collaboration with the Department of Education. Then the Department of Korean Education was established in 2008. Since that time, students have, through the program accumulated, expert and intricate knowledge of Korean language and literature in addition to polishing their teaching and leadership skills.

The mission of the Department is to cultivate educational leaders who will work to improve Korean education in local, national, and international settings. This is accomplished through the promotion of critical thought, research, and reflective practice related to teaching and learning, curricula, instruction, policy, and teacher education.

The master's and doctoral programs focus on both theory and practice, along with appropriate research preparation in a collaborative social context, grounded in the realities of schooling. The diversity of students and teachers in the program is led by research-active faculty members who regularly present at various academic conferences each semester and frequently publish their work in leading scholarly journals. Master's and doctoral students will conduct research and critically examine curricula, means of assessment, and the characteristics and politics of learning environments.

Faculty members in the Department of Korean Education believe that Korean language and Korean culture represent the roots of Korea as a nation, and strengthening the field of Korean education will enable the country to better participate and be fully represented in an increasingly globalized world.

# ■ Degree Requirements

Students must acquire 24 (M.A.) and 36 (Ph.D.) credit hours in major courses and 3 credit hours in thesis research to complete the course. All students must pass graduation qualification examinations (a foreign language exam and a comprehensive exam) before submitting the final copy of the thesis.

# ■ What Do You Study?

Studies in Teaching Korean Classical Literature Contents

Studies on Instruction of Old Korean Fiction

Studies on Instruction of Old Korean Essay Studies on Instruction of Oral Narrative Studies on Instruction of Oral Poetry Studies on Issues in Korean Literature Studies on Curriculum of Korean Instruction Studies on Teaching Materials of Korean Studies on Evaluations of Korean Language Ability Studies on Teaching Methods of Korean Seminar on Instruction of Korean Methodology of Instructional Korean Language Topics in Korean Language Instruction Studies on Korean Language History Korean history literature study Studies on Korean Language Policy Studies on Instruction of Drama Studies in Teaching Modern Korean Seminar on Instruction of Reading Studies on Instruction of Media Language Studies on Instruction of Grammar A Study on Literature and Video Contents Seminar on Literary Instruction Topics in Instruction of Literature Studies on Instruction of Literary Criticism Studies on Literary Criticism Studies on Instruction of Literary History

Studies on Instruction of Sociolinguistic Studies on Instruction of Narrative Studies on Instruction of Lyric Studies on Instruction of Sijo & Kasa Seminar on Instruction of the Korean Criterion Studies on Instruction of Lexicon Studies in Teaching Methods for Korean Phonology Studies on Instruction of the Applied Linguistics Studies on Instruction of Writer and Writing Seminar on Instruction of Writing Studies on Instruction of Middle Korean Grammar & Modern Korean Grammar Studies on Instruction of the Dialect Studies on Instruction of Creative Writing Studies on School Grammar of Korean Studies in Teaching Sino-Korean Literature Studies on Instruction of Hyangga & Lyeoyo Studies on Instruction of Modern Fiction Studies on Instruction of Modern Poetry Seminar on Instruction of Speech Studies on the Hunminjungum Seminar on the Instruction of Korean

### Professors

Studies on Comparative Literature

- Cheol Noh, Ph.D.
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- Young-Hee Yang, Ph.D.
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- Keun-Ho Kim, Ph.D.
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# Home Economics Education

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### ■ Graduate Studies in Home Economics Education

The Master's program in Home Economics Education offers systematic coursework in curriculum content and pedagogy related to home economics education while also being grounded in pedagogical and home economics theory. Students can acquire major knowledge suitable for a knowledge-based society and enhance their ability to develop, operate, and utilize home economics education curricula. The program aims to produce home education experts who can contribute to local and national development.

# Degree Requirements

The Master's program in Home Economics Education at the graduate school consists of a total of 4 semesters. Each academic year is divided into 2 semesters, each spanning 15 weeks of classes. A minimum of 24 credits must be completed, and Research Supervision is a mandatory course. A proposal presentation must be conducted before the commencement of the dissertation defense, which involves a total of 2 defenses. Those who receive approval for their proposal presentation and final defense will be awarded a Master's degree.

# ■ What Do You Study?

Research Supervision I, II, III

Advanced Educational Theories in Home

**Economics Education** 

Research Methods in Home Economics Education

Exploration of Teaching-Learning Method in Home

**Economics** 

Issue and Seminar in Home Economics Education

Evaluation of Home Economics Education

Advanced Family Relation Education

Advanced Child Development Education

Advanced Family Welfare Education

Advanced Parent Education

Advanced Culture and Consumption Education

Advanced on Consumer Decision Making Education

Advanced Consumer Information Education

Advanced Home Management Education

Advanced Nutrition Education

Advanced Clinical Nutrition Education

Advanced Food Science Education

Advanced Experimental Cookery Education

Advanced Food Chemistry Education

Advanced Clothing Materials Education

Advanced Culture of Costume Education

Advanced Clothing Pattern Making & Tailoring

Education

Advanced Fashion Design Education

Research on Apparel Behavior

Advanced General Housing Education

### Professors

### **Home Economics Education**

- Lan-Hee Jung, Ph.D. [Professor, Food Science, lhjung@jnu.ac.kr]
- Eun-Hah Wee, Ph.D.

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- Seo-Yeon Lee, Ph.D.

- [Assistant Professor, Family Studies, sy0929@jnu.ac.kr]
- Seong-Youn Choi, Ph.D.
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# Political Science

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### **■** Graduate Studies in Political Science

Political science is a discipline that aims to find the best way to realize the best political system in which human beings can manage their lives with happiness and freedom. In this sense, political science is a systematically and theoretically academic major. The political science major is also designed to help students to understand political phenomena and to encourage them to become prudent political participants.

In the Department of Political Science, students are encouraged to contribute to the development of political science with theoretical judgment and applicability on political phenomena in the vortex of reality. Students are also expected to develop various political theories and research methods learned by the undergraduate education.

# **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate and maintain an average grade of B or higher (3.0 based on a 4.5 scale). Ph.D. candidates are required to earn an additional 36 credits and maintain an average grade of B or higher.

Students who fulfill all course requirements are to pass both a comprehensive exam and a foreign language exam. Students then may write and submit a thesis.

# ■ What Do You Study?

Ancient and Medieval Political Thoughts (3)

Advanced Comparative Political Theories (3)

Advanced Korean Politics (3)

Advanced Research Method in Political Science (3)

Advanced Studies of Political Theories (3)

American Politics (3)

City and Local Politics (3)

Comparative Congressional Politics (3)

Comparative Political Economy (3)

Comparative Political Parties (3)

Comparative Study of Political Culture (3)

Contemporary Political Thoughts (3)

Cyberpolitics (3)

Election Campaign (3)

European Politics (3)

Gender and Politics (3)

Global Korean Network and International Co-op (3)

Global Politics of the Environment (3)

Globalization and National Reponses (3)

History of International Politics (3)

Human Rights and International Relations (3)

International Relations of North Eastern Asia (3)

International Politics of the Ocean (3)

Japanese Politics (3)

Korean Political Parties (3) Latin American Politics (3) Media and Politics (3) Modern Political Ideologies (3)

Modern Political Thoughts (3)

Nationalism and International Relations (3)

Oriental Political Thoughts (3)

Political Behavior (3)

Political Economy on the International

Migration (3)

Quantitative Political Analysis (3) Readings in International Relations (3)

Research of International Conflicts (3)

Russian Politics (3)

Seminar in International Political Economy (3)

Seminar in Korean Political Economy (3)

Seminar on Comparative Labor Politics (3)

Seminar on South-North Korea Relations (3)

Studies in International Organization (3)

Studies in International Political System

& Process (3)

Studies in Korean Foreign Policy (3) Studies in Korean Unification (3) Studies in North Korean Politics (3) Studies in Political Change (3) Studies in Political Philosophy (3)

Studies of Chinese Politics (3)

Studies of International Politics (3)

Studies on Elections (3)

Studies on Korean Legislative Politics (3)

Study on Peace and War (3)

Theories of National Security strategy (3)
Theories of International Relations (3)
Theories of Modern Democracy (3)

Theory of the State (3)
Topics in Foreign Policy (3)

Topics in Korean Political History (3) Topics in Korean Political Thoughts (3) Women and Political Thoughts (3)

Research for the Master's or Doctoral Degree (3)

### Professors

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- Kyung-Taek Oh, Ph.D. [Professor, International Politics, ktoh@chonnam.ac.kr]
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# Public Administration

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### ■ Graduate Studies in this institution of Public Administration

Today, the world has been confronted by the age of globalization. The importance of localized information has increased. In light of these trends, the Department of Public Administration concentrates its efforts on educating future administrative professionals with comprehensive problem-solving capabilities and task performance abilities through theoretical and practical studies on administrative phenomena. The efforts would equip them with various knowledge and skills, including those in planning, policy making, research analysis, organization management, and office management necessary for administrating governments and solving social problems.

# **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate and maintain an average grade of B or higher (3.0 based on a 4.5 scale). Ph.D. candidates are required to earn 36 credits and maintain an average grade of B or higher.

Students who fulfill all course requirements are to pass both a comprehensive exam and a foreign language exam. Students then may write and submit a thesis.

# **■** What Do You Study

Study of Examples of NGOs

Police administration Measuring analysis I Measuring analysis II High class administration

Public choice theory

Study of example of public policy

Public enterprise seminar Bureaucracy theory Regulation policy theory Urban planning theory

Marketplace and government

Human resource policy

Personnel matters of administration seminar

Disaster management theory

Electronic Government theory

The government's budget theory

Government and NGO

Government accounting theory

Policy theory

Policy enforcement theory

Policy formulation theory Organization and society

Formation design theory

Local finance theory

Local administration theory

Korean administration theory

Administrative reform theory

Administrative ethics Administrative Theory 2

Administration investigation theory 2

Administrative philosophy Environmental policy

Environmental policy seminar

History of science of public administration

Administration investigation theory 1

Administrative Theory 1 Administration and law Korean administration history Local administration seminar Chinese administration

Organizational analysis theory Organization and individual

Study of literature of policy studies

Policy theory special lecture Policy Analysis and Evaluation Government knowledge management seminar

The government's budget seminar Intergovernmental relation theory Disaster management policy

Personnel matters of administration Population and future administration

Policy of (the) city theory

Leadership seminar

Cultural policy

American public administration
Development administration theory
Public health administration theory
Comparative administration theory
Social science methodology 1
Social science methodology 2
Social welfare policy seminar
Social policy theory

# Professors

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Industrial policy theory

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# Sociology

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# ■ Graduate Studies in Sociology

Sociology is the study of the relationship between humans and human lifestyles and society. Sociologists study the structure of human society as a conglomerate of people who interact with each other.

# Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on research interests.

# ■ What Do You Study?

Classical Sociological Theories (I)

Contemporary Sociological Theories ( I )

Methodology of Social Science

Practice of the Social Statistics

Research for Master's or Doctoral Degree

Classical Sociological Theories ( [] )

Contemporary Sociological Theories (  ${\rm I\hspace{-.1em}I}$  )

Regional Societies

Environmental Sociology

Rural Societies

Sociology of Labor

Organization Theory

Social Movement

Social Movement

Sociology of Family Information and Society

Social Survey (I)

Social Survey (Ⅱ)

Social Change

Comparative Sociology

Seminar on Asian Thought

Regional Studies on Foreign Countries

Art and Society

Seminar on Visual Sociology

Women and Society

Sociology of Economics

East Asian Societies

Political Sociology

Sociology of Knowledge

Sociology of Education

Sociology of Religion

Social Thought

Korean Social Thought

Literature and Society

Social Psychology

Korean Social History

Special Topics in Sociology I

Special Topics in Sociology II

Social Control

Medical Sociology

Sociology of Gender

Culture Theory

Sociology of Human Rights

Social Statistics

Seminar on the Minority

Sociology of Leisure

Seminar on Social Development

Social Welfare

Seminar on Urban Society

# Professors

- Soo-Jong Yoon, Ph.D.
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- Jun-Woo Kim, Ph.D.
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- Su-Nam Jung, Ph.D.
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- Myeong-Soo Kim, Ph.D.
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Psychology

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# **■** Graduate Studies in Psychology

The Department of Psychology began offering MA programs in 1984 and Ph.D. Programs in 1996. As of 2017, we have conferred 180 MA and 24 Ph.D. degrees. Each year 15-20 new students are enrolled for M.A.s and 4-7 students for Ph.D. programs.

Currently about 70 graduate students in doctoral and Master's Programs are actively engaged in research and educational activities to become professionals in a variety of settings, including academia, government, and industry. The major research areas include: clinical psychology (child psychotherapy, PTSD, etc.), counseling psychology, cognitive-neuropsychology, socio-cultural psychology, learning, psychology of aging, the psychology of sexuality, and industrial/organizational psychology.

# Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate (at least 12 credits from the Psychology Department courses). Ph.D. candidates are required to earn 36 credits (at least 18 credits from the Psychology Department courses). Students not holding a bachelor's degree in psychology are required to take 12 additional credits from the undergraduate psychology programs.

# ■ What Do You Study?

Both MA candidates who earn 18 credits and Ph.D. candidates who earn 27 credits may take the qualifying exam. Students who are required to earn additional undergraduate course credits may take the exam after earning 30 credits.

Every graduate student is assigned to an academic advisor based on research interests.

History and Systems of Psychology (3)

Seminar in Research Methods (3)

Research Methodology (3)

Qualitative Research Methodology (3)

Practices in Clinical Psychology (3)

Psychopathology (3)

Psychotherapy (3)

Practices of Psychodiagnosis (3)

Counseling Techniques I (3)

Counseling Techniques II(3)

Group Counseling and Psychotherapy (3)

Special Issues in Counseling Psychology (3)

Behavior Therapy (3)

Advanced Developmental Psychology (3)

Developmental Psychopathology (3)

Psychology of Adolescence (3)

Psychology of Human Sexual Behavior (3)

Adult Development and Aging (3)

Special Issues in Developmental Psychology (3)

Advanced Industrial Psychology (3) Psychology of Industrial Culture (3)

Special Issues in Industrial Psychology (3)

Organizational Behavior and Job Stress (3)

Psychology of Consuming (3) Psychology of Advertising (3) Advanced Survey Methodology (3)

Multivariate Statistics (3) Advanced Statistics (3)

Design of Psychological Experiments (3)

Advanced Clinical Psychology (3)

Advanced Organizational Psychology (3)

Advanced Physiological Psychology (3)

Psychopharmacology (3)

Practices in Clinical Psychology (3)

Special Issues in Clinical Psychology (3)

Psycho-diagnosis (3)

Practices in Psycho-diagnosis (3)

Cognitive Therapy (3)

Rehabilitation Psychology (3)

Art Therapy (3)

Advanced Psychology of Personality (3)

Advanced Counseling Psychology (3)

Seminar on Psychobiology (3)

Neuropsychological Assessment (3)

Seminar in Biological Psychology (3)

Neuropsychological Assessment (3)

Advanced Psychology of Learning (3)

Neuropsychology (3)

Advanced Cognitive Psychology (3)

Psychology of Memory (3)

Cognitive Science (3)

Cognitive Neuropsychology (3)

Special Issues in Cognitive Psychology (3)

Social Cognition (3)

Psychology of Thought (3)

Seminar in Psychology of Learning (3)

Advanced Psychology of Language (3)

Psychophysics (3)

Advanced Social Psychology (3)

Advanced Methodology in Social Psychology (3)

Special Issues in Social Psychology (3)

Cross-cultural Psychology (3)

Advanced Cultural Psychology (3)

# Professors

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# Laboratories

# **Psychological Testing Lab**

This Lab is equipped with various psychological testing tools (K-WAIS-IV, BGT, MMPI-II, MMPI-A, Rorschach, SCL-90R, PAI, Sentence Completion Test, SNSB-II), camcorder, and voice recorder.

# Cognitive Neuropsychology Lab

This Lab is for EEG/ERP and behavioral researches on cognition, attention, emotion, and language. Main experimental equipment include one electromagnetic-wave shielding booth, three sound- proof experimental booths with control booths, one soundproof room for a group experiment, multichannel EEG amplifiers with electrode cap kits (made by BrainProducts), E-Primes with response boxes (made by PST), and PCs with LED monitors.

#### Clinical Neuropsychology Lab

This Lab is for bio-signal researches on various abnormal cognition and emotion. Main experimental equipment include one electromagnetic- wave shielding booth with ta control room, a multi-channel amplifier for physiological indices (e.g., EMG, SCR, HR; made by AD Instruments), Polygraph (made by Grass), MP Data Acquisition System (made by Biopac systems), and PCs with LED monitors.

#### **Behavioral Observation Lab**

This Lab is equipped with behavior observation systems including two soundproof booths, video- monitoring systems, and PCs with LED monitors, and a variety of psychological testing tools, making an ideal environment for research on interpersonal interactions or small group dynamics. In addition, researchers conduct behavioral experiments on an individual basis.

# Library and Information Science

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# ■ Graduate Studies in Library and information science

The graduate program in Library and Information Science educates students on information theory and the pursuit of scientific knowledge. The studies deal with the ideas and methods of knowledge relation and management and other issues that involve libraries. There is an increasing market for graduate studies in Library Information Systems that has raised the status of librarians, archivists, and academic specialists.

# **■** Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on research interests.

# ■ What Do You Study?

History of Library and Information Science

Research Methodology in Library and Information

Science

Studies in Comparative Library and Information

Science

Research for Master's or Doctoral Degree

Studies in Public Libraries

Studies in Textual Bibliography

Studies in DBMS

Multimedia Production

Theory of Comparative Classification

Advanced Indexing and Abstracting

Theory of Cataloging

Advanced Information Science

Theory of Information Retrieval

Studies in Collection Development

Theory of Information Network

Special Topics in Information Related Law

Studies in Information Center Buildings

Advanced Information Center Management

Assessment of Library and Information Center Series

Studies in Information Services

Exercises in Reading Archives

Studies in Korean Calligraphic History

Seminar in Information System Analysis and Design

Advanced Information Service

Advanced Subject Heading

Practice of Korean Paper Restoration

Advanced Information Processing

Information Seeking Behavior

Studies in Comparative Classification

Studies in Theory of Cataloging

Studies in Special Media

Studies in Automatic Cataloging

Special Topics in User Studies

Special Topics in Comparative Library and

Information Science

Bibliometrics

Studies in Indexing and Abstracting

Studies in Information Retrieval

Field Work (I)

Field Work (Ⅱ)

Archival Preservation
Research for Public Libraries
Special Topics in Meta Data
Studies in Meta Data
Theory of Bibliotherapy
Advanced Scholarly Information
Information Services
Seminar in Information Management
Seminar in Library Policy
Studies in Information Policy
General Study in Information Organization
General Study in Information Management
General Study in Information Culture
General Study in Information Technology
Theory of Archival Management

Technology of Archival Management
Theories in Organization of Archives
Development in Value of Archives
Development in Information Resources
Development in Knowledge Community
Special Topics in Regional Culture Information
Studies in Systematic Bibliography
Studies in Physical Bibliography
Research for Information Center Management
Advanced Studies in Institutional Information
Management
Doctorial Seminar in Institutional Information
Management

# Professors

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- Myoung-Gyu Lee, Ph.D.
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- Woo-Kwon Chang, Ph.D.
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Business Information Management

- Ji-Hyeon Kim, Ph.D.
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- Ji-sue Lee, Ph.D.
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# Laboratories

- LIS Graduate Study Room
- Information Processing Lab
- LIS Library

# Communication

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# What is Communication?

The discipline of communication focuses on how people use messages to generate meanings within and across various contexts, cultures, channels, and media. The discipline promotes the effective and ethical practice of human communication. Communication is a diverse discipline which includes inquiry by social scientists, humanists, and critical and cultural studies scholars. A body of scholarship and theory about all forms of human communication is the basis for an ever-expanding understanding of how we all communicate.

# ■ Department of Communication at Chonnam National University

The Department of Communication aims to prepare its students for careers in a variety of journalism and mass communication fields. It is expected that upon completion of the department's programs, students will be able to write, edit, and produce visuals and design for print and digital media.

The department offers both undergraduate and graduate curricula that mix academics with professional experience to ensure that students are well schooled in writing and editing and in analyzing the issues, conventions, and practices of journalism and mass communication. The departmental requirements give communication majors both guidance and flexibility in their selection of courses. Majors can pursue one of following tracks: journalism, advertising and PR, broadcasting, and cultural studies.

# ■ Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on research interests.

# ■ What Do You Study?

Philosophy of Journalism History of Korean Journalism International Communication Studies in Information Society Studies in Community Journalism

Studies in Mass Culture Seminar in Advertising Political Communication
Persuasion in Communication
Culture and Interpersonal Communication

Seminar in Cultural Studies Seminar in Public Relations

Human Communication

Modern Thoughts and Communication

Media Law

Political Economy of Communication

Multi-Media

Theories of Broadcasting Journalism Mass Media & Social Movements

Media Policy Media Management Media Criticism

Dynamics of Advertising

Public Relations Media Ethics

Seminar in Newspaper Seminar in Broadcasting Visual Communication Education of Media Cyber Communication Modern Communication Studies in Journalism

Seminar of Culture Management

Audience Studies

Qualitative Methodology

Quantitative Methodology Speech Communication Online Journalism

Communication & Gender Digital media & Society

Seminar in Communication Theory

Crisis Management Theories

CSR Communication Media Entertainment Cultural Policy

Culture Creation & Cultural Planning
Culture Economics & Cultural Management

Studies in Digital Culture

Digital Contents & Culture Technology

Culture Contents & Media

Culture Marketing & Public Relations

Macro-Communication Theory
Micro-Communication Theory

Research Design

Understanding of Mass Communication 1 Understanding of Mass Communication 2

# Professors

 Jong-Won Yoo, Ph.D.
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 Oh-Hyeon Lee, Ph.D.
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- Kyun Soo Kim, Ph.D. [Journalism, New Media, kimk@jnu.ac.kr]
- Jiyang-Bae, Ph.D.[PR, jiyang.bae@gmail.com]

# Careers

These job titles are not an exhaustive list, but rather, represent the types of positions most widely recruited for.

Account Associate/Manager Advertising Manager Associate Producer Broadcaster Columnist Professor

Community Relations Program Coordinator
Copy Editor Promotion Manager

Creative Director Public Information Specialist Editor Publishing Assistant/Manager

Event Coordinator Reporter

Film Editor Sales Associate
Foreign Correspondent Scriptwriter

Investigative Reporter Sports Announcer

Journalist Teacher

Marketing PR Specialist Video Journalist
Market Researcher Website Designer

Media Buyer Writer

Media Planner Employment areas are in:

Media Relations Coordinator Academia
Media Researcher Government

NewscasterPrivate CorporationsNewsletter Editor/CreatorNon-Profit OrganizationsNews ReporterPublicly Traded Corporations

Press Secretary

# Geography

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# **■** Graduate Studies in Geography

Geography as a graduate level, students are required on focusing more on spatial analyses in various topics. Students are also trained for critical thinking, problem solving skill, writing report/publication, and communication/presentation skill. Each student will select his/her own thesis or dissertation topic for graduation based on own interest, particularly on topics that the department is specialized such as economical geography, tourism, urban geography, environmental geography, and GIS.

# Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on their research interests.

# ■ What Do You Study?

Advanced Cartography

Climate change and natural hazard

Climatic Geomorphology

Computer Cartography with GIS

Development of Environment Thought

Development of Geographic Thought

Environmental change and human

Geographical Philosophy and methodology

Geography of Information and Telecommunication

Geography of Labor Market

Geography of Underdevelopment

Glacial and periglacial Geomorphogy

Land use Analysis

Landforms of Korea

Political geography in the third world

Practice in Geographic information system

Quantitative Analysis in Geography

Remote Sensing

Research in Cultural Geography

Research in Economic Geography

Research in Feminist Geography

Research in Historical Geography

Research in History of Geography

Research in Political Economy of Space

Research in Political Geography

Research In Regional Geography

Research in Rural Geography

Research in Social Geography

Research in Spatial and Regional Development

Research in Tourism Geogarphy

Research in Urban Geography

Resources and Environment

Seminar in Behavior Geography

Seminar in biogeography

Seminar in Cartography

Seminar in ecological geography

Seminar in Field Geomorphology

Seminar in Financial Geography

Seminar in Geography

Seminar in Geography of Korea

Seminar in Geography of North Korea

Seminar in New Geopolitics

Seminar in Population Geography

Seminar in Regioanl Analysis

Seminar in Regional Studies

Seminar of Regional Development Policy

Seminar of Tourism Resources

Seminar on Geographic information system

Soilgeography

Special Area Studies

Special Topics in Applied Geomorphology

Special Topics in Economic Geography

Studies in Location Theory

Study in Coastal Geomorphology

Synoptic Climatology

The city in the Third World

Theory of Urban Planning

Theory of Urban Renewal

Topic in Rural Geography

Topics In Cultural Geography

Topics in Economic Geography

Topics in Environment Conservation

Topics in European Studies

Topics in Feminist Geography

Topics in Geography of North East Asia

Topics in Geography of North Korea

Topics in GIS Application

Topics in Historical Geography

Topics in New Geopolitics

Topics in Regional Transportation and Analysis

Topics in Resional Theory

Topics In Social Geography

Topics in Theory of Industrial Location

Topics in Theory of Regional Development and

Planning

Topics in Tourism Development Planning

Topics in Tourism Geography

Topics in Urban Social Geography

Understanding Earth Environmental System and

Manage

Urban Economic Geography

Urban Land Economics

## Professors

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# Anthropology

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# ■ Graduate Studies in Anthropology

Anthropology is the study of human and its cultures, and is divided into sub-disciplines of cultural anthropology, archaeology, linguistic anthropology, and physical anthropology. Cultural anthropology is a comparative cultural study of the contemporary societies and attempts to understand other societies in terms of their own cultural values and symbols. Archaeology is a study on the origins and developments of cultures, and focuses on the material remains from the past and people with few or no written documents. Linguistic anthropology explores the relationship between language and culture. Physical anthropology studies human evolution and current health issues.

# **■** Degree Requirements

Students are assigned to advisors based on their research proposals. The assignment is guided by the graduate thesis committee and will be made in the first year of the program. Graduate students in the master level need 15 or more credits and those in the doctoral level need 27 or more credits to graduate. The credits should be fulfilled by anthropology courses. However, doctoral students may take up to six credits of non-anthropology courses under advisor's supervision. Some students may be advised to take as many as four extra courses based on their previous academic background. All graduate students should take a foreign language exam as a part of their qualification for thesis submission. The exam will be taken in English, German, French, Chinese, Classical Chinese or Japanese. International students may take a Korean exam.

The thesis prospectus should be submitted to the department before the completion of four semesters for master students and eight semesters for doctoral students. The prospectus needs approval from the advisor.

Doctoral students must publish two or more research papers before the review of their doctoral thesis begins. The student must be the first or the corresponding author of at least one paper, which is published in a journal of the KCI (Korea Citation Index) level or above.

# ■ What Do You Study?

Sexuality and Anthropology History of Anthropological Theories Ecological Anthropology Anthropology of Religion Seminar in Anthropology 1 History and Culture East Asian Culture

Readings in Oriental Archaeology

History of Archaeology

Field Methods in Archaeology

Research Methods in Archaeology

Seminar in Anthropology 2

Ethnoarchaeology

Special Topics in Prehistoric Archaeology of Korea

Special Topics in Western Archaeology

Special Topics in Oriental Archaeology

Archaeology of Mahan

Special Topics in Historic Archaeology of Korea

Topics of Consumption and Culture

Advanced Regional Studies

Understanding of Festivals and Culture

Documenting the Life through Ethnographic Films

Ethnicity and Nationality

Archaeology of Technology

Research of Honam Culture

Research Methods in Cultural Anthropology

Memory and Representation of Culture

Chinese Culture

Comparative studies in prehistory

Subsistence Economy and Culture

Political Anthropology

Studies in Mahan Culture

Anthropology of Religion

Area Studies of South Asia

Area Studies of Northeast Asia

Urban Anthropology

Political Anthropology

Anthropology of Ethnicity

Economic Anthropology

Minority Culture

Consumption and Culture

Urban Anthropology

# Professors

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- Jina Heo, Ph.D.
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- Go-Woon Noh, Ph.D.
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# Laboratories

#### Archaeobotany Lab

Archaeobotany is the study of human and societies through the analysis of plant remains from archaeological sites. The research emphases of this lab include food procurement, domestication, landscape transformation, and social complexity. The types of plant remains studied include macrobotanical (seed and wood) and microbotanical (pollen and phytolith) remains.

# Interdisciplinary Program of Global Diaspora Studies

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# ■ Graduate Studies in the Interdisciplinary Program of Global Diaspora Studies

The Interdisciplinary Program of Global Diaspora Studies strives to objectively understand current flows and movements of people while exploring paths for coexistence in a multicultural society. Moreover, through interdisciplinary research, we attempt to achieve a comprehensive understanding of migration phenomena across boundaries and territories, thereby spreading discourses and paradigms through which various members of our society can communicate and coexist. We provide a great variety of educational research programs to enhance the expertise and uniqueness of diaspora research, and we provide the opportunity to explore current issues about migration, offering a practical curriculum with a focus on field research. In addition, our department also provides opportunities to explore various research field and case studies, as well as, new chances for international cooperation in research thanks to our rich international academic network.

# ■ Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on their research interests.

# ■ What Do You Study?

Multiculturalism and Citizenship

Research Design and Methods
Methodology on Diaspora Studies
Theories of International Migration
Health Equity and Cultural Competence
International Migration and Labor Policy
International Migration and Development
International Migration and Social Networks
International Migration and Social Integration
Gender and International Migration
History of International Migration
Global Migration and Transnationalism
Health Issues in a Multicultural Society

Business Networks in Ethnic Diasporas
Diaspora Politics
Culture and Health
Cross-Cultural Studies
Anthropology of Ethnicity
Understanding of Asian Societies
Social Welfare Issues for Migrant's Families
Immigration legislation
Migration Policy
Human Rights and International Relations
Identity and Cultural Diversity
Religion and Diversity: Conflict and Coexistence
Studies of China's Ethnic Policy

Local Society and Social Integration Understanding Multicultural Korea Studies of Overseas-Chinese

Political Economy on the International Migration

Studies of International Politics

Advanced Research Method in Political Science

Political Behavior Media and Politics

NGOs and Election Politic in Korea

Qualitative Research Methodology

Sociology of Migration Women and Society Feminist Studies Sociology of Labor Sociology of Family

International Communication Digital media & Society

Digital Contents & Culture Technology Cultural and Interpersonal Communication Cultural Contents & Media Studies in Information Society

Research on Education of Cultural Geography Seminar on Education of Social Geography Research on Education of Migration and Diaspora Research on Education of Contemporary Cultural

Space Minority Culture

Research Methods in Cultural Anthropology

Culture Change and Multiculturalism Globalization and Local Culture Sexuality and Anthropology

Reading Ethnography
Research Guidance 1
Research Guidance 2
Research Guidance 3
Research Training 1
Research Training 2

# Professors

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# Interdisciplinary Program of Archival Studies

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# ■ Graduate Studies in the Interdisciplinary Program of Archival Studies

The Interdisciplinary Program of Archival Studies preserves, discovers, evaluates, and organizes Korea's documentary heritage while systematically collecting, preserving, and managing various records produced during the operation of national, public, and private institutions. The course also provides archival science. It is operated for the purpose of nurturing professional personnel for research and education.

# **■** Degree Requirements

Master's degree candidates are required to earn 24 credits. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are assigned an academic advisor based on their research interests. Applicants entering a master's or doctoral program that are not in the same field (library and information science, history, public administration) must complete 30 credits for the master's program and 42 credits for the doctoral program as graduate school graduation credits.

# ■ What Do You Study?

Policy evaluation theory

Korea High Publication Research

Information retrieval theory study

The archiving crane research

Korean History Research

Practice of Korean History 1

Practice of Korean History2

Administrative ethics

Electronic government

Record management theory

Record management technology

Record organization theory

Archive value development theory

Information system design special theory

Record Management Methodology

Record Management Policy

Records management law study

The memory tube operative path

Record management seminar

Record Management Sites

Record Information Services Study

Record Management Study Method Special

Record Management theory

Research Traning 1

Research Traning 2

Electronic record management

Record evaluation theory

Digital archiving special theory

History of History Management and System

Local feed research

A Study on the Silence of Chosun Dynasty

Administrative law theory

Administrative information system theory

Record Management Capstone Design

# Professors

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- Ji-sue Lee, Ph.D.
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- Juhyeon Park, Ph.D.
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# Family Environment and Fax: +82-62-530-1329 Welfare

# \_\_Contact Information

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# ■ Graduate Studies in Family Environment and Welfare

The goal of the Department of Family Environment and Welfare is to contribute to the improvement of family welfare and quality of life through the systematic studies of interaction between humans and family environment. To achieve this goal, the Department provides various academic programs about the basic theories and practice in the fields of human & family environment and also trains professionals who manage to solve special tasks and social problems on family welfare. The department's Major fields consist of family studies & social welfare, consumer science, and child care and counseling. Graduates from our department work as professors and researchers in their major fields, college instructors and professional public workers human service.

# **■** Degree Requirements

Master's degree candidates are required 24 credits for graduation. Ph.D. candidates are required an additional 36 credits.

Graduate students are also required to pass a comprehensive exam and a foreign language exam, and to submit a thesis or dissertation for approval

# ■ What Do You Study?

· Consumer science Seminar in Household Welfare Family Financial Counseling Research on Living Cost Advanced Course in Consumer Economics Consumer Competencies and Education Seminar in Consumer Affairs Advanced Course in Comsumer Protection and Policy Advanced Course in Consumer Counseling Advanced Course in Comsumer Decision Making Theories of Decision Making Advanced Course in Financial Management Electronic commerce Theory Investment Theory Advanced Course in Korean Households

· Child care and counseling Play Therapy Supervision Practice Practice in Play Therapy Theories of Play Therapy Theories and Practices of Sandplay Therapy Assessment and evaluation for children Research on Day Care Program Seminar in Child Care Theories of Parent - Education Studies in Filial Play Therapy Psychology Of Personality Child and Environment Seminar on Child Development Advanced the child welfare Theorise of Child Counseling Child Psychopathology

Administration and Organization of Early
Childhood Education and Care Center
Policies of Early Childhood Education and Care
Art Therapy
Narrative Therapy
Cognitive learning therapy
Theory and Practice of Group Counseling

Family studies and Social welfare
 Advanced Course in Family Relationships
 Advanced Course in Family Development
 Advanced Course in Family welfare
 Family Counseling the case study
 Family Life Education and Research
 Topics in Family Communication
 Advanced Family Therapy and Practice
 Advanced Family Studies
 Advanced Course in Social Service for the Elderly
 Social Problems

Skills and Techniques for Social Work Practice
Social Work Practice Theories
Social Welfare Policy
Social Welfare Research Method
Advanced Social Welfare
Social Welfare Administration
Advanced Seminar in Social Service
Advanced female Welfare
Human Behavior & Social Environment
Advanced Community Welfare
Studies in Korean Family

• Common(Methodology/Statistics)
Advanced Statistics
Research Method 1
Research Method 2
Research and Ethics
Data Analysis

# Professors

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- Joo Yeon Lee, Ph.D.
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- Jeong Ha Hwang, Ph.D.
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• Ji yeon Son, Ph.D.

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#### Laboratories

- Consumer Financial Management Lab
- Child Counseling Lab
- Family Studies Lab
- Consumer Education Lab
- Family Welfare Lab
- Child Development & Child Care Lab
- Social Welfare Lab

# \_\_Contact Information

Food & Nutrition

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# ■ Graduate Studies in Food and Nutrition

The graduate program in Food and Nutrition aims to offer outstanding educational and research programs covering fundamental and applied aspects in the field of food science and human nutrition.

The program provides in-depth knowledge of clinical nutrition, nutritional aspects of exercise, sensory and instrumental evaluation of food quality, nutrition and disease interactions, food chemistry, food microbiology, biotechnology, food processing, advanced food analysis, and functional foods. Students are provided with collaborative research opportunities in conjunction with hospitals, industry, and other research institutes. Faculty members have earned a reputation for distinguished education and research programs in the field of food science and human nutrition. Graduates are prepared for scientific and technical careers in educational institutions, government agencies, healthcare facilities, and industries.

# **■** Degree Requirements

Master's degree students are required to earn 24 credits for graduation. Ph.D. students are required to earn an additional 36 credits.

Graduate students are also required to pass a comprehensive exam and a foreign language exam, and to submit a thesis or dissertation to qualify for graduation.

# ■ What Do You Study?

Advanced Food Chemistry

Advanced Food Hygiene

Advanced Food Microbiology

Advanced Food Preservation Advanced Food Processing

Advanced Food Science

Advanced Molecular Nutrition

Advanced Nutrition

Advanced Nutrition Counseling and Education Advanced Science of Functional Foods

Advanced Statistics for Natural Scientists

Biotechnology of Foods Carbohydrate Chemistry

Carbohydrate Metabolism

Chemistry in Food Flavors

Clinical Nutrition Therapy Current Topics in Nutrition

Development of Nutritional Foods to Prevent Frailty

Evaluation of Functional Materials

Experiments in Food and Nutrition

Evaluation of Food

Food Marketing

Food Toxicology

Frailty Prevention

History of Foods

Hormone and Nutrition

Immunity and Nutrition

Lipid Metabolism

Metabolomics

Methodology of Food Sensory Profiling

Mineral Metabolism

Nutrition Diagnosis of the Community

Nutrition in Aging

Nutrition in Infancy and Childhood

Nutritional Physiology

**Nutrition Interventions** 

Nutrition Policy and Communication

Pathophysiology

Physiology of Aging

Phytochemicals

Pigments Chemistry

Practice in Clinical Nutrition

Presentation Skills and Proposal Writing

Protein Chemistry

Seminar in Clinical Nutrition

Seminar in Food Science

Seminar in Nutrition

Sensory and Consumer Science

Smart Technology for Personalized Nutrition

Special topics in Exercise Nutrition

Special topics in Fermentation Sitology

Special topics in Food Rheology

Special topics in Instrumental Analysis

Special topics in Nutritional Biochemistry

Special topics in Nutritional Epidemiology

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#### Laboratories

- Food Analysis Lab
- Cookery Science Lab
- Functional Food Lab
- Applied Nutrition Lab
- Food Chemistry Lab
- Metabolomics Lab
- Nutritional Epigenetics Lab
- Clinical Nutrition Lab
- Nutritional Biochemistry Lab
- Sensory science Lab

- Food Microbiology Lab

#### Facilities

- Experimental Foods Lab
- Food and Nutrition Lab
- Nutrition Counseling Lab
- Nutrition Assessment Lab
- Cell Culture Lab
- Instrumental Analysis Lab
- Animal Lab
- Sensory Evaluation Lab

# \_\_Contact Information

# Clothing & Textiles

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# **■** Graduate Studies in Clothing and Textiles

The Department of Clothing and Textiles offers both Master's and Ph.D. degree programs in Textile Science, Social Psychology of Clothing, Fashion Marketing, Clothing Ergonomics, Fashion Design, Clothing Engineering, and Traditional Korean-Western Costume. These programs are designed to prepare students for becoming scholars (careers in research and teaching) in higher education as well as challenging careers in a variety of fields, including fashion industry and government.

# **■** Degree Requirements

The program requirements for the Master's degree program consist of course work (minimum 24 credits including 15 credits from the Dept. of Clothing & Textiles), satisfactory performance on the qualifying examinations (three subjects), and thesis research. Ph.D. candidates are required to earn a minimum of 36 credits (24 credits from the Dept. of Clothing & Textiles) beyond the Master's degree. Satisfactory performance on the qualifying examinations (three subjects) and dissertation research are required. All graduate students must pass a foreign language exam.

# ■ What Do You Study?

3D Design of Virtual Clothing Active Sports Wear Design

Advanced Consumer Behavior in Fashion

Advanced Course of Dyeing Advanced Fashion Textiles

Advanced Marketing Strategy for Fashion

Business

Advanced Textile Evaluation Advanced Textile Science

AI Fashion

Art Wear Design Workshop

Capstone Design for Fashion Start-up

Clothing Ergonomics
Clothing Sizing System
Clothing production research
Creative Design & Venture Studio

Design of Korean Traditional Costume

Digital Clothing Workshop Digital Fashion and Research Ethnic Art Wear Design Fashion and Art Collaboration Fashion and Engineering Fashion brand management

Fashion Color Special Theory
Fashion Design Studio for Sustainability

Fashion Journalism Fahion Media Criticism

Fashion Product Design Studio Folk Costume Field Workshop Functional Textile System Research Global Outsourcing and Technical Design

History of 20th Century Fashion

Intergrated fashion brand communication Intellectual Properties and Fashion Startup IT&Fashion Design Convergence Workshop Korean Clothing Design Planning Natural Dyeing Research New Media Design for Fashion Omni-channel fashion business Process design for smart luminescent textile Research for Fashion Design Inspiration Research in Dyeing Techniques and Design Research in Fork Costume (I) Research Methods in Clothing & Textiles Research Methods in Clothing Construction Seminar in Clothing Seminar in History of Oriental Costume Seminar in Special Topics of Hanbok Smart healthcare wear design Social-Psychology of Clothing Special assignment in clothing science Special Problems in Textiles Special Topics in Fashion Retailing Special Topics in Smart Textiles

Study in Technotextiles & Application

Study in Textile Design

Study in Up-cycling Fashion Design

Study on Fashion Designers and Collections

Sustainability & Fashion Industry

Sustainable Fashion Textiles

Technical Wear Design

Textile Science Seminar

Theory of Global Fashion Cultural Industry

Seminar

Topics in Aesthetics of Costume

Topics in History of Korean Costume (I)

Topics in History of Korean Costume ( [] )

Topics in History of Western Costume &

Culture (I)

Topics in History of Western Costume &

Culture ( [] )

Topics in Image Making

Traditional Costume of Korean Culture&Design

Idea

Understanding of Traditional Clothing Works

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- Seokho Cho, Ph.D.
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#### Laboratories

- Fashion Design Research Lab
- Fashion Design Lab
- Apparel Technical Design Lab
- Clothing Engineering Lab
- Traditional Costume Research Lab
- Fashion Marketing Research Lab
- Wearable Electronics and Smart Textile Lab

# Interdisciplinary \_\_Contact Information Graduate Program of Social Welfare

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# ■ Goals of the Interdisciplinary Graduate Program of Social Welfare

The Interdisciplinary Graduate Program of Social Welfare has the following aims:

- Reeducate field social workers and educate graduate students to acquire academic and practical knowledge and skills related to social welfare through an interdisciplinary approach among the Departments of Family Environmental Welfare, Nursing, Sociology, and Public Administration.
- Train students to become highly-skilled, competent, and ethical practitioners who will provide leadership for the profession of social work within the local community and nationally.
- Contribute to the development of social welfare in the local community and the country by both creating knowledge on the prevention and amelioration of social problems and developing practical application programs.

# Degree Requirements

- Master's degree candidates are required 24 credits for graduation.
- Ph. D. candidates are required an additional 36 credits for graduation.
- Graduate students are also required to pass a comprehensive exam and a foreign language exam, and to submit a thesis or dissertation for final approval.

# ■ What Do You Study?

Advanced Child Health Nursing and Practice

Advanced Child welfare

Advanced Community Mental Health Nursing

and Practice

Advanced Data Analysis

Advanced Family Communication

Advanced Family Development

Advanced Family Relationships

Advanced Family Therapy and Practice

Advanced Family welfare

Advanced Rehabilitation Nursing and Practice

Advanced Social Service for the Elderly

Advanced Social Welfare

Advanced Welfare Finance

Advanced Welfare for Women

Case Management in Social Welfare Case Study on Family Counseling

Child Psychopathology

Community Welfare & Practice

Cultural Diversity and Social Welfare

Data Analysis for Social Welfare

Ethics and Philosophy in Social Welfare

Family Life Education and Research

Family Nursing and Family Therapy

Household Welfare Research

Housing Welfare

Human Behavior and Social Environment

Human Rights and Social Welfare

Information Society and Welfare

Introduction to Social Welfare

Mental Health and Social Welfare Poverty and Social Welfare

Principle and Practice of Group Counseling

Program Development and Evaluation
Public Home Management Research

Qualitative Research

Research Methods for Social Welfare

Research on Living Cost Research Training 1 Research Training 2 School Social Work

Seminar on Child Development Seminar on Social Welfare

Seminar on Social Welfare Administration

Seminar on Social Welfare Policy Skills for Social Work Practice

Social Problems Social Security Social Welfare Administration Social Welfare for the Disabled

Social Welfare History

Social Welfare in Criminal Justice System

Social Welfare in Mental Health

Social Welfare Legal System and Practice

Social Welfare Policy
Social Welfare Practicum
Social Welfare with Youths
Social Work in Health Care
Social Work Practice Theories
Studies in Korean Family
Theory of Child Counseling
Theory of Human Behavior

Theory of Human Resource Development

Theory of Welfare State Volunteer and Social Welfare

Women and Labor

# Professors

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# Laboratories

- Social Experiment Lab
- Family Welfare/ Welfare for the Aged Lab
- Health & Social Welfare Research Lab
- Consumer Financial Management Lab
- Consumer Education Lab
- Child Development Research Lab
- Child Counseling and Research Lab

Veterinary Medicine \_\_Contact Information

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**■** Graduate Studies in Veterinary Medicine

The College of Veterinary Medicine offers graduate studies leading to the Master of Science and Doctor of Philosophy degrees in Veterinary Medical Sciences to prepare students for careers in biomedical science. The professional DVM Program is not a graduate degree program, and applications are handled separately from the graduate program. The graduate program provides training in basic and applied veterinary medical

research for qualified students with a baccalaureate degree or a DVM or equivalent degree.

The major areas of concentration in graduate studies are administered by three departmental programs: Basic Veterinary Science, Preventive Veterinary Science and Veterinary Clinical Sciences. Within these departmental programs, training includes appropriate coursework and research in areas such as Comparative Anatomy and Physiology, Pharmacology, Biochemistry/Molecular Biology, Comparative Toxicology, Immunology, Pathology, Parasitology, Epidemiology, Infectious Diseases, Veterinary Internal Medicine,

Surgery, Theriogenology, Veterinary Medical Imaging and Laboratory Medicine.

The educational direction of the College embraces teaching knowledge and techniques to produce highly-trained veterinarians, for service in advanced basic medical sciences, clinics, and public health

areas.

**■** Degree Requirements

The length of coursework for graduate programs shall be 2 years or more for the master's degree program, 3 years or more for the Ph.D. Program, and 4 years or more for the joint master's and Ph.D.

degree program.

Master's degree candidates are required to earn 24 graduate and Ph.D. candidates are required to earn 60 graduate credits including credits already earned for the master's degree. Students may not take more than 12 credits a semester. A grade of C or better is acceptable in the master's degree program, and

a grade of B or better in the Doctoral Program.

**■** What Do You Study?

Adult Stem Cells
Advanced Medical Informatics

Advanced Molecular Biology Advanced Morphological Techniques

Culture of Animal Cells Advanced Public Health

Current Diagnostic Techniques of Avian Diseases Advanced Veterinary Anatomy Advanced Veterinary Bacteriology Diagnostic Ultrasonography in Large Animals Advanced Veterinary Biochemistry Diagnostic Ultrasonography in Small Animals Advanced Veterinary Clinical Pathology Domestic Animal Virus Infectious Disease

Advanced Veterinary Embriology Embryo Stem Cells Advanced Veterinary Histology Embryo Transfer

Advanced Veterinary Pharmacology Environmental Microbiology Advanced Veterinary Reproduction and Obstetrics Environmental Toxicology

in Large Animals Equine Medicine

Advanced Veterinary Surgery Experimental Animal Disease

Advanced Veterinary Toxicology Experimental Animal Theriogenology

Feline Disease

Advanced Veterinary Virology Farm Animal Theriogenology Advanced Wild Animal Disease Farm Animal Vaccinology

Animal Breeding and Infertility Antibody Engineering Fish Morphology Applied Veterinary Anatomy Fish Pathology Avian Anatomy Fish Vaccinology Avian Immunology Food Hygiene

Avian Pathology Food-borne Parasitic Diseases

Herd Health Avian Theriogenology

Bacterial Disease of Poultry Herd Reproductive Management

Bacterial Diseases of Domestic Animals Humoral Immunology Biochemical Analysis of Cells Large Animal Anatomy Biochemical Methods Large Animal Dermatology Biotechnology and Veterinary Medicine Large Animal Surgery

Bovine Disease Male Theriogenology

Canine and Feline Clinical Reproduction and Management of Laboratory Animals Obstetrics Metabolism of Energy in Body Canine Disease Methodology in Animal Experiments Cell Aging Methods in Molecular Biology

Cell Imaging Methods in Toxicology Cell Membrane Biology Microbial Engineering Cell Physiology Molecular Endocrinology Cell Signaling Molecular Virology

Cell Therapy Morphology of Laboratory Animals Cells Mucosal Immune Vaccinology

Cellular Immunology Neurotoxicology

Cellular Neurophysiology Pathology of Laboratory Animals Clinical Immune Diseases Pathology of Zoo and Wildlife

Pathophysiology Companion Animal Virus Infectious Disease Comparative Veterinary Histology Poultry Vaccinology Research for Master's or Doctoral Degree

Safety Evaluation of Chemicals

Sheep and Goat Disease Small Animal Anatomy Small Animal Dermatology

Small Animal Orthopedics Small Animal Surgery

Swine Disease Swine Pathology

Target Organ Toxicology

Techniques in Experimental Parasitology

Therapeutic Biology
Toxicologic Mechanism

Trends of Recent Vaccine Development

Veterinary Alimentary Pathology

Veterinary Anesthesia Veterinary Arthropodology Veterinary Chemotherapy

Veterinary Clinical Diagnostics Veterinary Clinical Pharmacology

Veterinary Dentistry

Veterinary Dermatopathology Veterinary Diagnostic Pathology

Veterinary Endocrinology and Reproduction

Veterinary Endodontics Veterinary Epistemology Veterinary Helminths

Veterinary Immunopathology Veterinary Molecular Pathology

Veterinary Neuroanatomy
Veterinary Neuropathology
Veterinary Neurosurgery
Veterinary Oncopathology
Veterinary Operative Surgery
Veterinary Ophthalmology

Veterinary Periodontics Veterinary Pharmacology of Autonomic Nervous System

Veterinary Pharmacology of Central Nervous System

Veterinary Protozoology

Veterinary Respiratory Pathology

Veterinary Surgery of Abdominal Organs Veterinary Surgery of Cardiovascular System

Veterinary Surgery of Obstetrics

Veterinary Surgery of Urogenital Organs

Veterinary Topographic Anatomy Veterinary Toxicopathology Veterinary Vaccinology Viral Disease of Poultry Viral Immunology

Wild Animal Theriogenology Zoonosis and Exotic Disease

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### Laboratories

#### Avian Diseases Lab

The multi-disciplinary study on avian diseases regards not only poultry but also pets and wildlife birds. Our mission is the education of undergraduate, graduate, professional, and post-doctoral students in effective disease control, precise prevention strategies, and rapid and accurate diagnostic methods to meet current and future societal needs for avian medicine and public health.

#### \*Main Research Interests:

The major research interest focuses on the cellular virology of viral enteritic and viral hepatitis, and its correlation with bile acids in both humans and animals.

#### "Main Research Interests:

The major research interest focuses on the cellular virology of viral enteritic and viral hepatitis, and its correlation with bile acids in both humans and animals.

#### Veterinary Anatomy Lab I

The Veterinary Anatomy Lab focuses on and researches the structure of animals. Basic data is collected through the approaches to macroo and micro-morphological study to understand the normal animal body.

# \*Main Research Interests:

- 1) Biological dosimetry of radiation
- 2) Radioprotection

3) Radioecology

# Veterinary Anatomy Lab II

#### Main Research Interests:

- 1) Neuroimmunology
- 2) Infrared sensory systems
- 3) Testicular ischemia
- 4) Learning and memory

# **Veterinary Biochemistry Lab**

Veterinary biochemistry is a field of life sciences that studies various life phenomena in animals by physical and chemical methods. It forms the foundation of all other veterinary medicine.

In particular, veterinary biochemistry examines molecular structures, functions, and metabolisms of macromolecules in animals, and helps to clarify other veterinary sciences on a molecular level. Furthermore, this subject provides the theoretical basis to be applied to veterinary preventive medicine and other clinical fields.

#### \*Main Research Interests:

- 1) Development of early diagnostic methods for liver diseases using cytochrome P450 family as a biological marker.
- Establishment of a database for cytorome P450 proteomes in disease-induced animal models.
- 3) Development of cytochrome P450 protein micro-arrays using cytomimetic phosphopid monolayers.
- 4) Study of the interaction between cytochrome P450 family and molecular chaperones.
- 5) Development of efficient production methods of recombinant proteins using the regulation of protein translocation mechinaries in Escherichia coli.

### **Veterinary Infectious Disease Lab**

The Lab researches the characterization and analysis of causative agents of infectious animal diseases and effective methods of preventing and controlling infectious animal diseases caused by viruses or bacteria.

#### Main Research Interests:

- 1) Application of molecular and immunological methods to epidemiological studies and analysis of causative agents of infectious diseases of animals.
- Development of rapid and accurate diagnostic methods by application of molecular and serological methods.
- 3) Application of modern vaccine technology to prevent infectious diseases that cause economic problems.
- 4) Research on molecular immunology to enhance the immune response of vaccines by activation of host immune systems.

# Veterinary Medicine Lab I

This Lab is divided into five units containing clinical recording, relationships between veterinarian and owner, drawing up prescriptions, methods of drug administration, and routes of administration for therapeutic agents. The courses also consider physical examination and diagnostic and therapeutic techniques for small and large animal diseases.

#### Main Research Interests:

- 1) Milk quality of dairy goats
- 2) Udder characteristics of Saanen dairy goats
- 3) Disease in the dairy goats
- 4) Alcohol positive milk in dairy goats
- 5) Disease of mammary gland in dogs

# Veterinary Medicine Lab II

This Lab teaches skilled clinical techniques. It considers the handling and restraint of animals, classic clinical diagnosis for major organs, methods of sampling for diagnosis, and field practice of herd health. The final goal is for students to be capable to diagnose animal diseases.

#### \*Main Research Interests:

- 1) Production and Metabolic disease in dairy cattle and Hanwoo
  - 2) Mastitis in dairy cows
- 3) Prevention of neonatal disease and acquire of immunity in neonatal
  - 4) Heard health management
- 5) Complementary and alternative veterinary medicine

# **Veterinary Microbiology Lab**

This Lab's current research work is focused on the respiratory and enteric diseases in swine and poultry and on the immunological responses to biologically activity materials. The Lab uses luminometers and flow cytometers to assay phagocyte activity and conducts lymphocyte analysis.

#### \*Main Research Interests:

- 1) Development of vaccines using specific gene deletion
  - 2) Studies on Mycoplasmal disease
- 3) Immunological assessment on the biological activity materials for industrial animals

#### Veterinary Theriogenology Lab I

Reproductive performance is one of the most important factors in determining the profitability and longevity of animals. Some animals have a longer postpartum interval and may still be acyclic during the period when they should be inseminated. Average individual and herd fertility is far from the reproductive and economic optimum. Therefore the Lab is concerned with improving reproductive efficiency and control of diseases in animals.

# \*Main Research Interests:

- 1) Understanding and confirming reproductive status using vaginal cytology, reproductive hormones (Progesterone, Estrogens) analysis and ultrasonography (optimal breeding and mating time, initial detection of gestational features, prediction table of parturition day, postpartum period).
  - 2) Differential diagnosis and treatment of

reproductive dysfunctions using reproductive hormones (Progesterone, Estrogens) analysis and ultrasonography (pregnancy diagnosis, abortion, ovarian and uterine disorders, examination of reproductive organs).

# Veterinary Theriogenology Lab II

#### \*Main Research Interests:

- 1) Differential diagnosis and treatment of reproductive dysfunctions using ultrasonography and reproductive hormones (Progesterone, Estrogens) analysis in farm animals.
- Understanding and confirm of reproductive status using vaginal cytology, reproductive hormones analysis and ultrasonography in small animals.

### **Veterinary Parasitology Lab**

The Veterinary Parasitology Lab is committed to the clinical diagnosis and consulting of parasitic diseases of pets and livestock animals of Korea, as well as teaching veterinary students parasitology. Particular research interests lie in study of the dirofilariasis of dogs and cats, zoonotic parasites, and wild animal diseases.

#### Main Research Interests:

- 1) Canine and feline dirofilariasis
- 2) Parasitic diseases of wild animals
- 3) Zoonotic parasites of pet and wild animals
- 4) Electromagnetic biology in infection and immunity

#### Veterinary Pathology Lab I

The Department of Veterinary Pathology is primarily responsible for running undergraduate courses (5) in the College of Veterinary Medicine, and the graduate courses (12) in the Graduate School. This Lab has been actively providing qualified diagnostic services on animal diseases as requested mainly from the Chonnam National Veterinary Education Teaching Hospital, small

animal clinics, field veterinarians, practitioners, farmers, city zoos, and animal shelters.

#### Main Research Interests:

- 1) Diagnostic services of animal diseases
- 2) Development of diagnostic methods and pathogenesis of viral diseases in ruminants
- 3) Development of vaccine and pathogenesis of zoonotic viral diseases in animals
- 4) Clinicopathological approaches to zoonotic and contagious infections in small animals

# Veterinary Pathology Lab II

The Department of Veterinary Pathology is primarily responsible for running the undergraduate courses in the College of Veterinary Medicine and graduate courses in the Graduate School. Recent research interests are focused on the development of diagnostic tools using DNA chips, and protein chips and multiplex PCR for important socioeconomical diseases such as enteric diseases of swine fever virus infection, bovine tuberculosis, and PMWS.

#### \*Main Research Interests:

- 1) Development of DNA chips and protein chips system for the diagnosis of animal diseases
- Development and application of PCR based methods (RT-PCR, real-time PCR) for the diagnosis of zoonotic diseases

# **Veterinary Pharmacology Lab**

Veterinary Pharmacology is the study of the properties of chemicals used as drugs for therapeutic and diagnostic purposes in veterinary medicine.

Students study the scientific basis of chemicals and practice drug therapy in this Lab. They also learn experimental techniques to measure smooth muscle contractilities and systemic blood pressure.

#### Main Research Interests:

- 1) Mechanism of the smooth muscle contraction
- 2) Cardiovascular effects of drugs

3) Toxic effects of drugs

# Veterinary Physiology I

Physiology is a branch of biology that deals with function and coordinated activities of cells, tissues, and organs. The study of physiology offers students not only the satisfaction of knowing something about the workings of the body, but it also provides students with a deep, perhaps even profound, understanding of it. The study of physiology broadens students' scientific interests and widens the scope of their outlook.

#### Main Research Interests:

- Regulatory functional mechanisms of embryonic stem cells
  - 2) Hormonal regulation of cell function
- 3) Measurement of physiological parameters of bio-organs

# Veterinary Physiology II

This Lab researches physiological functions of animals as it relates to mechanisms from molecular to body levels. We aim to establish basic conceptions of normal physiology to understand the study of the abnormal function of the body. Thus, veterinary physiology is introduced first in the veterinary curriculum.

#### \*Main Research Interests:

- 1) Molecular mechanism of metabolic syndrome
- 2) Pathogenesis of nephropathy under abnormal conditions
- 3) Study of the regulation of growth factors in vivo and in vitro

# **Veterinary Public Health Lab**

The principal task of veterinary public health is the protection of human health by the applications of veterinary medicine. This Lab was established to introduce the fields of research, knowledge, training, and education of veterinary public health. Veterinary public health comprises many aspects of veterinary science and the Lab covers the role of veterinarians and other related professionals in the protection of human health through the safe production of foods of animal origin, control of zoonotic diseases, and environmental contamination.

#### Main Research Interests:

- 1) Diagnosis, surveillance, and elimination of zoonoses
- 2) Quality and safety assurance in food production (meat, milk, and eggs)
- 3) Genetic characterization of Jindo for preservation of the species' purity
  - 4) Development of recombinant protein vaccine

#### Veterinary Surgery Lab I

The Department of Veterinary Surgery researches and teaches surgical diseases and anesthesia in animals. General surgery includes the general principles of anesthesia, treatment of shock, presurgical management, aftercare of patients, wound healing, and various surgical diseases which occur in animals.

The Lab has special experience in a full range of surgery related to the gastrointestinal system, respiratory system, cardiovascular system, urogenital system, nervous system, and muscular-skeletal system, as well as general surgical techniques. In clinical rotations, students will experience physical examination and diagnosis, surgical treatment, and management during surgery in real clinical situations.

#### Main Research Interests:

- 1) Wound healing and nerve regeneration
- 2) Osteoporosis and osteoporosis related fractures
- 3) Orthopedic and soft tissue surgery
- 4) Polycystic Ovary (PCO)

# **Veterinary Surgery Lab II**

#### \*Main Research Interests:

- 1) Oral mucosa wound healing
- 2) Inhibition of plaque formation and gingivitis
- 3) Arthritis diagnosis and therapeutic measures

# **Veterinary Toxicology Lab**

Toxicology is the study of the adverse effects that result from the interactions between chemicals and biological systems. We educate and research toxicological characteristic chemicals and biological toxins encountered by domestic animals and pets.

Emphasis is placed on 1) toxic effects on target organs, toxic mechanism, and detoxification of toxins, 2) developing a diagnosis of intoxication, and 3) identification of appropriate treatment strategies for each toxicosis.

#### \*Main Research Interests:

- 1) Study on reproductive and developmental toxicity evaluation and toxic mechanisms
- 2) Safety evaluation and risk assessment of chemicals
- 3) Study on oxidative damage and toxic mechanisms
- 4) Development of consultation of new functional drugs and foods

## Pharmacy

\_Contact Information

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## **■** Graduate Studies in Pharmacy

The mission of the Department of Pharmacy is to create highly qualified pharmaceutical scientists and healthcare professionals. Graduate program of the College focuses on introducing up-to-date scientific knowledge and cutting-edge technologies in various areas to graduate students to better equip them for collaborative and/or independent research. Areas of academic specialization of the faculties in the College include Natural products chemistry, Pharmaceutics, Pharmaceutical chemistry, Pharmacology, Pathophysiology, Molecular biology, Immunology, Structural biochemistry, Bionano-pharmaceuticals, Pharmacotherapy, Applied pharmacology, Preventive Pharmacy, Pharmacognosy, Medicinal Chemistry, Pharmaceutical Analysis, and Physical Pharmacy.

## Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate, including seminar 1. Ph.D. candidates are required to earn additional 36 credits, including seminar 2. Half of the required credits must come from Department courses. Students must also pass the foreign language exam and final exam (based on 2 subjects for master's degree candidates and 3 subjects for Ph.D. candidates).

Graduate students are also encouraged to publish their research at the SCI level. All students are assigned an academic advisor based on research interests.

## **■** What Do You Study?

Structure Elucidation of Natural Products

Research Techniques in Natural Products Chemistry

Advanced Medicinal Natural Products Chemistry 1

Advanced Medicinal Natural Products Chemistry 2

Natural Product Drug Development

Advanced Biopharmaceutics

Advanced Pharmacokinetics

Advanced Pharmaceutics

Advanced Pharmacodynamics

Advanced Pharmacogenomics

Advanced Pharmaceutical Chemistry I

Advanced Pharmaceutical Chemistry II Advanced Pharmaceutical Chemistry III

Computer Modeling for New Drug Development 1

Computer Modeling for New Drug Development 2

computer Woodening for Yew Brug Bevelopment 2

Molecular Methodologies in Pharmacological

Studies

Cellular Metabolic Disorders

Receptor Signaling

Signal Transduction and Regulation

Experimental Models and Design in Research

Advanced Pathophysiology I

Advanced Pathophysiology II Molecular Pathophysiology

Biochemistry of Signal Transductions

Advanced Molecular Biology I Advanced Molecular Biology II Molecular Endocrinology

Experimental Molecular Biology

Molecular Oncology

Immunological Methodology 1 Immunological Methodology 2 Advanced Immunology 1 Advanced Immunology 2 Medicine and Health Sciences

Pharmacotherapy for Infectious Deseases

Pharmacotherapy for Cancers Advanced Pharmacotherapy

Pharmacotherapy for Muscoskeletal Disorders

Structural Biochemistry

Advanced Topics in Protein Structure

Protein Biochemistry Scientific Writing

Protein Structure Determination and Analysis Advanced Drug Delivery System for

Bionanopharmaceuticals

Advanced Biomaterials-Based Pharmaceutical/

Therapeutical Sciences

Advanced Analytical Biotechnology/ Nanotechnology/Information Technology Advanced Site-specific Drug Targeting Advanced Topics in Biopharmaceuticals/

Biomedicines

Pharmacology of metabolic diseases 1 Pharmacology of metabolic diseases 2

Translational Research 1 Research methods

Pharmacology of reactive oxygen species

Preventive Toxicology Advanced Toxicology Molecular Toxicology Research Ethics

Advanced Pharmacognosy 1 Advanced Pharmacognosy 2 Advanced Pharmacognosy 3

Isolation and Elucidationof Natural Product

Secondary Metabolites

Biosynthesis of Natural Products
Advanced Medicinal Chemistry I
Advanced Medicinal Chemistry II
Advanced Medicinal Chemistry III
Total Synthesis of Natural Products 1
Total Synthesis of Natural Products 2
Introduction to Cancer Nanomedicine
Introduction to Cancer Immunotherapy
Advanced Vaccine Therapeutics 1
Advanced Vaccine Therapeutics 2

Pharmacology of Cardiovascular Disease Cardiovascular Disease and Research Introduction of Epigenetic Therapy Advanced Epigenetic Therapeutics

Current Trends in Analytical Biochemistry 1 Current Trends in Analytical Biochemistry 2

Advanced Instrumental Analysis

Advanced Spectroscopy

Analysis of Microbial Secondary Metabolites

Advanced Pharmacetutical Statistics
Advanced Physical Pharmacy
Advanced Biophysical Pharmacy
Nanomedicine for drug delivery
Advanced drug delivery system 1
Advanced drug delivery system 2
Seminar on Pharmaceutical Science 1
Seminar on Pharmaceutical Science 2

#### Professors

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- Young Ran Kim, Ph.D.
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#### Laboratories

- Pharmaceutics Lab
- Organic Pharmaceutical Chemistry Lab
- Pharmacology Lab
- Pathophysiology Lab
- Molecular Biology Lab
- Immunology Lab
- Pharmacotherapy Lab
- Structural Biochemistry Lab
- Bionano-Pharmaceuticals Lab

- Applied Pharmacology Lab
- Basic Pharmaceutical Chemistry Lab
- Preventive Pharmacy Lab
- Pharmacognosy Lab
- Medicinal Chemistry Lab
- Analytical Chemical Biology Lab
- Physical Pharmacy Lab
- Basic Pharmaceutical Biology Lab

## Department of Korean music

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URL: https://koreanmusic.jnu.ac.kr

### ■ Graduate Studies in Korean Music

The Department's 30 faculty members offer lectures in more than 30 Master's · Doctorate · Master's and Doctorate courses on special education in the theories and practice of Korean music.

## ■ Degree Requirements

#### ■ Master's Degree

Students can take 9 course units per semester for a total of 27 units. It is necessary to conduct a musical performance after finishing three terms for major practice.

Upon earning 1 semester and with the recommendation of the supervisor, a student may take the foreign language exam (in English, French, German, Chinese, or Japanese, or Korean for international students).

Upon earning 18 credits, and with the recommendation of the supervisor, students may take the general exam (based on 2 subjects).

#### ■ Ph.D. Degree

Students can take 9 course units per semester for a total of 36 units.

Upon earning 1 semester and with the recommendation of the supervisor, a student may take the foreign language exam (in English, French, German, Chinese, or Japanese, or Korean for international students).

Upon earning 27 credits, and with the recommendation of the supervisor, students may take the general exam (based on 3 subjects).

#### ■ Master's and Doctorate Degree

Students can take 9 course units per semester for a total of 54 units.

Upon earning 1 semester, and with the recommendation of the supervisor, a student may take the foreign language exam (in English, French, German, Chinese, or Japanese, or Korean for international students).

Upon earning 51 credits, and with the recommendation of the supervisor, students may take the general exam (based on 3 subjects).

## ■ What Do You Study?

Koryeo Dynasty Music
Old Literature and Musical Scores

Major of Traditional Korean Music Major (1-7) Folk Music

Analysis of Thesis

Research for Master's or Doctoral Degree

Korean Shamanistic Rhythm Analytical Study on Thesis

Asian Music

Korean Folk Music Orchestra

Ethnomusicology

Studies and Analysis of Sanjo

Poetry and Music

Modern History of Korea

Music History of Choseon Dynasty

Korean Musical Iconography

Korean Folk Music History of Korean Arts Musical Instrument and Acoustics

Musical Literature Philosophy of Art Esthetics of Music

Theory and Method in Music Anthropology

Musicology

Aesthetics of Korean Music Music of Choseon Dynasty History of Contemporary Music

Pansori and Literature

Studies and Analysis of Pansori

Ancient and Medieval History of Music

Korean Musical Palaeography Analysis of Korean Music

Korean Musicology

#### Professors

• In-Sam Jeon
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Sang-yeon Kim
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• Hee-Bong An

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Hye-jin Yoon
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Jae-young Kwak
 [Assistant Professor, Cayageum, kjy3050@jnu.ac.kr]

• Seung-heon Lee
[Assistant Professor, Piri, leehong97hgd3050@jnu.ac.kr]

#### Laboratories

Over 35 training rooms, individual exercise rooms, Orchestra Lab, Chamber Orchestra Lab, Korean Classical Opera, Phonograph Record Room, 450- seat, Professional Performance Hall, 1600-seat Auditorium.

# Department Of Design

\_Contact Information

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Fax: +82-62-530-3079

URL: http://design.jnu.ac.kr

## **■** Graduate Study on Music

Advancement of creative problem-solving ability in visual design

By convergence of knowledge from various academic fields (cognitive psychology, semiotics, HCI, communication, etc.) that can be linked by upgrading the visual design education system of the Faculty, students will develop creative problem-solving abilities of rich emotions and logical thinking.

Practical Convergence Studies

Aiming for design specialized education centered on industrial site demand, it is to nurture professional, practical talents based on differentiated industry-university-linked education centered on maker studio projects.

Multidisciplinary design convergence education

Through a curriculum that balances theory and practice, creative planning and problem-solving ability, imagination and logical thinking, we will nurture a challenging spirit of experimentation and creativity, thereby securing leadership through a multidisciplinary program centered on design.

## **■** Degree Requirements

#### Master's Degree

Students can take 6 credits (9 credits for students with excellent grades) per semester for a total of 24 units. Students who have the qualifications to apply for a foreign language at the graduate school(completed at least 1 semester) can take the foreign language test.

Upon earning 18 credits, and with the recommendation of the supervisor, students may take the general exam (based on 2 subjects).

If you pass the foreign language test and the comprehensive test and complete all 24 credits, you can proceed with the master's thesis examination.

Upon completion of the thesis examination, a degree can be obtained.

## ■ What Do You Study?

Master

A/V Motion Graphic Design Seminar

Directing Design
Design Semiotics
Design Management

Design Colloquium

Service Convergence Design

Video Image 1

Media Interaction Design Design Liberal Arts Design Culture

Integrated Marketing Design

Video Image 2

User Experience Design

ICT Design Project

Psychology of Formative Arts

Visual Contemporary Design paradigm Public Design Policy Digital Media Theory

Design Statistics

Design Expression Workshop

### Professors

• Kim, EelKwon [Professor, Media Art eelkwon@gmail.com]

 Yun, JaeSung [Professor, Visual Communication Design, asvi84@naver.com]

• Nam, HoJung

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• Suh, YoungSang

[Professor, Photo and Media, ysang@jnu,ac.kr]

· Choi, Souk

[Professor, Visual Communication Design, choiss@jnu.ac.kr]

• Jung, JungHo

[Associate Professor,

Service Design,

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#### Laboratories

Education and research activities are possible in each grade level practice room, state-of-the-art computer lab, and research lab.

# Department Of Fine Art

#### \_\_Contact Information

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#### **■** Graduate School of Fine Arts Research

Based on the tradition of *Yehyang* in the city Gwangju, referring to its historical role as a center of culture and arts in Korea, and motivated by new challenges in the contemporary art scene, the art elite of today is expected to pursue high levels of knowledge and professionalism. The Graduate School's goal is to foster progressive, creative thinking and practical art talent in response to social changes in the 21st century, through its five majors: Korean Painting, Western Painting, Sculpture, Crafts, and Art Theory.

## ■ What Do You Study?

Craft Theory
Modernization
Art Criticism

Seminar for theoretical studies

Author theory

Korean Painting Seminar Korean Painting Studio 2

Korean Painter 1

Contemporary art theory Korean conversation history

Visual Design Seminar Crafts Practice 1 Crafts Practice 2

a craft seminar

Design Management

Korean Painting Studio 3

Restoration of artwork

Realism Seminar Crafts Practice 3

Art and Culture Policy Theory

Conversation practice 1 Conversation practice 2

Korean Fire Techniques Research1

Research on Korean Fire Techniques 2

Korean Fire Techniques Research 3

Painting Techniques Research1

Study on Conversation Techniques

Conversational Techniques Research

Theories of Korean Art History

contemporary art issues

Art Materials

21C Art Field Study

The Theory of Interpretation of Miso Works

Research Plan Seminar Research Plan Seminar 2

Visual Design Techniques Research1 A Study on Visual Design Techniques 2 Special Issue of Visual Design Seminar

Visual design paradigm

Special Theory of Design Formation

Media specialism

Design marketing theory

Digital Communication Research Research on Craft Techniques 1 Research on Craft Techniques 2 Research on Craft Techniques 3 Craft Marketing Theory Materials and Techniques A Study on Spatial Formation Environmental Art Theory Special Study on Major Theory 1 Special Study on Major Theory 2 Criticism of Korean Contemporary Art A Study on the History of Korean Art A Study on the History of Western Art Artwork Analysis Eastern and Western cultural history the study of Western aesthetics Special Theory of Contemporary Art Design Content Research Theory of Oriental Painting 1 Theory of Oriental Painting 2 Research training 1 Research training 2 Research on Craft Techniques 4 Crafts Practice 4

A Study on Contemporary Art Techniques Utilization of traditional conversation techniques Modern and contemporary Korean chrysanthemum

Seminar for Research in Works

Formative Research 1 Formative Research 2

Theory of Formative Research 3 Modern Formwork Research 1 Modern Formwork Research 2 Modern Formwork Research 3 Modern Sculpture Research 1 Modern Sculpture Research 2 Modern Sculpture Research 3 Research Plan Seminar

A Comparative Study of East and West Sculpture

Design Context A2Z Painting Research Seminar Painting Theory Research1 Painting Theory Research 2

## Professors

- Jin Hur [Professor, Korean Painting, hurjin5@naver.com]
- Kum-Hee Jung
  [Professor, Western Art
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- Chul-Woo Kim [Professor, Fine Crafts(Ceramic Art), dogong63@hanmail.net]
- Ku-Yong Lee [Professor, Korean Painting, seed290@jnu.ac.kr]
- Kee-Moon Seo [Professor, Drawing & Painting, jinzza01@hanmail.net]

- Jei-Min Kim
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- Hyun-ju Kim
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- Jeong-Yong Park
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- Ha-Young Joo
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- Hyoung-O Park
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# Department of Music

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## **■** Graduate Study on Music

The Department of Music cultivates talented individuals in order to produce professional musicians and educators. The department offers students exceptional opportunities to develop their musical skills and expand their artistic horizons.

## **■** Degree Requirements

### **Credit Requirements**

Master: at least 27 credits Doctor: at least 36 credits

### **Comprehensive Examinations**

Qualifying Examinations

Master: at least 2 courses including history, literature of each major

Doctor: at least 3 courses including history, theory, literature of each major

#### **Language Examination**

possible to take after the completion of at least 1 semester

#### **Recital Requirements**

Master's: completion of 1 degree recital

#### Doctorate:

- String, Wood, Brass, Percussion Major: solo recitals (3 times) chamber recital (1 time) concerto (1 time)
- Voice Major: solo recitals (4 times) leading role in opera or grand choir (1 time)
- Composition Major: doctoral composition chamber recital (2 times),
   composition and recital of solo or chamber works (2 times),
   composition and recital of grand composition work (choir, orchestra, opera)
- Piano Major: solo recitals (3 times), chamber recital (1 time), concerto with orchestra or ensemble (1 time)

## ■ What Do You Study?

#### Master

Music History of the Baroque and Classical Period Music History of the Romantic and 20<sup>th</sup> Century Period

Music Analysis

Chamber Music Literature

Vocal Seminar 1, 2

Composition Seminar 1, 2

Conducting Seminar 1, 2

Piano Seminar 1, 2

Orchestral Seminar 1, 2

Study of Computer Music

Beethoven Studies

Research Seminar

Studies in Conducting

Symphonic Literature

Collaborative Piano 1, 2, 3

Instrument Major 1, 2, 3

Voice Major 1, 2, 3

Composition Major 1, 2, 3

Piano Major 1, 2, 3

Orchestral Conducting 1, 2, 3

#### **Doctor**

Music History of the Baroque and Classical Period Music History of the Romantic and 20<sup>th</sup> Century Period

Music Analysis

Chamber Music Literature

Vocal Seminar 1, 2

Composition Seminar 1, 2

Conducting Seminar 1, 2

Piano Seminar 1, 2

Orchestral Seminar 1, 2

Study of Computer Music

Beethoven Studies

Resarch Seminar

Studies in Conducting

Symphonic Literature

Collaborative Piano 1, 2, 3

Instrument Major 4, 5, 6, 7, 8, 9, 10

Voice Major 4, 5, 6, 7, 8, 9, 10

Composition Major 4, 5, 6, 7, 8, 9, 10

Piano Major 4, 5, 6, 7, 8, 9, 10

#### Professors

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- Sukyung Shin, D.M.
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- Kyung-Jin Han, Ph.D. [Professor, Composition, hankj7@jnu.ac.kr]
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- Eun-Shik Park, D.M.A.
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- Yun-Joo Na, D.M.A.
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• Hye-Sung Na, Konzertexamen [Assistant Professor, Voice

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#### Laboratories

- Yehang Hall is a professional concert hall with 300 seats.
- Jieum Hall has 100 seats and is also used for lectures and master classes.
- 50 soundproof practice rooms.
- Music listening room with more than 10,000 CDs

and 3,000 scores.

- Computer music lab with 20 computers with various midi systems.
- Chorus room
- Orchesra rehearsal room.

# Interdisciplinary Program of Arts & Design Technology

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## ■ Graduate Studies in Interdisciplinary Program of Arts & Design Technology

The Interdisciplinary Program of Arts & Design Technology is based on culture and art and combines intelligent technologies (AR/VR, big data, AI, 3D printing, etc.) to focus on various field practices such as new media art, interaction design, art marketing, and digital media management. It educates and researches content planning and production, nurturing design convergence talents to solve industrial and social problems.

Newly established in June 2020, this cooperative course consisting of digital arts and human interaction design majors combines humanities and social sciences technology to preemptively respond to rapidly changing social changes, nurturing intelligent cultural and artistic content convergence talents in regional bases, It aims to discover human care service experts who create shared values to solve social problems.

Through this, by securing creative education and research initiatives of regional base universities and driving high added value in the cultural technology field, which is the main industry in the region, it is possible to revitalize social contribution culture and art content research and create community social value for the region and the country. We are moving forward to nurture "right design convergence talents that benefit human life."

## Degree Requirements

#### The Master's degree program

Applicants for a master's dissertation are required to meet all following prerequisite requirements.

- ① Earn 24 credits: Applicants for a master's degree are required to obtain at least 18 credits in the curriculum provided by this interdisciplinary Program, including at least 12 credits in the curriculum of the major.
- ② Successful passing of qualification examination (general test + foreign language test)
- 3 Meet any one of the following prerequisite:
  - At least 1 publication of academic paper in on-campus or off-campus academic journal.
  - For the Digital Arts major, participation in at least 2 international exhibitions.
  - For the Human Interaction Design major, at least 2 presentations at international academic conferences.
- All requirements above must be completed and the dissertation must be successfully passed by the dissertation committee to graduate.

#### The Doctorate program

Applicants for doctorate dissertation are required to meet all following prerequisite requirements.

- ① Earn 36 credits: Applicants for a doctorate degree are required to obtain at least 27 credits in the curriculum provided by this interdisciplinary Program, including at least 18 credits in the curriculum of the major.
- ② Successful passing of qualification examination (general test + foreign language test)
- 3 Two or more academic papers worthy of being considered for publication at KCI (solo or lead author)
- 4 All requirements above must be completed and the dissertation must be successfully passed by the dissertation committee to graduate.

#### Integrated master's and doctorate program

Applicants for integrated master's and doctorate dissertation proposal are required to meet all following prerequisite requirements.

- ① Earn 54 credits: Applicants for an integrated master's and doctorate degree are required to obtain at least 42 credits in the curriculum provided by this interdisciplinary Program, including at least 30 credits in the curriculum of the major.
- ② Successful passing of qualification examination (general test + foreign language test)
- ③ Three or more academic papers worthy of being considered for publication at KCI (solo or lead author)
- 4 All requirements above must be completed and the dissertation must be successfully passed by the dissertation committee to graduate.

## ■ What Do You Study?

#### ■ Major in Digital Arts

Seminar : Visual Design Theory of Fine Arts Arts & Cultural Marketing Visual Design Studio

Theory of Korean Contemporary Art Theory of Contemporary Western Art

Arts And Aesthetics

Contemporary Art Criticism
East and West Comparative Art
Convergence Contents Design

Design Illustration
Theory of Art Creation
Convergence Formation Studio
Formative Arts Techniques 1
Formative Arts Techniques 2

Art Technology

Media & Formative Arts
Digital Fine Art Technics
Art Production Management
Culture & City Civilization

Introduction to Humanities & Arts Humanities Culture & Arts Seminar

UNESCO Culture Cities

Development of Local Culture & Urban

Cultural Arts & Technology Cultural Arts Entrepreneurship Art Merchandise Planning Culture & Arts Trends

Semiotics

Formative Psychology Media Art Studio Sound Design

Theory of Visual Communication Studies of Design & Formation

Art Psychotherapy Arts & Copyright Art Curation

Cultural Archetype & Contents Digital Contents Planning Theory of Video & Film Evolutionary Psychology Visual Programming

Motion Graphic Special Production Techniques

3D Printer Applications Motion Graphic Design Video Animation VFX Studio

Game Production Studio

Seminar for Convergence of Culture and Arts

Arts Management

Virtual Contents Storytelling
Design Policy Studies
Arts Research Guidance 1
Arts Research Guidance 2
Arts Project Research Training 1
Arts Project Research Training 2
Digital drawing coding practice
Glocal Convergence Studio

#### ■ Major in Human Interaction Design

**Bioinfomatics** 

Research of Digital Communication Service Engineering Special Theory Advanced Topics in Service Engineering

Service Convergence Design

Design Management
Marketing Communication
Design Strategy Simulation
Art & Design Business
Design Research Methodology

Public Brand Design Introduction to HCI Interaction Design Special Topic on Cognitive System Engineering

Cognitive Science and Applications
Development of New Service Production

AI & UX Design

Statistical Research Methodology 1 Statistical Research Methodology 2 Design Quality Management Service Management Innovation

Database Design

Introduction to Industrial and Information Engineering

AR/VR

Image Media Contents

Media Technology & Design

Art & Computational Thinking

Computer Graphics Programming

New Media & Contents Interactive Media

Cultural Technology Theory Healthcare Service Design

Human Physiology Healthcare IoT

Healthcare BigData Analysis Healthcare Business & Legal Mixed Research Methology Health Education and Promotion

Cognitive Psychology Design Startup UI/UX Design Interface Design

Design Trend

Physiological Computing User Experience Analysis

Development of AR / VR Contents

Design Thinking & Creative Problem Solving

Design Science Research
Design Convergence Essence
Arts Product Capstone Design
Design Research Guidance 1
Design Research Guidance 2

Design Project Research Training 1 Design Project Research Training 2 Creative Problem Sloving Design Digital Transformation Leadership Design statistics 1 Design statistics 2 ChatGPT and Design Ethics

#### Professors

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- Min, Jinyoung
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- Shin, Chunseong
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# Department of Medical Science

## \_\_Contact Information

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#### ■ Graduate Studies in Medical Science

Established in 1952, the Faculty of Medicine is the oldest graduate course of medical science in the south-western part of the nation. It's Basic Science courses provide research opportunities for students who want to study on biomedical science. The Clinical Science courses are conducted at the Chonnam University Hospital as well as other affiliated hospitals throughout the province of the nation.

In the spirit of Truth, Creativity, and Service which are the missions of the Chonnam National University, Faculty of Medicine in the Graduate School programs is committed to developing the medical scientist who have the personality and virtue necessary to handle human life, who have the leadership in the field of medical science, and who have the attitude to contribute to the welfare of human beings.

To meet the missions of the Faculty of Medicine in the Chonnam National University Graduate School, students should

- 1. Develop humanity required to a medical scientist
- 2. Develop research spirit to try to understand medical problems
- 3. Develop the attitude to solve any problems both rationally and creatively with his/her own knowledge and skills
- 4. Develop the capability to perform an independent research and education
- 5. Develop a sense of duty on the community and nation's health welfare

## **■** Degree Requirements

Master's degree candidates are required to earn 24 credits (6 credits of common compulsory, 6 credits for compulsory major, 6 credits of elective major and 6 additional credits). Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis.

Doctoral degree candidates are required to earn 36 credits (6 credits of common compulsory, 9 credits for compulsory major, 9 credits for elective major and 12 additional credits). Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis. They also have to publish at least one article (impact factor≥1.0) in a journal listed in science citation index (SCI(E)) as the first author and the advisor as the corresponding author.

## ■ What Do You Study?

- Subjects are divided into joint compulsory, compulsory major, and elective major.

- 1. The joint compulsory subjects are offered by semester for masters and doctoral students.
- The compulsory major courses are selected from the major subjects (I, II, III) to which the student's major belongs.
- 3. Major elective courses are selected from the subjects that do not include the student's major.
- Additional elective courses can be selected from within the department or from other departments.
- Major subjects classification
- Major I Anatomy, Physiology, Biochemistry, Pathology, Pharmacology, Microbiology, Preventive Medicine, Forensic Medicine, Medical Education, Biomedical Sciences, Parasitology and Tropical Medicine
- Major II Internal medicine, Pediatrics, Dermatology, Neurology, Psychiatry, Radiology, Radiation Oncology, Laboratory Medicine, Nuclear Medicine, Physical & Rehabilitation Medicine, Occupational and Environmental Medicine, Family Medicine
- Major III Surgery, Orthopedic Surgery, Neurosurgery, Thoracic and Cardiovascular Surgery, Obstetrics and Gynecology, Plastic and Reconstructive Surgery, Urology, Otolaryngology and Hean & Neck Surgery, Anesthesiology and Pain Medicine, Emergency Medicine, Ophthalmology

Abnormal Labor and Delivery Acute And Chronic Renal Failure

Adolescent Medicine
Adult Cardiac Surgery

Advanced Biochemistry

Advanced Cardiac Life Support Advanced Cellular Biology advanced Human Anatomy

Advanced Traumatic Life Support Allergic rhinitis and sleep apnea

Andrology

Anesthesia for Thoracic Surgery

Anorectal physiology Applied Anatomy Arthroscopic Surgery

Arthroscopic Surgery Basic Microbiology

Basic Pharmacology1
Basic Pharmacology2
Basic Virology

Behavioral Pediatrics Bioinformatics

Bone Pathology Bone Tumors Brain tumor Pathology

Breast Radiology
Breast Surgery
Cardiac Radiology

Cardiopulmonary Cerebral Resuscitation

Cardiovascular Pathology Cardiovascular Pharmacology

Cataract and Geriatric Ophthalmology

Cell age chemistry
Cell Pathology
Cell Signalling
Clincal epidemiology

Clinical Cardiac Electrophysiology

Clinical microbiology

Clinical occupational medicine

Clinical Pharmacology

Clinical psychopharmacology Clinical Research of Depression Clinical Systemic Mycology

Clinical Toxicology Clinical ultrasonography

Cochlear implant and Implantable hearing aid

Collagen Diseases of the Skin

Colorectal Surgery Environmental Epidemiology

Communicadle Disease Control Environmental Health Community Medicine Environmental Medicine

Comparative Embryology & Anatomy Environmental toxicology Critcal Care Medicine Enzymology

Cross-Sectional Anatomy **Epidemiology** 

Current Trend in Radiology Epidemiology of Chronic Disease

Current Trends in Nuclear Medicine Esophageal Surgery

Current Trends of Leukemia Study Experimental Methods in Cell Biology

Current Trends of Medical Science (I) Exposure assessment Current Trends of Medical Science (II) Extracellular Matrix Current Trends of Medical Science 3 Female Urology Current Trends of Medical Science 4 Fetal Cardiology

Cutaneous Oncology Fluid and Electrolyte Balance

Degenerative Lumbar Diseases Forensic Pathology

Dental Anesthesiology Fungal Diseases of the Skin Developmental Biology Gastroenterologic surgery Diagnosis and treatment of arrhythmia Gastrointestinal Bleeding Diagnosis and treatment of osteoarthritis Gastrointestinal Motility Diagnosis and Treatment of Posterior Flexural Pain Gastrointestinal Oncology

General Introducion in Rehabilitation Medicine Diagnosis and treatment of rheumatoid arthritis

Diagnosis and treatment of Spondyloarthritis General of thopedics General Opthalmology

Diagnosis and Treatment of Systemic Lupus

erythematosus Geriatric Anesthesiology Diagnosis of Lung Cancer Geriatric Otolaryngology Diagnostic Molecular Biology Geriatric Psychiatry

Diagnostic Radiology of Digestive System Geriatric Rehabilitation Medicine

Diagnostic Radiology of Musculoskeletal System Head and Neck Cancer Diagnostic Radiology of Respiratioy System Head and Neck Pathology Diagnostic Radiology of Urogenital System Health Administration Differential Diagnosis and Treatment of Hearing Loss Health Economics Digestive disease and Nutrition Health Statistics

Heart anesthesia Digestive Physiology Disaster Medicine Heat Emergencies

Drug Toxicology Hemodialysis and Peritoneal Dialysis

Electrodiagnostic Medicine Hemodynamic monitoring in Intensive care unit

Endocrine Physiology High-risk Obstetrics

Endocrinology and Metabolism Histology of the Endocrine System

Endourology Hospital Managment

Environmental Pathology Immunology of the Skin Environment and Health Immunopharmacology Industrial Health Environmental Carcinogenesis

Infection Immunology Ocular Surface Diseases

Infectious Disease in the Nervous System Ocular Tumors

Interventional Radiology Ophthalmologic Examination

Intravenous anesthesia Orthopaedic Traumatology-Frature and Dislocation

Introduction to Clinical Medicine Research Orthotics and Prosthetics

Joint Replacement Arthroplasty Osteoporosis and Metabolic Bone Diseases

Laparoscopic Surgery Otitis Media
Leukemia Cytogenetics Otoneurotology

Management & Control of Hospital Infection Outpatient Anesthesia

Mechaincal circulatory support

Medical Care

Medical Electrophysiology

Medical Oncology

Pain Medicine

Pain Rehabilitation

Pancreatic Surgery

Pancreatitis

Metabolic and Endocrine Disorders in Children

Microbial Genetics

Pathology of Hepatobilary System

Pathology of Cerebrovascular System

Microbiology of the Skin Pathology of Dementia

Mitochondrial Pathology

Molecular Endocrinology

Molecular Microbiology

Molecular Oncology

Molecular Pathology

Pathology of Endocrine System

Pathology of Genital System

Pathology of Hematopoietic System

Molecular Pathology

Pathology Of Respiratory System

Morphology of Congenital Cardiac Anomalies

Pathology of Urinary System

Mycobacterial pulmonary diseases Pathophysiology of Circulatory System

Neonatal Respiratory Physiology Pathophysiology of Congenital Heart Diseases.

Nephrology Patient Monitoring

Nerovascular Surgery
Pediatric Anesthesiology
Neuroradiology
Pediatric Echocardiography
Neural cell biology
Pediatric Hematology
Neuroanatomy
Pediatric Neurology
Neuroanesthesiology
Pediatric Neurosurgery
Neurodegenerative Pathology
Pediatric Ophthalmology
Neurological Diagnosis
Pediatric Orthopedics

 $\begin{array}{ll} \text{Neurooncology}(\ I\ ) & \text{Pediatric Otolaryngology} \\ \text{Neurooncology}(\ II\ ) & \text{Pediatric Pathology} \end{array}$ 

Neuro-Ophthalmology Pediatric Rehabilitation Medicine

Neuropharmacology Pediatric Urology

Neurotraumatology Pharmacology of Chemotherapy

Obstetric Anesthesiology Physiology and Defense mechanism of external

Obstetrics and Gynecology auditory canal

Occupational epidemiology Physiology of Autonomic Nervous System
Ocular Immunology Physiology of Cental Nervous System
Ocular infection Physiology of Motor Nervous system

Physiology of Somatic Sense Physiology of the Skin

Plastic and reconstructive surgery

Psychopathology Radiation oncology Radioisotope therapy Regional Anesthesiology

Rehabilitation in Spinal Cord Injury

Renal Pathology Renal Pathophysiology Renal Physiology

Reproductive Endocrinology

Research Methodology in Medicine 1 Research Methodology in Medicine 2 Research Methodology in Medicine 3

Research Methodology in Medicine 4
Research Methodology in Psychiatry

Research Methods for Clinical Medicine

Respiratory Allergy

Respirology
Rhinology
Seizure Disorder
Skin Pathology
Sleep Medicine
Spine Injury
Spine Surgery
Stroke Rehabilitation

Structure and Function of the Skin

Sudden Deafness Surface Anatomy Surgical Diseases of the Lung and the Pleura

Surgical Traumatology

Surveillance System on environmental medicine

The Foot and Ankle

The principle and application of nuclear medicine

technology

The Theory and Practice in the Teeatment of

Dermatologic Diseases
Therapeutic Endoscopy
Therapeutic Ophthalmology

Toxicogenomics

Toxicologic Pathology Transfusion Medicine Transplantation Surgery

Treatment Guideline of Dementia

Treatment of Inflammatory Bowel Disease

Treatment of lung cancer Tumor Immunology Tumor Pathology Tumor Virus

Tumors of nose and Paranasal sinuses

Updates of Gastroenterology, Hepatoloby and

Pancreatobiliary disease

Up-to-date understanding of infectious disease

Urinary Tract Infection Urologic Injury Urologic Oncology Urologic Stones Vestibular Physiology

Wilderness

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# BioMedical Sciences Graduate Program (BMSGP)

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#### Graduate Studies in BMSGP

The goals of the graduate program in BMSGP are:

- 1. To train graduate students to be creative biomedical scientists
- 2. To provide focused education in the three fields: Oncology, Aging Biology and Infection & Immunity.

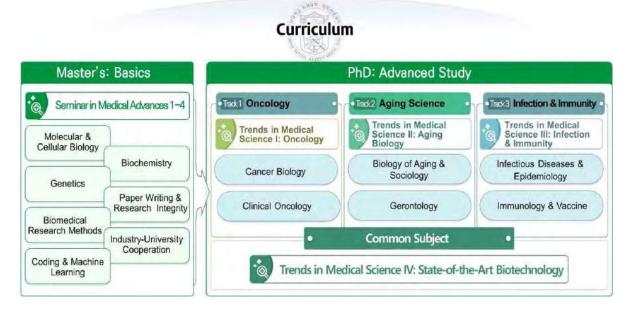
## Degree Requirements

- Master's degree candidates are required to earn 24 credits (4 major subjects), up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis.
- Master's degree candidates should publish at least one paper in a journal enlisted on SCI(E) as student being author (either 1st or co-author) and his/her thesis adviser being corresponding author. Counted as publication are papers that are either published or e-pub between admission to the BMSGP and application to the thesis defense.
- Doctoral degree candidates are required to earn 36 credits (4 major subjects), up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis.
- One of the following should be met. All papers should be published in journals enlisted on SCI(E) as student being 1st author and his/her thesis adviser being corresponding author. The journal IF is determined based on the thesis submission year's JCR. Neither books nor case reports are counted as publication. Counted as publication are papers that are either published or e-pub between admission to the BMSGP and application to the thesis defense.
  - 1) The sum of journal IF in which papers are published should be 7 or more.
  - 2) One paper published in a journal whose impact factor ranks 10% or less in the Subject Category.
- Master's/Doctoral Combined degree candidates are required to earn 54 credits (4 major subjects), up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam prior to submitting a thesis.
- One of the following should be met. All papers should be published in journals enlisted on SCI(E)

as student being 1st author and his/her thesis adviser being corresponding author. The journal IF is determined based on the thesis submission year's JCR. Neither books nor case reports are counted as publication. Counted as publication are papers that are either published or e-pub between admission to the BMSGP and application to the thesis defense.

- 1) The sum of journal IF in which papers are published should be 7 or more.
- 2) One paper published in a journal whose impact factor ranks 10% or less in the Subject Category.

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## Interdisciplinary program of Public Health

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Graduate studies in Interdisciplinary Public Health aim to foster academics and professionals with the core skills and research capabilities in protecting public health. In order to accomplish this, we educate students in a variety of techniques, including epidemiology, current progress in public health, medical care, and other spheres.

#### **■** Degree Requirements

#### Master of Science in Public Health

- The compulsory number of credits is 24 for master's degree
- Students are able to acquire 6 credits each semester.
- The students must pass a comprehensive exam and foreign language exam, as well as submit a thesis for a degree.
- An academic adviser is recommended by a student's request and determined by permission of advising committee.

#### Doctor of Philosophy in Public Health

- The compulsory requirement of credits is 36 for doctor's degree
- Students are able to acquire 6 credits each semester.
- The students must pass a comprehensive exam and foreign language exam, as well as submit a thesis for a degree.
- An academic adviser is recommended by a student's request and determined by permission of advising committee.

#### ■ What Do You Study?

Infectious disease epidemiology and control Health Promotion & Health Education Quantitative Analysis In Medical Science Advanced Epidemiology Advanced statistics International Health
Epidemiology of Chronic Disease
Health Planning
Health ethics
Health Statistics

Epidemiology
Health Economics
Medical Informatics
Health Communication
Survey Method

Community Dental Health
Community Health
Recent seminar in Public Health
Program Evaluation

Environment and Health

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## Korean Language and Literature

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In the Department of Korean Language and Literature, history and structures of Korean spoken and written language are studied scientifically. Also, classical and modern literature are appreciated, criticized, and researched. Spoken language and written language are the most basic methods to express the human mind and a resource to construct the mental system. Therefore, we study the nature of language with the usage of Korean language in life and Korean literature, the essence of language art. The graduate program enables students to understand the history, modes, and rules of Korean language and literature in a deeper sense.

The Department educates students on the theory of speech skills, the theory of literature appreciation, the theory of general writing, and the theory of creative writing, and allows them to put them to practical use to help students improve their language skills, aesthetic sentiments, and writing skills. That is, general studies and education concerning Korean language and literature, development of language skills, and culture of aesthetic appreciation are the aims of this Department.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. The exact courses are determined after consultation between students and academic advisors. Students may earn up to 9 credits per semester, or up to 6 credits per semester for those students with a full-time job. Up to 9 credits may be transferred into the Master's Program, and up to 12 credits into the Ph.D. program.

In order to be eligible for thesis submission, all graduate students must pass a foreign language exam. There are three thesis examiners for smaster's degree candidates and five for Ph.D. candidates. Of the five examiners of a Ph.D. thesis, two come from outside Chonnam National University.

All graduate students are assigned an academic advisor based on research interests.

#### ■ What Do You Study?

**Korean Linguistics Major Courses** 

Studies in Old Korean (3)

Studies in the History of Korean Language (3)

Studies in Korean Lexicology (3)

Studies In Korean Semantics (3)

Studies In Korean Syntax (3)

Studies in the History of Korean Linguistics (3) Reserch Methodolgy of Korean Linguistics (3) Studies In Korean Morphology (3) Studies in the Trends of Literary Thoughts (3) Studies in 'Hunminjongum' (3) Philological Studiesof Korean Linguistics (3) Studies in Modern Korean (3) Studies in Sociolinguistics (3) Studies in Cultural Linguistics (3) Studies in Korean Education (3) Studies in Textlinguistics (3) Research of Local Language (3) Literary Language & Metaphor (3) Local Languages and Culture Research (3) Studies in Discourse Analysis and Pragmatics (3) Studies in the Historical Grammar of Korean (3)

Further research in the History of Korean Language (3) Introduction to Studying Korean Linguistics (3)

Further research in Studying Korean Linguistics (3)

Studies in Contemporary general semantics (3) Studies in Contemporary general Syntax (3)

Studies in Korean Phonology concept (3)

Further research in Korean Phonology (3) Studies in the Loan Character System (3)

#### Korean Classic Literature Major Courses

Studies in 'Ka-sa' (3)

Research Methodology of Classical Korean

Literature (3)

Studies in Old Korean Poetry (3)

Studies in Korean Folklore (3)

Studies in 'Hayng-Ka' (3)

Studies in Poetry of the 'Korea' Dynasty (3)

Studies in 'Si-Jo' (3)

Seminar in SinoKorean Literature (3)

Studies in Classical Korean Novels (3)

Studies in Classical Korean Essays (3)

Studies in Classical Korean Literary Works (3)

Studies in Classical Korean Authors (3)

Topics in Classical Korean Novels (3)

Studies in the History of Classical Korean Novels (3)

Studies in Oral Poetry (3)

Studies in the Korean Folk Narratives (3)

Studies in Sino-Korean Literary Criticism (3)

Studies in the History of SinoKorean (3)

Study of Korea Hansi (3)

Works of Classical Korean Literature (3)

History of Classical Korean Literature (3)

History of Research in Classical Korean Literature (3)

A Study on PANSORI Literature (3)

Studies in Old Korean Literature (3)

Research of Local Culture's Law Data (3)

Research Methodology of Korean Folklore &

Oral Literature (3)

#### **Modern Korean Literature Major Courses**

Studies in Stylistics (3)

Studies in Middle Korean (3)

Studies In History Of Modern Korean (3)

Studies in Modern Korean Novels (3)

Studies in Modern Korean Poetry (3)

Research Methodology of Modern Literature (3)

Studies in Modern Korean Drama (3)

Studies in Koren Literary Criticism (3)

Studies in the Enlightenment Period Korean Literature (3)

Studies in the Theory of the Poetry (3)

Studies in the Theory of the Novel (3)

Studies in the Theory of Modern Literary Criticism (3)

Studies in Descriptive Methodology of Modern

Korean Literary History (3)

Studies in History of Korean Poetry (3)

Studies in History of Korean Novels (3)

Studies in the History of Modern Korean Literary Criticism (3)

Topics in Modern Korean Poets (3)

Topics in Literary Theory (3)

History of Studies in Modern Korean Literature (3)

Studies in Theory of Modern Korean Drama (3)

Seminar in Contemporary Korean Literature (3)

Studies in Drama (3)

Studies in the History of Korean Modern Theatre (3)

Topics in the Honam Literature (3)

Topics in Modern Korean Author (3)

Fiction Writing Theory (3)

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#### ■ Graduate Studies in English Language and Literature

The Department of English Language and Literature has a thriving postgraduate program. The Department's program aims primarily to train future teachers of all kinds, from those who wish to work in large public universities and small undergraduate colleges to those who will engage themselves in English language teaching in various types of institutions. The program emphasizes the ability to develop analytical and critical thinking, as well as the ability to master innovative and scholarly work in specialized fields.

The program comprises two core areas of study: Linguistics and Literature in English. The area of Linguistics in English includes specializations in English Syntax, English Semantics, and English Phonology. The area of Literature in English includes specializations in English Poetry, English Novels, and English Drama. The Department offers many courses that focus on literary genres and critical theories, as well as studies in the chronological periods of British literature, American literature, and Anglophone world literature.

The program is now in the process of expanding its field of study, so that it may become more inclusive of contemporary interdisciplinary studies such as cultural studies, gender studies, and film studies. Another important change in the program will be to integrate Applied Language Studies in order to offer a diploma in English as an International Language.

#### **■** Degree Requirements

Master's degree candidates must earn 24 credits and pass a foreign language exam and a qualifying exam based on the list of subjects provided by the Department. Students must also submit a thesis of original scholarly and critical work, signed and approved by the committee of three faculty members.

Ph.D. candidates must earn 36 credits and pass two foreign language exams and a qualifying exam based on a list of subjects provided by the Department. Students must also submit a dissertation, an original and substantial work of scholarship, signed and approved by the committee of five faculty members.

#### ■ What Do You Study?

#### Major Courses in Literature

Boundary-crossing Literature and Culture Gender and Nation in Early Modern English Literature Human Right in Glocal Culture Glocal Communication and Solidarity The arts of Eastern and Western nations with Aesthetics

Diaspora Literature

Body and Memory in Literature

Literature and Testimony

Literary Imagination and Cultural

Transformation

Mapping Cultural Memory

Culture Art and Philosophy

American Ecopoetics and Natural Communities

American Fiction: Capital and Technology

Tradition of American Fiction: Individual and

Society

(Trans)nationalism in Multi-ethnic Literatures of

the US

Body and Gender/Sexuality in American Poetry

American Poetic Traditions: Individuality and

Democratism

Ecocriticism, Science, and Technology

Narrative Desire and Narrative Accountability

Cross-cultural world and Philosophy

Shakespeare and Modernity

Irish Studies: Politics of Memory

Historical Wounds in Literature

English Modernist Fiction

Tradition of English Fiction: Capital, Race,

Hierarchy

English Poetic Traditions: Mourning and

Melancholy

English Literature and Studies of Human Bodies

British and American Literacy Criticism

Research Methods in English Literature

Special Topics in British & American Literature

Pro-seminar in English Literature

Special Topics in British and American Culture

English Poetry and Trauma

English Speaking World Literature

Human Rights in Film and Literature

Human Rights and Welfare

Representation, Comparison, and Translation

Protest Literature and Music

Medieval English Literature

Contemporary American Fiction: Acculturation

Language, Memory, Subjectivity in

Contemporary American Poetry

Multi-culturality, Ethnicity, Gender:

Contemporary British Fiction

Technology and Digital Humanities

Transnational English Poetry

British and American Novel in the Posthuman

World

Contemporary Literary Theory

Modern Anglo-American Drama and

Performativity

#### Major Courses in Language

Elementary English Phonology

Discourse Analysis theory and practice

Laboratory Phonology

Psycholinguistics

Special Topics on Psycholinguistics

Language Processing and Cognitive Science

Historical Linguistics

Teaching English as a Foreign Language

English Pedagogic Grammar

Testing in TEFL

Special Topics on Testing in TEFL

English Education Seminar

English Discourse and Grammar

English Acquisition

Special Topics on English Acquisition

English Phonology

Advanced English Phonology

Topic in English Phonology

**English Semantics** 

Topics in English Semantics

English Syntax

Research Method in English Linguistics and

Applied Linguistics

Special Topics on Research Method in English

Linguistics and Applied Linguistics

Special Topics in English Linguistics

**English Pragmatics** 

Corpus Data Analysis

Text Analysis with Python

#### Other Courses

Research Training 1 (3)

Research Training 2 (3)

Research Guidance 1 (3)

Research Guidance 2 (3)

Research Guidance 3 (3)

Research Ethics and Academic Writing (3)

#### Professors

- Tae-Un Min, Ph.D. [Professor, Modern British Fiction, aeun@chonnam.ac.kr]
- Seung-Hee Roh, Ph.D.
   [Professor, Shakespeare and Gender Studies, over@chonnam.ac.kr]
- Mi-Ra Oh, Ph.D.
   [Professor, English Phonology, mroh@chonnam.ac.kr]
- Yoon-Hee Na, Ph.D.
   [Professor, Principles of English Language Teaching, yhna@hanmail.net]
- Seunghyun Baek, Ph.D [Professor, Applied Linguistics, sh3940@jnu.ac.kr]

- Keun Young, Shin, Ph.D [Professor, Syntax-Semantics, kyshin@jnu.ac.kr]
- Yeonmin, Kim, PhD.[Professor, English Poetry, kogmc@jnu.ac.kr]
- Joori Lee, Ph.D.
   [Associate Professor, Contemporary English Literature, joorilee00@gmail.com]
- Seonghoon Kim, Ph.D.
   [Associate Professor, Contemporary American Literature and Culture, priest23@jnu.ac.kr]
- Euihwack Kang, Ph.D.
   [Associate Professor, Culture Studies and Contemporary American Novel, hanew@gmail.com]

## Japanese Language and Literature

\_\_Contact Information

Phone: +82-62-530-3210 Fax: +82-62-530-3219

URL: https://nihon.jnu.ac.kr

#### ■ Graduate Studies in Japanese Language and Literature

Graduates can pursue careers in business, the media, the Ministry of Foreign Affairs, trading, and high school and university education systems.

#### **■** Degree Requirements

Characterized by being systematic and in-depth, graduate programs in Japanese Language and Literature and Japanese Studies aim to produce experts able to contribute to the study of Japanese in Korea.

All students may earn up to 9 credits per semester. The Faculty Committee may decide to add to the requirements of graduate students based on their prior transcripts. Master's degree candidates may earn up to 15 additional credits while Ph.D. candidates may earn up to 9. Up to 9 credits may be transferred into a Master's Program and up to 12 credits into the Ph.D. program.

In order to be eligible to submit a thesis, Ph.D. candidates must have at least two papers published in academic journals, including one in an international journal. A master's degree candidate must earn 3 credits from 2 courses outside his/her area of specialization. All students must pass a foreign language exam. There are three examiners for master's degree theses and five for Ph.D. theses. One or more examiners for Ph.D. theses must come from outside of Chonnam National University.

Ph.D. applicants must pass a foreign language entrance exam in English or another foreign language, including German, French, Chinese, Japanese, or Chinese characters.

Each faculty member is limited to teaching 2 courses per semester, with the exception of co-teaching duties.

Master's degree candidates are required to earn 24 credits in order to graduate. Ph.D. candidates are required to earn an additional 36 credits. The exact courses are determined by the Department Head.

The student's supervisor is normally determined near the end of a student's first semester. A supervisor is assigned based on their research interests. In this regard, students are encouraged to provide the Department with a statement of interest no later than one month before the appointment deadline.

Candidates for degrees first submit their thesis proposals to their respective supervisors. Then, their supervisors arrange for them to present their proposals at department-wide meetings.

#### ■ What Do You Study?

Japanese Language Major Courses

Japanese Grammar

Research Methods in Japanese Linguistics

Japanese Linguistics I Japanese Linguistics II

Theories of Japanese Language Teaching Reading in Classical Japanese Reading

Materials

The History of Japanese Language.

Japanese Phonology Japanese Phonetics Ancient Japanese Modern Japanese Sociolinguistics

Classical Japanese Language

General Linguistics

Seminar in Japanese Linguistics I Seminar in Japanese Linguistics II

Sino-Japanese Phonology

Introduction to Interpretation and Translation

Introduction to Applied Linguistics

Second Language Acquisition Theory and

Practice

Studies on Modern Japanese Verses

Japanese Literature Major Courses

Method of Japanese Literature I Method of Japanese Literature II

Comparative Literature of Korean and Japanese Seminar in Comparative Literature of Korean

and Japanese

Modern Japanese Literature I Modern Japanese Literature II Japanese Popular Culture I Japanese Popular Culture II Classical Japanese Poetry Classical Japanese Prose Classical Japanese Drama

Comparative Studies in Korean and Japanese

Classical Literature

Japanese Literature and Film Japanese Women's Literature Sino-Japanese Literature

Special Topics in Modern Japanese Literature

Modern Japanese Novels

Seminar in Basic Translation

Special Topics on Comparative Study of

Korean and Japanese Literature

Studies on Japanese Literary Theories

Studies on History of Japanese Poetry and

Religion

Studies on Modern Japanese Literary Criticism Studies in Modern Japanese Religious

Literature

Seminar on East Asian Poetry

Seminar on Traditional Japanese Play

Translation Studies in Contemporary Japanese

Poetry

Seminar in Translation for Specific Areas Translation Studies in Modern Japanese Poetry

Seminar on Japanese Translation

**Japanese Culture Major Courses** 

Seminar in Korean and Japanese Comparative

Culture

History of Cultural Exchange between Korea

and Japan

Research Methods in Japanese Culture

Japanese Folklore Literature

Seminar in History of Japanese Thoughts

Japanese History

Special Study of Japanese Society Seminar in Modern Japanese Culture Seminar in Japanese Folk Belief

Seminar in Japanese Community Society Seminar in Korean and Japanese Mass Culture

Intercultural Communication

Special Lecture

Japanese Education and Information Research Methods in Japanese Education 1 Research Methods in Japanese Education 2

Seminar in Japanese Folklore Seminar in Japanese Culture Seminar on Japanese Studies Seminar on East Asian Culture

Seminar on Contemporary Japanese Society Seminar on Japanese Language and Thoughts Seminar on Japanese Culture and Thoughts Seminar on Japanese Society and Culture

Seminar in Korean and Japanese Comparative

Seminar on Religious Culture in Japan Seminar on Korea-Japan Relations

#### Professors

- Jung-Rye Kim, M.A. [Professor, Japanese Literature, kjrey@chonnam.ac.kr]
- Yong-Ui Kim, Ph.D.
   [Professor, Japanese Culture, yukim@chonnam.ac.kr]
- Dae-Sung Kim, Ph.D.
   [Professor, Japanese Linguistics, hanbyeol@chonnam.ac.kr]
- Sung Un Jeong, Ph.D.
   [Associate Professor, Japanese Literature, sujeong@chonnam.ac.kr]

- Seong-Eun Kim, Ph.D.
   [Assistant Professor, Japanese Thought, jnu2012@chonnam.ac.kr]
- Jiyoung-Lim, Ph.D.
   [Professor, Japanese Linguistics, jy-lim@jnu.ac.kr]
- Hyeon Il Moon, M.A.
   [Guest Professor, Japanese Linguistics, moonhagi@chonnam.ac.kr]
- Iida Saroi M.A.
   [Guest Professor, Korean Linguistics, saori77@chonnam.ac.kr]

#### Laboratories

The Seminar Room (room 409 in Liberal Arts Building 2) is reserved for graduate students' seminars. This room can also be used as a study space.

The resource room (room 114 in the Liberal Arts Building 2) houses theses from Korean and overseas universities, periodicals published abroad and at home, and a variety of visual materials and related equipment.

#### Chinese Language and Literature

\_\_\_Contact Information

Phone: +82-62-530-3200 Fax: +82-62-530-3209 URL: http://china.jnu.ac.kr

#### ■ Graduate Studies in Chinese Language and Literature

By training students in analytic skills across general and particular academic areas, the Department produces professionals in Chinese Language and Literature.

#### Degree Requirements

The Department of Chinese Language and Literature provides a program in comparative literature as part of graduate studies. The program aims to equip students with the skills needed to apply their expertise in Chinese in Language and Literature as well as to advance studies in Korean Language and Literature.

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. The exact courses will be selected by their upon consultations between supervisors and students. All students are not allowed to take more than 9 credits per semester.

Students in joint master's and Ph.D. programs are not required to earn additional credits. Up to 9 credits may be transferred into a Master's Program, and up to 12 into a Ph.D. program.

In order to be eligible to submit a thesis, students must pass a foreign language exam. There are three committee members for master's degree theses and five for the Ph.D. dissertation.

#### ■ What Do You Study?

GRADUATE COURSES

Contemporary Chinese Literature (3)

Modern Chinese Novels (3)

Modern Chinese Literary Criticism (3)

Modern Chinese Prose (3) Modern Chinese Poems (3)

Ancient Chinese Phonology (3)

Archaic Chinese Phonology (3)

Chinese Commentariology (3)

Chinese Dialectology (3)

Chinese Ideography (3)

Chinese Linguistics (3)

Chinese Mythology and Primitive Culture (3)

Chinese Phonology (3)

Chinese Semantics (3)

Classical Chinese Grammar (3)

Comparative Studies in Culture of Korean

and Chinese (3)

History of Chinese Linguistics (3)

History of Chinese Literary Thoughts (3)

History of Chinese Speech Sound (3)

Introduction to Chinese Culture (3)

Methodology of Classical Chinese Literature (3)

Modern Chinese Grammar (3)

Practical Exercise in Chinese Language and

Culture 1 (3)

Practical Exercise in Chinese Language and

Culture 2 (3)

Research for Master's or Doctoral Degree (3)

Research on Chinese Cultural Narrative (3)

Seminar in Literary Debates in Modern

Chinese Literature (3)

Seminar in May Fourth Literature (3)

Seminar in Methods of Research in Modern

Chinese (3)

Seminar in Modern Chinese Literature (3)

Seminar in New Era Literature (3)

Special Studies in Classical Chinese Drama (3)

Special Studies in Chinese Culture (3)

Special Studies in Chinese Prose (3)

Special Studies of Classical Chinese Novels (3)

Special Studies of Chinese Classics (3)

Special Studies of Chinese Grammar (3)

Special Studies of Chinese Ideography (3)

Special Studies of Chinese Linguistics (3)

Special Studies of Chinese Literary Criticism (3)

Ancient Literary Criticism Works (3)

Chinese Regional Culture (3)

Ancient Chinese Poems (3)

Arts Performance (3)

Bone Inscription and Bronze Inscription (3)

Chinese Aesthetics (3)

Chinese Cinema History (3)

Chinese Classic Drama (3)

Chinese Classic Drama Criticism (3)

Classical Chinese Novels (3)

Classical Chinese Prose (3)

Chinese Folklore (3)

Chinese Life Culture (3)

Chinese Literary History (3)

Chinese Literature and Film Arts (3)

Chinese Novel Criticism and Theories (3)

Chinese Publication History (3)

Chinese Rhetoric and Lexicology (3)

Chinese TV Drama (3)

Ci-Fu (3)

History of Culture Exchange between Korea

and China (3)

Jiang-chang (recite-chant) Literature (3)

Modern Chinese Drama (3)

Modern Chinese Literature (3)

Modern Chinese Works (3)

Original Types in Chinese Culture (3)

The Cultures of Minority Nationality (3)

Modern Chinese Writers (3)

Chinese Verse Literature (3)

Ci-qu (3)

Rhyme Dictionaries (3)

Rhyme Tables (3)

Tang-Song Prose (3)

#### Professors

· Hoi-Seok Yang, Ph.D. [Professor, Chinese Literature, hoisyang@jnu.ac.kr]

Man-Jong Oh, Ph.D.

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· Tai-Wan Kim, Ph.D.

[Professor, Chinese Linguistics,

lomloy@jnu.ac.kr] • Joo-No Lee, Ph.D.

[Professor, Chinese Literature,

zhongljn@jnu.ac.kr]

• Chun-Seok Jang, Ph.D. [Professor, Chinese Literature, jangchun@jnu.ac.kr]

· Bao-Yu Xu, Ph.D.

[Professor, Chinese Literature,

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• You-Mi Moon, Ph.D.

[Assistant professor, Chinese Linguistics,

xiammi@jnu.ac.kr]

• Hee-Kyung Lee, Ph.D.

[Associate Professor, Chinese Literature,

xiammi@jnu.ac.kr]

#### Laboratories

A seminar room (room #409 in the Liberal Arts Building #2 and room #206 in Liberal Arts Building #1) houses master's and doctoral thesis from overseas or Korean universities, Korean and foreign periodicals, and various visual resources.

## German Language and Literature

\_\_Contact Information
Phone: +82-62-530-3170

Fax: +82-62-530-3179

URL: http://german.jnu.ac.kr

#### ■ Graduate Studies in German Language and Literature

The Department of German Language and Literature provides a graduate program in comparative literature. The program is aimed to equip students with the skills needed to apply their expertise in German Language and Literature while advancing studies in Korean Language and Literature.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. The exact courses are determined upon consultation between students and supervisors. All students may earn up to 9 credits per semester.

Up to 9 credits may be transferred into the Master's Program, and up to 12 into the Ph.D. program. In order to become eligible to submit a thesis, students must first pass a foreign language test. A Ph.D. candidate must pass tests in German and English.

There are three external examiners for the master's degree and five for the doctoral degree. Of the five examiners of a Ph.D. thesis, two come from outside of Chonnam National University.

All students are assigned to academic advisors based on their research interests.

#### **■** What Do You Study?

Comparison of Korean and German Literature (3)

Special Studies in German Literature II (3)

Contemporary German Novels (3)

Special Topics in German Literature II (3)

German Kinder und Jugendliteratur (3)

Special Topics in German Literature II (3)

Special Topics in German Literature II (3)

Special Topics in German Literature II (3)

German Classical Literature (3) Special Topics in German Literature III (3)
German Classicism and Romanticism (3) German Drama (3)

German Literature and Arts (3)

German Eco-Literature (3)

German Eco-Literature (3)

German Feminist Literature (3)

German Literature in the 20th Century (3)

Modern European Drama and Play (3)

German Modern Literature Engagement (3)

German Modern Literature (3)

Modern German Literature (3) German Novels (3)

Modern German Poetry (3) German Poetry (3)

Modern German Theater (3) Korean and German Comparative Literature (3)

Recent German Drama and Theater (3)

Literary Criticism and Essays (3)

Special Studies in German Literature I (3)

German Contemporary Literature (3)

German Writers I (3)

German Writers II (3)

German Writers III (3)

German Writers IV (3)

Themes in German Literature I (3)

Themes in German Literature II (3)

Theory of Comparative Literature (3)

Theory of Trends of German Literature (3)

Theory on German Literaturwissenschaft (3)

Modern German Literature I (3)

Modern German Literature II (3)

German Realism and Naturalism (3)

German Romantic Literature (3)

German Literature in the 20th Century I (3)

Hermeneutics (3)

Literature and Text Linguistics (3)

Modern Critical Theory (3)

#### Professors

- Ja-Kyung Cho, Ph.D.
   [Associate Professor, German Linguistics, jkcho@jnu.ac.kr]
- Myeong-Soon Jeong, Ph.D.
   [Professor, German Literature, msnjeong@jnu.ac.kr]
- Dong-Min Choi, Ph.D.
   [Professor, German Literature, dmchoi@jnu.ac.kr]

- Jeong-Ae Choi, Ph.D.
   [Professor, German Area Study, ja@jnu.ac.kr]
- Yoojung Jeon, Ph.D.
   [Professor, German Literature, jeonyj@jnu.ac.kr]
- Chirin Eisele
   [Invited Professor, German Linguistics, chirin@jnu.ac.kr]

#### Laboratories

The Department has one seminar room (room #307 in the 2nd Humanities Building), which doubles as a study space for graduate students.

The resource room (room #103 in the 2nd Humanities Building) houses theses from overseas and Korean universities, periodicals published abroad or at home, and a variety of visual materials.

## French Language and Literature

\_\_Contact Information

Phone: +82-62-530-3190 Fax: +82-62-530-3199 URL: http://french.jnu.ac.kr

#### ■ Graduate Studies in French Language and Literature

The Department has contributed to cultural exchanges between Korea and France, thus advancing Korean culture. Graduates have also played an important role in improving Korea's relationships with Europe and Africa.

#### **■** Degree Requirements

Characterized by being systematic and in-depth, the Department's graduate programs aim at producing experts in French Language and Literature. These experts can also contribute to advancing studies in Korean Language and Literature.

In order to establish eligibility for degrees, master's degree and Ph.D. candidates have to earn at least 12 and 18 credits, respectively. In principle, full-time students and part-time students can respectively earn up to 9 and 6 credits per semester. Supplementary credit requirements for a student may be made based on the student's previous transcripts. Master's degree and Ph.D. candidates may earn up to 12 and 9 supplementary credits respectively.

In order to be eligible to submit a thesis, graduate students must pass a foreign language exam. Ph.D. candidates must pass both French and English language exams.

There are three examiners for the master's degree and five for the Ph.D. theses. Up to three (master's) and four (Ph.D.) thesis examiners come from within the Department. At least one or more thesis examiners for the Ph.D. must come from outside Chonnam National University.

All students are assigned a supervisor based on research interest. A faculty member can supervise up to three master's students and up to five Ph.D. students from the same class.

#### ■ What Do You Study?

The Late 19th Century Novel (3)

Special Topics in Structural Linguistics (3)

The Problem of Writing (3)

Nouveau Roman (3)

Methods of Discourse Analysis (3)

Conversational Analysis (3)

Sociolinguistics (3)

Existentialist Novel (3)

D 1 1: '.' (2)

Psycholinguistics (3)

Lexicology (3)

Philosophy of Language (3)

Semantics (3)

Feminist Literature (3)

Pragmatics (3)

Sociology of Novel (3)

Medieval Poetry (3)

Medieval Roman (3)

The Aesthetics of 18th Century (3)

Studies in Methodology of French Language

Education (3)

Lexicography (3)

The Critics of Mythology and Hermeneutics of Text

(3) The Early 20th Century Novel (3) Theories of French Versification (3) French Poetics of the Lyric (3) Studies in French Films (3) Nouvel Vague (3) Myth and Literature (3) Literature and Psychoanalysis (3) Literature of War (3) The Mordern Art of French (3) French Area Studies (3) Studies in French Popular Culture (3) European Culture Analysis (3) Research on the space cultural and communication (3) Studies in French Cultural Administration and Policy (3) Studies in french culture marketing (3) Topics in comedy (3) Topics in tragedy (3) Drama and performance (3) Topics in reception of French drama (3) Special Topics in Semantics (3) Topics in French cultural cities (3) Topics in French cultural industries (3) Topics in French complex cultural space (3) Topics in French performing art (3) Special topics in cultural area of French language Renaissance literature (3)

Topics in fiction of romanticism (3) Topics in fiction of realism (3) Topics in fiction of naturalism (3) Topics in poetry in the sixteenth century (3) Topics in poetry of romanticism (3) Topics in poetry of symbolism (3) Topics in poetry of surrealism (3) Topics in French present poetry (3) Topics in classical drama in the middle ages Topics in modern/present drama (3) Topics in moralist literature (3) Topics in fiction authors (3) Special topics in literary criticism (3) Topics in structuralism (3) Topics in modern literary criticism (3) Methods of fiction analysis (3) Methods of poetic analysis (3) Topics in drama analysis (3) Topics in new criticism (3) Theory of modern language (3) Research methods in linguistic study (3) History of French language (3) History of French language study (3) Phonology (3) Special topics in phonology (3) Studies in phrase (3) Methods of syntactical analysis (3)

#### Professors

 Min Choi, M.A.
 [Professor, French Literature, mchoi@jnu.ac.kr]

Topics in literature of enlightenment (3)

Topics in fiction of early-romanticism (3)

 Jae-Han Ryu, Ph.D.
 [Professor, French Literature, jh2059@jnu.ac.kr]

• Chae-Kwang Lim, Ph.D. [Professor, French Literature, cklim@jnu.ac.kr]

Young-Dong Ha, Ph.D.
 [Professor, French Linguistics,

ydha@jnu.ac.kr]

French stylistics (3)

• Tae-Hoon Kim, Ph.D. [Professor, French Culture, remine@jnu.ac.kr]

Special topics in syntax (3)

Theory of modern grammar (3)

Interpretation and translation studies (3)

• Jin-Young Min, Ph.D. [Professor, French Culture, sahara@jnu.ac.kr]

Soue-Won Rhee, Ph.D.
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• Sung-Wook Moon, Ph.D.

[Assistant Professor, French Literature, moon.sungwook@jnu.ac.kr]

• Lionel BREUGNON

[Invited Professor, French Conversation, lionel@jnu.ac.kr]

#### Laboratories

The Seminar Room (Room #205 in the 1st Humanities Building) is reserved for graduate students' seminars. This Seminar Room can be also used as a study space. The Resource Room (Room #102 in the 2nd Humanities Building) holds theses from domestic and overseas universities, domestic and overseas periodicals, and a variety of visual materials and related equipment.

#### Philosophy

#### \_\_Contact Information

Phone: +82-62-530-3220 Fax: +82-62-530-3229 URL: http://philos.jnu.ac.kr/

#### **■** Graduate Studies in Philosophy

The objective of the Department of Philosophy is to explore the origins of the world and the nature of human beings. The graduate program in Philosophy educates students to be qualified faculty members, researchers, or equivalent professionals.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 10 credits each semester. Candidates also have to pass a comprehensive exam and foreign language exam as well as submit a thesis.

Ph.D. candidates are required to earn 36 credits and pass a comprehensive exam and foreign language exam. Students must also submit a dissertation. An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

#### ■ What Do You Study?

Contemporary Korean Thoughts (3)

Seminar on Conflict and Peace (3)

Economy Management and Philosophy (3)

Studies in Philosophy of Confucius and Mencius (3)

Science Technology and Philosophy (3)

Special lecture on The Glocal humanities (3)

Human Right in Glocal Culture (3)

Glocal Communication and Solidarity (3)

Studies in Philosophy of Lao-Tzu and Chung-Tzu (3)

Studies of "Discussion Theories" (3)

Topics in Tsoism Philosophy (3)

Eastern and Western nation's values and Moral

philosophy (3)

Study on Philosophy of Law of East and West (3)

Comparative Studies in East and West Thought (3)

Eastern and Western nations with Philosophy of law (3)

The arts of Eastern and Western nations with Aesthetics (3)

Special Lecture on Eastern and Western Ethical

Theory of History (3)

Natural philosophy of Eastern and Western nations (3)

Special Lecture on Eastern and Western natural

Philosophy (3)

Comparative Studies on Eastern and Western

Philosophical Research Method (3)

Metaphysics of Eastern and Western Philosophy (3)

Study on Metaphysics of East and West (3)

East Asian Buddhism (3)

The Study of East Asia Thought Exchanges History (3)

Curating for Oriental Philosophy Text (3)

Digital Humanities and Regional Texts (3)

Culture Art and Philosophy (3)

Topics in Philosophy of Culture and Arts (3)

Studies in Cultural Philosophy (3)

Seminar in Cultural Philosophy (3)

Studies in Aesthetics (3)

Studies in Legal Philosophy (3)

Philosophical Study of Welfare Society (3)

Paradigm of Welfare and Philosophy (3)

Topic in Analytic Philosophy (3) Curating on European Classical Philosophy (3) Studies in Buddhism Philosophy (3) Curating on European Modern Philosophy (3) Buddhist Ethics (3) Studies in Yogacara Philosophy (3) Indian Buddhist Epistemology (3) Seminar in Applied Ethics (3) Studies in Critical Philosophy (3) Theory and Praxis (3) Curating for Social Problem Solving (3) Human Rights and Welfare (3) Social Welfare and Humanities and welfare (3) The Mode of Writing a History of Indian Philosophy (3) Social exclusion and solidarity (3) Indian Philosophy Seminar (3) Society Politics and Philosophy (3) Seminar on Indian Philosophical Schools (3) Education Seminar in Socical Philosophy (3) Special lecture on Education of philosophy for Seminar in Social Philosophy (3) The welfare of humanity (3) Seminar in Chinese Madhyamaka Thoughts (3) The theory and practice of Humanities and welfare (3) Seminar in Bioethics (3) Humanities and Peace Theory & Practice1 (3) Seminar in Ancient Western Philosophy (3) Humanities and Peace Theory & Practice2 (3) Topics in Ancient Western Philosophy (3) Topics in Epistemology (3) Study of Modern European Philosophy (3) Studies in Cognitive Science (3) Semianr in Modern (3) Seminar in Information Ethics (3) Critical History of Western Civilization (3) Studies in Political Philosophy (3) Studies in Zen Thoughts (3) Seminar in The Hundred Schools of Thought (3) Cross-cultural world and Philosophy (3) Seminar in Korean Confucianism in Yi-Dynasty (3) Study of classics on The world's intercultural philosophy (3) Special Seminar on the Late Joseon Pracitical-Learning (3) Philosophical Education for Estrangement class 1 (3) Topics in Ontology (3) Philosophical Education for Estrangement class 2 (3) Topic in Philosophy of Religion (3) Philosophic academy for Citizen 1 (3) Studies in Madhyamaka Philosophy (3) Philosophic academy for Citizen 2 (3) Study of Ancient Chinese Philosophy (3) Studies in Pragmatism (3) Studies in Chinese Buddhism (3) Studies in Existential Philosophy (3) Studies in Chinese Neo-Confucianism (3) Seminar in Practical Science Thought (3) Local classical literature translation and interpretation I (3) Local classical literature translation and interpretation [] (3) Aristotle I (3) Aristotle 

(3) Studies in Tien-tai and Hua-Yem Thoughts (3) Studies in Philosophy of Wang Yangming (3) Contents Designing in Philosophy (3) Language?Communication and Philosophy (3) Philosophy Curating Study & Research Ethics 1 (3) Education Seminar in Philosophy of Language (3) Philosophy Curating Study & Research Ethics2 (3) Topics in the Philosophy of Language (3) Curating Philosophy 1 (Beginning) (3) Education Seminar in Philosophy of History (3) Curating Philosophy 2 (Intermediate) (3) Research Training 1 (3) Philosophical Education for Teenager 1 (3) Research Training 2 (3) Philosophical Education for Teenager 2 (3) English Literature and Studies of Human Bodies (3) Studies in Kant's Practical Philosophy (3) Education Seminar in Education Philosophy of Art (3) Studies in Kant's Ethics (3) Studies in Philosophy of Art (3) Study on Kant's theoretical philosophy (3) Seminar in Won-hyo's Thoughts (3) Study of the Kantian Philosophy (3) Text Analysis with Python (3) Topics in Confucianism Philosophy (3)

Practice on the Philosophy of Peace (3)

Practice on Violence and Peace (3)

Plato I (3)

Plato II (3)

Interdisciplinary Philosophical Research Method (3)

Studies in Korean Buddhism (3)

Study on Korean Practical-Learning (3)

Seminar in Comparative Seminarin Confucianism,

Taoism and Buddhism (3)

Seminar on Korean Confucianism (3)

Studies in Hermeneutics (3)

Hegel's Philosophy (3)

Topics in Hegel's Philosophy (3)

Seminar in Contemporary German Philosophy (3)

Studies in Modern Legal Philosophy (3)

Study on Changes of Modern Society and Paradigm

of Socail Welfare (3)

Contemporary Issues on Practical Ethics (3)

Seminar in Contemporary Anglo-American

Philosophy (3)

Seminar in Contemporary Europe Philosophy (3)

Studies in Contemporary Ethics (3)

Seminar in Contemporary France Philosophy (3)

Studies in Phenomenology (3)

Study of Metaphysics (3)

Study in Greek Philosophy (3)

Seminar in Greek Philosophy (3)

#### Professors

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- Ku-Yong Park, Ph.D. [Professor, Political Philosophy, parksem@chonnam.ac.kr]
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- Won-seok Lee, Ph.D.
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#### History

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#### **■** Graduate Studies in History

Since its establishment along with Chonnam National University in 1952, the Department of History has grown to be one of the most respected departments within the University and in Korea. The Department is certainly the most prestigious in the field of history in the south-western region of Korea.

The Department has 11 full-time faculty members, 17 part-time instructors, 30 full time graduate students. All faculty members are committed to helping students think critically and independently about the human past, and understand how cultures evolved into what they are today. Divided into three areas of study, Korean History, Asian History, and Western History, the areas of expertise among faculty members range across the major geographical and chronological fields in the discipline from ancient Korean History to contemporary US History. The Department enjoys a reputation for excellence in both undergraduate and graduate teaching. The Department offers bachelor's, master's, and Ph.D. degrees in History.

#### **■ Degree Requirements**

Master's candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All students are required to pass foreign language exams and a qualifying exam. Prior to submitting a thesis, students must deliver more than one presentation at a Department seminar.

Students are also required to publish more than one paper in an academic journal.

All students are assigned a supervisor after their first semester based on research interests.

#### ■ What Do You Study?

Research for the Master's or Doctoral Degree

#### **East Asia Major Courses**

Studies in Reforms and Revolutions in Modern

Chinese History (3)

Seminar in Asian History (3)

Topics in Asian History I (3)

Topics in Asian History II (3)

Studies in the History of Asian Historiography (3)

Studies in the History of Chinese Movement (3)

Studies in Chinese Modernization (3)

Studies in Chinese Cultural History (3)

Topics in Chinese Institutional History (3)

Studies in the Aristocratic Institutions of

Medieval and Ancient China (3)

Studies in the History of Medieval and

Ancient Chinese Thought (3)

Studies in Medieval and Ancient Chinese

Political History (3)

Studies in Contemporary Political Thought and

Intellectual History of China (3)
Studies in Government Organizations of Sung,
Yuan, Ming, and Ching Dynasties (3)
Studies in Socioeconomic History of Medieval
and Ancient China (3)
Studies in Japanese Political History (3)
Studies in Socioeconomic History of Japan (3)
Studies in Chinese Pre-modern History (3)
Studies in Chinese Gentry (3)
Studies in Socioeconomic History of Modern
China (3)

Studies in Japanese Feudal Society (3)
Studies in Intellectual History of Japan (3)
Studies in the History of East Asia
International Relations (3)

#### Western History Major

Studies in German History (3) Studies in Russian History (3) History of the Renaissance (3) Studies in American History (3) Studies in Nationalism (3) Studies in Western Feudalism (3) Seminar in Ancient Western History (3) Seminar in Modern Western History (3) Studies in History of Western Thought (3) History of Western Historiography (3) Seminar in Medieval Western History (3) Seminar in Contemporary Western History (3) Theories of History (3) Studies in British History (3) History of European Labour Movement and Socialism (3) Studies in Imperialism (3) Studies in French History (3) History of Rome (3) Studies in Totalitarianism (3)

History of American Foreign Policy (3) History of Revolution (3) History of Ancient Greece (3) Research for the Master's or Doctoral Degree (3)

Studies in Korean Economic History (3)

#### Korean History Major

Topics in Korean Economic History (3) Studies in Ancient History of Korea (3) Topics in Ancient History of Korea (3) Studies in Korean Paleography (3) Topics in Korean Paleography (3) Studies in Modern Korean History (3) Topics in Modern Korean History (3) Topics in Pre-modern History of Korea (3) Studies in Korean Epigraphy (3) Studies in the History of Korean Thought (3) Topics in the History of Korean Thought (3) Studies in Korean Historiography (3) Studies in Korean Social History (3) Topics in Korean Social History (3) Studies in Korean Political History (3) Topics in Korean Political History (3) Studies in Medieval History of Korea (3) Topics in Medieval History of Korea (3) Topics in the History of Korean Historiography (3) Topics in Korean Epigraphy (3) Studies in the History of Korean Foreign Relations (3) Studies in Pre-modern History of Korea (3) Topics in Contemporary History of Korea Studies in Contemporary History of Korea (3) Topics in Korean Institutional History (3) Seminar in Korean Historical Records 1 (3) Seminar in Korean Historical Records 2 (3) Studies in Modern Korean Nationalism (3) Studies in Local Korean History (3)

#### Professors

 Bong-Joong Kim, Ph.D.
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History of the Reformation (3)

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#### **■** Graduate Program in Honam Studies

Honam Studies

The Department of Honam Studies aims for a regional studies research and integrated education model that will lead the era of decentralization. In addition, it aims to foster professional researchers and field activists across generations across the region and the world, tradition and modernity.

The Department of Honam Studies is establishing a new academic, research, and education system that creates added value of the local economy and industry and revitalizes local employment based on overall and three-dimensional data and DBs about the region.

The Department of Honam Studies opens and provides various local culture majors to foster comprehensive knowledge and practical use of local dialects/languages and cultures, informatization of knowledge, and humanities knowledge.

Through this process, the Department of Honam Studies aims to cultivate regional studies experts with "humanistic knowledge," "cultural and artistic sensitivity," and "creative application" based on an integrated worldview that encompasses the region and the world while fusing tradition and modernity.

The Department of Honam Studies operates various subjects for regional studies research and integrated education that will lead the era of decentralization. As major subjects, Honam Studies Methodology, Honam Village History Research, Local cultural resources Research, Regional Identity Research, Regional Exchange History Research, Life and Play Seminar, Honam Nujeong and Wonlim Research Research, Honam Hyanggyo and Seowon Research, Local narrative research, Translocal cultural studies, Locality and Performance will be studied as major subjects. Such major areas can help a lot in career search as researchers and activists specializing in regional studies.

Currently, graduates and students who have completed their courses in Department of Honam Studies work in local government-related departments, related research institutes, regional studies research institutes, and local cultural centers.

#### **■** Degree Requirements

Master's candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All students are required to pass foreign language exams and a qualifying exam. Prior to submitting a thesis, students must deliver more than one presentation at a Department seminar.

Students are also required to publish one paper in an academic journal.

All students are assigned a supervisor after their first semester based on research interests.

#### ■ What Do You Study?

Honam Studies Research Methodology (3)

Local cultural resources (3)

Local history of everyday lives (3)

Local history of thoughts (3)

Honam Village History Research (3)

Honam Film Culture (3)

Honam Town castle Research (3)

Honam Traditional Craft Research (3)

Studies in festivals of Honam (3)

Local Culture Theory (3)

Regional Community Research (3)

Regional Identity Research (3)

Honam Street Research (3)

Honam Arts and Aesthetics (3)

Honam Market Research (3)

Honam Traditional Liquor Studies (3)

Honam Studies Special Lecture (3)

Mountain Mudeung Area Culture Research (3)

Life and Play Seminar (3)

Regional Cultural Content Research (3)

Regional Food Culture Research (3)

Regional cooperation and publicity (3)

Digital Honam Studies (3)

Local narrative research (3)

Local Creator Practical Workshop (3)

Honam Theater Arts Research (3)

Honam Modern University Studies (3)

Honam Farmers' Movement Research (3)

Honam Buddhist Studies (3)

Honam Silhak Research (3)

Honam Religious Studies (3)

Honam Student Movement Research (3)

Honam Ocean and Island Culture (3)

Youngsan River Area Culture Research (3)

Natural scenery and locality (3)

Imagination of Community and ecological (3)

Local main family culture (3)

Multiculturalism and community (3)

Local Department Welfare Seminar (3)

Local Coordinator Practical Workshop (3)

Village study (3)

Honam Modern People Research (3)

Honam Enterprise History Research (3)

Honam Nujeong and Wonlim Research (3)

Studies in Honam Seonbi culture (3)

Honam Women's Character Study (3)

Honam Language Studies (3)

Honam Studies Seminar (3)

Locality and media (3)

Local culture and global imaginations (3)

Regional and Gender Studies (3)

Regional Urban Research (3)

Regional Cultural Policy Research (3)

Translocal cultural studies (3)

Honam Hyanggyo and Seowon Research (3)

Locality and performance (3)

Special lecture on village research (3)

Regional Exchange History Research (3)

Local culture and public art (3)

Regional decentralization research (3)

#### Professors

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· Bong-Guk Kim, Ph.D.

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#### Laboratories

- Library
- Seminar Room
- Student Lounge
- Institute of Honam Studies

#### Interdisciplinary Program of Asian Culture

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URL: http://asia0907.co.kr/

#### ■ Graduate Studies in the Interdisciplinary Program of Asian Culture

This program aims to promote the development of Asian research in Korea by establishing a comprehensive and systematic Asian research and Asian studies database covering humanities and social sciences such as languages, literature, folklore, history, politics, economics, and society.

#### **■** Degree Requirements

- Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Students are required to earn at least 16 credits in Asian culture major. In addition, Candidates must pass the foreign language test and the comprehensive test to submit their graduation thesis.
- Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Students are required to earn at least 24 credits in Asian culture major. In addition, Candidates must pass the foreign language test and the comprehensive test to submit their graduation thesis.
- Except for early graduates, Candidates must complete at least four semesters.

#### ■ What Do You Study?

Asian Traditional Culture
Asian Folk Culture
Asian Performing Arts
Asian oral culture
Asian modern culture
Asian civilization

Asian Cultural Heritage and Festival

Culture in Asia

Comparison of Culture between Korea and

China

Culture in China region

Chinese mythology and primitive culture

Central Eurasian Culture Cultural Research Method Dramatic literature

Korean Folk Drama

Korean Literature and Festival

Pansori Literature

Performing Arts in China

Research guidance 1
Research training 1
Research training 2
Southeast Asian culture
Southwest Asian Culture

Special Lecture on Chinese Character Culture Special Lecture on Chinese Contemporary

Culture

Special Lecture on Korean Traditional Culture
Special Lecture on Korean Popular Culture
Special Lecture on Korean Folk Culture
Special Lecture on Japanese Living Culture
Special Lecture on Japanese Popular Culture
Special Lecture on Japanese Folk Culture
Special Lecture on Modern Japanese Culture
Special Lecture on Japanese Traditional Culture

Special Lecture on Culture in Japan The original form of Chinese Cultural

#### **■** Professors

- Yong-Ui Kim, Ph.D.
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- Kyunghak Kim, Ph.D.
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- Yujun Choi, Ph.D. [Professor, Local culture, hoggenug@jnu.ac.kr]
- Heekyung Lee, Ph.D.
   [Associate Professor, Chinese Literature and Contemporary Literature, bokdany@jnu.ac.kr]
- Jeong-hoon Han, Ph.D.
   [Assistant Professor, ganghon78@jnu.ac.kr]

# Interdisciplinary Graduate Program of Community Studies in Humanities

#### \_\_Contact Information

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URL: https://communitystudy.jnu.ac.kr/

### ■ What is the Interdisciplinary Graduate Program of Community Studies in Humanities?

The Interdisciplinary Graduate Program of Community Studies in Humanities was established in 2022 at Chonnam National University to strengthen community-based education and research rooted in humanistic values. This program operates in collaboration with Chonnam National University's Humanities Institute, along with the Departments of Philosophy, English Language and Literature, Korean Language and Literature, and Honam Studies.

The curriculum of the Interdisciplinary Graduate Program of Community Studies in Humanities is structured into four segments: Community Theory, Community Methodology, Organizational Theory, Community Practical Studies. Community Theory and interdisciplinary theories integrating fields like literature, history, and philosophy with family studies, women's studies, regional studies, peace studies, and ecology. Community Methodology focuses on concrete methodologies used in research and analysis. Community Organizational Theory studies humanistic principles and mechanisms for democratic and peaceful community structures. Community Practical Studies enhance on-site skills for restoring communal bonds and achieving a better quality of life.

#### **■** Degree Requirements

- Master's course: Master's degree candidates must earn a minimum of 20 credits.
- Doctoral course: Ph.D. candidates must earn a minimum of 30 credits.
- Students are required to pass a qualifying examination and a foreign language examination as well as submit a thesis.

#### ■ What Do You Study?

Studies in Humanities Community (3)
Studies in Korean Family History (3)
Family and Neighbor Relationship Practice (3)
Studies in Traditional Family Narratives (3)
Case Studies in the Local History (3)
Comparative Studies in Community of
Yongnam and Honam (3)
Community Ritual Studies (3)

Community Figure Studies (3)
Feminism and Community (3)
Studies in Gender-Sensitive Communication (3)
The Politics of Minority Families and Civic
Solidarity (3)
Media Gender Culture (3)
Caring Crisis and Community (3)
Introduction to Disability Studies (3)

Human rights ·Refugee· Migration (3)
Studies in Community Records (3)
Methodology in Community Research (3)
Body ·Affection· Community (3)
Community Organization Studies (3)
Theories & practices of Community and Urban Regeneration (3)
Theories and practices of Democratic Civic Education (3)
Peace Movement Theory
(Community Communication I) (3)

Conflict Communication Theory (Community Communication II) (3)
Interspecies Community Studies (3)
Digital Citizenship and Solidarity (3)
Case Studies on Community Practice I (3)
Case Studies on Community Practice II (3)
Historical and Cultural Resource Curation (3)
Community Coordinator Workshop (3)
Global Crisis and Ecological Civilization (3)
Art· Community·Democracy(3)

#### Professors

- Mi-Ra Chung, Ph.D.
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- Dohyang, Ryoo, Ph.D.
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- Euisoong, Han, Ph.D. [Professor, Korean Literature in Classical Chinese, lovehes@hanmail.net]
- Misun, Park, Ph.D.
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# Interdiscilpinary Course for Translating Korean Texts in Classical Chinese

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#### **■ Graduate Studies in History**

The 'Chinese classics translation cooperation course' is an interdisciplinary cooperation course to cultivate professionals who translate ancient East Asian classics recorded in Chinese characters. The educational goal of this course is to cultivate professionals who can study Korean and Honam studies through the wide use of classical materials and develop translation skills for Chinese classics, which form the basis of Korean culture.

#### Degree Requirements

Master's candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All students are required to pass foreign language exams and a qualifying exam. Prior to submitting a thesis, students must deliver more than one presentation at a Department seminar.

The thesis can be replaced with a first translation containing academic text and annotations. In this case, it is permitted through a separate review process organized by the steering committee at the stage of submitting the thesis proposal.

#### ■ What Do You Study?

Studies in Ancient Chinese Poems (3)

Classical Chinese Grammar (3)

Studies in Chinese Character (3)

Studies in Chinese verse literature (3)

Studies in Korean Ancient Documents (3)

Special lecture on Korean ancient documents (3)

Studies in Korean Epigraphy (3)

Studies in Korean Buddhism Thoughts (3)

Studies in the History Korean Historiography (3)

Studies in Local Korean History (3)

Topics in the History of Korean Historiography (3)

Tang-Song Prose (3)

Studies in Chinese Confucian Classics (3)

Studies in Chinese Character Borrowing and

Notation (3)

Chinese Literature Practice (3)

Studies in Classical Korean Essays (3)

Studies in Classical Korean Literary Works (3)

Studies in the history of Korean Chinese

Literature (3)

Studies in Chinese Buddhist Thought (3)

Studies in Korean Han-si (3)

Studies in Korean Academy of Classical Literature (3)

Reading Korean Classical Literature Works (3)

Korean Historical Materials Practice 1 (3)

Korean Historical Materials Practice 2 (3)

Studies in East Asian Buddhism (3)

Studies in Korean Confucianism in Yi-Dynasty (3)

Special Lecture on Taoist Philosophy (3)

Studies in Chinese Neo-Confucian (3)

Special Lecture on Confucian Philosophy (3)

Studies in Korean Neo-Confucian Studies (3)

Studies in Honam Classical Literature (3)

Studies in Chinese Kangchang Literature (3)

Studies in Chinese Classical Prose (3)
Studies in Chinese Classical novels (3)
Studies in Criticism of Classical Chinese Poetry (3)
Studies in Book of Basic Chinese Characters (3)
Studies in Marking Methodology (3)
Han-si Translation Practice (3)
Prose Translation Practice (3)
Studies in Honam Region Literature (3)
Cataloging and Bibliographical Introduction Writing (3)
Special Lecture on Reference Book (3)
Chinese Philosophers Optional Reading (3)
Reading Poetry (3)
Reading Confucian Classics (3)

Research Training 1 (3)
Research Training 2 (3)
Reading Korean Historical Texts (3)
Reading Korean Historical Texts (3)
Translation Stylistics (3)
Chinese Writing Style Practice (3)
History of Translation (3)
Caoshu Practice 1 (3)
Caoshu Practice 2 (3)
Studies in Zhuanshu (3)
Studies in Bibliography (3)

#### Professors

- Yoon-Ho Cho, Ph.D.
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- Dae-Hyun Kim, Ph.D. [Professor, Classic Korean Literature, kdh@jnu.ac.kr]
- Hae-Jin Shin, Ph.D.
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Korean History of Calligraphy (3)

- Chun-Seok Jang, Ph.D.
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#### Laboratories

- Library

#### Interdisciplinary Program in Teaching Korean as a Foreign Language

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#### ■ Graduate Studies in Korean Education

In order to foster Korean teachers and professors and develop Korean pedagogy, eight interdisciplinary cooperative courses (Korean language education, German language literature, French and French literature, English education, Japanese and Chinese literature) were established in 2011. If you complete the degree course according to the prescribed procedure, you can obtain a second-level Korean language teaching certificate, and after graduation, you can teach both Korean and Korean culture as a professor and teacher at domestic and foreign universities and other educational institutions.

#### **■** Degree Requirements

Students must acquire 24 (M.A.) and 36 (Ph.D.) credit hours in major courses and 3 credit hours in thesis research to complete the course. All students must pass graduation qualification examinations (a foreign language exam and a comprehensive exam) before submitting the final copy of the thesis.

#### ■ What Do You Study?

Multicultural Education

Contrastive Analysis in Linguistics Studies in Conversation Analysis

Studies in Teaching Aids in Korean Language

Education

Sociolinguistics of Korean

Theories of Language Teaching

A Study on the Type of Language

Research Training 1

Research Training 2

Second Language Acquisition

Applied Linguistics

Studies in Bilingual Education

Studies in Text Linguistics

Advanced Studies in Korean Orthography

Introduction to Korean Literature

Studies in Korean Literature Education

A Study on the History of Korean Literature

Advanced Studies in Korean Literature

Studies in Korean Literature

A Study on the Works of Korean Literature

Studies in Korean Culture Education

Advanced Studies in Korean Culture

Introduction to Korean Language Teaching

Curriculum Development of Korean Education

Advanced Studies in Theories of Korean

Language Teaching

Teaching Practice of Korean as a Foreign

Language

Methodologies on the Researches of Korean

Education

Seminar In Korean Language Education

Theories of Korean Teaching Materials

Teaching of Korean Grammar

Advanced Studies in Teaching of Korean

Grammar

Theories of Korean Grammar Korean Pronunciation Pedagogy Advanced Studies in Teaching Korean of Pronunciation Korean Orthography Theories of Korean Vocabulary Teaching Advanced Studies in Teaching of Korean Vocabulary Korean Lexicology

Studies in Korean Semantics
Teaching Receptive Skills of Korean
Studies in Korean Language Education Policy
Studies in Korean Syntax Semantics
Korean Language Testing
Teaching Productive Skills of Korean
Studies in Pragmatics
Studies in Korean Pragmatics
Korean Traditional Culture

#### Professor

#### Korean Language and Literature

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- Jeong-hoon Han, Ph.D.
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#### **Korean Education**

· Cheol No, Ph.D.

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- Keun-Ho Kim, Ph.D.
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- Jin-Su Jo, Ph.D.
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- Ji-Hyoung Cho, Ph.D.
   [Assistant Professor, Classic Korean Literature, kaisercho@jnu.ac.kr]
- Yoonmi Chae, Ph.D.
   [Assistant Professor, Classic Korean Novel, ymchae82@jnu.ac.kr]

#### **English Language and Literature**

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#### **English Education**

 Chul Joo Uhm, Ph.D.
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#### **Global Business**

• Inhye Lee, Ph.D.
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# Mathematics

#### \_\_Contact Information

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#### ■ Graduate Studies in Mathematics

The graduate program in the Department of Mathematics offers advanced studies of quality instruction and research in pure and applied mathematics, which leads to master's and doctoral degrees in Mathematics. The Master's Program in Mathematics involves fundamental graduate coursework on various subjects and gives students opportunities to carry out research visions or plans. The Ph.D. program in Mathematics offers students wider and deeper theoretic training for various abstract materials and guides them to become professional mathematicians. Research fields of the Department include algebra, analysis, geometry, topology, applied mathematics, and mathematics education. In addition, the Department sponsors colloquia on the topics of various fields of mathematics for graduate students.

#### Degree Requirements

Upon completion of required courses in the first semester, students are expected to select a thesis advisor and begin research.

Master's degree candidates may take the qualifying exam upon earning 18 credits, and take the foreign language exam upon earning 9 credits.

Ph.D. candidates may take the qualifying exam upon earning 27 credits, and take the foreign language exam upon earning 9 credits.

Master's degree candidates are required to earn 24 credits from electives, 1 credit from a research course, and 9 credits from undergraduate mathematics courses for candidates where majors are not mathematics.

Ph.D. candidates are required to earn 36 credits from electives, 1 credit from a research course, and 9 credits from undergraduate mathematics courses for candidates whose majors are not mathematics.

# ■ What Do You Study?

Algebra I (3) Algebra II (3)

Topics in Algebra I (3)

Topics in Algebra II (3)

Algebraic Number Theory (3)

Homological Algebra (3)

Commutative Algebra (3)

Rings and Module Theory (3)

Topics in Group Theory (3)

Representation Theory I (3)

Representation Theory **I** (3)

Special Topics in Algebra (3)

Algebraic Geometry I (3)

Algebraic Geometry II (3)

Differential Manifold I (3) Applied Analysis I (3) Differential Manifold II (3) Applied Analysis II (3) Riemannian Geometry I (3) Nonlinear Analysis (3) Riemannian Geometry II (3) Real Analysis (3) Advanced Differential Geometry I (3) Complex Analysis (3) Theory of Ordinary Differential Equations I (3) Advanced Differential Geometry II (3) Complex Manifolds I (3) Theory of Ordinary Differential Equations II (3) Complex Manifolds II (3) Partial Differential Equations I (3) Lorentzian Geometry I (3) Partial Differential Equations II (3) Lorentzian Geometry II (3) Topics in Numerical Analysis (3) Modern Topology I (3) Applied Numerical Analysis (3) Probability Theory I (3) Modern Topology II (3) Algebraic Topology I (3) Probability Theory II (3) Algebraic Topology [] (3) Combinatorics (3) Topological Groups (3) Numerical Matrix Theory (3) Numerical Analysis and Method (3) Topics in Topology I (3) Topics in Topology II (3) Numerical Scientific Computation (3) Topics in Topology **I** (3) Parallel Computing (3) Differential Topology (3) Industrial Numerical Analysis (3) Topological Transformation Groups (3) Financial Engineering (3) Functional Analysis I (3) BigData Analysis and Method (3) Functional Analysis II (3) Mathematics Pedagogy (3) Topics in History of Mathematics (3) Harmonic Analysis (3) Algebra Teaching Materials (3) Several Complex Variables I (3) Analysis Teaching Materials (3) Several Complex Variables [] (3) Operator Algebra I (3) Geometry Teaching Materials (3) Operator Algebra II (3) Topics in Mathematical Education (3)

#### Professors

Dong-Soo Kim, Ph.D.
 [Professor, Geometry, dosokim@jnu.ac.kr]
 (Submanifold Theory, Conformal
 Vector Fields, Einstein Spaces)

Bok-Hee Im, Ph.D.
 [Professor, Algebra, bim@jnu.ac.kr]
 (Group Theory and their
 Generalizations, Non-associative
 Rings and Algebras Geometry, Cryptology)

 Hyeong-Kwan Ju, Ph.D.
 [Professor, Combinatorial Mathematics, hkju@jnu.ac.kr] (Dynamical Systems)

 Jeong-Ook Kim, Ph.D.
 [Professor, Applied Mathematics, jkim@jnu.ac.kr]
 (Systems Theory, Operator Theory)

Min-Kyu Kwak, Ph.D.
 [Professor, Analysis, mkkwak@jnu.ac.kr]
 (Partial Differential Equations,
 Ordinary Differential Equations,
 Dynamical Systems)

Young-Bok Chung, Ph.D.
 [Professor, Analysis, ybchung@jnu.ac.kr]

(One or Several Variable Complex Analysis)

- Jong-Taek Cho, Ph.D.
   [Professor, Geometry, jtcho@jnu.ac.kr]
   (Riemannian Geometry related with Contact Structures or Complex Structures, Pseudo-Hermitian Geometry, CR-Geometry)
- Byeong-Chun Shin, Ph.D.
   [Professor, Applied Mathematics, bcshin@jnu.ac.kr] (Numerical Analysis)
- Young-Joo Lee, Ph.D.
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   (Several Variable Complex Analysis)
- Dae-Heui Park, Ph.D.
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   (Algebraic Topology, Semi-Algebraic Topology)
- · Do-Yong Kwon, Ph.D.

- [Professor, Number Theory, doyong@jnu.ac.kr]
- Hong-Sung Jin, Ph.D.
   [Professor, Applied Mathematics, hjin@jnu.ac.kr]
   (Uniform Superconvergence Wavelets)
- Sang-Wook Kim, Ph.D.
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- Hyun-Cheul Lim, Ph.D.
   [Assistant Professor, Financial Mathematics, limhc@jnu.ac.kr]
- Ji-Hoon Lee, Ph.D.
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   (Partial Differential Equations and Dynamical Systems)

#### Laboratories

#### Algebra Lab

Research is carried out on prime factorization, a solution of various equations and symmetry.

#### **Analysis Lab**

Research is conducted on functions and their differentiation or integration. Many laws of nature are described by differential equations.

#### **Geometry Lab**

Research is conducted on the curve, surface, and structures of space.

#### **Topology Lab**

Research is conducted on invariability under continuous deformations, such as spheres, tubes, and Moebius strips.

#### **Applied Mathematics Lab**

Research is conducted on cryptography, coding theory, computational mathematics, numerical analysis, communications, information mathematics, financial mathematics, and bio-mathematics. \_\_Contact Information

Statistics

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#### Graduate Studies in Statistics

The Department of Statistics offers advanced graduate programs leading to master's and doctoral degrees in Statistics. The goal of our graduate programs is to educate students to have an in-depth knowledge of Statistics. Our graduate program balances theory and applications, including solid mathematical training, modeling, data analysis, and computation. Electives are regularly offered in active areas. Recent offerings have included Bayesian data analysis, bio-informatics, categorical data analysis, longitudinal and spatial data modeling, sequential analysis, and survival analysis. The Master's Program in Statistics prepares students for professional opportunities in research areas and in the IT industry. The Ph.D. program in Statistics prepares students for careers in a wide spectrum of topics in data and statistics. Ph.D. candidates have opportunities for rigorous training in theoretical statistics as well as applied research topics.

# **■** Degree Requirements

All students are assigned a supervisor to oversee their work.

Master's candidates are required to earn 24 credits and develop a thesis. Students in this program must pass a written exam in statistics and complete the following courses: Theory of Statistical Inference, Regression Analysis Theory, and Multivariate Statistical Analysis.

Three committee members including the advisor are nominated by the Department to approve the thesis (approval must be given by at least two-thirds of the committee).

Ph.D. candidates are required to earn 36 credits and develop a thesis. Students in this program must pass a written exam in statistics. This exam consists of three parts: 1) theoretical statistics (one of Theory of Statistical Inference and Large Sampling Theory), including probability and mathematical statistics; 2) applied statistics (one of Linear Statistical Models, Experimental Design Theory, and Advanced Statistical Quality Control), including statistical design and data analysis; and 3) a major field of research (one of Topics in Statistical Computing, Survey Method Theory, Time Series Analysis, The Analysis of Cross-classified Categorical Data).

Five committee members including the advisor are nominated by the Department to approve the thesis (approval must be given by at least four-fifths of the committee).

#### ■ What Do You Study?

#### **General Course**

Research for Master's or Doctoral Degree

#### Master's Program

Multivariate Statistical Analysis Regression Analysis Theory of Statistical Inference 1 Theory of Statistical Inference 2

#### Ph.D. Program

Introduction to Advanced Statistics

#### **Electives**

Experimental Design Linear Statistical Models Topics in Sampling Theory The Analysis of Cross-classified Categorical Data Topics in Stochastic Process Large Sampling Theory Advanced Statistical Quality Control

Advanced Statistical Data Analysis Statistical Data Mining Contents Development for Web-based Education of Statistics Reliability Theory

Statistical Image Analysis Advanced Statistical Programming Language Monte Carlo Method and Statistical Computation Advanced Categorical Data Analysis Advanced Statistical Methods in Biometry Statistical Methods for Geo-sciences Advanced Statistical Consulting and Practice Non-parasitic Statistics

#### Professors

· Young-Sook Son, Ph.D. [Professor, ysson@jnu.ac.kr] (Time Series Analysis, Data Mining, Bayesian Statistical Inference)

· Jeong-Soo Park, Ph.D. [Professor, jspark@jnu.ac.kr] (Design and Analysis of Computer Experiments (Simulation), Meteorological Statistics, Educational Statistics, Statistical Computing)

· Jang-Sun Baek, Ph.D. [Professor, jbaek@jnu.ac.kr] (Nonparametric Function Estimation, Multivariate Analysis, Bioinformatics, Pattern Recognition)

• Il-Su Choi, Ph.D. [Professor, ichoi@jnu.ac.kr] (Bayesian Statistics(MCMC), Mathematical Biology, Environmental Ecology Statistics)

Topics in Statistical Computing

Advanced Statistics Seminar Topics in Time Series Analysis

Statistical Pattern Recognition

Intermediate Statistical Data Analysis

**Bayesian Statistics** 

Survival Analysis

Survey Method

• Myung-Whan Na, Ph.D. [Professor, nmh@jnu.ac.kr] (Reliability Theory, Statistical Quality Control, Probabilistic Finite Element Method, Probabilistic Safety Assessment)

· Eun-Sik Park, Ph.D. [Professor, espark02@jnu.ac.kr] (Longitudinal/Categorical Data Analysis, Statistical Methods in Medical Research,

Clinical Trials, Bioinformatics)

- Min-Soo Kim, Ph.D.
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   (Multivariate Analysis, Image Partition or Searching,
   Financial Statistics)
- Jae-sik Jeong, Ph.D.
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   (Bioinformatics (Metabolomics, Genomics),
   Biostatistics (clinical trials), Bayesian analysis)
- Bong-Gyun Ko, Ph.D.
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   (interpretative public intelligence)
- Jeong-Gyu Huh, Ph.D.
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   (Machine-learning-based financial engineering)
- Kwangmin Lee, Ph.D.
   [Assistant Professor, klee564@jnu.ac.kr]
   (Baysian Statistics)

#### Laboratories

Study Rooms
Pattern Recognition and Image Processing Lab
Quality Control and Reliability Lab
Applied Statistics Lab

Bayesian Statistics Lab Experimental Design Lab Discrimination Analysis Lab

The Statistics Library is filled numerous statistics and computer science books and relevant outstanding papers. The Computing Lab houses computers with programs such as SAS, SPSS, S-PLUS, Minitab, and MATLAB.

# Physics

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#### **■** Graduate Studies in Physics

Physics is the most basic science to understand how and why things in the universe work, to discover the fundamental laws of nature. The graduate program in Physics aims to research all natural phenomena and laws of nature, to develop wide applications in other natural sciences, engineering, medical science, agricultural science, and social science, and to source all high technologies.

- The Department of Physics offers programs of study for B.S., M.S., and Ph.D. degrees. The Department is composed of 18 faculty members and 24 graduate students. Our research ranges from fundamental topics such as elementary particle physics and cosmology to applied areas such as material physics and optics. The graduate curriculum in the department of physics provides the background and training required to conduct high quality worldwide research.

• Research areas: Optics, Condensed Matter Physics, High Energy Physics

# **■** Degree Requirements

The graduate program in Physics focuses on the fields of condensed matter physics, optics, and high energy physics in both education and research. After completing the required courses in classical mechanics, electromagnetism, quantum mechanics, and statistical mechanics, students are expected to choose a thesis advisor to start their own research and thesis program.

Master's degree candidates are required to earn 9 credits from required courses(Quantum Mechanics I, Classical Electromagnetism I) and choose 1 between Classical Mechanics I and Statistical Mechanics I), 9 credits from electives. 6 credits can be earned from non-physics courses.

Ph.D. candidates are required to earn 6 credits from required courses (Quantum Mechanics II and Classical Electromagnetism II), 30 credits from electives and 24 credits from non-physics courses.

# ■ What Do You Study?

Classical Mechanics I (3) Statistical Mechanics I (3)
Classical Mechanics II (3) Statistical Mechanics II (3)

Classical Electromagnetism I (3)

Mathematical Physics I (3)

Classical Electromagnetism II (3) Mathematical Physics II (3)

Oughtum Mechanics I (3)

Spectroscopy (3)

Quantum Mechanics I (3) Spectroscopy (3)

Quantum Mechanics II (3) Research for Master's or Doctoral Degree I (1)

Integrated Optics I (3) The Theory of Relativity (3) Optical Design (3) Nuclear Physics I (3) Diffraction Theory of Optical Imagine (3) Nuclear Physics II (3) Many Body Physics (3) Advanced Nuclear Physics I (3) Topics on Equilibrium Statistical Physics I (3) Advanced Nuclear Physics II (3) Topics on Equilibrium Statistical Physics II (3) Nuclear Structure Theory (3) Topics on Non-equilibrium Statistical High Energy Physics Laboratory I (3) Physics I (3) Topics on Non-equilibrium Statistical Applied Optics I (3) Physics II (3) Applied Optics II (3) Quantum Field Theory I (3) Advanced Topics on Optics I (3) Quantum Field Theory [] (3) Advanced Topics on Optics II (3) High Energy Physics I (3) Quantum Optics I (3) Quantum Optics [] (3) Topics on High Energy Physics I (3) Applied Optics Experiments I (3) Topics on High Energy Physics II (3) Applied Optics Experiments **I** (3) Research for Master's or Doctoral Laser Physics I (3) Degree Ⅱ (1) Laser Physics II (3) Special Topics in Advanced Physics I (3) Solid State Physics I (3) Solid State Physics II (3) Special Topics in Advanced Physics II (3) Topics on Solid State Physics I (3) Special Topics in Advanced Physics II (3) Topics on Solid State Physics [] (3) Special Topics in Advanced Physics IV (3) Solid State Physics Laboratory I (3) Special Topics in Advanced Physics V (3) Solid State Physics Laboratory [] (3) Special Topics in Advanced Physics VI (3) Quantum Theory of Solids I (3) Physics of Magnetic Materials (3) Quantum Theory of Solids [] (3) Mesoscopic Physics (3) Integrated Optics I (3) Introduction to Quantum Information Science (3) Cosmic Ray Physics (3)

#### Professors

- Chang Sub Kim, Ph.D.
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- Sun Hyun Youn, Ph.D.
   [Professor, Quantum Optics and Nonlinear Optics Experiments, sunyoun@jnu.ac.kr]
- En Jin Cho, Ph.D. [Professor, Condensed Matter Experiments, ejcho@jnu.ac.kr]
- · Ki Cheon Kang, Ph.D.

- [Professor, Mesoscopic Physics, kckang@jnu.ac.kr]
- Sang Wan Ryu, Ph.D.
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- In Kag Hwang, Ph.D [Professor, Nano Optics, ikhwang@jnu.ac.kr]
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- SoongGeun Je, Ph.D.
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- Ara Go, Ph.D.
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- Chan Beom Park, Ph.D.
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#### Laboratories

#### **Optics Lab**

Research is conducted by Sun Hyun Youn, Heung Ryoul Noh, In Kag Hwang and Joong Wook Lee. Areas of interest include:

- Applied Optics
- Fiber Optics
- Integrated Optics
- Quantum Optics
- Atom Optics
- Terahertz Photonics & Plasmonics

#### **Condensed Matter Physics**

Research is conducted by En Jin Cho, Sang Wan Ryu, Han Jin Noh, Ha Sul Kim, Chang Sub Kim, Ki Cheon Kang, SoongGeun Je and Ara Go. Research is carried out in the fundamentals of condensed matter physics, semiconductor physics, IT and nanotechnology. Areas of interest include:

- Solid State Physics
- Semiconductor Physics
- Applied Physics
- Nano Physics
- Optical Science & III-V Semiconductor

#### **High Energy Physics Lab**

Research in nuclear and particle physics is conducted by Kyung Kwang Joo, Dong ho Moon and Jae Sik Lee. Research interests include the study of the ultimate constituent of matter. Chemistry

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# **■** Graduate Studies in Chemistry

Chemists analyze, synthesize, quantitate, and design materials. They relish creating models and theories that can rationalize what happens in the laboratory. They enjoy discussing experiments and ideas with each other as well as with physicists, biologists, computer scientists, and with experts in electronics and material science. The study of chemistry prepares individuals for obvious real-life jobs in the chemical industry, education, and other related fields. More fundamentally, the department helps students to develop the ability to solve problems and to think critically. These latter skills will be more valuable to students than any specific facts, theories, and techniques they will master in the classroom. The Department is committed to providing students with a first-class education.

#### Degree Requirements

All students are assigned a research advisor and a research group. The first year is spent developing a research idea, while later years are spent conducting lab research and composing a Ph.D. thesis.

Most students earn 36 credits during their first 2 years. The Department's committee selects courses necessary for students to meet academic requirements.

A qualifying exam is required after successful completion of coursework. All students are required to prepare and present a research plan, including an outline of a proposal and identification of research direction. Upon completion of course requirements and passing required exams and submitting a research plan, students will become eligible for Ph.D. candidacy.

# ■ What Do You Study?

Special Research in Analytical Chemistry II and

Seminar (3)

Molecular Orbital Theory (3)

Physiological Chemistry (3)

Special Topics in Biochemistry 1 (3)

Special Topics in Biochemistry 2 (3)

Quantum Chemistry (3)

Organometallic Chemistry (3)

Organic Reaction Mechanism (3)

Organic Synthesis (3)

Special Topics in Organic Chemistry I (3)

Special Topics in Organic Chemistry II (3)

Special Research in Organic Chemistry I and

Seminar (3)

Special Research in Organic Chemistry II and

Seminar (3)

Electrochemistry (3)

Transition Metal Chemistry (3)

Stereochemistry (3)

Electro-analytical Chemistry (3)

Electronics (3)

Liquid Theory (3)

Natural Product Chemistry (3)

Catalytic Chemistry (3)

Statistical Thermodynamics (3)

Nucleic Acid Chemistry (3)

Heterocyclic Chemistry (3)

#### Professors

- Hyoung-Ryun Park, Ph.D.
   [Professor, Inorganic Chemistry, hrpark@jnu.ac.kr]
- Jae-Nyoung Kim, Ph.D.
   [Professor, Organic Chemistry, kimjn@jnu.ac.kr]
- Jong-Hoon Oh, Ph.D.
   [Professor, Organic Chemistry, jnoh@jnu.ac.kr]
- Che-Hun Jung, Ph.D.
   [Professor, Biochemistry, jungch@jnu.ac.kr]
- Sun-Woo Lee, Ph.D.
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- Jeong-Sun Kim, Ph.D.
   [Professor, Biochemistry, jsunkim@jnu.ac.kr]
- Hyun-Dam Jeong, Ph.D.
   [Professor, Physical Chemistry, hdjeong@jnu.ac.kr]
- Hyun-Chul Choi, Ph.D.
   [Professor, Analytical Chemistry, chc12@jnu.ac.kr]

#### Laboratories

#### **Faculty Members by Research Area**

- Physical Chemistry
  - · Hyun-Dam Jeong

Chemical Binding Theory (3)

Chemical Kinetics (3)

Special Topics in Environmental Analysis (3)

Enzyme Chemistry (3)

Organo Transition Metallic Chemistry (3)

Bioinformatics (3)

X-ray Crystallography (3)

Chemistry of Nanomaterials (3)

Supramolecular Chemistry (3)

- Jun-seong Lee, Ph.D.
   [Professor, Inorganic Chemistry, leespy@jnu.ac.kr]
- Cheol-Won Lee, Ph.D.
   [Professor, Biochemistry, cwlee@jnu.ac.kr]
- Sung Cho, Ph.D.
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- Jimin Kim, Ph.D.
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- Kyungsu Na, Ph.D.
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- Jeongsuk Seo, Ph.D.
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- Changwoo Kim. Ph.D.
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- Jacopo Tessarolo, Ph.D.
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- Sung Cho
- Kyungsu Na
- · Changwoo Kim

- Analytical Chemistry
  - · Hyun-Chul Choi
  - · Jeongsuk Seo
- Inorganic Chemistry
  - · Hyoung-Ryun Park
  - Jun-seong Lee
  - · JacopoTessarolo

- Organic Chemistry
  - Jae Nyoung Kim
  - · Jong-hoon Oh
  - · Sun-woo Lee
  - Jimin Kim
- Biochemistry
  - · Che-Hoon Jung
  - Jeong-Sun Kim
  - Cheol-Won Lee

#### **■ Research Instruments Lab**

Advanced instrumentation is an essential com- nent of Departmental research. The Department and individual research groups collectively maintain research instruments (hardware and software) that are constantly being updated.

Major Department equipment available to research faculty members and students include the following: NMR 500MHz, NMR 300MHz, Nd: YAG Laser, LC (HPLC), GC, IR, TGA, UVo Vis - computational resources Linux PC Clusters (8nodes) - running Gaussian 98, NWChem.

Linux PC Severs - running Gaussian 98, NWChem. Various Workstations (Alpha and SGI machines) - running Gaussian 98, NWChem. - University research facilities and Research Center Chonnam National University sponsors a large number of specialized centers of research and campus-wide research facilities. Two centers that many members of the Facilities Department frequently use are the Laboratories Building Equipment Management Center and Korea Basic Science Institute.

# Department of Geological and Environmental Sciences

\_\_Contact Information

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# ■ Graduate Studies in Geological and Environmental Sciences

The department of geological and environmental sciences provides an outstanding environment for studies of the Earth and various environmental problems. The department seeks to understand the fundamental processes defining the origin, evolution, and current state of Earth systems and to use this understanding to predict future states and to solve environmental problems. The Department is composed of three major research areas as follows:

- 1) Pure/Basic Geology: conducting broad investigations on rocks, minerals, and fossils of past and present geological environments and predicting the future.
- 2) Applied Geology: geological and seismological studies of practical issues related with the geological stability of a critical structure, such as a nuclear power plant or nuclear waste disposal.
- 3) Environmental Geology: practical application of the principles of geology in solving environmental problems, such as soil and ground water contaminations and their remediation.

The specific research encompasses igneous/metamorphic petrology, economic mineral deposits, paleontology, sedimentary environments, environmental hydrogeology, biogeochemistry, geophysics and geodynamics. The Department's programs include interdisciplinary research and teaching that bring the unique perspective of geology to scientific problems at diverse spatial and temporal scales. The Department currently has 8 faculty members.

Currently, the Department has 24 graduate students; 162 undergraduate students are majoring in geology. The Department's programs offer courses leading to Bachelor's, Master's, and Doctoral degrees in geology. The Department's faculty members, graduate students, and undergraduate students are involved in field, laboratory, experimental, and modeling studies to solve geological and environmental problems. The graduate programs are designed to train geology students beyond the bachelor's degree for professional employment or for advanced research. To be admitted into the graduate program, applicants must have a bachelor's degree in geology or an applied science, as determined by the department's graduate committee.

# **■** Degree Requirements

Master's degree candidates are required to earn 24 credits in addition to 1 research credit. Ph.D. candidates are required to earn an additional 36 credits plus 1 research credit.

# ■ What Do You Study?

Advanced Lecture of Earth Environmental

Science I (3)

Advanced Lecture of Earth Environmental

Science II (3)

Advanced Metamorphic Petrology (3)

Advanced Field Geology (3) Advanced Geology (3)

Geological Survey and Study (3)

Materials Science under Extreme Conditions (3)

Circum Pacific Geology (3)
Study of Mineral Analysis (3)
Advanced Mineral Exploration (3)
Advanced Structural Geology (3)
Hydrothermal Ore Genesis (3)
Advance of Soil Mineralogy (3)
Digital seismic signal analysis (3)

Advanced Geophysics (3)
Advanced Seismology (3)
Practice on Seismology 1 (3)
Practice on Seismology 2 (3)

Geometry and Mechanics of Thrust faults (3)

Medical Mineralogy (3)

Special Lectures on Seismology (3)

Ichnology (3)
Plate Tectonics (3)

Advanced Vertebrate Paleontology (3) Seminar in Tidal-Flat Sedimentology (3)

Special Topics on Geophysical Fluid Dynamics (3)

Advanced Paleontology (3) Seminar on Paleoenvironment (3) Advanced Micropaleontology (3)

Biostratigraphy (3)

Earth History and Evolution (3)

Sediment Particle Size Analysis Seminar (3)

Carbonate Sedimentology (3)

Marine Geology of the Korean Seas

Coastal Zone Management (3)

Sequence Stratigraphy (3) Clastic Sedimentology (3)

Coastal Geology (3)

Paleoclimatology and Paleoceanography (3) Seminar in Earth Environmental Science I (3) Seminar in Earth Environmental Science II (3)

Vertebrate Paleontology (3)

Geotectonics (3)

Precambrian Geology (3)

Advanced Mineralogical Petrology (3) Petrogenesis of the Metamorphic Rocks (3)

Advanced Hydrogeology (3)

Advanced Contaminant Hydrogeology (3) Groundwater and Transport Modeling (3)

Fractured Rock Hydrogeology (3)

Aquifer Hydraulics (3) Groundwater Remediation (3)

Numerical Analysis and Programing for

Hydrogeology (3) Geo-microbiology (3)

Environmental Mineralogy (3)

Advanced Environmental Geology (3) Advanced Environmental Soil Science (3) Environmental Geo-microbiology (3) Seismological Data Processing (3)

Geodynamics (3)

Advanced Geodynamics(3) Deodynamic Modeling (3) Subduction Zone Geology (3)

Mantle Geology (3)

Tectonics (3)

#### Professors

 Min Huh, Ph.D.
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• In-Wook Yeo, Ph.D.

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• Yul Roh, Ph.D.

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- and Geomicrobiology, rohy@jnu.ac.kr]
- Dong-Hoon Sheen, Ph.D.
   [Professor, Seismology & geophysics, dhsheen@jnu.ac.kr]
- Donghoon Seoung, PhD.
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#### Laboratories

#### **Paleontology Lab**

(Advisor: Prof. Min Huh)

Paleontology is the study of prehistoric animals and plants which remain or other indications that are found in sedimentary rocks. It is the branch of geology which aims to interpret the record of events in the earth's history, past geography, paleoclimate and paleoenvironments. The Paleontology Lab is currently interested in the research on dinosaur and pterobrur fossils including footprints, eggs, bones from the Cretaceous deposits, and the ostracoda.

- Research Interests and Current Projects:
- Paleontologic study on the life of past geological times
- Paleoenvironments, paleogeography, paleoclimatology, paleoecology
- Fossil excavation and its scientific preparation and conservation
- Geological investigation of buried cultural properties

#### **Environmental Hydrogeology**

(Advisor: Prof. In-Wook Yeo)

Hydrogeology deals with the occurrence, movement, and quality of water in porous media. The Environmental Hydrogeology group is involved in a diverse spectrum of research in hydrogeology, with a strong program in fractured rock hydrogeology. In their research, faculty members and students in the Hydrogeology group use theoretical

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- Byung-choon Lee, Ph.D.
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analyses, groundwater flow and contaminant transport modelings, hydrogeological field data analyses, and laboratory experiments.

- Research Interests and Current Projects:
- Groundwater flow analysis in rock fractures and its modeling
- Discontinuity network analysis and its 3-D realization
- DNAPL migration and remediation in rock fractures
- Bacterial transport in rock fractures
- Reactive transport modeling of heavy metals and NAPLs

# Environmental Soil Science & Geomicrobioloogy Lab

(Adviser: Prof. Yul Roh)

Biogeochemistry is the study of biological controls on the chemistry of the Earth's environment and mineral formation. Biogeochemistry has been vital to the study of the Earth, and has resulted in the findings of many environmental/industrial applications such as the remediation of contaminated soil and groundwater and the microbially-induced synthesis of nanomaterials.

- Research Interests and Current Projects:
- Characterization and remediation of contaminated soils
- Naturally accelerated bioremediation of contaminated soils and groundwater

- Microbially induced synthesis of nanoo materials
- Assessment and characterization of nuclear power plants and nuclear waste disposal sites

#### Seismology & Geophysics Lab

(Advisor: Prof. Dong-Hoon Sheen)

Geophysics is the study of the Earth using quantitative physical methods. This group focuses especially on seismology, which is useful to study the structure of the Earth and also to reduce potential earthquake hazards. Recently, microseism, seismic source parameter estimation and earthquake early warning are main research topics.

- Research Interests and Current Projects:
- Generation and propagation characteristics of microseism
- Seismic source parameter estimation
- Development of various magnitude relationships for earthquakes around South Korea
- Development of earthquake early warning system in South Korea

#### Earth Materials Science Lab.

(Advisor: Prof. Donghoon Seoung)

The Earth Materials Science Laboratory is a research laboratory that focuses on the role of Earth materials in (1) mineralogical processes on the crust, mantle, and deep inside core and, (2) processing of these materials to derive novel use and functionality, and (3) crystallographic access to atomic scale changes under various thermodynamic conditions.

- Research Interests and Current Projects:
- Mineralogical investigation under extreme conditions (High-pressures and temperatures) using Diamond-anvil-cells (DACs) via synchrotron radiation lightsources and laser-induced shock waves
- Crystallographic access to changes of the materials in atomic scale ranges
- Fixation and sequestration of CO2, H2, and radioactive nuclides using microporous materials

- (MOFs, ZIFs, COFs, and Zeolites)
- Development of 2D/3D functional materials (interstratified/porous materials)

#### Coastal Geology/Sedimentology Lab.

(Advisor: Prof. Tae Soo Chang)

Coastal geology and sedimentology laboratory deals with sediments and their transport, and geomorphology and stratigraphic evolution of coastal landforms on the shore and coastal shelves. From the sediments and sedimentary records, we aims to understand the changes in sea levels and environmental changes driven by various physical forcings. For the purposes, we use multi-proxies such as sedimentological, mineralogical, and geochemical tools.

- Research Interests and Current Projects:
- Coastal processes and geomorphology of beach-coastal dune systems along the macrotidal west coast of Korea
- Quaternary stratigraphic evolution of tidal flats, deltas and barrier islands system
- Shallow-marine tidal sand ridges and its evolution
- Late Quaternary sea-level studies around the Korean Peninsula
- Coastal erosion and management studies
- Gravel beach studies in the macrotidal settings
- Marine geology of Ieodo submerged volcanoes

#### Structural geology & Tectonics Lab.

(Advisor: Prof. Yirang Jang)

Structural geology is the study of the architecture of rocks from micro- to macro-scales resulting from deformation, and Tectonics is the same as Structural geology but deal with very large-scale structures. This research field is a fundamental subject in geological sciences to understanding Earth structures based on their structural geometry, kinematics, and mechanics.

Research Interests and Current Projects:

Field-based structural studies for deciphering the tectonic evolution of fold-thrust belts in Korea as well as abroad.

Geometric and Kinematic studies using various

#### Petrology Lab.

(Advisor: Prof. Byung-choon Lee) The Department of Geological and Environmental Sciences conducts research on the origin, formation, and timing of rocks (metamorphic and igneous) based on the field, texture, and composition of rocks that make up the Earth's crust. On a macro scale, it studies the tectonic evolution of East Asia, including the Korean Peninsula

- Research on metamorphism and igneous activities worldwide
- Identification of conditions (pressure, temperature, composition) for the formation of metamorphic rocks and tracking of reactions and metamorphic

modern structural techniques for inferring the 3-D evolution of fold-thrust belts.

Applied Structural geology in Petroleum geoscience and Geological/Civil Engineering, etc.

#### paths over time

- Research on the origin and evolution of igneous rocks using the composition and petrochemical data of minerals and rock chemistry
- Research on the tectonic evolution of Northeast Asia through a comparison of geological features between the Korean Peninsula, China, and Japan
- Research on the extension of the Chinese continent collision belt formed in the Triassic to the Korean Peninsula
- Identification of unrecognized tectonic movements within the Korean Peninsula
- Research on the formation and division mechanisms of the orogen subduction zone

# Oceanography

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# **■** Graduate Studies in Oceanography

The Department of Oceanography has 9 full-time faculty members and several part-time lecturers engaged in teaching and research at the graduate and undergraduate levels. The Department conducts interdisciplinary research in coastal marine environments, maintains advanced laboratories, seeks public and private research funds, and recruits and retains qualified faculty, staff, and students. It provides an effective learning environment for students who are interested in careers in marine science or related fields, and also for students who are interested in science-based management of contaminated and human-impacted coastal environments. Faculty research interests range from the ecology of phytoplankton, macro-alga zooplankton and nekton to the biogeochemical cycle of elements and numerical modeling of coastal processes. Graduates from the Department of Oceanography hold many faculty positions in universities and colleges, as well as research positions in industry, private research institutions, national laboratories, and regulatory agencies.

# ■ Degree Requirements

Master's degree candidates are required to earn 24 credits from various oceanography courses. They are also required to pass a foreign language exam and a qualifying exam, and submit a thesis.

Ph.D. candidates are required to earn an additional 36 credits from various oceanography courses. They are also required to pass a foreign language exam and a qualifying exam, and submit a thesis.

# ■ What Do You Study?

Seminar in Marine Environment I (3)

Seminar in Marine Environment II (3)

Regional Oceanography I (3)

Regional Oceanography II (3)

Estuarine Oceanography (3)

Intertidal Oceanography (3)

Advanced Sedimentology (3)

Advanced Sedimentary Structure (3)

Advanced Quaternary Geology (3)

Special Topics on Tidal Geology (3)

Underwater Acoustics (3)

Advanced Deep-sea Geology (3)

Advanced Littoral Sedimentary Environment (3)

Circulation in Coastal Ocean (3)

Environmental Assessment in Coastal Ocean (3)

Advanced Remote Sensing (3)

Geophysical Fluid Dynamics (3)

Advanced Ecology of Plankton (3)

Special Topics on Benthic Ecology (3)

Special Topics on Fish Ecology (3)

special Topics on Tish Ecology (3

Seminar in Marine Ecology I (3)

Seminar in Marine Ecology II (3)

Advanced Wave Dynamics (3)

Advanced Ocean Currents (3)

Advanced Tides Dynamics (3)

Advanced Dynamical Oceanography (3)

Seminar in Chemical Oceanography (3)

Advanced Seawater Analysis (3)

Seminar in Marine Pollution (3)

Advanced Carbonate Rock (3)

Advanced Physical Oceanographic Exploration (3)

Seminar on Physical Oceanography (3)

Advanced Marine Biology (3)

Advanced Clastic Sedimentary Rock (3)

Shallow Water Tides (3)

Marine Community Ecology (3)

Advanced Marine Meteorology (3)

Ecology of Marine Zooplankton (3)

Ecology of Marine Phytoplankton (3)

Marine Resource Management (3)

Marine Zoo-benthic Ecology (3)

Marine Phyto-benthic Ecology (3)

Advanced Submarine Stratigraphy (3)

Advanced Marine Chemistry (3)

Advanced Marine Geology (3)

Advanced Chemical Oceanography (3)

Climate Modelling and machine learning (3)

Climate data machine learning (3)

Atmosphere Ocean General Circulation (3)

Big Data Analysis (3)

Field expedition and observation (3)

Big Data Analysis in Earth Sciences (3)

Advanced Marine Paleontology (3)

Marine population ecology (3)

Advanced Marine Microbial Ecology (3)

Marine biology and systematics (3)

Marine Biology Studies (3)

Marine biogeochemistry (3)

Numerical Ocean Modeling (3)

Advanced Marine Geochemistry (3)

Ocean science machine learning (3)

#### Professors

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- Se Hyeon Jang, Ph.D.
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#### Laboratories

#### **Ecological Impact in Coastal Zone Lab**

(Advisor: Kwang-Young Kim)

Research is conducted on photosynthetic and fouling processes of coastal zones, which represents an extremely contaminated region. An effort is made to understand how prevalent environmental parameters can influence the benthic population dynamic and community structures in the various habitats

#### Metal Ecology Tocisity Laboratory; MET

(Advisor: Prof. Byeong-Gweon Lee)

Research in this lab focus on metal biogeochemistry aquatic environments. Research is conducted on chronic toxicological effects of metals to aquatic organisms, and evaluation of sedimentary quality criteria for metals.

#### Laboratory OF HAB Ecophysiology; LOHABE

(Advisor: Prof. Myung Gil Park)

Research is conducted on Planktonic members of most algal group known to harbor intercellular symbionts including viruses, bacteria, fungi, and protozoa.

#### Climate Prediction Lab:CPL

(Advisor: Prof. Jee-Hoon Jeong)

This lab (CPL) conducts various studies on climate variabilities, climate change, and climate modeling. The accurate climate prediction over seasonal to interannual time-scale is a principal aim of the research.

#### Ocean & Climate Science Lab.

(Advisor: Prof. Yoo-Geun Ham) This lab conducts studies on sub-seasonal, interannual, and decadal climate variability over the tropics (e.g. El Nino, AMOC), climate change/sensitivity after the global warming, and the development of the initialization system including the data assimilation and the optimal perturbation method for sub-seasonal, seasonal to decadal prediction by using a global coupled climate model. To understand the physical mechanisms of the climate variability and the improvement of the seasonal predictability is the main aim of the research.

#### Physical Oceanography Lab.

(Advisor: Prof. Byoung-Ju Choi)

To understand physical processes in the ocean, observation data such as temperature, salinity, currents and sea level are collected and analyzed in Physical Oceanography Laboratory. We also study ocean circulation using Numerical Models and Ocean Data Assimilation. Recently, regional ocean modeling systems (ROMS) for Northwestern Pacific Ocean, Yellow and East China Sea, Korea Strait, and East Sea have been used for real time ocean prediction and research.

#### Marine Biogeochemistry Lab.

(Advisor: Prof. Tae-Hoon Kim)

This lab (MBL) conducts studies on carbon and nutrients being transformed by biological, geological, and chemical processes in the ocean. Our research is to determine fluxes of chemical species via the atmosphere, groundwater, and river to the ocean, to understand biogeochemical reactions, cycling, and sedimentation of chemical species in oceans, and to evaluate advantages of various radionuclides for tracing these environmental processes.

# Marine Environmental and Molecular Ecology Lab.

(Advisor: Prof. Se Hyeon Jang)

The Marine Environmental and Molecular Ecology (MEME) Laboratory uses molecular genetic approaches to tackle ecological and oceanographic questions in the context of a rapidly changing marine environment. We are now gearing towards a better understanding of marine ecosystems in relation to their structures and functions. In particular, we are studying marine plankton and also targeting various marine organisms without boundaries that biologically interact with them.

# Biological Sciences and Biotechnology

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# ■ Graduate Studies in Biological Sciences and Biotechnology

Biological Sciences and Biotechnology is the field of study which explores the principles of life phenomena and applies the results of scientific research to high-tech industries. This is a field of cutting-edge technology which strives to promote the health and welfare of humankind, focusing on such diverse fields as medicine, health, pharmaceuticals, food, environment, agriculture and energy. It is a future-oriented industrial field that can create numerous high-value-added industries in the knowledge-based society of the 21st century.

# **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits to graduate.

# ■ What Do You Study?

Advanced Mycology (3)

Advanced Immunology (3)

Advanced Microbial Systematics (3)

Advanced Molecular Biology (3)

Molecular Cell Biology (3)

Advanced Molecular Genetics (3)

Reproductive Endocrinology (3)

Advanced Ecology (3)

Advanced Plant Systematics (3)

Special Topics in Plant Physiology (3)

Advanced Plant Ecology (3)

Advanced Phycology (3)

Advanced Biostatistics (3)

Infection Immunology (3)

Cell Signalling (3)

Cellular and Molecular Immunology (3)

Methods in Molecular Immunology (3)

Methods in Molecular Biology (3)

Reproductive Biology (3)

Cell Culture Engineering (3)

Aging & Cancer Biology (3)

Artificial Evolution of Protein (3)

Metagenomics (3)

Special Topics in Molecular Endocrinology (3)

Molecular Physiology (3)

Comparative Genomics (3)

Special Topics in Physiology (3)

Bioethics (3)

Special Topics in Aquatic Biology (3)

Special Topics in Plant Molecular Biology (3)

Special Topics in Neurobiology (3)

Enzyme and Proteomics (3)

Advanced Biotechnology (3)

Genomic Stability (3)

Physiology of aging (3)

Plant Stress Physiology (3)

Research and Communication1 (3)

Research and Communication2 (3)

Advanced molecular research (3)

Research Guidance 1 (3)

Research Guidance 2 (3)

Research Guidance 3 (3)

Biomaterials (3)

Plant Development (3)

Bioimaging (3)

Advanced Ecomimetics (3)

Cancer Biology (3)

Safety and intellectual property Management for

Researchers (3)

Research Training 1 (3)

Research Training 2 (3)

Molecular cell biology capstone design1 (3)

Molecular cell biology capstone design2 (3)

Ecological Environmental Seminar (3)

Molecular and Cellular Biology Seminar (3)

Current topics of basic medical science (3)

Advanced Biomimetics (3)

General Ecological Environmental Capstone

Design1 (3)

General Ecological Environmental Capstone

Design2 (3)

System Biotechnology capstone design1 (3)

System Biotechnology capstone design2 (3)

Bioanalytic systems (3)

Research methods in animal behavior (3)

Bio future energy seminar (3)

Epigenomics (3)

Industrial Microbiology and Intellectual Property

(3

IP based bio-big data and machine learning (3)

bioenergy capstone design (3)

Advanced study in future energy (3)

Cellular Mechanobiology (3)

Advances in cell differentiation (3)

bio signaling and energy (3)

Energy and intellectual property rights (3)

Plant Gene Expression (3)

Advanced Human Physiology (3)

Advanced Animal Behavior and Ecology (3)

Master guide laboratory animal practice (3)

Biomolecules and Regulation of Metabolism (3)

Stem Cell Biology (3)

Advanced Plant Genetics (3)

Topics in plant biotechnology (3)

Scientific Writing in Biomedical Science (3)

Advanced systems biology (3)

Advanced Omics (3)

#### Professors

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#### Laboratories

#### **Equipment**

Phosphoimage analyzer, MALDI-TOF, Digital viscometer, Freeze-dryer system, Scintillation counter, Elisa analyzer, Protein purification system, Deep freezer, Spectrophotometer, Luminometer, Cryocut microtome, Gel documentation system, HPLC, FACS. Ultracentrifuge (table top), Micro- injection system, Automatic DNA sequencer, Akta FPLC.

# Department of Future Mobility Convergence

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#### ■ Graduate Studies in Artificial Intelligence Convergence

The Department of Future Mobility Convergence deals with various fields such as eco-friendly vehicles, autonomous driving, smart communication and security, Sensors and control are the main core of this interdisciplinary department, as well as fundamental vehicle and mobility dynamics.

Globally, the future mobility industry has been nurtured at the national level as one of the major national industries crucial to the 4th industrial revolution and new technology industry. In line with this, the world's leading universities and global companies are also keen to secure new technologies for future mobility.

Therefore, it is an urgent task to nurture professionals, who will lead the future mobility industry, through efforts such as the development of the future mobility technology knowledge that will lead the future. Accordingly, the Department of Future Mobility Convergence at Chonnam National University intends to play a leading role in researching cutting-edge future mobility technology and nurturing future prospects.

#### **■** Degree Requirements

#### Master's Program

Students in the master's degree program must acquire 24 credits, courses in the fields of Control System for Mobility, Powertrain Control Engineering, and Electric Machine Design and mobility studies. Students must pass a foreign language test and qualification exam before applying for a thesis examination for the master's degree.

# ■ What Do You Study?

Advanced Solid Mechanics

Advanced Course of Composite Materials

Advanced Fluid Mechanics

Intelligent Control Engineering

Network Protocols

Computer and Network Security

Visual Information Processing and Recognition

Micro Thermal and Fluid System

Probability and signal processing

Power Semiconductor Engineering

Next Generation Intelligent Convergence Information

and Communication Engineering

Computational Mechanics of Materials

Microfluidics

Deep Learning

Precise Sensor and Metrology

Reinforement Learning
Advanced Navigation System for Mobility
Advanced Perception System for Mobility
Control System for Mobility
Powertrain Control Engineering

Advanced Theory of Plasticity Electric Machine Design Advanced dynamics 3D Multimedia Research Guidance 1

#### Professors

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- Gyuhae Park, Ph.D.
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- Chansoo, Kim, Ph.D.
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- Seoung-Yun Seol, Ph.D. [Professor, Super Conductors, syseol@jnu.ac.kr]
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- Jinsoo Park, Ph.D.
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- Seunghwoi Han, Ph.D.
   [Assistant Professor, Laser engineering, nano optics, optical sensor, shan@jnu.ac.kr]
- Jaehyung Park Ph.D.
   [Professor, State-of-the-Art of Network
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- Sung-Hoon Hong, Ph.D.
  [Professor, Image Processing, hsh@jnu.ac.kr]
- Taejin Jung, Ph.D.
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#### Laboratories

- Structures Design and Manufacturing Lab.
- Mobility System Engineering Lab.
- Composites & Mechanics Lab.
- Advanced Fluidics and Nano Technology Lab.
- Multiscale Flow Control Lab.
- Ultraprecision Photonics Lab.
- Visual Information Processing&System Lab.

- Active Structures and Dynamics Lab
- Artificial Intelligence&Mobility Lab.
- lectric propulsion system Lab.
- Augmented/Virtual reality Lab.
- Secure and Reliable Computing Lab.
- Intelligent Semiconductor and Circuit Lab.

# Department of Cultural Studies

#### \_\_Contact Information

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#### ■ Graduate Research in Cultural Studies

The GSC opened a Ph.D. program in 2014 in order to produce competent scholars in cultural studies. The GSC offers the Ph.D. program that combines rigorous work in cultural theory and planning, diversified study of cultural content and technology, and practical experience in cultural marketing and tourism.

We pursue a collaborative environment between faculty and students while providing intensive training including many different courses and writing research papers related to cultural studies. We are eager to help students become future scholars, researchers, and practitioners of cultural studies.

#### Degree Requirements

To obtain a Ph.D. degree, a student must meet the following requirements:

- 1) 36 credit hours in the Cultural Studies and a minimum of 24 credit hours in the major.
- 2) Students need to demonstrate proficiency in one foreign language (English, Chinese, French, German, or Japanese) and pass a foreign language test recognized by their department.
- 3) submit a "Proposal for Dissertation" under the supervision of his/her dissertation advisor.
- 4) submit and defend an acceptable dissertation.

# ■ What Do You Study?

Adaptation(3)

Emotional Imagetelling studies(3)

Spatial Culture and Place Marketing(3)

Publicity, Art, City(3)

Study on Community Theories and Shared Culture(3)

Introduction to Structural Equation Modeling(3)

Glocal Cities, Arts and Culture(3)

New Media Content Studies(3)

City Culture Management(3)

Seminar on Contemporary Art & Culture(3)

Digital Culture Contents studies(3)

Digital Realistic Media Content Analysis(3)

Media Aesthetics(3)

Culture Governance Research(3)

Data Analysis in Cultural Management(3)

Culture Management Research Methods(3)

Qualitative Research in Cultural Management(3)

Cultural Tourism Marketing(3)

Cultural Semiotics(3)

Discourses in Contemporary Art and Culture(3)

Cultural Service Assessment(3)

Culture service experience Studies(3)

Methodologies for Cultural Studies(3)

Cultural Studies Seminar(3)

Culture and Art Management(3)

Arts & Cultural Education Policy(3)

Culture & Image Studies(3)

Culture Technology Seminar(3)

Culture convergence service studies(3)

Seminar on Cultural Policy(3)

Cultural Policy(3)

Cultural Healing Studies(3)

Media Article Workshop(3)

Imagination and Culture(3)

Ecotourism Studies(3)

Theory of Visual Culture(3)

Analysis of Visual Contents(3)

Research Training 1(3) Video Content Analysis(3)

Convergence contents seminars(3)

Study of Korean Popular Culture(3)

Community Tourism Studies(3)

Seminar in Cultural Exchange(3)

Local Cultural Contents(3)

Festival Studies(3)

#### Professors

- Kyung-woon Jeong, Ph.D.
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- Ki-Hyun Park, Ph.D.
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- Jina Kim, Ph.D.
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- Shi-Hun Noh, Ph.D.

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- Kyoung-Soo Kim, Ph.D.
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# Department of Law

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#### ■ Graduate Studies in Law

Law is the formal regime that orders human activities and relations through a systematic application of the force of a politically organized society.

Laws may require or proscribe given actions and empower the members of the society governed by such laws to engage in certain activities, such as entering into contracts and drafting wills. Laws may also simply mandate what procedures are to be followed under a given situation.

In most countries only those professionals trained in the law can effectively understand and explain legal principles, draft relevant documents, and guide parties through legal disputes, whether with another private party (civil law) or with the government (public law, often involving constitutional or criminal law).

#### Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass both a comprehensive and a foreign language exam as well as submit a thesis.

Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

For Integrated Degree (Master's and Doctoral) candidates are required to earn 54 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

# ■ What Do You Study?

Economic Crime (3)

General Theories of Economic Law (3)

Case Study on Economic Law (3)

Termination of Contract (3)

Theory of State (3)

Governmental Liability and Compensation (3)

International Trade Law (3)

International Economic Law (3)

General Theory of International Law (3)

International Human Rights Law (3)

International Humanitarian Law (3)

International Environmental Law (3)

Fundamental Rights (3)

Advanced Study of Fundamental Rights (3)

Fundamental Labor Rights (3)

Law of Collective Labor Relations (3)

General Theoties of Labor Law (3)

Case Study on Labor Law (3)

Law of Company (3)

Roman Law (3)

Studies on Law of Real Rights (3)

American Family Law (3)

Provisional Remedies (3)

Cases on Civil Procedure (3)

Law of Civil Evidence (3)

Enforcement of Judgments (3)

Case Study on Civil Procedure (3)

Anti-discrimination Movement and Law (3)

Criminology (3)

Sociology of Law (3)

Legal Positivism (3)

Feminist Jurisprudence (3)

Study on Corporate Tax Law (3)

Legal Reasoning (3)

Measures of Security (3)

Studies On Insurance And Maritime Law (3)

Study on VAT (3)

Studies on Law of Tort (3)

Comparative Labor Law (3)

Introduction to comparative private law (3)

Comparative Commercial Law (3)

General Theories of Comercial Law (3)

Commercial Law Cases 1 (3)

Trademark and Design Law (3)

History of Western Legal Philosophy (3)

Studies On Tax Law (3)

Consumer Protection Law (3)

Study on the trust law (3)

A study on decision by feminist viewpoint (3)

Anglo-American Law (3)

Studies on Human Rihgts Law (3)

Human Rights Theory (3)

Legislation (3)

Natural Law (3)

Copyright Law (3)

Law of Electronic commerce (3)

Historical Philosophy in East Asian Traditional (3)

Legal Culture (3)

The Spirit of Law in East Asian Tradition (3)

Law and Politics (3)

Chinese Law (3)

Local Government Law (3)

Special Topics in Intellectual Property Law (3)

Studies on Law of Obligations (3)

Patent Law (3)

General Theories of Administrative Law (3)

Administrative Operative Law (3)

Exhaustion of Administrative Remedies and Judicial

Review (3)

Administrative Organization Law (3)

Administrative Action (3)

History of Constitution (3)

General Study of Constitutional Law (3)

Constitutional Review (3)

Case Studies on Constitutional Law (3)

General Theories of Criminal Law (3)

Advanced Study on Criminal Law (3)
General Theories of Criminal Procedure (3)

Theory of Evidence in Criminal Procedure (3)

Special Criminal Acts (3)

Case Studies in Criminal Law and Procedures 1 (3)

Case Studies in Criminal Law and Procedures 2 (3)

Studies On Company Law (3)

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# Interdisciplinary Graduate School of NGOs

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#### Graduate Studies in NGOs

Civil society and NGOs have emerged as one of the most important actors in society in the 21st century and research on both social cohesion and formation. Also, the developmental process of Korean civil society, conceptual studies of civil society, research on political implications, and regional and national comparative studies between the two are being actively developed in the field of social science. In particular, the importance of research on civil society is not limited to an academic perspective but has practical implications for seeking a positive role for civil society in the development of democracy, and its importance is being highlighted. In this context, the Interdisciplinary Graduate Program of NGOs was established in 2002 with the educational goal of cultivating professional manpower in civil society and NGO fields, with the academic goal of establishing NGO studies, and the practical goal of playing a central role in the network of NGO activists and researchers.

# Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

# ■ What Do You Study?

5.18 and Human Rights (3)

May 18 Uprising and NGOs (3)

Theory of Reform Movement (3)

Governance and NGO (3)

Law of International Organizations (3)

International Conflicts and Peace Movement (3)

International Migration and Women (3)

International NGO (3)

History of Human Rights in Modern East Asia (3)

Political History of Modern East Asia (3)

Fundamental Rights (3)

Labor Movements (3)

Rural Society Movements (3)

Urban Society Movements (3)

History of East Asia Relations (3)

Culture Movement and NGOs (3)

Media & NGO (3)

Law and Society (3)

Social Work and NGO (3)

Social Movement (3)

Social Economy (3)

Social Economic Ecosystem (3)

Social Economy and Civil Society (3)

Social Enterprise (3)

Seminar on the Civil Society (3)

Introduction to Civil society & Social movement (3)

Democracy and Participatory Democracy (3)

Civic Participation (3)

Seminar on New Social Movement (3)

Mass Media & Social Movements (3)

Women and Family Policy (3)

Women and Society (3)

Social welfare policy of Women (3)

Women's Movements (3)

Women policy analysis (3)

Research Training 1 (3)

Research Training 2 (6)

Human Rights and International Relations (3)

Democracy and Human Rights (3)

Human Rights and NGO (3)

Studies on Human Rihgts Law (3)

The Philosophy of Human rights (3)

Humanities and Civil Society (3)

Civil Movements via Internet (3)

Capitalism and Social Economics (3)

Voluntaries (3)

Information Society & NGO (3)

Information and Public Sector (3)

NGO and Government (3)

Women in the Third world (3)

Gender political and economic (3)

Local Autonomy (3)

Post Colonialism (3)

Korean Social Movements History (3)

Civil society and NGO in Korea (3)

Advanced Korean Politics (3)

Korea contemporary history (3)

Comtemporary Society & NGO (3)

Environmental Movements (3)

Environmentalism and Ecology (3)

Political Economy for NGOs (3)

NGO and Law (3)

NGO Case Study(I) (3)

NGO Case Study(Ⅱ) (3)

Introduction to NGO Studies (3)

NGOs and Networks (3)

NGOs and Election Politic in Korea (3)

NGO Policy (3)

NGO Research Methods (3)

NGO Administration and Management (3)

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# Department of Intellectual Property Convergence

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# **■** Graduate Studies in Intellectual Property Convergence

The Department's Goal: To nurture intellectual property-based convergence experts who can lead the era of the Fourth industrial revolution and regional innovation industries.

The Department of Intellectual Property Convergence at CNU Graduate School was established with the goal of nurturing intellectual property-based convergence talent who will lead the Era of the Fourth Industrial Revolution and lead regional innovation industries. In order to foster intellectual property experts needed in regional and national industries, the department established a shared intellectual property professional training hub at university and is operating a unique convergence and complex intellectual property curriculum.

#### Degree Requirements

Applicants for the master's degree are required to acquire 24 credits (maximum 10 credits per semester). They must pass comprehensive exams and foreign language exams before successfully defending their theses to obtain the degree.

Applicants for the doctoral degree are required to acquire 36 credits (maximum 10 credits per semester). They must pass comprehensive exams and foreign language exams before successfully defending their dissertations to obtain the degree.

Applicants for a combined master's and doctoral degree are required to acquire 54 credits (maximum 10 credits per semester). They must pass comprehensive exams and foreign language exams before successfully defending their dissertations to obtain the degree.

# ■ What Do You Study?

Patent Law (3)

Trademark Law (3)

Special Research on Intellectual Property Law (3)

Copyright Law (3)

Special Information Management Research (3)

Design Semiotics (3)

Knowledge Management and Artificial Intelligence (3)

Design Seminar (3)

Design Paradigm (3)

Renewable Energy and Intellectual Property (3)

Energy Materials Analysis and IP (3)

Biomedical Signals and Energy (3)

Regional Innovation System and Intellectual Asset

Management Theory (3)

Industry-Academia-Research Partnerships and

Intellectual Property Research (3)

Understanding Intellectual Property (3)

Patent Information Research and Analysis (3)

IP - R&D and Patent Strategy (3)
Trademark and Brand Strategy (3)
Information Society and Copyright (3)
IP Evaluation (3)
Patent Infringement Research (3)
Patent Application Practice (3)
Intellectual Property Research Seminar (3)
Technology Transfer and Commercialization (3)
Special Topics in IP Management (3)
Infringement and Protection of Intellectual Property
Rights (3)
Intellectual Property-Based Synthetic Chemistry (3)
AI Big Data-Based Inorganic Synthetic Chemistry

Intellectual **Property** Protection ofEnvironment-Related Technology (3) Introduction to Green Energy (3) Special Topics in Environment and Energy-Related Intellectual Property (3) Environment and Energy-Related Intellectual Property Seminar (3) Biomedical Intellectual Property (3) Digital Business Intellectual and **Property** Management (3) Technology Management Innovation Theory (3) Special Topics in Quantitative Informatics (3) Intellectual Property Rights and Fair Trade (3)

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# Dental Science

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#### ■ Graduate Studies in Dental Science

The courses provide the ability to acquire rapidly developing knowledge of dentistry, to raise new concerns, to contribute to the development of dentistry through continuous research activities, to solve problems, and to educate acquired knowledge, skills, and research results. It also has a mission to serve the community through education.

#### **■** Degree Requirements

The length of coursework for graduate programs shall be 2 years or more for the master's degree program, 2 years or more for the Ph.D. Program, and 4 years or more for the joint master's and Ph.D. degree program.

Master's degree candidates are required to earn 24 graduate credits (minimum of 9 credits in this department) and Ph.D. candidates are required to earn 36 graduate credits (minimum of 12 credits in this department). Students may not take more than 10 credits a semester. A grade of C or better is acceptable in the master's degree program, and a grade of B or better in the Doctoral Program.

#### ■ What Do You Study?

Removable Partial Prosthodontics

Statistical Applications in Orthodontics

Oral Microbiology

Experiment of Oral Pathology

Prevention of Oral Disease

Oral and Maxillofacial Minor Surgery

Growth and Development of Oromaxillofacial

Tissue

Oral and Maxillofacial imaging

Oral Epidemiology

Oncology of Oral Cavity

Study on Oral Diagnosis & Oral Medicine

Team Approach of Cleft Lip and Palate

Geriatric Dental Health

Ceramic Restoration

Applied Anatomy of the Head and Neck

Oral & Maxillofacial Sonography

Digital oral and maxillofacial surgery

Orthodontic Management of Prosthodontic Patient

Stress analytics of prosthesis using finite elements

method

Technics in Molecular Biology

Adult Dental Health

Pediatric Oral and Maxillofacial Surgery

Surgical Orthodontic Treatment

Esthetic Aspects in Orthodontics

Esthetic Prosthodontics

Esthetic Restorative Materials

Esthetic Dentistry

Functional Jaw Orthopedics

Maxillofacial Traumatology

Orofacial Pain and Dental Neurophysiology Pharmacological Control of Orofacial Pain

Cariology

Interdisciplinary Dentistry1 Interdisciplinary Dentistry2

Implant Surgery 1 Implant Surgery 2

Community Dental Health

Prosthodontic Treatment for Edentulous Patinet

Modern Endodontic Therapy Metallic Dental Materials Molecular Biology in Dentistry

Dental Cements

Current Topics of Dental Materials

Properties and Evaluation of Dental Materials

Pathology of Pulpal & Periapical Diseases

The Dental Pulp Biology Pathology of Dental Caries

Methodology for Dental Research(I)
Methodology for Dental Research(I)
Current Trends of Dental Science(I)
Current Topics of Dental Science(I)
Current Topics of Dental Science(I)
Current Topics of Dental Science(I)
Microbial Aspects of Periodontal Disease
Histophysiology of Periodontal Disease
Current topics in Periodontology
Diseases of Salivary Glands
Specialized Radiographic Techniques

School Dental Health Mixed Dentition Treatment

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#### ■ Graduate Studies in Dental Bioscience

The department fosters creativity and research skills through graduate education with expertise with the aim of forging world-class researchers and competent faculty members who will contribute to dental and life sciences. It strives to develop experts with creative capabilities and nurtures talented people with international perspectives and leadership through the latest knowledge and technologies in dental and life sciences.

#### **■** Degree Requirements

The length of coursework for graduate programs shall be 2 years or more for the master's degree program, 2 years or more for the Ph.D. Program, and 4 years or more for the joint master's and Ph.D. degree program.

Master's degree candidates are required to earn 24 graduate credits (minimum of 9 credits in this department) and Ph.D. candidates are required to earn 36 graduate credits (minimum of 12 credits in this department). Students may not take more than 10 credits a semester. A grade of C or better is acceptable in the master's degree program, and a grade of B or better in the Doctoral Program.

#### **■** What Do You Study?

Physiology of Hard Tissue and Temporomandibular

Joint

Advanced Hard Tissue Biology

Finite elements Method in fixed prosthodontics

Case Planning Seminar TMJ in Orthodontics

Occlusion

Advanced Oral Medicine

Oral Radiology

Review of Recent Studies in Oral Pathology

Special Topics in Oral Physiology Advanced Course of Oral Biochemistry

Current Topics of Oral and Maxillofacial Surgery

Immunopathology of Oral Cavity

Examination for Oral Diagnosis

Modern Removable Partial Denture Current Topics root canal molding

Endodontic microbiology

Geriatric Biology

Gerodontics

Theory of Craniofacial Pain

Molecular Pathology of Head and Neck

Immunology and Vaccines

Radiation Biology

Nonsurgical Periodontal therapy

Surgery-first Orthodontics

Growth Modification in Orthodontics

Pediatric Orthodontics

Orthodontic Treatment for Orthognathic Surgery

Orthognathic Surgery

Pathology for Anomaly in Maxillofacial Region

Maxillofacial Anomaly

Maxillofacial Reconstructive Surgery

Research Guidance 1 Research Guidance 2

surgical micro rootcanal acology

Child Dental Health

Special Lectures on Regenerative Medicine 1 Special Lectures on Regenerative Medicine 2 Precision Attachment in Removable Prosthodontics Tissue Regeneration and Adult Stem Cells

Stem Cell Therapy

Creative Biomedical Science 1 Creative Biomedical Science 2 Growth of Skull After Birth Dental Polymer Materials Dental Implant Materials Developmental Biology in

Dentistry

Molecular Phamacology in Dentistry

Cell Biology in Dentistry

Dental Ceramics

Dental Materials Science

Biocompatibility Testing of Dental Materials

Plup and Periapical Disease Biology of Dental Hard Tissue

Special Introduction to the Research Method of

Dental Life Sciences

Periodontal Orthodontic Interrelationship Microbial Pathogenesis of Periodontal Disease Periodontic and Prosthodontic Dentistry

Salivary Physiology

Pain Control

#### Professors

· See major of Dental Science Professors

# Interdisciplinary Program of Biomedical Engineering

\_\_Contact Information
Phone: +82-62-530-5808

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#### ■ Graduate Studies in the Interdisciplinary Program of Biomedical Engineering

The department's aims are to interpret problems in the medical field, research on advanced medical subjects, and develop advanced medical equipment. the other core goal is to cultivate excellent medical professionals who can contribute to the medical community as well as science and technology through a curriculum composed by related departments.

#### **■** Degree Requirements

The length of coursework for graduate programs shall be 2 years or more for the master's degree program, 2 years or more for the Ph.D. Program, and 4 years or more for the joint master's and Ph.D. degree program.

Master's degree candidates are required to earn 24 graduate credits (minimum of 9 credits in this department) and Ph.D. candidates are required to earn 36 graduate credits (minimum of 12 credits in this department). Students may not take more than 10 credits a semester. A grade of C or better is acceptable in the master's degree program, and a grade of B or better in the Doctoral Program.

#### ■ What Do You Study?

Advanced Hard Tissue Biology Advanced Interface Engineering

Metallic Biomaterials

Advanced Course of Instrumental Analysis

Protein Engineering

Advanced Protein Engineering Diagnostic Radiology of RI

Micro/Nano Robotics

Microcapsule Mechatronics

Biomedical Photonics

Pathology

Hospital information system

Pathophysiology

Advanced Molecular Biology

Advanced Molecular Imaging Introduction to Physiology

Bioinformatics

Advanced Bioseparation & Purification

Advanced Biopolymers

**Biomimetics** 

Biomedical System Modeling and Analysis

Biomedical Signal Processing

Analysis of Biological Signals for Robot

Applications
Cell Technology
Cellular Genetics

Advanced Metabolic Engineering

Esthetic Prosthodontics Advanced Drug Delivery Research Training 1
Research Training 2
Research Guidance 1
Research Guidance 2
Research Guidance 3

Instrumental Analysis for Organic Molecules

Metals and Alloys for Medical Use

Medical Robotics

Introduction to Biomedical Imaging

Medicinal Chemistry

Biomedical Digital System Design

Medical Physics

Biomedical Measurement Biomedical Materials Advanced Biomechanics

Advanced Biofluid Mechanics

Medical Electronics

Medical Control Device

Medical Imaging

Medical Terminology 1 Medical Terminology 2

Current Trends of Medical Science ( I )
Current Trends of Medical Science ( II )

Artificial Neural Network Clincal Electrophysiology

Tissue Engineering

Theory of Perception and Intelligence

Intelligent Control Theory Diagnostic Instrument Current stem cell biology Dental Materials Science Fracture Mechanics Introduction to Anatomy

Image Analysis

#### Professors

- Hoonsung Cho
   [Professor, Biomaterials, cho.hoonsung@jnu.ac.kr]
- Jihoon Kang
   [Associate Professor, Medical Imaging System,
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- Dowon Kim
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- Chang-Moon Lee
   [Professor, Molecular Imaging and Therapy,
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- KangJu Lee
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- Young-Jin Jung
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- Bo Kyeong Yoon
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- In Kyu Park
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- Chang Ho Lee
   [Associate Professor, Biomedical optical imaging, Multimodal imaging, Molecular imaging, ch31037@jnu.ac.kr]
- Keun Bae Lee [Professor, Foot &Ankle, Fracture & Trauma,

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- Sujeong Jang
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- Koh, Jeong-Tae,
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   [Professor, Department of Oral and Maxillofacial Surgery, omskook@jnu.ac.kr]
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- Yun, Kwi-Dug,
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- Hwang, Yun-Chan,
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# Interdisciplinary Program of Perfume and Cosmetic

\_\_Contact Information
Phone: +82-62-530-5808

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URL: http://dent.jnu.ac.kr

#### ■ Graduate Studies in the Interdisciplinary Program of Perfumes and Cosmetics

It aims to cultivate professional manpower to lead the Perfume and Cosmetics industry by acquiring the expertise necessary for the industry.

#### **■** Degree Requirements

The length of coursework for graduate programs shall be 2 years or more for the master's degree program, 2 years or more for the Ph.D. Program, and 4 years or more for the joint/integrated master's and Ph.D. degree program.

Master's degree candidates are required to earn 24 graduate credits (minimum of 9 credits in this department) and Ph.D. candidates are required to earn 36 graduate credits (minimum of 12 credits in this department). Students may not take more than 10 credits a semester. A grade of C or better is acceptable in the master's degree program, and a grade of B or better in the Doctoral Program.

#### ■ What Do You Study?

Transepidermal drug delivery

Surface science

Advanced Biopolymer

Selected topics in Biochemical Engineering

Polymer gel

Instrumental Analysis

Advanced Course of Instrumental Analysis

Functional Polymers functional cosmetics

Advanced Nono Biotechnology

polysaccharide Protein Engineering

Toxicology
Microcapsule
Hair science
Hair coloring
Hair cosmetics

Microbiology

Bioelectronics engineering

Power Technology

Advanced Course for Color Science

biosurfactants Physiology

Pharmacology

Advanced Bioreaction Engineering

Advanced Bioseparation & Purification

Advanced Bioanalysis
Bioconversion Engineering
Biodegradable polymer
Advanced Biopolymers
Advanced Biomaterials
Advanced Biochemistry
Cellular Genetics
Consumer research

Advanced Drug Delivery

Drug Delivery

Research Training 1

Research Training 2

Research Guidance 1

Research Guidance 2

Research Guidance 3

Instrumental Analysis for Organic Molecules

Medicinal Chemistry natural ingredient

Advanced Carbohydrate Materials

Surface Science

Introduced dermatology Advanced dermatology Synthetic chemistry

Fragrance

Cosmetic formulation
Introduced cosmetology
Cosmetic rheology
Cosmetic regulation
Cosmetics ingredients
Cosmetic safety evaluation

Cosmetic evaluation

#### Professors

- Ohk, Seung-Ho,
   [Professor, Department of Oral Microbiology, shohk@chonnam.ac.kr]
- Ji, Taek-soo,
   [Professor, Electronic Engineering,
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- Kim, Il-cheol, [Professor, Functional Genomics, ickim@chonnam.ac.kr]

## Electronic Communication Engineering

#### \_\_Contact Information

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#### ■ Graduate Studies in Electronic Communication Engineering

The Department of Electronic Communication Engineering provides education that will prepare students to be the backbone of this localizing/globalizing society. Students will fully understand the electronic communication development process, and utilize state-of-the-art equipment as well as computer simulations that will develop their creative skills and get them accustomed to the working environment.

#### **■** Degree Requirements

Both master's and Doctoral Programs are normally completed in 2 years. Students wishing to complete the programs in shorter durations are required to earn the necessary credits (24 for a master's and 36 for Ph.D.) and achieve a grade point average of at least 4.3 (out of 4.5). They will also need to obtain the recommendation of their academic adviser and pass the thesis qualification exam.

#### ■ What Do You Study?

Digital Signal Processing Optimization Theory Sensor Engineering Acoustic Engineering

Piezoelectric Ceramic Application Technique Principles of Underwater Sound Communication

Satellite Communication System

Microwave and Millimeter Wave Engineering

Microwave Circuit Design Advanced Wave Engineering Theory and Application of Antenna Microwave Communication System Instrumentation Engineering

VLSI Digital Signal Processing Systems Design of Digital Integrated Circuits

Digital Design
Computer Networks
VLSI Design Automation
Design of Data Converters
Advanced Circuit Theory

Advanced Data Communications

Advanced Mobile Communication Systems

SmartGrid

Deep Learning and Its applications

#### Professors

• Ki-Ryang Cho, Ph.D.
[Professor, Optimization, krcho@jnu.ac.kr]

Seung-yeop Rhee, Ph.D.[Professor, Microwave Engineering,

ysrsy@jnu.ac.kr]

 Han-Seung Jang, Ph.D.
 [Associate Professor, IoT & Machine-to-Machine Communications, Smart Grid, hsjang@jnu.ac.kr] • Dae-Ik Kim, Ph.D. [Professor, Integrated Circuit Design, daeik@jnu.ac.kr]

#### Laboratories

- Electronic Measurement Lab
- Communication Engineering Lab
- Electronic Circuit Lab

- Electrical and Electronic Lab
- Hyper connected intelligent Wireless communication Lab

# Department of Computer Engineering

\_\_Contact Information

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#### ■ Graduate Studies in the Department of Computer Engineering

Leading the information-oriented society, computers are playing a major role in scientific calculation as well as computer communication, office automation, design automation, and artificial intelligence, all of which are crucial to future industry. In order to nurture computer-related human resources, the Department of Computer Engineering offers subjects in computer programs, digital systems, computer structure, databases, computer graphics, artificial intelligence, pattern acknowledgement, embedded systems, SOC design, data communication, and networks.

#### **■** Degree Requirements

Both master's and doctoral programs are normally completed in 2 years. Students wishing to complete the programs in shorter durations are required to earn the necessary credits (24 for master's and 36 for Ph.D.) and achieve a grade point average of at least 4.3 (out of 4.5). They will also need to obtain the recommendation of their academic adviser and pass the thesis qualification exam.

#### ■ What Do You Study?

#### **Required Course**

Research for Master's and Doctor's Degree

#### **Major Courses**

Multimedia System Design Parallel Processing Architecture Interconnection Network System Advanced Computer Graphics Advanced Image Processing Advanced Artificial Intelligence

Soft Computing

Digital Integrated Circuits Advanced Data Communication Advanced Operating System

Advanced Database Digital Signal Processing Advanced Multimedia Computer Vision

Advanced Pattern Recognition
Artificial Intelligence Application

VLSI System Design

Advanced Multi Processor Architecture

Advanced 3D Graphics
Graphics Modeling
Embedded System Design
Advanced Pattern Recognition

Artificial Intelligence Application Embedded software applications

Advanced Real Time Communication Systems

Multimedia Computer Architecture

Advanced Computer Vision

Medical Image Processing Systems

Embedded Software

Mobile Communication

Wide Band Communication Networks Advanced Optimization Methodology

Advanced in Machine Learning

Advanced Embedded System Architecture

Data Mining Methodology Advanced Data Mining

Data Science

Advanced Distributed Processing

Big Data Special Theory

Internet of Things

Introduction to Sensor Network

Advanced Algorithm

Research Traning 1, 2

Hospital Information Communication

Artificial Intelligent Robotics

Advanced to embedded system

Embedded system programming

Advanced topics in Embedded system programming

Next Generation Mobile Communication

Regression Analysis

DSP Specials

R Data Analysis

Advanced R Data analysis

Introduction to Information Security

#### Professors

- .Kang-Chul Kim. Ph.D
   [Professor, VLSI Design, kkc@jnu.ac.kr]
- Chang-Gyoon Lim. Ph.D
   [Professor, Artificial Intelligence, cglim@jnu.ac.kr]

- Gwang-Jun Kim. Ph.D
   [Professor, Computer Communication, kgj@jnu.ac.kr]
- Tai-hoon Kim. Ph.D
   [Professor, Cyber security, taihoonn@jnu.ac.kr]

#### Laboratories

- High Performance Computer Lab
- Embedded System Lab

- Computer Application Lab
- Real-time Communication Lab

### Electrical and Semiconductor Engineering

#### \_\_Contact Information

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#### ■ Graduate Studies in Electrical and Semiconductor Engineering

The Department of Electrical and Semiconductor Engineering is focused on research and development in specific fields, such as power systems, semiconductor and VLSI engineering, power electronics, vision and computer engineering, and automatic controls and mechatronics.

#### **■** Degree Requirements

Master's candidates are required to earn 24 credits (15 credits in electrical and semiconductor engineering). A maximum of 9 credits (earned up to 5 years from the time of enrollment) may be transferred into the program from other graduate schools. Transfer credits are determined by the Department. Master's candidates are required to publish a minimum of one conference paper and one academic society paper. The student's academic advisor is selected by the Department.

#### ■ What Do You Study?

Required Course

Research for Master's or Doctoral Degree

Major Courses Advanced DSP

Motion, Tracking and Stereo Vision

VLSI Circuit Design Emotion Engineering Advanced Robust Control Robot and Machine Vision Advanced Microprocessor

Reliability Engineering of Power System Stability Engineering of Power System

Power Electronics Systems Advanced Power Electronics Power Electronics Project

Analysis of Power Electronics Circuit Advanced Engineering Electromagnetics Advanced Electronic Display Engineering

Advanced Electronics

Advanced Information Security

Probability Stochastic Process Theory

Advanced Probability Control Network Analysis and Synthesis Advanced Matrix Converter

Multimedia Digital Signal Processing

Thin Film Engineering Semiconductor Process

Advanced Semiconductor Engineering

Semiconductor Physics

Advanced Non-linear Control Theory

Industrial Safety Engineering

Advanced Solid Electronic Device Engineering

Advanced Optoelectronics Engineering

Advanced Nano Integrated Circuit Engineering

Neuro Computing

Advanced Digital Image Processing Digital Control Engineering Regulation

Biometrics System

Advanced Linear Control Theory

Plant Diagnosis Theory

Sensor Engineering

Renewable Energy System

Dielectric Engineering

Adaptive Control Engineering

Advanced Electrical Machinery

Economic Engineering of Power System

Data Science

Data Engineering

Deep learning application

Advanced Power System Engineering

Power System Simulation

Power System Operation

Intelligent Control Engineering

Advanced Intelligent System

Automatic Engineering Study

Green Energy Engineering

Advanced Chaos Engineering

Advanced Chaos Control and Synchronization

Advanced Pattern Recognition

Fuzzy-neuro Control Theory

Advanced Plasma Engineering

Advanced Modern Control

· Young-Chul Bae, Ph.D.

Circuit Design and Simulation

#### Professors

- Nam-Sup Choi, Ph.D.
   [Professor, Power Electronics, nschoi@jnu.ac.kr]
- Buhm Lee, Ph.D.
   [Professor, Power Systems, buhmlee@jnu.ac.kr]
- Yang-Hee Joung, Ph.D.
   [Professor, VLSI, Materials, jyanghee@jnu.ac.kr]

# ycbae@jnu.ac.kr] • Kyoung-Min Kim, Ph.D.

[Professor, Chaos Synchronization,

- [Professor, Vision and Signal Processing, kkm@jnu.ac.kr]
- Seong-Jun Kang, Ph.D.
   [Professor, VLSI,Processing and Design, sjkang@jnu.ac.kr]

#### Laboratories

- Power Electronics Lab
- Automatic Controls Lab
- Power Systems Lab
- Semiconductor and VLSI Lab

- Non-linear Dynamics Lab
- Signal Processing and Computer Vision Lab
- VLSI Processing and Design Lab

# Department of Mechanical Design Engineering

\_\_Contact Information
Phone: +82-61-659-7280
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#### ■ Graduate Studies in Mechanical Design Engineering

The Department of Mechanical Design Engineering trains students in industrial technology theory and application methods. The Department fosters creativity and critical thinking amongst its students, in terms of mechanical engineering as the center of advanced technology. Graduates serve as prominent figures in government agencies and research institutions, servicing a broad range of important industries.

#### **■** Degree Requirements

Master's candidates are required to earn 24 credits and successfully complete a research project. Ph.D. candidates are required to earn an additional 36 credits and successfully complete a research project.

#### ■ What Do You Study?

Boundary Layer Theory

Advanced Measurements Engineering

Structural Vibration

Advanced Machine Design Materials for Machines

Computational Turbulence Modelling

Turbulence

Convestive Heat Transfer Advanced Dynamics Macromachine

Radiation Heat Tansfer Composite Materials

Machanics of Composite Materials Noise and Vibration Engineering

Numerical Control Theory of Shell

Experimental Methodsin Thermal Engineering

**Energy Conversion Engineering** 

Research Training 1 Research Training 2

Advanced Combustion Engineering

Continuum Mechanics

Thermal System Design

Advanced Thermal Engineering

Heat Power

Advanced Thermodynamics
Advanced Heat Transfer
Advanced Fluid Mechinery
Advanced Fluid Machanics
Finite Element Method
Applied Mathematics
Transport Phenomena

Advanced Automatic Control Mechanical Behaviorof Materials Computational Fluid Dynamics Numerial Stresses Analysis Radiation Heat Transfer

Optimal Design
Theory of Elasticity
Fracture Machanics
Theory of Plates
Application of Image
Energy and Environment

#### Professors

- Sang-Kyoo Park, Ph.D.
   [Professor, Fluid Engineering and Turbulence, psk@jnu.ac.kr]
- Seung-Uk Ko, Ph.D.
   [Professor, Dynamics Control and Biomedical, kos2@jnu.ac.kr]
- Young-Wan Kim, Ph.D.
   [Professor, Mechanical Design and Mechanics

- of Composite Materials, wannkim@jnu.ac.kr]
- Ki-Seong Kim, Ph.D.
   [Professor, Heat and Particle Imaging Velocimeter, sngkim@jnu.ac.kr]
- Sang-Hun Kim, Ph.D.
   [Assistant Professor, Applied solid dynamics, shkim83@jnu.ac.kr]

#### Laboratories

- Hydrodynamic Lab
- Mechanical Design Lab
- Thermal Engineering Lab

- Applied Mechanics Lab
- Mechatronics Lab
- Modeling and Simulation Lab

# Department of Mechanical System Engineering

\_\_Contact Information

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URL: http://mechauto.jnu.ac.kr/

#### ■ Graduate Studies in Product Mechanical Engineering

Our graduate school deals with academic fields that are based on mechanical engineering. It can be applied from design to manufacture of mechanical systems in various applications. In order to improve the competence of education in a more qualitative way, we develop detailed majors such as thermodynamics, fluid engineering, destructive and vibration, control measurement, and friction, etc. We are also actively conducting research activities by participating in various industry-academia-research projects. It inspires creative solutions to problems faced in the technical field and provides opportunities to apply theories to practice. Thus, we aim to cultivate talented prospect engineers who can play a pivotal role in the field of mechanical engineering in industrial fields and research institutes. And it helps to creatively solve problems in the future high-tech industry by equipping them with theoretical and practical application skills for mechanical engineering

#### **■** Degree Requirements

Master's candidates are required to earn 24 credits and successfully complete a research project. Ph.D. candidates are required to earn an additional 36 credits and successfully complete a research project.

#### ■ What Do You Study?

Research for Thesis

Advanced Dynamics

Advanced Vibration Theory

Advanced Solid Mechanics

Experiment for Stress Analysis

Advanced Combustion Engine

Advanced Fluid Mechanics

Applied Numerical Method of Engineering

Advanced Automatic Control

Advanced Working Machine

Tribology

Advanced Numerical Dynamics

Advanced Vehicle Dynamics

Finite Element Analysis

Advanced Figure Mechanical Behavior

Strength Design of Automotive Component

Advanced Thermodynamics

Advanced Heat Transfer

Advanced Mechatronics

Mechanical Instrumentation Theory and

Application

Advanced Manufacturing

Special Machining

#### Professors

- Kyung-Jo Park, Ph.D. [Professor, Dynamics and Vibration, kjpark40@jnu.ac.kr]
- Chung-Youb Kim, Ph.D.
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- Hei-Cheon Yang, Ph.D.

- [Professor, Thermal and Fluid Engineering, hcyang@jnu.ac.kr]
- 5Hoon Kim, Ph.D.
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- Bong-Ho Moon, Ph.D.[Professor, Tribology, mbh@jnu.ac.kr]

#### Laboratories

- Dynamics Lab
- Mechanics of Mechanics Lab
- Multiphase Flow Lab

- Production Engineering Lab
- Control System Instrumentation Lab

## Department of Smart Plant Engineering

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#### ■ Graduate Studies in Smart Plant Engineering

Smart plants are defined as infrastructure and process automation plants that incorporate information and communication technology (ICT) technology into existing plants to manage real-time process data, events, and provide instant access to critical real-time data.

Smart plants can automate maintenance tasks and equipment management, promote systematic and efficient data management, and create knowledge-based plant services based on this. It also enables plants to achieve integrated digital engineering throughout their entire life cycle, which can maximize plant industry profits by reducing costs and increasing efficiency.

The goal is to create integrated, advanced workforce for smart plants that leverage intelligence element technologies for real-time operation monitoring, facility management/maintenance, process foresight diagnosis, and operation optimization.

#### **■** Degree Requirements

Master's candidates are required to earn 24 credits and successfully complete a research project.

#### ■ What Do You Study?

Advanced MEMS

Advanced microprocessor

Advanced design of product system

Advanced embedded system design

Advanced Computer Vision

Advanced plant mechanical design

Advanced plant data mining

Advanced plant power system

Advanced plant deep learning

Advanced plant big-data analysis

Advanced digital circuit engineering

Advanced mechatronics

Advanced Non-destructive Examination

Engineering

Advanced Numerical Analysis

Advanced analog circuit engineering

Advanced actuator engineering

Research Guidance 1

Research Guidance 2

Research Guidance 3

AI plant system and experiment

Advanced plant structural dynamics

Advanced plant base AI

Advanced plant robotics

Advanced plant piping engineering

Advanced plant sensor engineering

Design and experiment of plant system

Advanced plant material mechanics

Advanced plant control engineering

Advanced plant vibration engineering

#### Professors

- Kang Chung, Ph.D.
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- Kyung-Jo Park, Ph.D.
   [Professor, Dynamics and Vibration, kjpark40@jnu.ac.kr]
- Young-Wan Kim, Ph.D.

### Laboratories

- Applied mechanics Dynamics
- Machine design Lab
- Dynamics Lab

- [Professor, Mechanical Design and Mechanics of Composite Materials, ywkim@jnu.ac.kr]
- Sang-Hun Kim, Ph.D.
   [Associate Professor, Applied solid dynamics, shkim83@jnu.ac.kr]
- Yang-kyu Park, Ph.D.
   [Associate Professor, Micro actuator & sensor, yangkyu.park@jnu.ac.kr]
- Simulate Applied Solid Dynamics Lab
- Micro actuator & sensor Lab

Department of Refrigeration and Air-Conditioning Engineering

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#### ■ Graduate Studies in Refrigeration & Air-Conditioning Engineering

The Department of Refrigeration and Air-Conditioning Engineering aims to cultivate quality human resources in the field of refrigeration and air conditioning, development of heat exchangers and energy-saving machines, cryogenics, utilization of natural energy, and food refrigeration. There have been numerous research projects led by the Department's faculty members and involving numerous graduate students.

Scholarships are available for selected students along with opportunities to attend domestic and international conferences where students can learn about new research and developments in their respective fields and learn how to present themselves in international environments.

The Department of Refrigeration and Air-Conditioning Engineering provides graduate student exchange programs lasting from a month to a year with overseas universities including ACRC at the University of Illinois in the USA, and the Departments of Mechanical Engineering at the University of Tokyo and University of Waseda in Japan.

These exchange programs allow students a chance to improve their research skills and expand their experience with international researchers. Upon finishing a master's or Ph.D. Program, graduates are expected to contribute significantly to research and development on a national and global scale.

#### **■** Degree Requirements

Master's candidates are required to earn 24 credits while Ph.D. candidates must earn 36 credits. Students are able to select their courses upon consulting their academic advisor.

As a general rule, graduate students are limited to earning 9 credits per semester, up to 2 semesters per year. Students who have transferred from other graduate schools may transfer up to 9 credits and 12 credits for master's and Ph.D. programs, respectively.

Master's and Ph.D. degree candidates subbit coursework, including the Korean language proficiency examination.

The Department encourages all students to present and publish research papers at international conferences and in journals.

Master's degree candidates have their theses assessed by three examiners while Ph.D. theses are assessed by five examiners.

Two of the five Ph.D. thesis examiners are from external organizations. Applicants are encouraged

to select their supervisors by contacting faculty are required to pass one foreign language exam. Graduate students must pass examinations upon completing all members at Chonnam National University directly.

#### **■** What Do You Study?

- Advanced Building Environmental Engineering 1, 2
- Advanced Air Conditioning 1, 2
- Advanced Engineering Mathematic 1, 2
- · Advanced Air Conditioning Plan
- Advanced Air Conditioning Equipment and Design 1, 2
- Advanced Refrigeration Fluid Engineering 1, 2
- Advanced Refrigeration Equipment and Design 1, 2
- · Research for Master's or Doctoral Degree
- · Advanced Ship Refrigeration
- · Advanced Noise Engineering
- Advanced Numerical Analysis
- · Advanced System Optimal Design
- Advanced Food Freezing 1, 2
- Advanced Energy Utilizing Engineering 1, 2

- Advanced Energy
- Advanced Thermal Engineering 1, 2
- Advanced Heat Exchanger and Design 1, 2
- Advanced Thermal Engineering 1, 2
- Advanced Sanitary Provision 1, 2
- Advanced Fluid Engineering 1, 2
- Advanced Two-phase Flow 1, 2
- · Advanced Automatical Control
- Advanced Material Engineering 1, 2
- Advanced Low Physical Properties Engineering 1, 2
- Advanced Cold Chain 1, 2
- Advanced Numerical Fluid Mechanics 1, 2
- · Advanced Control Measurements Engineering
- Advanced Vibration Engineering
- Advanced Ultra Cryogenics Engineering 1, 2

#### Professors

- Min-Young Kim, Ph.D.
   [Professor, Food Refrigeration Engineering, kmy@jnu.ac.kr / +82-11-623-6081]
- Ki-Won Park, Ph.D.
   [Professor, Air Conditioning Engineering,
- pkw@jnu.ac.kr/ +82-10-3834-3274]
- Young-Woo Shin, Ph.D.
   [Professor, Mechanical Engineering, (Material Forming), shin5381@jnu.ac.kr/+82-10-3785-3254]

#### Laboratories

#### **Laboratories**

The Department of Refrigeration and Air conditioning Engineering has many Laboratories including the Refrigeration Engineering Lab, Heat Engineering Lab, Energy Engineering Lab, Air Conditioning Lab, Control and Instrumentation Engineering Lab, Food Refrigeration Lab, and Thermal and Fluid Engineering Lab.

#### **Heat Engineering Lab**

The Heat Engineering Lab provides experimental equipment and measuring devices for heat transfer research. The research includes flow patterns and heat transfer characteristics of boiling and condensation inside micro/mini channels, heat transfer enhancement technology and effective heat exchanger design and development, heat transfer

characteristics and energy consumption used in cryogenics refrige- ration, analysis of insulation performance, special quality of heat fluids, and energy saving studies.

#### **Energy Engineering Lab**

The Energy Engineering Lab provides students with energy conversion machines and measuring equipment for energy engineering research. Research in this lab includes district heating and cooling equipment, cogeneration systems, energy diagnosis of building and estimation of heat loss, development of new and potential energy, development of waste heat collection technology, energy saving operations, development of high efficiency heat pump systems, estimation of heat source and propriety examination, and solar energy studies.

#### **Air Conditioning Lab**

The Air Conditioning Lab provides experimental equipment for air-conditioning system research.

Topics studied in the Lab include comfort air and indoor environment control, building development, energy saving appliances, air and earth environment

#### **Refrigeration Engineering Lab**

The Refrigeration Engineering Lab provides students with sophisticated experimental and measurement equipment, used for drop-in testing of alternatives, pure and mixture refrigerants, development and improvement of various refrigeration cycles, cryogenics equipment, improvements protections, plumbing flow characteristic estimations, indoor heat environment assessments, heat storage air-conditioning systems, weather condition standardization for air-conditioning equipment, and windows air circulation development.

#### **Control and Instrumentation Engineering Lab**

The Control and Instrumentation Engineering Lab offers control and instrumentation test devices for graduate students. Research is conducted on operation enhancement of system controls for food and beverages storage, air conditioning environment control, performance improvement of equipment controls, efficient use of refrigeration equipment, solutions for industry control systems, engineering numerical analysis, and computer applications.

#### **Food Refrigeration Lab**

The Food Refrigeration Lab is specifically designed for students wishing to conduct research in the field of food refrigeration technology.

Research is carried out in the fields of operation development of food storage and circulation system, physical and chemical characteristics of food at low temperature storage, heat properties of material changes of food at cryogenics conditions, heat transfer, cryogenics and super conduction utilities application, thermodynamics characteristics of food of freezing processes, thermal diffusions coefficients by thermal conduction model estimations, thermal properties measurement to estimate freezing time of food, controlled atmosphere (CA) storage, and development of after-ripening control systems.

## Civil and Environmental Engineering

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#### Graduate Studies in Marine and Civil Engineering

Graduate programs in Marine and Civil Engineering aim to improve research activities in the fields of structuring engineering, geotechnical engineering, hydraulics, coastal engineering, transportation engineering, surveying and GIS toward enhancing industry productivity and preserving the natural environment. Quality engineers are produced by providing training in theory along with opportunities to apply this knowledge.

#### **■** Graduate Studies in Environmental Engineering

Environmental Engineering focuses on identifying and understanding environmental problems and designing appropriate solutions. Major research areas include air pollution control, water and wastewater treatment, bioremediation, hazardous waste management, and pollution prevention. Environmental engineers have the technical and scientific knowledge to identify, monitor, design, build and operate systems that protect the environment from damage and correct existing problems. Environmental engineers typically work in consulting firms, industries, state and federal agencies, universities or waste treatment companies.

#### Degree Requirements

#### Master's Program

The graduate program aims at instruction of the highest level of academic theory and towards enhancing the research abilities of students. Applicants should have earned an undergraduate degree in good standing in an engineering discipline. Candidates from other backgrounds may be considered if they have suitable qualifications and interests. Master's degree candidates are required to earn a minimum 24 credit hours and submit a thesis based on a research project. These requirements should be fulfilled between two to three years of enrollment.

#### **Doctoral Program**

Ph.D. candidates undertake an individual research project under the general direction of a supervisor and prepare a dissertation presenting their work and findings. The dissertation, which is examined by at least 5 committee members, must make a substantial contribution to the scientific or engineering fields. In addition, students are required to earn at least 60 credits in coursework including the credits already

earned for the master's degree as well as pass one foreign language exam. Degrees are conferred to those who fulfill the requirements between two to five years of enrollment.

#### ■ What Do You Study?

Marine and Civil Engineering Systems

Theory of Elasticity and Plasticity

Artificial Neural Networks

Finite Element Method

Advanced Photogrammetry

Theory of Structural Stability

Advanced Remote Sensing

Advanced Prestressed Concrete Advanced Geographic Information System

Advanced Reinforced Concrete Research for Master's Degree or Doctoral Degree

Structural Dynamics Environmental Engineering

Boundary Element Method Advanced Water and Wastewater Treatment

Earthquake Engineering Advanced Instrumental Analysis

Reliability Engineering Advanced Air Pollution Control Equipment Design

Advanced Applied Mathematics Modeling of Atmospheric Diffusion

Design and Analysis of Special Structure Advanced Atmospheric Chemistry

Theory of Optimum Design Physical and Chemical Processes for Water and

Advanced Soil Mechanics Wastewater Treatment

Advanced Foundation Engineering Special Topics in Pollutant Mixing
Advanced Rock Mechanics Advanced Industrial Gas Treatment

Advanced Ocean Soil Mechanics

Advanced Industrial Wastewater Treatment

Advance Water Supply System Engineering

Theoretical Soil Mechanics

Biological Processes for Water and Wastewater

Advanced Geodesy Treatment

Liquefaction of Soil Noise Control Engineering
Ground Translation Hydrological Simulation

Site Investigation and Reinforcement Techniques Advanced Water Quality Control and Management

Advanced Hydrodynamics Combustion Gas and Particle Control Engineering
Advanced Hydraulics Thermal System Design Engineering

Advanced Hydraulics Advanced Water Treatment Plants
Advanced Hydrology Technique of Watershed Modeling

Coastal Hydraulic Models Fluid Flow and Heat Transfer Design Engineering

Advanced River Engineering Advanced Hazardous Gas Treatment
Water Resource System Advanced Hazardous and Industrial Waste

Advanced Coastal Engineering Treatment

Advanced Harbor Engineering

Advanced Study on Transportation Engineering

Transportation Policies

Mobile Source Control Engineering

Advanced Soil Pollution Management

Advanced Integrate Waste Management

Transportation Planning and Economy Engineering

Traffic Engineering Advanced Waste Treatment Engineering

Advanced Study on Intelligent Transportation Advanced Wastewater Treatment

Advanced Sewage System Engineering
Design of Advanced Wastewater Treatment Plants
Maintenance and Operation of Wastewater
Treatment Plants
Advanced Ocean Environmental Engineering
Environmental Economics
Environmental Toxicology
Advanced Environmental Hydraulics

Advance Environmental Hydrology
Numerical Analysis for Environmental Engineering
Advanced Environmental System Engineering
Advanced Environment and Combustion
Engineering
Advance Environmental Organic Chemistry
Administration and Polices for Environmental
Management

#### Professors

#### **Environmental Engineering**

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# Biotechnology and Chemical Engineering

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#### ■ Graduate Studies in Biotechnology and Chemical System Engineering

The Department of Biotechnology and Chemical System Engineering is open to all students interested in pursuing further studies in the fundamental and applied aspects of biotechnology. The Department's aim is to educate a new generation of young scientists with fundamental knowledge and state-of-the-art research skills to harness the potential of biotechnology for the development of human society in ways harmonious with the natural environment. Both master's and Ph.D. programs are offered.

The Major of Chemical Engineering has the educational aim of studying manufacturing processes of chemicals and operations for the conversion of raw materials into final products, as well as to cultivate creativity and a challenging spirit toward new things. To reach this goal, the department presents a curriculum that centers on teaching the basics in mathematics, physics and chemistry, which stem from the basis of natural science and on helping students to experiment and practice. The spectrum of research and educational opportunities in our department also includes environmental engineering, chemical reaction engineering, particle technology, electrochemical engineering, biochemical engineering, semiconductor processing, polymer and material engineering, The major has produced engineers who have greatly contributed to the nation's industrial development as some of sophisticated experts in inorganic and organic industrial fields including petrochemicals, fertilizers, acid-alkali, rubber, synthetic ibers, biosensor, fine chemicals, ceramics and fine polymers.

#### **■ Degree Requirements**

Master's candidates are required to earn 24 credits and achieve a grade point average of 3.0 (based on a 4.5 scale). Ph.D. candidates are required to earn an additional 36 credits with a grade point average of 3.0 (based on a 4.5 scale). Graduate students must also pass a comprehensive examination in three subjects within a specific major as well as a foreign language examination. All students must successfully complete a thesis presentation and defense and provide all required documents to the thesis committee. The thesis must be submitted in English or Korean. The thesis advisor must be a faculty member within the Department.

#### ■ What Do You Study?

Advanced Microbial Physiology (3)

Advanced Culture Engineering (3)

Radiation Biology (3)

Biotechnology Advanced Biomembranes (3) Advanced Botany (3) Special Topics in Genetic Engineering 1 (3) Advanced Economic Botany (3) Advanced Genetics (3) Topics in Functional Food (3) Phycology (3) Topics in Bioreactor Engineering (3) Research for Master's or Doctoral Degree (1) Topics in Fermentation Technology (3) **Chemical System Engineering** Bioresource Engineering (3) Elective Courses Topics in Ecology (3) Advanced Fine Chemical Process Advanced Biochemistry (3) Advanced Chemical Reaction Engineering Topics in Breeding (3) Advanced Chemical Engineering Thermodynamics Advanced Protein Engineering (3) Advanced Polymer Chemistry Protein Chemistry (3) Advanced Fluid Mechanics Advanced Immunology (3) Advanced Physical Chemistry Topics in Microbial Engineering (3) Fluid Phase Equilibria Advanced Microbiology (3) Advanced Process Control Molecular Genetics (3) Reaction Kinetics Advanced Industrial Microbiology (3) Properties of Polymer Advanced Bioseparation (3) Adsorption Technology Advanced Cell Technology (3) Advanced Engineering Mathematics Advanced Food Engineering (3) Advanced Organic Chemistry Ichthyology (3) The Treatment of Hazardous Materials Special Topics in Genetic Engineering 2 (3) Advanced Chemical Engineering Safety Special Topics in Antioxidants (3) Rubber Engineering Advanced Zoology (3) Advanced Polymer Synthesis Advanced Molecular Biology (3) Catalytic Reaction Engineering Advanced Cell Culture (3) High Pressure Chemical Processes Advanced Food Biotechnology (3) Advanced Catalyst Engineering Special Topics in Culture Engineering (3) Interfacial Phenomena Bioprocess Engineering (3) New Material Engineering Special Topics in Food Biotechnology (3) Advanced Reactor Analysis and Design Advanced Bioactive Material Fermentation Process Analysis and Simulation Technology (3) Properties of Gases and Liquids Special Topics in Breeding (3) Advanced Environmental Chemical Engineering Special Topics in Marine Ecology (3) Polymer Rheology Special Topics in Enzyme Technology (3) **Energy Engineering** Special Topics in Controlling Products (3) C-1 Chemistry Topics in Microbial Engineering 2 (3) Advanced Polymer Materials

Polymer Blend

Advanced Supercritical Fluids Engineer

Topics in Physical Chemistry

Advanced Chemical Engineering Materials Advanced Nano and Bioengineering Advanced Biochemical Engineering Advanced Bioanalytical Chemistry Advanced Biopolymer Advanced Tissue Engineering

#### Professors

#### Biotechnology

- Jin-Man Kim, Ph.D.
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- Byoung-San Moon Ph D.
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#### Chemical Engineering

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- Ho-Joon Seo, Ph.D.
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- Hun-Soo Byun, Ph.D.
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- Soon-Do Yoon, Ph.D.
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- Heon-Ho Jeong, Ph.D.
   [Associate Professor, Bio-application Engineering, jeonghh29@jnu.ac.kr]

#### Laboratories

- Genetic Resources and Molecular Biology
- Cell Culture Technology

#### **Chemical Engineering**

- Polymer Chemistry Lab
- Supervisor: Youn-Sop Kim
- Catalyst and Chemical Reaction Engineering Lab
- Supervisor: Ho-Joon Seo
- Supercritical Fluids Thermodynamics and Chemical Engineering Safety Lab

- Supervisor: Hun-Soo Byun
- Chemical Engineering Materials Preparation Process and Control Lab
- Supervisor: Soon-Do Yoon
- Bio-application Process Lab
- Supervisor: Heon-Ho Jeong

# Department of Architecture

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#### **■** Graduate Studies in Architecture

The Department of Architecture aims to understand the basis of architectural development considering the background of architecture's comprehensive character, rapid innovation of technology, and recognition of various cultures and values. The department cultivates the ability to think critically and comprehensively among its students. In addition, students are encouraged to understand nature, society, and technology through studies in architecture.

#### **■** Degree Requirements

Supervisors are assigned to students based on the preferences of both students and faculty members. Faculty members are limited to supervising up to 5 Master's degree candidates and 3 Ph.D. candidates. Faculty members may not teach more than 2 courses per semester with the exception of jointly taught courses. Students may earn up to 9 credits each semester. Master's degree candidates must earn a total of 24 credits, of which 12 must be from the Department. Ph.D. candidates are required to earn at least 18 credits from the Department.

Among the qualification tests for all graduate students will be a foreign language examination. Students will have to present a thesis plan before submitting the actual thesis. Supervisors will sit in on a thesis supervision committee 6 months prior to submission of a Master's degree thesis and 1 year before the submission of a Ph.D. thesis.

#### **■** What Do You Study?

Computer-aided Architectural Design
Theory of Architectural Planning
Methodology of Architectural Planning
Theory of Architectural Space
Theory of Architectural Project
Theory of Architectural Design 4
Methodology of Architectural Design
Psychology of Architectural
Architectural Environment
Theory of Design's Valuation

Theory of Architectural Design 3
Methodology of Urban Design 2
Theory of Welfare Facility's Design
Theory of Waterfront
Theory of Medical Facility's Design
Japan and East History of Architecture
Theory of Education Facility's Design
Research for Master's Degree
Theory of Complex's Design
Theory of City Planning

Theory of Urban Design
Methodology of Urban Design 1
Theory of Architectural Beauty
Aesthetics of Architecture
Theory of Architectural Design 1
Theory of Architectural Design 2

Theory of Japan and East of Architecture Theory of Garden's Design Theory of Housing Theory of Korea's Architecture Theory of Modern Architecture

#### Professors

- Hyun-tae Kim, Ph.D.
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- sunhyung KIM
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# Department of Sustainable Architecture ICT Convergence

\_\_Contact Information

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# ■ The Department's Goal: To achieve sustainable low-carbon construction education

- Digital Space Architecture Technology: Education focusing on virtual space design, aiming at education to build an online virtual metaspace and train experts in virtual design metacity construction, metaspace planning, and metaspace development in various architectural aspects.
- Low-Carbon Convergence Technology for Carbon Neutrality: The technology aims to develop low-carbon convergence technology in construction engineering. Social issues can also be solved by measures such as utilizing waste materials for carbon neutrality, developing functional new materials related to construction and applying them to building structures, employing structural systems to prevent natural disasters and developing storage devices, and preparing measures to reduce inter-floor noise and solving related difficulties. The department aims to train experts in convergence technology who can provide various solutions.

#### Degree Requirements

#### The Master's degree program

Master's degree applicants must meet all of the following requirements.

- ① Acquisition of 24 credits: Applicants for a master's degree must take 24 credits, including 12 credits from the Department of Sustainable Architecture ICT Convergence under the guidance of an advisor.
- 2 Candidates must pass the comprehensive exam and foreign language test.
- 3 Submission of the thesis copy.
- 4 All requirements above must be met and the candidate must successfully defend the thesis before a thesis committee in order to graduate.

#### The Doctorate program

Doctoral degree applicants must meet all of the following requirements.

- ① Acquisition of 36 credits: Applicants for a doctoral degree must take these 36 credits, including 18 credits from the Department of Sustainable Architecture ICT Convergence under the guidance of an advisor.
- 2 Candidates must pass the comprehensive exam and foreign language test.
- 3 Submission of the dissertation copy.

All requirements above must be met and the candidate must successfully defend the thesis before a thesis committee in order to graduate.

#### Integrated master's and doctorate program

Applicants for the combined master's and doctoral degree must meet all of the following requirements.

- ① Acquisition of 54 credits: Applicants for a doctoral degree must take these 54 credits, including 27 credits from the Department of Sustainable Architecture ICT Convergence under the guidance of an advisor.
- 2 Candidates must pass the comprehensive exam and foreign language test.
- 3 Submission of the dissertation copy.
- All requirements above must be met and the candidate must successfully defend the thesis before a thesis committee in order to graduate.

#### ■ What Do You Study?

# ■ Major in Department of Sustainable Architecture ICT Convergence

Theory of Architectural Space
Architectural Programming
Architectural Design Methodology
High-quality polymer materials
Urban Design Methodology
digital engineering
Theory of Waterfront Design
Tall building structures
the theory of elasticity

Understanding carbon neutrality and embodied carbon
Theory of Environment-Friendly Architecture
Sustainable Material Engineering
Digital Signal Processing
Principle of Urban regeneration
High-quality composite material
Structure Dynamics
Advanced finite element analysis
Programming data analysis
Theory of Urban Planning
Fracture Mechanics

#### Professors

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- Bae Jae-hoon
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- An Hyo-sung
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# Interdisciplinary Program of Biomedical Engineering (Department of Biomedical Engineering)

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#### Graduate Studies in the Interdisciplinary program of Biomedical Engineering (Biomedical Engineering)

The 'Interdisciplinary program of biomedical engineering' at Chonnam National University offers a unique educational experience that integrates principles from engineering, medicine, biology, and other related fields. This program is designed to equip students with a comprehensive skill set and knowledge base to address complex challenges in healthcare, medical research, and the development of innovative medical technologies.

#### **■** Degree Requirements

The 'interdisciplinary program of biomedical engineering' at **Chonnam National University** is designed to provide students with a well-rounded education that combines engineering, medical sciences, and other related disciplines. The degree requirements for such a program are carefully structured to ensure that graduates possess a strong foundation in both theoretical knowledge and the practical skills necessary for addressing complex healthcare challenges. Below are the typical degree requirements for an interdisciplinary program of biomedical engineering:

The master's program requires the completion of 24 credits, while the doctoral program mandates the fulfillment of 36 credits. In addition, the integrated master's and doctoral program necessitates the accumulation of 54 credits for eligibility to receive the Ph.D degree

#### ■ What Do You Study?

Advanced Sensor Engineering

Special Topic in Biomedical Engineering

Research Guidance 1

Research Guidance 2

D 1 G 1 1

Research Guidance 3

Radiation Detection for Medical Application

Advanced Radiation Medical Imaging Modalities

Neural Signal Processing

Special topics in data science

Special topics in artificial neural network in

Biomedical Engineering

Biomedical VHDL Design

Ethics and technical writing

Biomedical Statistics

Big Data Analytics

Monte Carlo Simulation

Photosensor Applications for Medical System

Research Training 1

Research Training 2

Seminar in Biomedical

Special Topic in Biomedical Signal Processing Industry-University Cooperation Project

Understanding of Healthcare Industry

Healthcare and Wellness

electroceuticals
Instrumental Analysis
Smart Theranotics

Advanced Cosmetic Science
Advanced Pharmaceutical Science

Advanced Immunology Biomedical Microdevices

Motion Analysis Digital Therapeutics Neuromodulation Time Series Analysis

AI & Rehabilitation Engineering Computational Medical Imaging

Ergonomics

Digital Healthcare Seminar Neural Engineering Seminar

Rehabilitaion Engineering Seminar

Motion Analysis Seminar Advanced Brain Stimulation Advanced Brain Engineering

Machine Learning and Neural Network

Advanced Biochemical Analysis

Clinical Electroencephalogram Analysis

Brain-Computer Interface Dynamic Neuroimaging

MRI Physics

Advanced MRI Image Processing

AdvancedGenetics AdvancedBiochemistry AdvancedMicrobiology SpecialTopicsinAntioxidant AdvancedCellCulture

SpecialTopicsinFoodBiotechnology SpecialTopicsinEnzymeTechnology

RadiationBiology

AdvancedMicroprocessor

Advanced Digital Image Processing

DigitalControlEngineering

Advanced Nano Intergrated Circuit Engineering

Advanced Biomaterials

Advanced Tissue Engineering Advanced Human Anatomy Advanced Human Physiology

Nano-Bio Engineering Physiological Modelin

Advanced Biomedical Signal Processing

#### Professors

Chang-Moon Lee
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 · Young-Jin Jung

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#### Laboratories

- Nano-biomedical Laboratory
- Medical Imaging Systems Laboratory
- Clinical Neuroengineering Laboratory
- Mediated Bio-Microfabrication Laboratory
- Intelligent Rehabilitation Engineering Laboratory
- Antimicrobial Biotechnology Laboratory
- Thermofluids Laboratory
- Chemical Process and Control Laboratory

- Biological Resources and Genetic Engineering Laboratory
- Cell Engineering Laboratory
- Control Systems Laboratory
- Hyper Connected Intelligent Wireless Communication Laboratory
- Functional Food and Pharmaceutical Material Laboratory

# Department of English Language

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#### **■** Graduate Studies in Department of English Language

The Department of English teaches English language skills necessary for scholarly research, and provides students with in-depth knowledge of a broad range of subjects in the fields of English linguistics and literature. Students can specialize either in English linguistics or British and American literature.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and foreign language exam as well as submit a thesis.

Ph.D. candidates are required to earn 36 credits and pass a comprehensive exam and foreign language exam. Students must also submit a dissertation. An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

#### ■ What Do You Study?

Research Guidance 1 English Semantics
Research Guidance 2 Traditional Grammar

Research Guidance 3 Theory and Practice of Translation

Research Training 1 18-19th Century American and British Novel
Research Training 2 18-19th Century American and British Poetry

English Grammar Elizabethan Drama

Morpheme Semantics

Corpus Linguistics

Background of English Literature

Discourse Analysis

Seminar in English Phonetics

History of the English Language

Contemporary English Syntax

Introducing translation studies Contemporary Semantics

History of English Phonological Theory

Seminar in English Phonology

Eco criticism

Seminar in British and American

Eco criticism

Seminar in British and American Poets Before 20<sup>th</sup>
Environments and English Poetry

Century

General Linguistics

Seminar in British and American Writers Before
English Phonetics

20<sup>th</sup> Century

English Morphology English Literature and Nature

English Literature and Films History of English Literature

English Phonology
English Syntax
English Pragmatics

Psychological Linguistics

English Linguistics and Literature Modern American and British Novel Modern American and British Poetry Modern American British Drama

Literature & Environment

Special Topics in English Syntax

Topics in Semantics

Special Topics in English Phonology Modern British and American Poets Modern British and American Writers

Comparative Literature

Topics on the Contemporary British and American

Fiction
Seminar 1
Seminar 2
Seminar 3

Modern Critical Theory

- Young-Soon Cho, Ph.D.
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- Sung-Kap Yang, Ph.D.
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- Kwan-Young Oh, Ph.D.
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- Han-Nae Yu, Ph.D.
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#### Department of International Commerce

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#### **■** Graduate Studies in Department of International Commerce

#### Interdisciplinary Program of International Commerce

The graduate program in International Commerce offers education and research aimed at investigating the rapidly changing domestic and overseas business environment. The program cultivates specialized experts in international commerce.

#### **■ Degree Requirements**

Master's degree candidates are required to earn 24 credits and pass a comprehensive exam and a foreign language exam as well as submit a master's thesis.

#### ■ What Do You Study?

Advanced Corporate Finance Theory (3) Case Study on Distribution and Logistics (3) Seminar in Regional Studies (3) Topics in International Business Management (3) Special Topics in Finance1 (3) Topics in Theory of Foreign Exchange (3) Special Topics in Finance2 (3) Topics in International Business Strategy (3) Research Training 1 (3) Topics in International Finance (3) Research Training 2 (3) Topics in Multinational Enterprise (3) Topics in Statistics (3) Topics in Marketing Management (3) Topics in International Marketing (3) Topics in Econometrics (3) Topics in International Trade Theory (3) Topics in International Trade Policy (3) Topics in Letter of Credit (3) Topics in International Resource and Topics in International Financial Management (3) Environmental Economics (3) Topics in Foreign Direct Investment (3) Topics in Corporate Foreign Exchange Risk Topics in Overseas Regional Economics (3) Management (3) Topics in Economic Integration (3) Topics in Commercial Practice of International Topics in International Financial Derivatives (3) Trade (3) Case Study on International Commerce (3) Topics in EDI (3) Topics in Electronic Commerce (3) Case Study on International Logistics (3) International Trade Contract and Marine International Negotiation and Foreign Insurance (3) Commercial Custom (3)

#### Professors

- Cheol Lee, Ph.D.
   [Professor, International Economics, clee1@jnu.ac.kr]
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- Gil-sung Kim, Ph.D. [Professor, International Business,

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- Seok-gang Park, Ph.D.
   [Assistant Professor, Strategic Management, parksg1214@jnu.ac.kr]

#### Laboratories

- Internet Trade Practice Lab

- Trade Incubator Lab

# Department of Transportation and Logistics

#### \_Contact Information

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#### ■ Graduate Studies in Department of Transportation and Logistics

Graduate studies in transportation examine issues such as traffic jams, accidents, and air pollution.

The Department of Transportation and Logistics nurtures transportation experts able to resolve these types of problems.

Graduate studies in logistics aim to strengthen international competitiveness by strengthening logistics systems. The Department nurtures experts able to plan, design, and operate these types of logistics systems.

#### **■** Degree Requirements

Ph.D. candidates must earn a total of 36 credits, while master's degree candidates must earn 24 credits. All students are able to earn up to 9 credits each semester. Students must also pass a comprehensive exam and a foreign language exam as well as submit a master's thesis.

An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

#### ■ What Do You Study?

Advanced Operation Research(3)

Research on Supply Management(3)
Research on Supply Chain Management(3)

Transportation economics Seminar(3)

Advanced Transportation Planning(3)
Advanced Analysis of Traffic Flow(3)

Transportation Network Theory(3)

Advanced Database Management for Transportation

and Logistics(3)

Estimation of Traffic Accident Cost(3)

Economic Evaluation for Transport Infrastructure

Investment(3)

Seminar on Traffic Safety(3)

Advanced Capacity Analysis(3)

Seminar on Traffic Operations(3)

Advanced Study on Transportation Polices(3)

Advanced Traffic Control(3)

Global Logistics Seminar(3)

Advanced Study on NationalandRegionalPlanning

Advanced Public Transportation(3)
Advanced Theory of Urban Planning(3)

Urban Modeling Seminar(3)

UrbanLogisticsPlanningTheory(3)

Urban and Regional Economics(3)

Urban Disaster Prevention(3)

Research on Logistics Pricing Analysis(3)

Logistics Management Seminar(3)

research on Logistics cost Calculation(3)

Industrial Organization for Logistics(3)

Advanced Logistics Information System(3)

Logistics Polices Seminar(3)

Research on Logistics Accounting(3)

Advanced Material Handling(3)

Business Analytics(3)
Big Data Analytics(3)

Service Management Seminar(3)

Performance Management Seminar(3)

Transportation Planning Seminar(3)

Forecasting(3)

Research Training 1(3)

Research Training 2(3)

Research Guidance 1(3)

Research Guidance 2(3)

Research Guidance 3(3)

Strategic decision making(3)

Information Technology and Management Inno

vation(3)

Advanced Research Methodology(3)

Capstone Design(3)

Computer Simulation(3)

Application of Statistics(3)

Port Management Seminar(3)

Port Logistics Management(3)

Special Discussion on Freight Transportation(3)

Advanced Green Logistics(3)

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- Jong-Wook Bae [Logistics Systems, jwbae@chonnam.ac.kr]

- Chang-Hyun Kim [Logistics Information Systems, chkim@chonnam.ac.kr]
- Chang-Ho Choi [Freight Transportation, jc1214@chonnam.ac.kr]
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## Department of Culture Contents

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#### ■ Graduate Studies in Department of Culture Contents?

The graduate course covers the topics of content authoring and distribution.

The purpose of the graduate studies is to provide highly qualified information technology (IT) professionals in the field of electronic commerce.

#### Degree Requirements

Master's degree candidates must earn 24 credits. All students are able to earn up to 9 credits each semester. Students must also pass a comprehensive exam and a foreign language exam as well as submit a master's thesis.

An academic advisor is appointed to each graduate student based on the student's interest and with the permission of the advising committee.

#### ■ What Do You Study?

Advanced Research methodology (3)

Advanced Computation Theory (3)

Advanced Electronic Commerce Security (3)

Advanced Information Security (3)

Advanced Information Security (3)

Advanced Mobile Communication (3)

Advanced Multimedia Systems (3)

Advanced Operating Systems (3)

Advanced Web Programming (3)

Computer Vision (3)

Data Mining (3)

Decision Making Methodology (3)

Decision Making Seminar (3)

Digital Culture Business Seminar (3)

E-Business Management (3)

E-Business Strategy (3)

Image Pattern Recognition (3)

Machine Learning (3)

Project Research of Video Content (3)

Research Guidance1 (3)

Research of K-Content Trend (3)

Research Training1 (3)

Research Training2 (6)

RFID System Applications (3)

Security and Privacy (3)

Sensor Networks (3)

Software Development Management (3)

Special Topics in IS Research (3)

Special Topics in New Media Video Content (3)

Topics in Convergence Systems (3)

Topics in Culture Contents Planning (3)

Topics in Embedded Systems (3)

Topics in Graphic and Moving Image Processing (3)

Topics in Information Retrieval Systems (3)

Topics in Internet (3)

Topics in Mobile Systems (3)

Topics in Network Game (3)

Topics in Web Design (3)

Topics in Web Information Systems (3)

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#### Program of East Asia Studies

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#### ■ Graduate Programs in the Department of East Asia Studies

The East Asian Studies Collaborative Program aims to nurture convergence-type high-level human resources that contribute to the realization of innovative growth in the era of the new industrial revolution with novel concepts. It also aims to foster high-quality human resources in the humanities and social sciences who can proactively respond to the paradigm shift in the era of the 4th industrial revolution.

The East Asian Studies Interdisciplinary Program seeks to nurture convergence-type talents related to East Asian regional studies. Therefore, we have established and are operating customized talent development curricula for each semester. Specifically, we have established and run curricula related to East Asian literature, East Asian history, East Asian philosophy, East Asian culture, East Asian tourism, and East Asian maritime culture. In particular, we plan to actively offer foreign language courses such as Chinese, English, and Korean tailored to the needs of foreign students.

#### ■ Degree Requirements

- Doctoral course: Ph.D. candidates must earn a minimum of 36 credits.
- Students are required to pass both the qualifying examination and a foreign language examination.

#### ■ What Do You Study?

East Asia Regional Studies Seminar(3)

East-West cultural exchange history Seminar(3)

East Asia Tea Culture Seminar(3)

East Asia Cultural Studies Seminar(3)

East Asian Cultural Thought(3)

History of East Asia marine culture(3)

Theory of Maritime thoughts(3)

Chinese Literature Seminar(3)

Chinese philosophy Seminar(3)

Chinese literature Selection Seminar(3)

Chinese Tea Culture and Healing Seminar(3)

Chinese culture Seminar(3)

Chinese Regional Studies Seminar(3)

Classical Chinese Literature Seminar(3)

Special Lecture on Linguistics(3)

Special Theory of Marine Informatics(3)

Storytelling and Cultural Tourism Seminar(3)

Culture & Philosophy(3)

Korean Cultural History(3)

Korean traditional culture(3)

Korean Thought History Seminar(3)

Korean Literature and modern culture(3)

Theory of Urban Tourism Seminar(3)

Geography of Tourism Seminar(3)

Theory of Culture Tourism Seminar(3)

Theory of Ocean diffusion(3)

Tourism and Culture Anthropology Seminar(3)

Humanistic Understanding of Tourism Seminar(3)

Cultural Arts and Tourism Seminar(3)

Venture of Management of Tourism Seminar(3)

- Won-Il Cho, Ph.D.
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- Jin-Hee Song, Ph.D.
   [Professor, Chinese linguistics, fu286599@jnu.ac.kr]
- Jun-Ho Kim, Ph.D.
   [Associate Professor, Tourism Management,

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- Eun-Jeong Noh, Ph.D
   [Assistant Professor, Tourism Management, noheun@jnu.ac.kr]
- Hyo-Yeon Park, Ph.D.
   [Associate Professor, Tourism Management, hyopark@jnu.ac.kr]
- Jong-Kyu Kim, Ph.D.
   [Professor, Marine Culture & Engineering, kimjk@jnu.ac.kr]

# Department of Culture and Tourism Management

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#### ■ Graduate Studies in Business Administration

The Department of Culture and Tourism Management promotes the revitalization of the local tourism industry, such as cultural tourism and MICE, and aims to nurture global creative talents who will contribute to the development of the tourism industry, which is attracting attention as a strategic industry for strengthening national competitiveness. Graduates of our major can be active as experts in the overall tourism field, such as cultural tourism and tourism management.

#### **■** Degree Requirements

- Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.
- Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

#### ■ What Do You Study?

Advanced Study on Tourism Resources (3)

Tourism Big Data Analysis (3)

Forecasting Models in Tourism (3)

Tourism Strategy Seminar (3)

International Tourism Seminar (3)

Seminar of Tourism Human Resources Management (3)

Trade Fair Planning Seminar (3)

MICE Tourist Destination Marketing (3)

Incentive Industry Tourism Seminar (3)

Smart Tourist Behavior (3)

Methodology for Research (3)

Advanced Statistics (3)

East Asian Culture and Tourism (3)

Tea Culture Tourism Seminar (3)

Field Trip of Tea Culture Sites (3)

Appreciation and Criticism of Cultural Contents (3)

Special Lecture on East Asian Language (3)

Advanced Study on Urban Tourism (3)

Advanced Topics in Tourism Transportation (3)

Intelligent Transportation Management in Tourism (3)

Tourism Financial Management Seminar (3)

Franchise System Seminar (3)

Analysis of Festival & Event Cases (3)

Convention Management Strategy Research (3)

Current Issues on Mega Event (3)

Leisure Theory Seminar (3)

MICE Industry Partnership Seminar (3)

Basic Statistics (3)

Seminar on Convention & Tourism Applied

Economics (3)

Cultural Anthropology Seminar (3)

Consumer Behavior in Tourism (3)

Tourism and Global Change (3)

Seminar on Service Management (3)

Qualitative Research Methodology of Tourism (3)

Research Methodology of Tourism (3)

Seminar on Tourism Market Research (3) Seminar on Qualitative Research Methodology (3) Tourism Marketing Theories (3) Seminar on Tourism Marketing (3) Sustainable Tourism (3)
Service Management (3)
Tourism Research Design (3)

#### Professors

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• Won Il Cho, Ph.D.

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• Eun Jeong Noh, Ph.D.

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• Joon Ho Kim, Ph.D.

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• Young Uk Um, Ph.D.

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• Jin Hee Song, Ph.D.

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#### Interdisciplinary Program of Smart City

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#### ■ Graduate Studies in the Smart City Interdisciplinary Program

The study of Smart Cities are an emerging field that focuses on the next-generation urban concept, where the Internet of Things (IoT) and Artificial Intelligence (AI) technologies are integrated into urban infrastructures, such as roads, ports, airports, and individual buildings. Its aim is to address various urban challenges of the 21st century, including transportation, energy, environment, and housing issues, while generating sustainable value.

This course educates students to respond to the rapidly evolving paradigm shift in urban development based on the basic knowledge of urban planning, architecture, and civil engineering acquired in undergraduate studies. In particular, the main goal of education is to nurture high-quality professionals with advanced technology expertise in the field of urban studies, such as IoT, AI, and big data, which are essential for realizing smart cities.

#### **■** Degree Requirements

- Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.
- Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

#### ■ What Do You Study?

Smart City Introduction

Smart City Planning And Design

Smart Parking Design

Study on Smart City Act

Urban Economics

Urban and Regional Tourism Development

Urban Regeneration and Development Analysis

Smart Tourism

R Data Analysis

Data Mining

Transportation Planning And Economics

Transport Policy

Advanced Transportation Engineering

Intelligent Transport Systems

Maritime Intelligent Transport Systems

Advanced Artificial Intelligence

Artificial Neural Network

Application of Artificial Intelligence

Computer Vision

Advanced Image Processing

Advanced Remote Sensing

Advanced Photogrammetry

Advanced Geographic Information System

Internet of Things

Smart Mobile Communication

Medical Information Communication

IoT of Smart City

Multimedia System Design Barrier-Free Urban Design

Architectural Design Methodology

Advanced Modern Architecture

Waterfront Design
Theory of Housing

Welfare Facility'S Design System Engineering

Disaster Management Theory

Advanced Disaster Geographic Information

Advanced Coastal Engineering

Geodynamics

Advanced Port Engineering

Research Training 1

Research Training 2

Research Training 3

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#### Fisheries Science

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#### ■ Graduate Studies in Fisheries Science

The aim of the Department of Fisheries Science is to contribute to the development of the nation and human society by advancing academic theories and applicable methods, and producing human resources with leadership and great creative talent. The Graduate School fosters excellent talent who will advance fisheries industries with professional knowledge. Students carry out theory and practice together, and study fishery, harbors, shipping and aquaculture. The Department of Fisheries Science consists of 2 majors: Marine Production Management, and Fishery Biology and Aquaculture.

#### ■ Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam.

Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

#### ■ What Do You Study?

Taxonomy Invertebrate (3)

Adhesion Biology (3)

Advanced Fisheries Oceanography (3)

Benthos Ecology (3)

Marine Invertebrate Zoology (3)

Aquafarm Environmental Ecology (3)

Endocrinology (3)

Advanced Developmental Biology (3)

Advanced Biochemistry (3)

Advances Cell Biology (3)

Advances Fish of Fresh Water Culture (3)

Advanced Marine Fish Culture (3)

Advanced Taxonomy Algal (3)

Trait and Group Genetics (3)

Breeding Technoscience (3)

Advances Algae Physiology Ecology (3)

Algae Cultivation Technoscience (3)

Island Biology (3)

Zooplankton Feed Biology (3)

Phytoplankton Feed Biology (3)

Advances Marine Invertebrate Seed Production (3)

Marine Restoration Ecology (3)

Marine Invertebrate Zoology Culture (3)

Advances Fish Seeds Production (3)

Advances Aqua System (3)

Advanced Science of Aquatic Resources (3)

Systematic Ichthyology (3)

Biology of Fish Larva (3)

Advanced Marine Ecology (3)

Fish Ecology (3)

Advanced Conservation Biology (3)

Biological Statistics (3)

Invertebrate Physiology Ecology (3)

Advanced Ichthyology (3)

Algal Culture Technoscience (3)

Advanced Agriculture and Fisheries Market

Structure (3)

Advanced Food Economics (3)

Advanced Fisheries Administration (3)

Advanced Fisheries Law (3)

Fishing Ground Management (3)

Advanced Biology (3)

Fish Physiology (3)

Advanced Molecular Biology (3)

#### Professors

• Won Kyo Lee, Ph.D.

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· Sang Duk Choi, Ph.D.

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#### Laboratories

- Reproductive Biology Lab
  - · Reproductive Cycle of Marine Organisms
- Fish Thremmatology Lab
  - · Nutritional Studies of Fish
- Reproductive Biology Lab
  - · Basic Disciplines of Fish
- Marine Ecological Restoration Lab
  - · Biological Components of Marine Ecosystems, Ecological Studies
- Form Environmental Ecology Lab
  - · Chemical Ecology and Marine Invertebrate Ranch Development
- Resource Biology Physiology Lab
  - · Fisheries Biological Studies on Physiology of the Body

## Department of Aqualife Medicine

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#### **■** Graduate Studies in Aqualife Medicine

The Department of Aqualife Medicine enables students to launch professional careers in the field through exposure to both balanced research and education. Students who engage with the department have the opportunity to develop their skills and knowledge in various areas related to fish and shellfish health, pathogenesis, disease factors, fish medicine, water environments, and host defense of aquatic organisms. Research projects cover a broad range of needs including fish medicine, fisheries industries, and the food safety of fish and shellfish.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam.

Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

#### ■ What Do You Study?

Experimental Theory of Immune Biochemical

Techniques

Cell Biology of Fish Established Cell Lines

Biochemistry of Fish Viruses

Virulence Theory of Fish Pathogenic Viruses

Molecular Epidemiology of Fish Viruses

Pharmacokinerics in Fish

Convergence Research Design

Planning of Research Project

Management of Fisheries Disease Control Center

Field Management of Fish Diseases 1

Field Management of Fish Diseases 2

Field Management of Fish Diseases 3

Current Topic in Bacterial Fish Pathogens

Ecology of Drug Resistance Bacteria

Microanatomy of Fish

Topics in Morphogenesis

Microanatomy of Invertebrates

Cell Pathology

Advanced Fish Diseases and Nutrition

Diagnosis of Aquatic Animal Diseases 1

Diagnosis of Aquatic Animal Diseases 2

Fish Virology

Fish Parasitology

Ecology of Aquatic Pathogens

Health Control of Fishery Products

Advanced Environmental Disease

Topics in Environmental Analysis

Experimental Data Analysis

Advanced Aquatic Animal Physiology

Environmental Physiology

Advanced Aquatic Toxicology

Research Methodology

Prevention of Epizootics

Advanced Fish Immunology

Advanced Fish Pathology

Immunological Research Methods

Invertebrate Immunology

Clinical Pathology

Advanced Instrumenal Analysis

Topics in Applied Fish Pharmacology

Safety Control of Fisheries Products

Advanced Diseases of Inveterates

Principles of Fisheries Drug

Topics in Bioactive Natural Products

Introduction of Bioinformatics

Cell Ultrastructure

Advanced Diagnostic Methodology

Topics in Anti-Infectives

Current Topics in Immunostimulants

Topics in Biosecurity in Aquatic Organisms-

Topics in Biological Control-

Mechanisms of Fish Virus Infection

Vaccinology of Fish Viral Infection

ImmunoHistoChemistry

Molecular Virology

#### Professors

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- Heung-Yun Kim, Ph.D.
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- Sung-ju Jung, Ph.D.
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- So Young Kang, Ph.D.
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- Toyohiko Nishizawa, Ph.D.
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- Wi-Sik Kim, Ph.D.
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#### Laboratories

- Microbiology Lab
- Histopathology Lab
- Fish Disease Diagnostics Lab
- Environmental Physiology Lab

- Fish Disease Prevention Lab
- Pharmacology Lab
- Fish Virology Lab
- Clinical Lab

### Food Technology & Nutrition

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#### ■ Graduate Studies in Food Technology & Nutrition

The objectives of the Department of Food Technology and Nutrition are i) to educate and research various disciplines as well as new theories and application technology related to food technology and nutrition in more depth, and ii) to nurture talent students with adaptability against rapidly changing food environment and nutritional problems.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. Candidates are required to earn 36 credits. Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Graduate students are also required to pass the comprehensive exam, foreign language exam and submit a thesis.

#### ■ What Do You Study?

Advanced Food Chemistry (3)

Advanced Food Science (3)

Carbohydrate Chemistry (3)

Lipid Chemistry (3)

Principles of Nutrition Interaction (3)

Advanced Food Preservation (3)

Advanced Nutrition (3)

Advanced Nutritional Biochemistry (3)

Analytical Chemistry (3)

Chemistry of Food Color & Pigments (3)

Chemistry of Food Flavor (3)

Advanced Instrumental Analysis (3)

Advanced Biochemistry (3)

Advanced Nutritional Chemistry (3)

Food Toxicology (3)

Nutrition for Fitness and Sports (3)

Nutrition in Life Cycle (3)

Community Nutrition (3)

Nutritional Research 1 (3)

Nutritional Research 2 (3)

Advanced Nutrition Theory (3)

Mineral Nutrition (3)

Vitamin Nutrition (3)

Nutrient Metabolism (3)

Clinical Nutrition Research (3)

Animal Experiments in Nutrition (3)

Advanced Nutrition Education (3)

Sensory Evaluation of Food (3)

Food Service Industry (3)

Diet & Disease (3)

Advanced Nutrition Counseling Education (3)

Advanced Cooking Science (3)

Physiopathology (3)

Advanced Statistics for Natural Scientists (3)

Clinical Nutrition Treatment 1 (3)

Clinical Nutrition Treatment 2 (3)

Clinical Nutrition Practice 1 (3)

Clinical Nutrition Practice 2 (3)

Evaluation of Functional Materials (3)

Advanced Functional Foods (3)

Physiological Active Substances (3)

Advanced Protein Chemistry (3)

Advanced Food Enzymes (3)

Advanced Natural Products Chemistry (3)

Advanced Enzyme Chemistry (3)

Molecular Biology (3)

Advanced Fermentation Technology(3)

Advanced Food Microbiology (3)

#### Management for Food Hazard Point (3)

Advanced Antibiotics (3)

Advanced Food Additives (3)

Advanced Applied Microbiology (3)

Advanced Food Hygiene (3)

Advanced Food Engineering (3)

Physical Properties of Foods (3)

Food Rheology (3)

Advanced Marine Resources Processing (3)

Advanced Seaweed Processing (3)

Food Stuff Technology (3)

Advanced Fisheries Chemistry (3)

Advanced Seafood Processing (3)

Food Resources Processing (3)

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- Gin-Nae Ahn, Ph.D.
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- Sun-Hee Cheong, Ph.D.
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#### Naval Architecture and Ocean Engineering

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#### ■ Graduate Studies in the Department of Naval Architecture and Ocean Engineering

Naval architecture and ocean engineering focuses on research and education in a variety of areas from basic theory to advanced technology on ship and offshore structures. The final goal of the Department lies in the design and production of the reliable and cost-effective transport systems and offshore structures which can carry out missions successfully in harsh ocean environments. The research scopes of naval architecture consist of resistance and propulsion, propulsor, structures and materials, motion and maneuverability, noise and vibration, and welding. Ocean engineering involves various scopes of technical problems that arise during the design, construction, load-out, and operation of various forms of structures developed to meet the needs of offshore petroleum and construction industries. Research on the ocean environment itself is also one of the major research fields of the Department. To meet increasingly complex technical demands, the Department extends research fields to cover rigorous analysis of detailed subjects using powerful computers. In particular, it offers on-board training courses on university-owned research and training ships.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam. Students who gain 4.0 in a semester are allowed to take up to 12 credits in the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

#### ■ What Do You Study?

Boundary Layer Theory(3)

Advanced ship outfitting(3)

Advanced Structural Dynamics(3) Advanced hull corrosion protection(3)

Advanced Structural Design(3) Advanced hull manufacturing automation(3)

Advanced Structural Analysis(3)

Advanced shipbuilding welding(3)

Advanced Ecological Engineering(3) Advanced theory of ship vibration(3)

Advanced shipbuilding process(3) Advanced theory of noise control(3)

Advanced Marine Auxiliary Machinery(3)

Advanced Fisheries Physics(3)

Advanced theory of ship motion and control(3) Advanced Numerical Methods(3)

ReliabilityandProbabilisticEngineeringDesign(3)

Advanced Hydrodynamics(3)

Finite Element Method(3)

Advanced Applied Mechanics(3)

AdvancedComputationalStructuralAnalysis(3)

Computational Fluid Mechanics(3)

Advanced Optimal Design(3)

Sediment Transport and Littoral Processes (3)

AdvancedCoastalandHarborEnginering(3)

Coastal and Ocean Numerical Modelling 1(3)

Coastal and Ocean Numerical Modelling 2(3)

Advanced Marine Measurement(3)

On-siteandProjectStudyonOceanEngineering(3)

SpecialTopicsonMarineSurveyTechniques1(3)

Analysis of Offshore Structure(3)

Introduction to Ocean Thought(3)

Advanced Ocean Ecosystem Modelling(3)

Advanced Dynamical Oceanography(3)

Advanced Operational Oceanography(3)

Advanced Ocean Remote Sensing(3)

Ocean Data Assimilation and Inverse Method(3)

Advanced Ocean Information Analysis(3)

Advanced Ocean Informatics(3)

Advanced Marine Geographical Information

System(3)

Advanced Water Wave Mechanics(3)

Turbulent Diffusion Theoryinthe Ocean(3)

Environmental Planning Methods(3)

Advanced Marine Environmental Engineering(3)

#### Professors

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- Il-Heum Park, Ph.D.

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- Jong-Kyu Kim, Ph.D.

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- Hee-Jong Choi, Ph.D.
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- Jee-Hun Song, Ph.D.
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#### Environmental Oceanography

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#### ■ Graduate Studies in Environmental Oceanography

The graduate program in Environmental Oceanography utilizes scientific and technological education and the application of marine environment studies. Students wishing to be advanced researchers in the field may choose from among 8 majors offered through the program.

#### Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam.

Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits in the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

#### ■ What Do You Study?

Advanced Aquatic Environmental Processes (3)

Advanced Biology of Water Pollution (3)

Advanced Chemical Oceanography (3)

Advanced Coastal Oceanography (3)

Advanced Community Ecology (3)

Advanced Ecology of Fisheries Resources (3)

Advanced Estuary Ecology 1 (3)

Advanced Estuary Ecology 2 (3)

Advanced Evolutionary Ecology (3)

Advanced Fisheries Oceanography (3)

Advanced Geological Oceanography 1 (3)

Advanced Geological Oceanography 2 (3)

Advanced Intertidal Ecology (3)

Advanced Marine Biology of Benthos (3)

Advanced Marine Conservation Biology (3)

Advanced Marine Conservation Ecology (3)

Advanced Marine Ecology (3)

Advanced Deep Sea Biology (3)

Advanced Marine Planktology (3)

Advanced Marine Pollution (3)

Advanced Marine Pollution Control (3)

Advanced Marine Pollution Ecology (3)

Advanced Marine Sedimentology (3)

Advanced Marine Zooplanktology (3)

Advanced Ocean Bio-Genetics (3)

Advanced Ocean-Ecotoxicology 1 (3)

Advanced Ocean-Ecotoxicology 2 (3)

Advanced Ocean Environmental Condition (3)

Advanced Physical Oceanography 1 (3)

Advanced Physical Oceanography 2 (3)

Advanced Red Tides (3)

Environment Analysis of Fishing Area (3)

Environment of Fisheries Oceanography (3)

Fisheries Physical Oceanography (3)

Fluid Dynamics for Oceanography (3) Instrumental Analytical Chemistry (3) Marine Environmental Ecology (3) Ocean Animal Behavior (3) Ocean Eco-informatics (3) Paleo Oceanography 1 (3)
Paleo Oceanography 2 (3)
Regional Oceanography (3)
Water Quality Control of Aquatic Culture Systems (3)
Zooplankton Taxonomy (3)

#### Professors

- Yeon Gyu Lee, Ph.D.
  [Professor, Marine Geology, lyg6342@jnu.ac.kr]
- Hyun Chool Shin, Ph.D.
   [Professor, Marine Benthic Ecology, shinhc@jnu.ac.kr]
- Hyeon Seo Cho, Ph.D.

  [Professor, Chemical Oceanography, hscho@jnu.ac.kr]
- Ho Young Soh, Ph.D.
   [Professor, Zooplankton Systematics and Ecology, hysoh@jnu.ac.kr]
- Ihn-Sil Kwak, Ph.D.
   [Professor, Zoology, iskwak@jnu.ac.kr]
- Yoonja Kang, Ph.D.
   [Assistant Professor, Phytoplankton Ecology, yoonjakang@jnu.ac.kr]

#### Laboratories

- Bio-environmental Science Lab
- Marine Geology Lab
- Physical Oceanography Lab
- Benthic Ecology Lab

- Chemical Oceanography and Environmental Pollution Lab
- Species Diversity and Ecology Lab
- Animal Behavior and Observation Lab

#### Department of Power System Engineering

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#### ■ Graduate Studies in Power System Engineering

Power System Engineering is an academic field combining the mechanical engineering and the electrical/electronics engineering. Power System Engineering deals with the design, manufacture, control, and management of power machinery, thermal-fluid machinery, electrical/electronics machinery, etc. The Department of Power System Engineering aims for nurturing experts with state-of-the-art technology in the field of power system engineering. The department consists of five laboratories: internal combustion engine, hydraulic-pneumatic control, heat-fluid, applied mechanics, and electro-mechanical energy conversion.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

Doctoral degree candidates are required to earn 36 credits, up to 9 credits each semester. Candidates also have to pass a comprehensive exam and a foreign language exam as well as submit a thesis.

#### ■ What Do You Study?

Advanced Engineering Mathematics

Image Visualization Engineering

Advanced Solid Mechanics Advanced Air Conditioning

Advanced Measurement System

Advanced Engineering Mathematics

Advanced Engineering Thermodynamics 1

Advanced Machine Tools

Advanced Manufacturing Processes

Advanced Machine Design

Advanced Mechanical System Dynamics

Advanced Mechanical Dynamics Advanced Mechanical Vibration

Advanced Gas-Dynamics

Turbulence

AdvancedInternal Combustion Engine 1

AdvancedInternal Combustion Engine 2

Advanced Dynamics

Control of Dynamic System Analysis of Dynamic System

Advanced Robotics
Advanced Mechatronics

Advanced Numerical Analysis
System Design(Capstone Design)

Advanced Energy Engineering

Advanced Combustion Measurement System

Advanced Combustion Engineering 1 Advanced Combustion Engineering 2

Continuum Mechanics

Advanced Heat Exchangerand Design Advanced Thermal Power Engineering

Advanced Thermodynamics 2

Advanced Heat Transfer 1 Advanced Heat Transfer 2

Advanced Joiningand Welding Engineering Advanced Hydraulic-Pneumatic Control

Advanced Hydraulic Engineering Advanced Fluid Machinery Advanced Fluid Mechanics

Finite Element Method

Advanced Lubrication Engineering

Applied electromagnetics
Transport Phenomena
Electromagnetic field theory

Designand Control of Automatic System

Advanced Electric Machinery

Electric machine technology convergence capstone

design

Electric machine analysis

Advanced Motor Control Theory Electroc machine application theory

Advanced Computational Solid Mechanics Advanced Computational Fluid Mechanics

Advanced Accurate Machining

Superconducting electric machine theory

Advanced Optimal Design

Studyon on Computer Simulation

Advaced Control System with Computer

Advanced Elasticity

Special machines application theory

Rotor Dynamics

#### Professors

- Kyong-Uk Yang, Ph.D.
   [Professor, Hydraulic-Pneumatic Control, yangku@jnu.ac.kr]
- Woo-Gyeong Wang, Ph.D.
   [Professor, Internal Combustion Engine, wangwk@jnu.ac.kr]

#### Laboratories

- · Applied Mechanics Lab
- Hydraulic-Pneumatic Control Lab
- Internal Combustion Engine Lab
- · Heat-Fluid Lab
- Electro-Mechanical Energy Conversion Lab

- Myung-Soo Choi, Ph.D.
   [Professor, Mechanical Vibration, engine@jnu.ac.kr]
- Kyung-Hun Shin, Ph.D.
   [Assistant Professor, Electric Machine. kshin@jnu.ac.kr]

#### Department of Maritime Police Science

\_\_Contact Information

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E-mail: ksprof@jnu.ac.kr

URL: http://sea.jnu.ac.kr/sites/police/index.do

#### ■ Graduate Studies in Department of Maritime Police Science

In response to the rapid development of the maritime industry and the increasing population engaged in maritime activities, there is a growing emphasis on maritime safety. The Department of Maritime Police Science aims to systematically train maritime police professionals. Through academic cooperation with the Yeosu Maritime Police Education Institute of the Maritime Police Agency, the department specializes in maritime police studies for current practitioners. With over 20 years since its establishment as an undergraduate program, there are sufficient graduates from the Department of Maritime Police Science who can pursue systematic research in graduate studies.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive/general exam and a foreign language exam. Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

#### **■** What Do You Study?

Advanced International Law (3)

Advanced Fisheries and Oceanography (3)

Advanced Maritime Police Science (3)

Advanced Criminal Law (3)

Advanced Criminal Procedure Law Seminar (3)

Advanced Public Law Research (3)

Advanced Maritime Crime Studies (3)

Advanced Fisheries Law and Regulations (3)

Advanced Maritime Safety Engineering (3)

Advanced Maritime Law (3)

Advanced Maritime Transportation Law (3)

Advanced Police Science (3)

Advanced Police Investigation (3)

Advanced Maritime Police Science (3)

Advanced Criminal Policy (3)

Advanced Maritime Patrol (3)

Advanced Maritime Security (3)

Advanced Maritime Information (3)

Advanced International Maritime Law (3)

- Dal-hyun Park, Ph.D. [Professor, Criminal Law, dhpark328@jnu.ac.kr]
- Duck-jong Jang, Ph.D.
   [Professor, Marine Safety, Navigation, Marine Pollution response, jdj@jnu.ac.kr]

- Ki-Soo Lee, J.S.D.
   [Professor, Criminal Law, Police Science, ksprof@jnu.ac.kr]
- Ho-Sam Bang, Ph,D.
   [Professor, International Law of the Sea, Maritime Law, hosamms@jnu.ac.kr]

#### BIg data Fishery Resource Management Interdisciplinary Program

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#### ■ Graduate Studies in Fisheries Science

The program has been designed to further the development of fishery resource management specialists to solve pending issues in the flood field, development and utilization of 4th industrial technology related to the flood field, and development of field-tailored fishery resource management specialists.

#### **■** Degree Requirements

Master's degree candidates are required to earn 24 credits to graduate. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam.

Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

#### ■ What Do You Study?

Acoustics Fishing Methodology (3)

Advanced Analysis of Seawater (3)

Advanced Coastal Oceanography (3)

Advanced Developmental Biology (3)

Advanced Feeding Ecology of Fishery Resources (3)

Advanced Fisheries Business Management (3)

Advanced Fishery Resources Model Based on

Marine Ecosystem (3)

Advanced Fishing Management (3)

Advanced Ichthyology (3)

Advanced Marine Animal Taxonomics (3)

Advanced Marine Benthic Fauna (3)

Advanced Marine Conservation Biology (3)

Advanced Marine Data Analysis 1 (3)

Advanced Marine Data Analysis 2 (3)

Advanced Marine Planktology (3)

Advanced Marine Pollution (3)

Advanced Marine Zooplankton Ecology (3)

Advanced Sciencw of Aquatic Resources (3)

Advencesin Invertebrate Taxonomy (3)

Big Data Analytics and Practice (3)

Bioinformation (3)

Biological Production Marine Lower Trophic

Levels (3)

Community Advanced (3)

Fish Ecology (3)

Fisheries Data Processing (3)

Fishery Resources Assessment (3)

Fishery Resources Management Based on ICT (3)

Fishing Ground Safety Management (3)

Fishing Methods and Ecology (3)

Image Pattern Recognition (3)

Machine Learning (3)

Metagenomics (3)

Oceanic Data Processing and Analysis 1 (3) Statistics for ICT Marine Biology (3) Topics in Convergence System (3)

#### Professors

- Ho Young Soh Ph.D.
   [Professor. Zooplankton Diversity hysoh@jnu.ac.kr, +82-61-659-7147]
- Hyun Chool Shin Ph.D.
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- Hyeon Seo Cho Ph.D.
   [Professor.Marine Chemical Oceanography hscho@jnu.ac.kr +82-61-659-7146
- Won-Kyo LEE Ph.D.
   [Professor. Reproduction organism wklee196@jnu.ac.kr, +82-61-659-7161]
- Kyeong Ho Kang, Ph.D.
   [Professor. Invertebrate Culture mobidic@jnu.ac.kr, +82-61-659-7165]
- Sang Duk Choi, Ph.D.

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- Hyi Thak Chong Ph.D.
   [Professor. Bioinformatics

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- Taeho Kim Ph.D. [Professor. Fisheries Engineering kimth@jnu.ac.kr, +82-61-659-7121]
- Duck Jong Jang Ph.D.
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- Man Ki Jeong Ph.D.
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- Jeong Seon Park Ph.D.
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- Soon Hee Han Ph.D. [Professor. Multimedia System shhan@jnu.ac.kr, +82-61-659-7432]
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# Interdisciplinary Program of Smart Aqua Farm

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#### ■ Graduate Studies in Interdisciplinary Program of Smart Aqua Farm

The Program's Goal: The Interdisciplinary Program of Smart Aqua Farm organizes a curriculum that combines traditional aquaculture with Fourth Industrial Revolution technologies such as information and communication technology (ICT), big data, and artificial intelligence (AI) to cover aquaculture organism production, aquaculture system, environment, and electricity.

#### **■** Degree Requirements

Applicants for the master's degree are required to acquire 24 credits, including 12 credits from the Interdisciplinary Program of Smart Aqua Farm and 6 credits from required subjects. Applicants for the doctoral degree are required to acquire 36 credits, including 18 credits from the Interdisciplinary Program of Smart Aqua Farm and 9 credits from required subjects. Candidates for all degree programs must pass the comprehensive exam and foreign language test before submitting a thesis / dissertation in order to obtain the degree.

Students are recommended to obtain 9 credits in the first semester of the program. Those who record an average GPA of 4.0 or above can acquire a maximum 12 credits next semester. Students are not supposed to earn more than 6 credits from courses offered by their advisor professor.

#### ■ What Do You Study?(\*Required subjects)

Advanced Sensor Engineering (3)

Fish Physiology (3)

Field Management of Fish Diseases 1 (3)

Smart Imaging Diagnostics\* (3)

Advanced Smart Aquaculture System\* (3)

Advanced Smart Aquaculture Automation

Technology and Application\* (3)

Smart Fish Health Care\* (3)

Smart Water Management \* (3)

Water Quality Control of Smart Aquaculture\* (3)

Advanced Fisheries Bio-informatics (3)

Special Topics in ICT-Based Fish Behavior\* (3)

Shared Data Analysis (3)

Edge Computing (3)

Computational Stress Analysis (3)

Optimal Design (3)

Infectious Disease Prevention (3)

Immunity Research Methods (3)

Clinical Pathology (3)

Special Topics in Instrumental Analysis (3)

Special Topics in Fish Pharmacology (3)

Special Topics in Embryology (3)

Marine Invertebrate Zoology (3)

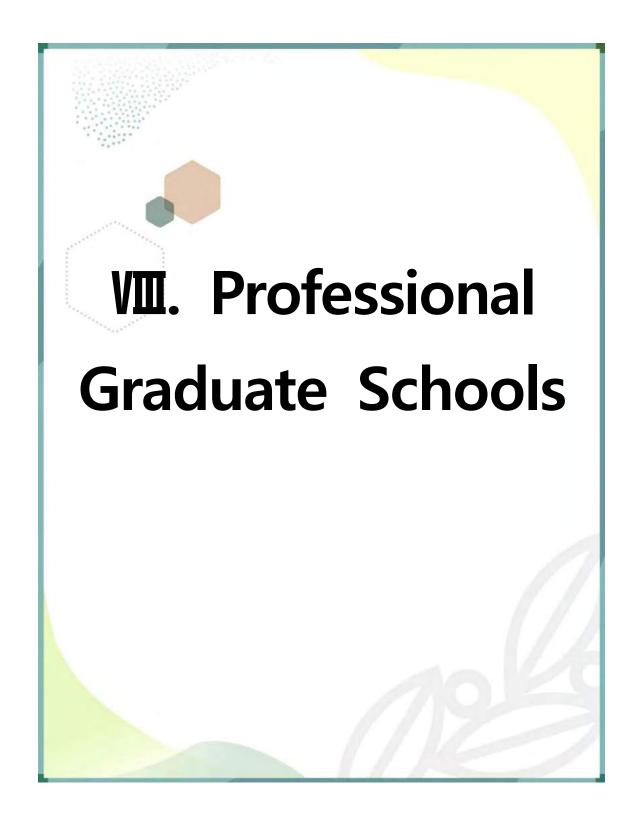
Advanced Fish Feeds (3)

Biology of Fish Larva (3)
Advanced Marine Fish Culture (3)
Numerical Analysis for Environment Engineering (3)
Special Topics in Pollutant Mixing (3)
Physical and Chemical Processes for Water and
Wastewater Treatment (3)
Applied Instrument Analysis (3)
Machine Learning (3)

Data Mining (3)
Image Pattern Recognition (3)
Topics in Convergence System (3)
Advanced Information Technology (3)
Membrane Water Treatment Process (3)
Research Guidance 1 (3)
Research Guidance 2 (3)
Research Guidance 3 credits (3)

- Kim Tae-ho[Professor, Fisheries Engineering, kimth@jnu.ac.kr, 061-659-7121]
- Kang So-young[Professor, Fish Physiognomy, sykang1@jnu.ac.kr, 061-659-7176]
- Kho Kang-hee[Professor, Physiology of Biological Resources, kkh@jnu.ac.kr, 061-659-7168]
- Kim Eun-sik[Professor, Functional Environmental Materials, skim@jnu.ac.kr, 061-659-7266]
- Kim Wi-sik[Associate professor, Fish Pathology, wisky@jnu.ac.kr, 061-659-7177]
- Park Jeong-seon[Professor, Computer Science, jpark@jnu.ac.kr, 061-659-7444
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- Kang Ji-hoon[Associate professor, Medical Imaging System, jihoon.kang@jnu.ac.kr, 061-659-7363]
- Hwang Min-jin[Associate professor, Industrial and Environmental Engineering, vip7080@jnu.ac.kr, 061-659-7267]
- Kwon In-yeong[Assistant Professor, Aquatic Animal Behavior, inyeong1201@jnu.ac.kr, 061-659-7412]



#### Contact Information

Graduate School of Business

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#### Overview

The mission of the Graduate School of Business (GSB), established on March 1, 2007, is to nurture business leaders through practical, global, and an interdisciplinary-oriented education that meets international standards. The GSB offers Global MBA and K-MBA degrees operated on a 45 contact hours system in 4 semesters across 2 years. The program admits students with academic aptitude, regardless of work experience but an internship is required for those students with no work experience. The school also offers Customized Executive MBA Programs designed to meet the specific needs of an industry or a firm. In 2015, the school launched KEPCO E<sup>3</sup> MBA which is the dual degree program with Darla Moore School of Business, University of South Carolina in USA. for Korean Electricity Power Company(KEPCO) employees.

As a result of the school's effort to provide an education with a global orientation, the school had earned AACSB international accreditation in July 2012 and earned reaccreditation in April 2018. In 2023, GSB received AACSB accreditation three times in a row. The GSB offers students not only knowledge and skills in corporate management and entrepreneurial enterprises, but also opportunities to deepen their understanding of Asian business culture through business field study tours to top business schools in Asia.

#### History

Feb 1969 Established as the Graduate School of Business Administration

Mar 1994 Launched Advanced Management Program

Mar 2007 Transformed into the Graduate School of Business and launched MBA Program

Apr 2010 Launched MOT MBA Program

July 2012 Accredited AACSB

Mar 2014 Selected KOICA-CNU by Korea International Cooperation

Aug 2015 Launched KEPCO E<sup>3</sup> MBA Dual Degree Program(Customized Executive MBA Program)
K-MBA

Apr 2018 Reaccredited AACSB

Oct 2018 Launched Big data Management track

Mar 2019 Concluded an MOU for MBA Dual Degree Program with University of Missouri-St. Louis

#### **Educational Goals**

- Practical Management Education: Prepare students with practical capabilities through case studies requiring problem-solving and decision-making skills, project-based learning and internships.
- 2. Global Orientation: Provide students with opportunities to study abroad through academic exchanges and collaborative projects with leading MBA programs in Asia, Europe, and the USA. In addition, students will be provided with foreign language education, global experiences through interaction with international students, student exchange programs, and lectures by distinguished scholars in the field.
- 3. Interdisciplinary Training: Equip students with skills, knowledge, and leadership as well-rounded business managers in corporate management in such areas as finance, accounting, human resources and organization, marketing, production/operations, management information systems, and international business.

#### Curriculum

Global MBA and K-MBA curricula are composed of all electives. Students need only 45 credits for any subjects in either curriculum. During the second year, students can do the Capstone Project1 and 2 instead of in-person lectures, through which they compile their knowledge and field training experience during the MBA course. The Capstone projects are a form of self-study teams or alone. Such a systematic curriculum enables students to be fully equipped with the necessary knowledge, in-depth expertise, and comprehensive and practical perspectives essential to become qualified business leaders.

#### **Education System**

	Global MBA	K-MBA
Degree offered	Master of Business Administration (Global MBA)	Master of Business Administration
Medium of instruction	English and Korean	Korean
Length of program		4 Semesters in 2 Years

#### **■** Degree Requirements

In order to obtain an MBA degree, students are required to complete 45 credit hours consisting of core courses and electives with a grade point average of B or above. Also, students need more than six months of work experience and an internship is required for those students with no work experience.

#### Professors

#### **Business Administration**

• Ilsang Ko, Ph.D.
[Professor, MIS, isko@jnu.ac.kr]

Joon Koh, Ph.D. [Professor, MIS, kjoon@jnu.ac.kr]

- Min-Jeong Kim, Ph.D.
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- Sang-Hee Kim, Ph.D.
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- Eun-Hee Kim, Ph.D
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- Jae-Yun Kim, Ph.D
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- Ji-Yoon Kim, Ph.D.
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- Kwang-il Bae, Ph.D.
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- Yong-zik Shin
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- Kang-Mun Lee, Ph.D.

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- Su-Yol Lee, Ph.D.
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- Soojin Lee, Ph.D.
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- Young-Je Im, Ph.D.
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- Myung-Sook Jun, Ph.D.
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- Seong-Il Jeon, Ph.D. [Professor, Financial Accounting, sijeon@jnu.ac.kr]
- Ki-Ju Cheong, Ph.D.

  [Professor Marketing, kcheong3@jnu.ac.kr]
- Yong-Ki Jung, Ph.D.
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- Byoung-Sop Han, Ph.D.
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- So-Ra Park, Ph.D
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- Soohoon Park, PhD.
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# Graduate School of Culture

\_\_Contact Information

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# **■** Graduate School of Culture

# History

Oct	2005	School of Culture at JNU authorized to open
Mar	2006	First-year graduate students enrolled in the Program of Culture Theory and Planning and the Program of Culture and Tourism, Performed the 1st Asian Culture & Arts Academy project(Ministry of Culture & Tourism, Gwangju Metropolitan City)
Mar	2007	Held an academic seminar on storytelling for the creation of Hub City of Asian Culture(Hub City of Asian Culture Promotion Group)
July	2008	Moved from the Yongbong Cultural Center building to the Yongji Center building.
Sep	2009	Change the Name of the Program of Culture and Tourism to Cultural Management and Tourism
Mar	2011	Performed a service to change the comprehensive plan for the Creation of Hub City of Asian Culture(Gwangju Metropolitan City)
Mar	2012	Worked on the 518 Road Development Project(Ministry of Culture, Sports and Tourism, Gwangju Metropolitan City)
Mar	2013	Worked on the Asian Culture Academy Consignment Operation Project(Hub City of Asian Culture Promotion Group) Conducted Brain Korea 21 PLUS Program( ~ 2020, Ministry of Education)
Mar	2014	Change the Name of the Program of Culture Theory and Planning to Arts and Culture Planning Launched a Ph.D. program (Department of Cultural Studies) at Graduate School, 30 first-year students enrolled in the Ph.D. program
Mar	2015	Students enrolled in the newly added Program of Media and Arts Technology
Jan	2020	Established the Cultural Convergence Research Institute
Aug	2021	Change the Name of the Program of Media and Arts Technology to Media Content & Culture Technology

### Vision

- To foster creative and competent cultural planners and educational specialists in the field of Korean culture.
- To develop creative minds with the ability to identify the natural relationship between uniqueness and universality based on a comprehensive understanding of cultural diversity.
- To nurture the ability to attract aesthetic or artistic factors from daily life and to commercialize them based on the knowledge of Korean cultural technology.

#### Staff

Position	University Classification	Name	
Dean	Professor	Shin-Kyum Kang, Ph.D.	
Associate Dean	Professor	Ki-Hyun Park, Ph.D.	

# **Faculty Members**

		Faci	ulty		Total			
	Professors	Associate Professors	Assistant Professors	Assistants	General Affairs	Maintenanc e	School Supporting Association	
No.	8	2	1	1			1	13

### **Entrance Quota for Each Department**

Departments	Arts and Culture Planning Cultural Management and Tourism	Total
	Media Content & Culture Technology	
Entrance Quota	30	30

# Overview of Programs

The Graduate School of Culture was established in 2006 in order to nurture creative professionals working in the culture industry. The School's programs are aimed at teaching students the social and financial values of art and culture, and developing a long-term perspective on commercialization using the academic base of liberal arts studies. To achieve this goal, the School provides three programs:

- 1) Arts and Culture Planning
- 2) Cultural Management and Tourism
- 3) Media Content & Culture Technology

The Arts and Culture Planning program is designed to educate talented planners able to produce creative cultural products based on knowledge of the humanities that encompass aesthetics, cultural studies, literature, ecology, philosophy, and sociology. The program aims to create cultural art theorists who have a clear grasp of current trends in global cultural project planning and policy. The program also aspires to enable professionals to communicate cultural and art products to the general public, and identify consumption and production practices.

The aim of the Cultural Management and Tourism Program is to train professionals in cultural management and tourism and create culture and place marketing experts who can conduct research and planning, and oversee management by uniting various professional fields in a creative and integrative way based on passion, knowledge, and executive ability.

"Culture, Tourism, and Place" are chosen as three key words of this program, and the two routes, the Cultural Tourism Strategist route and Place Marketing Strategist route, are available along with a 32-subject curriculum.

The Cultural Tourism Strategist route is designed to create tourism professionals equipped with comprehensive and unique abilities. This route empowers students to overcome the limits of mass tourism by identifying alternative industries such as ecotourism, social welfare tourism, sustainable tourism, and green tourism.

The Place Marketing Strategist route aims to produce experts in the fields of place marketing and spatial culture. Students are empowered to practice in the new paradigm of Place Studies including place identity, urban culture, cultural politics of space, and human communication and networking, from which identity and authenticity of region and place as grounds of daily life are derived. This route focuses on nurturing the ability to conduct creative, critical, and practical research, and devise plans related to urban and local cultural contents and brands.

The Media Content & Culture Technology program focuses on creating quality media specialists who are armed with cultural sensibility and a sound view on society through a comprehensive understanding of video, animation, video games, web, design and digital media industries that are vital in the digital era.

# **■** Degree Requirements

To obtain the MA, a student must meet the following requirements:

- 1) 30 credit hours in the Graduate School of Culture and a minimum of 21 credit hours in the major.
- 2) Students need to demonstrate proficiency in one foreign language (English, Chinese, French, German, or Japanese) and pass a foreign language test recognized by their department.
- 3) submit a "Proposal for Thesis" under the supervision of his/her thesis supervisor.
- 4) submit and defend an acceptable thesis.

# ■ What Do You Study?

### **Arts and Culture Planning**

Public Art and Community Art(3)

Culture & Community(3)

Performing Arts Planning(3)

International Exhibitions(3)

Multicultural Studies(3)

Cultural Planning in Urban Space(3)

Seminar in Culture Aesthetics(3)

Cultural Industry Seminar(3)

Introduction to Culture Industry(3)

Arts and Culture Education Workshop(3)

Seminar in Art and Culture Planning(3)

Introduction to Culture and Arts Planning(3)

Introduction to Cultural Policy(3)

Cultural Contents Planning Workshop(3)

Cultural Contents Theory(3)

Cultural Contents and Storytelling(3)

Museums and Cultural Complexes(3)

Imagination and Culture(3)

Sound and Global Imagination(3)

Workshop for Minor-cultural Planning 1(3)

Seminar for Minor-cultural Theories(3)

Research on Minority Movement(3)

Seminar on Visual Culture(3)

Understanding of Visual Culture(3)

Music Culture and Performance(3)

Local Cultural Policy(3)

Workshop for Creative Planning(3)

Introduction to Art & Cultural Theories(3)

Modern and Contemporary Art: History and

Issues(3)

Theories of Mass Culture(3)

Media Aesthetics(3)

Seminar in Culture Planning(3)

Research on Cultural City(3)

Culture Aesthetics(3)

Seminar in Cultural Studies(3)

Seminar in Art & Culture Education(3)

Introduction to Art&Cultural Theories(3)

Myth & Narrative(3)

Image & Writing(3)

Theories of Visual Communication(3)

Project on Gwangju Cultural City(3)

Cultural Semiotics & Practice in Cultural Contents(3)

Seminal in Culture Producing(3)

Research on Cultural Narrative(3)

Methods for the Study of Culture(3)

Culture & Photography(3)

Seminar in Cultural Policy(3)

Workshop For Cultural Policy(3)

Seminar for MA(3)

Study of Regional Cultures(3)

### **Cultural Management and Tourism**

Emotion and Culture Marketing(3)

Spatial Culture Design(3)

Spatial Culture and Place Identity(3)

Culture Politics of Space(3)

Public Marketing(3)

Audience Development Studies(3)

Tourism and Culture(3)

Tourism and Local Regeneration(3)

Green Tourism Manual(3)

Seminar in Urban Tourism Planning(3)

Urban Cultural Policy(3)

Theories of Urban Branding Management (3)

Cultural Governance Research(3)

Data Analysis in Cultural Management(3)

Research Methodology in Cultural Management(3)

Culture business Strategy and Leadership(3)

Cultural Economics(3)

Cultural Tourism Economics(3)

Seminar in Cultual Tourism planning & Design(3)

Cultural Tourism Marketing Research(3)

Cultural Tourists'Behaviors(3)

Seminar on Cultural Tourism Studies(3)

Cultural Tourism Research Methodology(3)

Seminar on Cultural Tourism Issues(3)

Studies on Cultural Tourism Resources(3)

Studies on Cultural Tourism Resources(S

Seminar in Cultural Tourism Policy(3)

Cultural Tourism Contents Marketing(3)
Arts & Cultural Management Studies(3)

Consumer Behavior in Arts and Culture(3)

Policy Studies in Promoting Arts & Culture(3)

Culture and Welfare(3)

Culture Convergenced Tourism Workshop(3)

Cultural Healing Seminar(3)

Music Management(3)

Seminar for MCT(3)

Asia Culture Exchange Workshop(3)

Asia Cultural Cities Workshop(3)

Art Tourism Seminar(3)

Leisure and Culture(3)

Arts Organizations & Theater Management(3)

Seminar in Place Marketing Strategy(3)

Sustainable Tourism(3)

Community Tourism(3)

Theories of Creative Urban Development(3)

Experimental Marketing(3)

Festival & Culture(3)

Festival and Event Management(3)

Culture Business Theory(3)

Study on Cultural Tourism Theory(3)

Reserch for Ecotourism(3)

Workshop for Place Marketing Strategy(3)

# Media Content & Culture Technology

3D Animation & VFX(3)

3D Animation Workshop(3)

Virtual Reality and Augmented Reality Study(3)

Emotional Media Study(3)

Game and Storytelling Workshop(3)

New Media and Production of Broadcasting(3)

New Media and Social Media Design Study(3)

New Media Contents Storytelling(3)

Media Art Independent Project(3)

Digital Image Directing Theory(3)

Digital Interdisciplinary Arts Seminar(3)

Digital Photography Seminar(3)

Multimedia Contents Study(3)

Mobile Contents Analysis and Study(3)

Media Thesis Research(3)

Media Art Seminar(3)

Media Arts & Animation(3)

Media Art and Communication(3)

Media Image Analysis(3)

Media Contents Independent Project(3)

Media Paradigm and Trend Analysis(3)

Strategy of Media Public Relation(3)

Broadcast Contents Storytelling(3)

Book Media Project(3)

Big data and Social Media Study(3)

Visual Contents Seminar(3)

Realistic Media CG Research(3)

Study on Cartoon and Animation(3)

The Characteristics of Animated Film(3)

Interaction between Image and Music(3)

YouTube and Visual Video Contents(3)

Interdisciplinary Experiment Media Workshop(3)

Convergence Contents Project(3)

Artificial Intelligence and Contents Study

Interactive Media Study(3)

Creative Service Design(3)

Advanced Cartoon Production Animation(3)

Culture Technology Study(3)

Killer Contents Analysis and Study(3)

Technical Arts Projects(3)

Planning Portfolio(3)

Human Media Interaction(3)

CG Animation Independent Project(3)

### Professors

### **Administrators**

- Shin-Kyum Kang, Ph.D.
   [Professor, Tourism(Cultural Tourism Marketing/ Ecotourism), tourlab@jnu.ac.kr]
- Ki-Hyun Park, Ph.D.
   [Professor, Media Aesthetics/Cultural Theory, dumal@jnu.ac.kr]

### **Arts and Culture Planning Program**

- Kyung-woon Jeong, Ph.D.
   [Professor, Narratology, kw518@yahoo.co.kr]
- Ki-Hyun Park, Ph.D.
   [Professor, Media Aesthetics/Cultural Theory, dumal@jnu.ac.kr]
- Jina Kim, Ph.D.
   [Professor, Art History/Cultural Studies/Exhibition

Studies, jkart@jnu.ac.kr]

• Shi-Hun Noh, Ph.D.

[Professor, Cultural Contents, shnoh@jnu.ac.kr]

### **Cultural Management and Tourism Program**

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- · Chi-Ok Oh, Ph.D.

[Professor, Tourism Management/Tourism Economics, chiokoh@jnu.ac.kr]

• Ji-Hyon Park, Ph.D.

[Assistant Professor, Arts & Cultural Management,

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## Media Content & Culture Technology

- Kyoung-Soo Kim, Ph.D.
   [Professor, Multimedia Design, ks@jnu.ac.kr]
- · Choon-Sung Shin, Ph.D.

[Associate Professor, Digital Culture Contents/ AR·VR/ Culture Technology, cshin@jnu.ac.kr]

 Trina Hyunjin Byun, Ph.D.
 [Associate Professor, Media Art/Digital Art, aawoo@jnu.ac.kr]

# **■** Cultural Convergence Research Institute (CCRI)

The Cultural Convergence Research Institute (CCRI) is designed to conduct various research and development projects to (re)define regional identity; to support regional culture & economic development; and to realize the universal values and ideals of human societies via the globalization of regional culture. CCRI also aims to increase the academic prestige of Chonnam National University as a nation's leading research university. Currently, eight laboratories are operated by CCRI to serves diverse research activities.

# \_\_Contact Information

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# URL:

■ The School in General History

Law School

- 1953. 04. College of Liberal Arts, Department of Law, as part of the newly established Chonnam National University
- 1954. 02. Permitted to establish college of law (Dep't of Law & Dep't of Public Administration)
- 1955. 08. Department of public administration abolished. Renamed the Dep't of Law
- 1955. 12. Professor Se-Hoon Kee became the first Dean
- 1957. 03. Conferred law degrees for the first time (22)
- 1970. 12. Re-established Dep't of Public Administration (incoming class of 20)
- 1975. 11. Established Social Science Research Center in the college of law
- 1983. 03. Divided Dep't of Law into Dep't of Public Law and Dep't of Private Law
- 1985. 11. Transferred Social Science Research Center to the College of Social Science Established
  Institute for Law and Public Administration
- 1990. 06. Established Career Development Office
- 1995. 03. Merged Dep't of Public Law and Dep't of Private Law into one Dep't of Law
- 1995. 06. Established Computer Lab
- 1996. 07. Established Law Library
- 1997. 03. Established Language Lab
- 1999. 03. Merged Dep't of Law and Dep't of Public Administration into Law Major (total 230)
- 2001. 03. Adjusted the size of the incoming class (221)
- 2005. 02. Entered into Academic Cooperation Agreement with Kobe University College of Law in Japan
- 2005. 04. Opened Prime Study Hall
- 2005. 12. Entered into Academic Cooperation Agreement with Remin University Law Center in China
- 2005. 12. Entered into Academic Cooperation Agreement with Yentai University College of Law in China
- 2006. 03. Merged with the Dep't of Public Administration at Yesu University (Class size 251)
- 2006. 06. Entered into Academic Cooperation Agreement with Qinghwa University College of Law in China
- 2007. 04. Entered into Academic Cooperation Agreement Hong Kong Chinses University Law School
- 2008. 01. Preliminary approval for law school
- 2008. 08. Officially approved to establish a law school for 120 students
- 2009. 03. Opened CNU Law School. Abolished College of Law, Transferred Dep't of Public Administration to College of Social Science.
- 2010. 02. Entered into Academic Cooperation Agreement with University of Kansas, School of Law in USA
- 2011. 03. Entered into Academic Cooperation Agreement with Keio University College of Law in Japan

- 2012. 05. Entered into Academic Cooperation Agreement with "Ho Chi Minh city University of Law" in Vietnam
- 2016. 10. Entered into Academic Cooperation & Practical training Agreement with Law Firm 'Yang Associates' in Moscow
- 2017. 01. Entered into Academic Cooperation & Practical training Agreement with Law Firm 'Nelson Mullin Riley & Scarborough L.L.P' in USA
- 2017. 12. Entered into Academic Cooperation & Practical training Agreement with Law Firm 'XINGTONG' in China
- 2018. 09. Entered into Academic Cooperation Agreement with Nankai University College of Law in China
- 2019. 12. Entered into Academic Cooperation Agreement with "Civil, Commercial and Economic Law School, China University of Political Science and Law" in China
- 2023. 02. Juris Doctor (Accumulates 1,346 people)
- 2023. 04. Getting qualified as a lawyer (Accumulates 1,126 people)

### Educational Goal

With vaues based on the spirits fo Truth, Creation, and Dedications, the educational motto fo CNU, the school's educational goal is to educate and cultivate world-class legal experts with special areas fo expertise.

The school will equip its students with the required capability and knowledge to professionally handle complicated legal issues in order to provide quality legal service, while maintaining a deep understanding of humanity and society. Students educated by the school will emerge in this globalized world as the legal experts with:

- (1) solid ethical views;
- (2) sufficient legal knowledge and practical capability; and
- (3) strong sense of social solidarity.

## Administrators

Title	Rank	Name
Dean	Professor	Byung-Ro Min
Assistant Dean for Academic Affairs	Associate Professor	Byung-Seok Lim
Assistant Dean for Student Affairs	Professor	Hye-Sun Choi
Administrative Director	Governmental Official	Sun-Joon Kim

# Faculty

Classificati		Fac	ulty	Administrative Staffs			
on	Professors	Associate Professors	Assistant Professors	Teaching Assistants	General	University Funded	Total
Numbers	34	7	1	3	4	2	51

# **■** Enrollment

the master's course	the doctor's course
120	10

# **■** Faculty Members

# **■** Professors

Name	Major
• Bong-Su Kim, LL.D.	[Professor. Criminal Law, ant103683@jnu.ac.kr]
• Song Kim, LL.D.	[Professor. Civil Law, kimsong5@jnu.ac.kr]
• Soon-Suk Kim, LL.D.	[Professor, Commercial Law, soonskim@jnu.ac.kr]
• Yeon-Mi Kim, LL.D.	[Professor, Philosophy of Law, yeonmy@jnu.ac.kr]
• Jae-Seung Kim, J.D. SJD.	[Professor, Tax Law, kimjjss@jnu.ac.kr]
• Ji-su Kim, LL.D.	[Professor, Korean & Chinese Legal History and Philosophy, Chinese Law. LotusBud@jnu.ac.kr]
• Hyun-Chul Kim, LL.D.	[Professor, constitutional Law, hckim77@jnu.ac.kr]
• Shiwon Ryu, J.S.D	[Associate Prof, Intellectual Property Law, swryu@jnu.ac.kr]
• Chen-Chel Ryu, LL.D.	[Professor, Criminal Law, ccryu@jnu.ac.kr]
• Ki-Seok Moon, J.D.	[Professor, American Law, kmoon@jnu.ac.kr]
• Moon Deokmin, Ph.D.in Law	[Assistant professor, Criminal Law, moondeokmin@jnu.ac.kr]
• Byung-Ro Min, LL.D.	[Professor, Constitutional Law, byungro@jnu.ac.kr]
• In-Ho Park, LL.M.	[Professor, Commercial Law, ihpark12@jnu.ac.kr]
• Jong-Mi Park, LL.B.	[Associate Prof. Civil Law, pjm45646@jnu.ac.kr]
• Chang-Weon Seo, LL.B.	[Professor, Civil Procedure, shb@jnu.ac.kr]
• Seung-Hyeon Seong, LL.D.	[Professor, Civil Law, gaius@jnu.ac.kr]
• Oh-Sik Song, LL.D.	[Professor, Civil Law, ohsik@jnu.ac.kr]
• Sung-Po An, LL.D.	[Professor, Commercial and Trust Law, sungpo@jnu.ac.kr]
• Jean Ahn, Ph.D.	[Professor, Human Right Law, jean7475@jnu.ac.kr]
• In-Kyu Wi, LL.B.	[Professor, Criminal Law, wiinkyu@jnu.ac.kr]
• Sin-sung Yun, LL.M	[Professor, Civil Law, ssyun617@jnu.ac.kr]
• Soon-Uk Lee, LL.D.	[Associate Prof. Criminal Law, soonuklee@jnu.ac.kr]
• Seng-Woo Lee, LL.D.	[Professor, Civil Law, sengwoo@jnu.ac.kr]
• Young-Moo Lee, MA(Administration)	[Professor, Administrative Law and Public law, shushanke@jnu.ac.kr]

Name	Major
• Jun-Min Lee, LL.M	[Associate Prof. Civil Law, juminlee@jnu.ac.kr]
• Ji-hyeong Lee, LL.M.	[Professor, Civil Law, klara@jnu.ac.kr]
• Hyun-Jai Lee, LL.M.	[Professor, Civil Law, woomoon@jnu.ac.kr]
Byung-Seok Lim, LL.B.	[Associate Prof. Civil Law, bslim11@jnu.ac.kr]
Yoon-Soon Jang, LL.B.	[Professor, Competition Law, yunsoon1021@jnu.ac.kr]
Byung-Seok Jeong, LL.D.	[Professor, Commercial Law, bsjeong@jnu.ac.kr]
• Hoon Jeong, LL.D.	[Professor, Administrative Law and Environmental Law, jh8341@jnu.ac.kr]
• Sang-Kyun Cho, LL.D.	[Professor, Labor Law, skcho@jnu.ac.kr]
• Seon-Yeong Cho, LL.D.	[Associate Prof. Administrative Law, sycho302@jnu.ac.kr]
• Seon-Ja Cha, LL.D.	[Professor, Law and Women, seonja@jnu.ac.kr]
• Kwang-Sun Choi, Ph.D.in Law	[Professor, Civil Procedure, choiks@jnu.ac.kr]
• Byung-Chun Choi, LL.D.	[Associate Prof. Criminal Law, bcchoi88@gmail.com]
• Hye-Sun Choi, LL.D.	[Professor, International law and International Transaction Law, chs45647@jnu.ac.kr]
• Hwan-Ju Choi, LL.D.	[Professor, Civil Procedure, hjchoi@jnu.ac.kr]
• In-Seon Ham, LL.D.	[Professor, Administrative Law, isham@jnu.ac.kr]
• Wan-Jung Heo, LL.D.	[Professor, Constitutional Law, hanjunior@jnu.ac.kr]
• Kwan-Pyo Hong, LL.B.	[Professor, Human Right, feder@jnu.ac.kr]
• Seok-han Hong, Ph.D.in Law	[Professor. Constitutional Law, shhong@jnu.ac.kr]

# **■ Curriculum**

Mandatory Courses

Legal Research (1) Property (3)

Civil Procedure 1 (3)

Basic Theories in Administrative Law (3)

Corporate Law (3) Legal Writing (1) Contracts (3)

Criminal Procedure (3)
The Constitutional Law 2 (3)

Legal Ethics (2)
Externship (1)
Moot Court (1)
Criminal Law 2 (3)
Obligations (3)

Electives

Family Law Practice (3)

Family Law (3)

Personal Data Protection Law (3)

Prosecutorial Practice I (3) Prosecutorial Practice II (3) Competition Law (3)

Cases and Doctrine of Economic Law (3)

Economic Crimes and Law (2) Police Practice & Legal Issues (2)

Practice of Public Briefing and Writing (3)
Public Interests and Human Rights Clinic (2)
Assessment and Reconciliation of Past and Law (2)

Science and Human Rights (2)

Cases and Doctrine of International Transaction Law (3) Western Legal History (3) Practice of International Transaction Law (2) Taxation (3) International Trades and Law (3) Tax Litigation Practice (3) International Organizations (3) Seminar in Consumer Law (2) International Law (3) Human Rights and Minorities (2) Case Law in International Law (3) Trusts (2) International Commerce Law (3) Advanced Externship (1) Labor Contracts (3) Women and Human Rights (3) Advanced Legal Writing (2) Requirement Facts (2) Seminar in Basic Rights (3) Securities Law (3) Corporate Management and Taxation (3) Life Science Ethics and Medical Criminal Law (2) Law of Corporate Restructuring (2) History of Human Rights Development (3) Labor Organizations (3) Human Rights Policy System and Practice (2) Labor Dispute Practice (3) Japanese Labor Law (3) German Law (2) Japanese Law (2) Basic Civil Law (3) Japanese Private Law (2) Case Study of Civil Law (3) Japanese Constitutional Law (3) Seminar In Civil Law (3) Financial Market Law (2) Practice of Civil Briefing and Writing (3) Taxation of Estates, Gifts and Property Transfers (3) Civil Procedure 2 (3) Copyright Law (3) Case Study of Civil Procedure (3) Understanding of Traditional Legal Culture (2) Civil Procedure Practice (3) Spirits of Traditional Laws (3) Practice in Civil Enforcement and Attachment (3) Law and Political Process (3) Trends in Civil Cases (3) Chinese Law (2) Criminology (2) Local Government Law (3) Victims of Crime and Human Rights (3) Intellectual Property Law (2) Legal Clinic (2) Anti-Discrimination Law (3) History of Legal Philosophy (3) Integrated Civil Law Seminar (3) Law and Society (2) Seminar in Integrated Commercial Law (3) Law and Women (2) Criminal Law in specific fields (3) Forensic Medicine (2) Patent Law (3) Legal Philosophy (3) Patent Litigation Practice (2) Legal Methods (3) Violence and Law (3) Insurance Law (3) Administrational Reliefs Law (3) Real Estate Registration and Deposit Practice (3) Particulars of Administrative Law (3) Real Property Law (3) Case Study of Administrative Law (3) Torts (3) The Constitutional Law 1 (3) Case Study of the Constitutional Law (3) Cyber Space and Law (2) Human Rights and Social Welfare (3) Constitutional Procedure (3) Case Study of Commercial Law (3) Modern Contracts (2) General Principles of Commercial Law (3) Criminal Law 1 (3)

Exercise of Criminal Law (3)

Trademark and Design Law (3)

Practice of Criminal Briefing and Writing (3)

Case Study of Criminal Law and Procedure (3)

Exercise of Criminal Procedure Law (3)

Criminal Law Practice (3)

Criminal Policies (3)

Environmental Law (3)

Environmental Litigation Practice (3)

Case Study of Corporate Law (3)

American Civil Procedure Rules & Practice (2)

American Constitutional Law (2)

American Criminal Law & Procedure (2)

American Private Law (2)

American Public Law (2)

American Securities Law (2)

Corporate Accounting Law & Practice (2)

EU Law (2)

International Arbitration Law & Practice (2)

International Human Rights (2)

Law & Economics (2)

Legal English (2)

Negotiation (2)

Protection of Economic, Social and Cultural Rights (2)

The Law of Business? Enterprises (2)

The Law of Contract in America (3)

The UN and the rights of the child (2)

The WTO (2)

Transnational M&A (2)

Trust & Estate (2)

\_\_Contact Information

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■ School of Dentistry

School of Dentistry

The Chonnam National University (CNU) School of Dentistry was established with the purpose of training oral health professionals equipped with fundamental knowledge, skills, and the spirit of service to meet the needs of the nation and the local community.

The CNU School of Dentistry takes pride in and maintains a sense of mission in that it has produced 2,779 graduates and 1,198 master's and doctoral degree graduates. These alumni have been playing an important role in national and social developments, as well as in bringing prestige and growth to our School of Dentistry.

The transition of the Dental College to the School of Dentistry in March 1, 2005 laid the foundation for growth in quantity and quality. A combined dental hospital and clinical education center building with state-of-the-art facilities and high-tech dental equipment has been built on the Yongbong Campus. This building is 18,624 square meters in size and is in harmony with the surrounding woodland, creating an eco-friendly environment and emerging as a world-class dental school. In addition, the Educational Research Center was completed in 2020 next to the Clinical Education Center and is expected to facilitate collaboration between basic and clinical research.

The Chonnam National University School of Dentistry operates from the dental science laboratories (Building No. 2) with high-tech laboratory and practical equipment; from the Education Research Center (Building No. 3) where undergraduate and graduate education, dental science research, and clinical trials take place; and from the Chonnam Dental Care Center (CDCC) and Dental Hospital with state-of-the-art dental equipment and outstanding dental staff. The school runs the largest National Dental Technician Clinical Skills Testing Center in the nation with treatment by students to provide clinical training for its students. The school also runs the nation's finest testing center in preparation for the National Dental Technician Clinical Skills Test and is making every effort in training talented dentists by maintaining state-of-the-art educational equipment such as the simulation system and through continuous procurement of the latest dental practical equipment.

The CNU School of Dentistry's Department of Dental Science consists of two faculties - the Faculty of Basic Science in Dentistry and the Faculty of Clinical Dentistry. The Faculty of Basic Dentistry includes the fields of Oral Anatomy, Dental Biomaterials, Oral Biochemistry, Oral Microbiology, Oral Pathology, Preventive and Public Heath Dentistry, Pharmacology and Dental Therapeutics, Dental Science Education,

and Dental Biomaterials. The Faculty of Clinical Dentistry includes the fields of Orthodontics, Oral Medicine and Oral Diagnosis, Oral and Maxillofacial Radiology, Oral and Maxillofacial Surgery, Pediatric Dentistry, Dental Anesthesiology, Conservative Dentistry, Prosthodontics, Clinical Dentistry and Periodontology. The Department of Dental Science puts emphasis on early clinical study and offers an integrated curriculum that links various courses to provide the professional dental education that the current times demand.

The CNU School of Dentistry's Department of Dental Science is a single-department graduate school that consists of talented teaching staff and around 280 outstanding students. Its integrated program with a quota of 35 students began in 2014. Under this program, a student enters the CNU School of Dentistry after graduating from high school and completes the three-years undergraduate curriculum followed by a four-year graduate curriculum. Another integrated program is available where one entering graduate school student is selected to earn both master's and doctorate degrees by undertaking seven years of required coursework and dissertation writing.

Under the current school administration, the academic staff has been bolstered by hiring a large number of talented professors. Its faculty of 56 (48 full-time professors and 8 assistants) are putting forth their best efforts in improving the quality of education and research capability, as well as contributing to internationalizing education through an increased number of international professors and offering overseas training opportunities for students.

The school was selected as a Brain Korea 21 research project grantee in 2006 producing excellent research achievements and making great contributions in training dental research personnel. Also, the school was the first dental hospital to be selected by the Ministry of Health and Welfare in February 2009 to establish the Dental Clinic for Persons with Special Needs. This became a big turning point in providing dental care services to the disabled in the local region. This also created plenty of field training opportunities for the students in dealing with disabled patients and created opportunities for serving the local community. The Oral Care Center continues to provide dental services to disabled patients of the region today.

From September 2011 to August 2018, the Research Center for Biomineralization Disorders (RCBD) had been selected annually as the leading MRC research center by the Ministry of Education, Science, and Technology and by the National Research Foundation of Korea. For its research in biomineralization, the RCBD has received a research grant of one billion won annually for seven years. The research center has been selected again in September 2019 and won a research grant of 10.5 billion won for the next seven years. The RCBD is expected to play a crucial role in developing new technology for the medical and dental industry in the future.

CNU signed a Memorandum of Understanding (MOU) for the development of the National Examination Practical Test Center for Dentists in 2021 and was selected as a national examination practical test center. The CNU Dental Practicum Test Center is composed of 9 rooms with a total floor area of 311.58 m<sup>2</sup>. It is equipped with advanced educational facilities, including simulation practice tables, dental unit chairs,

and an AV system in the clinical practical test room to provide students with high-level education and practical training.

Graduates of the school who pass their National Dentist Licensing Examination may contribute to the national oral health as clinicians and may work as professionals at oral health education and research centers. The CNU School of Dentistry is devoted to training talented dentists and oral health professionals by providing quality dental education.

### Educational Goals

Our goal is to train oral health professionals equipped with fundamental knowledge, skills, and the spirit of service to meet the needs of the nation and the local community.

### We aim to:

- 1. Develop an open mind and a sense of professionalism to be able to communicate with others efficiently. (Open-minded professionalism)
- 2. Provide a fundamental understanding of the human body and train students with professional knowledge and skills to be able to diagnose, treat, and prevent oral and maxillofacial diseases. (Excellent dental education)
- 3. Develop creative research capabilities and information utilization skills regarding dentistry and related disciplines. (Creative ability)
- Develop skills and abilities needed to actively participate and serve in improving the public oral health of the nation and the local community. (Comprehensive dental and social service)

# Degree Requirements

Course Registration and Graduation

Each student is required to submit his/her application card for course enrollment to the Dean through the supervising professor during the course registration session of each semester.

The academic year is from the first day of March to the last day of February the following year. The academic year is divided into two semesters: the first semester is from March 1st to the end of August, and the second semester is from September 1st to the end of February the following year. Summer and winter courses are held for four weeks during each vacation period.

There are final exams, midterm exams, spot tests, special tests, graduation exams, and make-up exams. Midterm exams, final exams, and spot tests are administered to students in regular courses.

For graduation, 162 credit hours must be earned. The graduation of students who have completed eight semesters or more, who possess the appropriate GPAs, and whose graduation papers or exams were satisfactory, is decided by faculty of the School of Dentistry to achieve a Doctorate of Dental Science degree.

After passing the National board Exam for general dentists, graduated students are qualified to practice work as practicing dentists.

# ■ What Do You Study?

First Year (Major Requirement)

Public health dentistry

Oral histology

Crown and bridge prosthodontics1

Anesthesiology

Operative dentistry1

Medicine

Human Immunology

Practice of human microbiology and pharmacology

Human microbiology Human pathology

Practice of human pathology

Practice of human physiology/biochemistry

Human physiology Human biochemistry Human pharmacology Human histology

Practice of human histology

Human anatomy

Practice of human anatomy

History of dentistry Dental materials1

pratice of dental materials

Dental anatomy and occlusion 1

Dental anatomy and occlusion 2

Pratice of dental anatomy and occlusion

Periodontology1

Second Year (Major Requirement)

Orthodontics1

Practice of orthodontics1

Oral pathology

Practice of oral pathology
Oral and maxillofacial radiology1
Oral and maxillofacial rodiology2

Oral and maxillofacial surgery1

Oral and maxillofacial surgery2

Practice of oral and maxillofacial surgery

Oral diagnosis

Partial denture prosthodontics1

Partial denture prosthodontics2

Practice of partial denture prosthodontics1

Endodontics1 Endodontics2

Practice of endodontics1 Practive of endodontics2

Crown and bridge prosthodontics2

Practice of crown and bridge prosthodontics1

Operative dentistry2
Operative dentistry3
Practice operative1

Practice of operative dentistry2

Pediatric dentistry1
Pediatric dentistry2

Practice of pediatric dentistry1 Practice of pediatric dentistry2

Preventive dentistry

Practice preventive dentistry

Complete denture prosthodontics1

Complete denture prosthodontics2

Practice of complete denture prosthodontics1

Dental local anesthesiology DentistRoleinSociety

Periodontology2

Practice of periodontology

Third Year (Major Requirement)

Infection control
Orthodontics2

Practice of orthodontics2

Oral medicine1
Oral medicine2

Oral and maxillofacial radiology3 Oral and maxillofacial surgery3 Oral and maxillofacial surgery4 Partial denture prosthodontics3

Practice of partial denture prosthodontics2

Endodontics3

Crown and bridge prosthodontics3

Practice of crown and bridge prosthodontics2

Geriatric dentistry

Methods in Scientific Research1

Methods in Scientific Research2

Craniomandibular disorders and orofacial pain

Operative dentistry4
Pediatric dentistry3
Clinical communications

Clinical oral and maxillofacial radiology1

Clinical pathology Clinical practice1

ClinicalPractice(Subinternship)2
Complete denture prosthodontics3

Practice of complete denture prosthodontics2

Dental therapeutics DentalEthics Dental materials2 Periodontology3

Fourth Year (Major Requirement)

Field study
Forensic dentistry
Medical laws
Adult orthodontics
Esthetic dentistry

Oral and maxillofacial plastic surgery

Practice of clinical anatomy Clinical oral pathology

Clinical oral and maxillofacial radiology Clinical oral and maxillofacial surgery Clinical partial denture prosthodontics Clinical crown and bridge prosthodontics

Clinical conservative dentistry Clinical pediatric dentistry

Objective structured clinical examination

Clinical practice3

ClinicalPractice(Subinternship)4

Clinical Case Study

Clinical complete denture prosthodontics

Clinical periodontology

Case Discussion

Volunteer Service and the Community

Dental management
Dental implantology
Practice of implantology

### ■ Graduate Courses

Methodology for Dental Research ( I )

Methodology for Dental Research ( II )

Statistics in Dentistry ( I ) Statistics in Dentistry ( II )

Current Topics of Dental Science (I)

Current Topics of Dental Science ( [] )

Current Trends of Dental Science (I)
Current Trends of Dental Science (II)

Research for the Master's or Doctoral Degree

Clinical Perspective of Dental Nutrition Advanced Course of Oral Biochemistry Experimental Clinical Oral Biochemistry ( I )

Molecular Biology in Oral Cancer Cell

Molecular Biology in Dentistry

Orofacial Pain

Physiology of Hard Tissue and

Temporomandibular Joint

Salivary Physiology

Dental Neurophysiology

Taste, Smell and Speech

Chemotherapy on Oral Infectious Disease Molecular Pharmacology in Dentistry

Pharmacological Control of Orofacial Pain

Genetic Disorders in Dentistry

Drug and Gene Therapy on Oral Cancer Microbial Aspects of Periodontal Disease Histophysiology of Periodontal Disease Advanced Clinical Periodontology

Current Topics in Periodontology

Esthetic Periodontics

Nonsurgical Periodontal Therapy

Pain Control

Outpatient Anesthesia

Fluid and Electrolyte Balance

Cardiopulmonary Resuscitation Orthodontic Treatment for Orthognathic Surgery

Patient Monitoring Mixed Dentition Treatment Functional Jaw Orthopedics Retention and Relapse

Growth and Development of Oromaxillofacial Tissue Growth Modification in Orthodontics

Behavior Management of Children Orthodontic Management of Prosthodontic Patients Preventive Dentistry of Children Esthetic Aspects in Orthodontics

Team Approach of Cleft Lip and Palate Oral Advanced Dental Materials

Microbiology Dental Materials Science Oral Immunology Dental Polymer Materials

Experimental Oral Microbiology Current Topics of Dental Materials Experimental Oral Immunology Metallic Dental Materials Dental Ceramics

Dental Impression Materials Clinical Oral Microbiology

Central Nervous System in Dentistry Cell Biology in Dentistry Esthetic Restorative Materials Biology of Dental Hard Tissue Dental Implant Materials

Applied Anatomy of the Head and Neck Properties and Evaluation of Dental Materials Advanced Oral Histology Biocompatibility Testing of Dental Materials

Dental Cements

Gerontological Biology in Dentistry The Dental Pulp Biology Growth of Skull after Birth Endodontic Microbiology

Advanced Hard Tissue Biology Cardiology

Technics in Molecular Biology Plastic Restoration Experiment of Oral Pathology Esthetic Dentistry

Oncology of Oral Cavity Pulp and Periapical Disease Pathology of Dental Caries Endodontic Immunopathology

Pathology of Pulpal and Periapical Diseases Ceramic Restoration

Pathology for Anomaly in Maxillofacial Region Modern Endodontic Therapy

Diseases of Salivary Glands Endodontic Microsurgery Immunopathology of Oral Cavity Current Topics in Canal Obturation

Current Topics in Canal Shaping Review of Recent Studies in Oral Pathology Colloquium in Clinical Oral Pathology Dental Implantology

Advanced Oral and Maxillofacial Surgery Occlusion Oral Anomaly Gerodontics

Theory and Practice of Fixed Prosthodontics Orthognathic Surgery

Maxillofacial Reconstructive Surgery Removable Partial Prosthodontics

Practice in Functional Rehabilitation of TMJ Esthetic Prosthodontics

Transplantation Immunology Precision Attachment in Removable Prosthodontics

Maxillofacial Traumatology Modern Dental Ceramics

Current Topics of Oral and Maxillofacial Surgery Periodontic and Prosthodontic Dentistry

Surgical Orthodontic Treatment Modern Practice in Crown and Bridge

TMJ in Orthodontics Prosthodontics

Periodontal Orthodontic Interrelationship Modern Removable Partial Denture

Prosthodontic Treatment for Edentulous Patient Case Planning Seminar

Advanced Oral Diagnosis Advanced Oral Medicine The Theory of Maxillofacial Pain-dysfunction Study on Oral Diagnosis & Oral Medicine Oral Diagnosis and Treatment Plan Diagnosis of Dental Emergency Theory of Oral Soft Tissue Lesion Examination for Oral Diagnosis Myology of Oral and Mandible Clinical Practice of Oral Diagnosis Clinical Practice of Oral Diagnosis Theory of Craniofacial Pain Oral Radiology Radiographic Interpretation Oral Radiographic Technique Specialized Radiographic Techniques TMJ Radiology

Oral & Maxillofacial Radiographic Therapy Oral & Maxillofacial Radiographic Anatomy Radiation Dosimetry & Protection Oral & Maxillofacial Sonography Oral and Maxillofacial Imaging Prevention of Oral Disease Dental Health Statistics School Dental Health Oral Epidemiology Community Dental Health Dental Health Programmity Adult Dental Health Geriatric Dental Health Child Dental Health Dental Health Administration Dental Manpower Development Dental Care Social Insurance System

# Academic Departments and Faculties

# Basic Science in Dentistry

Radiation Biology Salivary Gland Imaging

# **▶** Department of Oral Microbiology Faculty

Professor / Kang, In-Chol Professor / Ohk, Seung-Ho

### Research areas

Molecular diagnosis of oral bacteria Cellular microbiology of periodontal disease

The courses offered in this specialty are Human Immunology, Human Microbiology, and Microbiology Practice. Human Immunology studies the composition and behavior of the immune system that is responsible for our body's defense against microbes and immune disorders. Human Microbiology studies the characteristics of pathogenic bacteria and viruses, as well as the diagnosis and treatment of various infectious diseases. It puts particular

emphasis on microbes related to oral diseases (dental caries, periodontitis, etc). Microbiology Practice, students will experiment with bacterial staining, microscope observations, pure culture methods, antibiotic susceptibility testing. Students will be able to develop skills for accurate diagnosis treatment of various infectious diseases including oral diseases.

# **▷** Department of Oral Pathology Faculty

Professor / Kim, Ok-Jun Associate Professor / Kim, Young

### Research areas

Oral and maxillofacial cancer
Photobiology application to dentistry
Stem cell and cell free therapy for
degenerative disease
Molecular imaging and target probe application
for various disease

Differential expressed genes and bio-marker screening in oral & maxillofacial tumor

Oral Pathology is an applied medicine specialty that connects basic medicine with clinical medicine. It studies the changes in cells and tissues to identify the causes and pathogenesis of diseases, and also studies diseases occurring in the oral cavity and its surrounding structures. It aims to provide pathological diagnosis of biopsies and surgically operated tissues conducted in other departments and hospitals. Related laboratory practice will provide histological understanding and clinical experience.

# **▶** Department of Oral Physiology Faculty

Professor / Kim, Won-Jae Professor / Jung, Ji-Yeon

### Research areas

Role of autophagy in oral biology Differentiation from adult neural stem cells

The purposes of Oral Physiology Laboratory are to make undergraduate students in the School of Dentistry understand the cellular functions and regulating mechanisms in which life phenomena are normally involved in functions and the interaction of tissues or organs of the human body. In our lab, researches in progress are as follows;

- 1. Autophagy regulation in dentin formation and inflammation
- 2. Proliferation and differentiation mechanism of adult neuronal stem cell

Human Physiology is the study that explains the functions of cells and organs that make up the human body. It is the fundamental discipline to understanding the physiological mechanisms of life phenomena and is the basic dentistry specialty in understanding clinical courses and other related subjects. In Human Physiology Practice, students will learn about the biochemical properties of cells and biomaterials that make up the human body and

the physiological mechanisms related to the maintenance of homeostasis in the human body.

# ▶ Department of Oral Biochemistry Faculty

Professor / Lee, Tae-Hoon Associate Professor / Park, Sang-Wook

#### Research areas

General biochemistry of oral biology Redox mediated cell signaling & disease

The oral tissues of the craniomaxillofacial area can be largely divided into hard and soft tissues. Oral Biochemistry studies biochemical metabolic processes of the hard soft tissues that make craniomaxillofacial area. It deals with various biochemical metabolic processes and metabolic abnormalities, such as carbohydrates, lipids, and protein metabolism in tissues, to discover a connection to the occurrence of diseases.

# ▶ Department of Oral Anatomy

Professor / Lee, Eun-Joo Professor / Kim, Sun-Hun Professor / Kim, Min-Seok

#### Research areas

Hard tissue biology

Direct lineage reprogramming

Identification of novel genes in tooth development

The courses covered in the Oral Anatomy specialty include Human Anatomy, Applied Human Anatomy, Histology, Oral Histology, Dental Shapes and Occlusion, along with related laboratory practice. Education on human anatomy as a whole deals with the normal structure of the human body, which is the basis of pathology, and aims to lay the foundation for dental clinical education and its laboratory practice.

# Department of Preventive and Public **Health Dentistry**

### **Faculty**

Professor / Choi, Choong-Ho Associate Professor / Chung, Ki-Ho

### Research areas

Oral epidemiology Prevention of oral diseases Anti-plaque and anti-gingivitis agents Development of tooth pastes and oral hygiene products

Preventive Dentistry studies the principles and methods of oral disease prevention for individual patients, whereas Public Dentistry is that specialty that promotes oral health for the local community and population. Through fundamental research and clinical practice on oral disease prevention, contribute to public oral health by seeking and creating ways to improve the quality of life of the people and by removing potential risk factors of oral diseases,

# Department of Dental Materials

**Faculty** 

Professor / Park, Yeong-Joon Professor / Song, Ho-Jun

### Research areas

Evaluation of biocompatibility for dental materials

Development of advanced dental products including restorative and implant materials

Dental Materials is a basic program within the Department of Dental Science with the aim of understanding the physical and chemical properties of dental materials used in dental clinics and to impart knowledge through academic systematization of the differences in clinical applications and handling methods according to the characteristics of the material. The department has manufacturing equipment and various analytical laboratory devices for experiments, material and has equipment necessary for laboratory practice for undergraduate and graduate students. By implementing cutting-edge technology, department puts a focus on developing new composite resins and dental alloys, developing a multi-purpose hydrophilic dentin binder, on research for surface modification of implant materials, on research for highly effective dental polyvinyl siloxane impression materials, and on research for biocompatibility assessment of dental materials.

# Department of Pharmacology and Dental **Therapeutics**

### **Faculty**

Professor / Koh, Jeong-Tae Professor / Lee, Shee-Eun Professor / Ryu, Je-Hwang

### Research areas

Molecular bone biology

Vaccine development and mucosal immunology Pathogenic mechanism of hard tissue degenerative diseases

Dental Pharmacology aims to provide the skills for proper clinical use of drugs by understanding (a) the general principles of drug interaction based on basic medicine, (b) the pharmacological interaction of drugs with the autonomic nervous system, central nervous various organ functions, system. neurotransmitters, and (c) the pharmacological mechanism, side effects, and toxicity of chemotherapeutic agents.

# **▶** Department of Dental Science Education

Professor / Lee, Seok-Woo Professor / Lim, Hoi-Soon

#### Research areas

Development and implementation of novel didactic methodology

Enhancing students' involvement in academic, research, and service activities

Development and managing courses related to medical/dental humanities

The Dental Science Education Department was established by Dean Won-man Oh in 2005 during the conversion period into the School of Dentistry for the students entering the graduate school after completing their four-year undergraduate program. The department aims to train oral health professionals with knowledge, skills, and spirit of service to meet the needs of the nation and the local community. Students will learn about various human interactions in the medical field (i.e., doctor-patient interaction and interaction between colleagues) and be able to apply humanities such as history, culture, ethics, philosophy, and management of medicine in real-life situations.

### **Clinical Dentistry**

# **▷** Department of Oral and Maxillofacial Surgery

#### **Faculty**

Professor / Oh, Hee-Kyun
Professor / Park, Hong-Ju
Professor / Kook, Min-Suk
Associate Professor / Jung, Seung-Gon
Associate Professor / Ryu, Jae-Young

#### Research areas

Oral cancer Orthognathic surgery Craniofacial deformity Maxillofacial plastic and Reconstructive Surgery

The Department of Oral and Maxillofacial Surgery is the surgical specialty in dental clinics that includes surgical diagnosis, esthetic treatment, and the functional treatments of diseases, injuries and defects of intraoral organs such as teeth, gingiva, oral mucosa and tongue, and reconstructive treatment of jaws,

faces, heads, and necks. Oral and maxillofacial surgeons are trained to treat and care for patients who have maxillofacial injuries, facial deformities, infections, dental implants, cleft lips and palates, salivary gland disease, oral mucosal disease, and the cyst of the jaw. Department of Oral and Maxillofacial Surgery is in the process of researching on oral cancer, maxillofacial reconstructive surgery, craniofacial deformity, cleft lip and palate, and the basic study and clinical treatment of dental implants, and TMJ disorder.

# **▶** Department of Orthodontics Faculty

Professor / Cho, Jin-Hyoung Professor / Lee, Kyung-Min Associate Professor / Oh Min-Hee

#### Research areas

Early Orthodontic Treatment
Adult Interdisciplinary Treatment
Craniofacial Growth and Development
3D Imaging Analysis using cone-beam CT
3D Digital Orthodontics using Laser Scan and
Stereophotogrammetry

Orthodontic treatment is the field of dentistry that treats malocclusion with normal occlusion. It consists of orthodontic treatment, which moves individual teeth to create an even dentition, and orthopedic treatment, which induces harmonious growth of the maxilla and mandible in growing children who have a non-esthetic appearance due to a mismatch of the maxilla and mandible. have. It is the newest and most specialized field of dentistry, making it the first specialty in dentistry to be established.

In the Orthodontics speciality, professors and former trainees are striving for academic excellence and high-quality treatment, and they are playing a leading role in domestic clinical orthodontics. By introducing the concept of interdisciplinary treatment into clinical practice for the first time in Korea, it is providing the

best treatment for patients and has expanded its treatment area early to include advanced orthodontic fields such as lingual correction and esthetic correction, which have recently become subjects of interest. In particular, in the field of adult orthodontics, which is orthodontic treatment for adults with tooth defects along with periodontal disease, it is recognized domestically and abroad for its accumulated know-how through cooperation with periodontology and prosthetics.

# **▶** Department of Prosthodontics Faculty

Professor / Park, Sang-Won Professor / Lim, Hyun-Pil Professor / Yun, Kwi-Dug Associate Professor / Park, Chan Assistant Professor / Jang, Woo-Hyung

### Research areas

CAD-CAM digital dentistry
Esthetic ceramic restorative material
Implant surface treatment & bone material
research

Prosthodontics is a field of clinical dentistry that aims to restore functional impairment and esthetics that occur when there is substantial loss due to dental caries and trauma, or when any number or all teeth are completely missing. It is a field that is very dentist-centric in nature regarding treatment and research. It includes Dental Bridges, Removable Partial Prosthodontics. Complete Denture Prosthodontics. Occlusion, Implantology, Geriatric Dentistry, and their respective clinical practice. The department offers 47 credits and a total of 140 hours of lecture and laboratory practice, which is approximately 29% of the total credits offered by the School Dentistry. The department is committed to training outstanding dentists through its lectures and laboratory practice.

# **Department of Periodontology** Faculty

Professor / Kim, Young-Joon

Professor / Kim, Ok-Su

#### Research areas

Genotyping in periodontal diseases patients Surface characteristics and bioactivity of titanium surface Relationship between the periodontal diseases and systemic diseases

The Periodontology speciality aims to train medical professionals who can accurately diagnose and treat periodontal and oral soft tissue diseases. The specialty currently offers technical education and treatment on calculus removal and root conditioning, periodontal valve surgery progressed periodontal for tissue-guided lesions, bone graft and regeneration, periodontal plastic surgery mucogingival including surgery, aesthetic periodontal surgery, and intraosseous dental implantation. Successful treatment results are obtained in complex patient cases through cooperative treatment with other clinical fields.

# **▶** Department of Conservative Dentistry Faculty

Professor / Oh, Won-Man Professor / Hwang, In-Nam Professor / Hwang, Yun-Chan Professor / Chang, Hoon-Sang Associate Professor / Lee, Bin-Na

### Research areas

Pulp-dentin regeneration Color of composite resin Treatment of pulp inflammation

The Conservative Dentistry speciality provides fillings to restore the function of teeth by repairing diseases occurring in the hard tissue of the teeth, and it provides esthetic restoration to restore esthetic defects caused by hard tissue diseases of the teeth. It deals with for the the field of endodontic therapy apical treatment of pulp and diseases. Conservative dentistry is a basic study of

dental clinical practice and is a required program that all dentists must acquire. We are proud of the goals we have achieved.

# **▶** Department of Oral Medicine Faculty

Professor / Kim, Byung-Gook Professor / Kim, Jae-Hyung Assistant Professor / Im, Yeong-Gwan

#### Research areas

Orofacial Pain Oral Mucosal Diseases Temporomandibular Disorders

Oral Medicine is the field of clinical dentistry that treats various diseases occurring in the oral and maxillofacial area through medical treatment. Diseases covered in the Oral Medicine specialty include temporomandibular oral-facial pain, oral diseases, dry mouth, bad breath, taste disorders, oral movement disorders, snoring, and sleep apnea. The discipline also deals with the dental care of systemic patients and the dental application of lasers. Through courses in forensic medicine and in health and medical regulations, students will acquire knowledge and literacy as healthcare professionals.

# **▶** Department of Pediatric Dentistry Faculty

Professor / Choi, Nam-Ki Professor / Kim, Seon-Mi

# Research areas

Restorative & Preventive Treatment
Treatment for Handicapped Children
Preventive & Interceptive Orthodontic
Treatment

# **▷** Department of Oral and Maxillofacial Radiology

### Faculty

Professor / Yoon, Suk-Ja Professor / Lee, Jae-Seo

#### Research areas

3D Dental Imaging Sialographic examination Oral and Maxillofacial Diagnosis

Students will learn about (a) the discovery of the x-ray, its physical properties interaction with materials and devices that generate and control x-rays, (b) the source and amount of natural radiation, and its effect on induce desired the living, (c) ways to radiographs that accurately show anatomical structures and pathological conditions observed with the human eye by using x-rays, (d) special imagery and its characteristics, and (e) methods for reading radiographs understanding the anatomical structures and diseases represented on radiographs for proper diagnosis.

# **▷** Department of Anesthesiology Faculty

Assistant Professor / Jang, Eun-A

### Research areas

Critical care medicine Respiratory care Pediatric anesthesia

Students will learn the basics of anesthesiology, the pharmacological properties and clinical applications of drugs used for anesthesia, fluid and electrolyte therapy, blood transfusion, and CPR to be able to discuss methods relieve pain during to patient treatment or surgery, to induce psychological stability, and prevent and cure complexities that can occur during patient treatment. In addition, the causes, symptoms, treatment, and prevention of diseases that can occur after anesthesia are discussed.

# Graduate School of Data Science

\_Contact Information

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# History

- 2021. 02. CNU Seoul National University Gwangju Metropolitan City signed a business agreement (MOU) for the development of regional innovation platform business and data science.
- 2021. 07. CNU Seoul National University Kyungpook National University signed business agreement (MOU) for data science education
- 2021. 09. Establishment Promotion Committee of the Graduate School of Data Science was launched
- 2021. 10. Opening Preparation Team of the Graduate School of Data Science was launched
- 2021. 10. Approval for establishment of Graduate School of Data Science (Ministry of Education)
- 2022. 03. Opening of the Graduate School of Data Science (1st Dean: Professor Kim Soo-hyung)
- 2022. 05. Opening ceremony of Graduate School of Data Science was held
- 2022. 06. Signed a business agreement (MOU) with Korea Electric Power Corporation Gwangju-Jeonnam Headquarters
- 2022. 12. Signed a business agreement (MOU) with Gwangju Artificial Intelligence Academy / Smart Human Resources Development Institute
- 2023. 01. Signed a business agreement (MOU) with Megaworks
- 2023. 04. Selection of Data Science Convergence Talent Training Project: Project period (total project amount): 2023 to 2029 (33.7 billion KRW)

### Educational Goal

- Through systematic learning of computer science and mathematics/ statistics theory, trainees including non-majors are fostered to become data analysis experts who can be put into practice.
- The program cultivates practical experts who can solve problems by combining data science in various domains.

## Administrators

Position	Rank	Name	Note
Dean	Professor	Kim Soo-hyung	
Vice-Dean	Assistant Professor	Euom Ieck-chae	

# Faculty

		Fac	ulty	Sta			
Category	Professor	Associate Professor	Assistant Professor	Adjunct Professor	Full-time	Concurrent Position	Total
Number of Individuals	1	3	5	24	1	2	36

# **■** Enrollment capacity by major

50 students per master's program

# **■** Degree Requirements

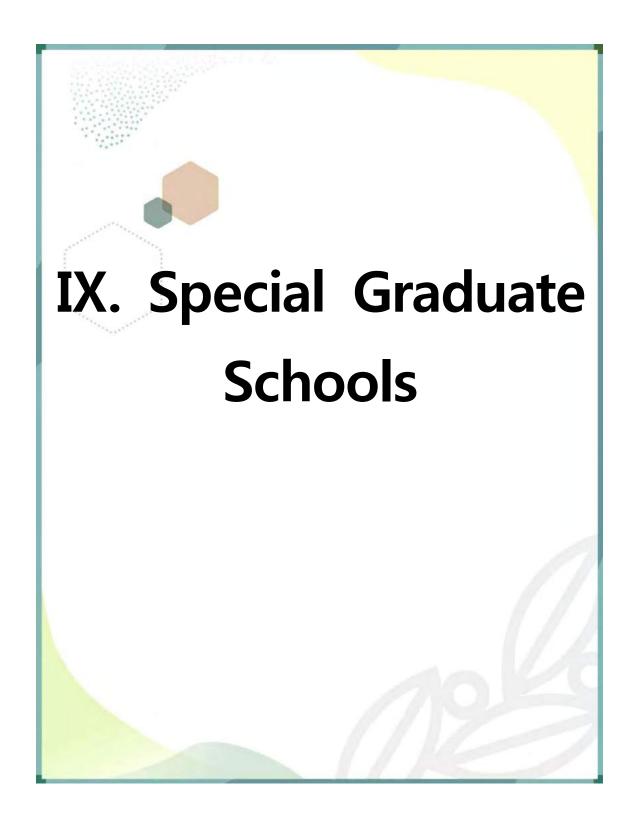
- For admission, application is available regardless of undergraduate degree (field, major) if the applicant has earned a bachelor's degree or is recognized by law as having an equivalent or higher academic background.
- The enrollment period is 2 years, and a Specialized Master's Degree in Data Science is awarded if the candidate earns an average grade of B (3.0) or higher, submits a thesis for the degree after completing 24 credits or more in the thesis track, and earns 30 or more credits in the project track.

# ■ What Do You Study?

Subject Name	credit	Subject Name	credit
Data Science Programming	3	Topics in Statistics for Data Science	3
Data Science Mathematics	3	Topics in Computing for Data Science	3
Data acquistion and visualization	3	Image Processing	3
Software Platforms for Data Science	3	Natural Language Processing	3
Machine Learning	3	Field Practice and Learning	3
Statistics for Data Science	3	Creative Interdisciplinary Capstone Project	3
Deep Learning	3	Advanced Machine Learning	3
Ethics and Law for Data Science	3	Advanced Statistics for Data Science	3
Interdisciplinary Thesis Study	3	Advanced Deep Learning	3
Machine Learning and Financial Engineering	3	Applied Data Science and Machine Learning for Cybersecurity	3
Data Mining for Agriculture	3	IoT Data Analytics	3
Advanced Statistics for Data Science	3		3

# **■** Faculty Members

Position	Name	Field of Study	Position	Name	Field of Study
Assistant Professor	Kang Byung-jeon	Medical Data	Associate Professor	Bang Do-yeon	Soft Robotics
Associate Professor	Seong Jin-taek	Artificial Intelligence	Professor	Lim Hoi-jeong	Natural Language Processing and Big Data Analysis
Assistant Professor	Euom Ieck-chae	Privacy Security	Associate Professor	Um Tai-won	IoT Data Analysis
Assistant Professor	Jeon Jae-gi	Financial Data Analysis	Assistant Professor	Choi Tae-jong	Evolutionary Computing
Assistant Professor	Hong In-ho	Computational Social Science			
Adjunct Professor	Kim Soo-hyung	Artificial Intelligence	Adjunct Professor	Kim Sung-eun	Japanese Language and Literature
Adjunct Professor	Kim Yong-kwan	Physical Education	Adjunct Professor	Kim Min-soo	Statistics
Adjunct Professor	Kim Kyung-baek	Software	Adjunct Professor	Na Myung-hwan	Big Data
Adjunct Professor	Na In-seop	Artificial Intelligence	Adjunct Professor	Ryu Geun-pil	Public Administration
Adjunct Professor	Park Seok-kang	Business Administration	Adjunct Professor	Park Il-woo	Biomedical Engineering
Adjunct Professor	Park Jin-kyung	Nursing	Adjunct Professor	Shin Choon-sung	Immersive Media
Adjunct Professor	An Min-jeong	Nursing	Adjunct Professor	Yang Hyung-jeong	Artificial Intelligence
Adjunct Professor	Yoo Sun-yong	Computer Information and Communication	Adjunct Professor	Yun Jin-hyeon	Animal Welfare
Adjunct Professor	Lee Sang-hyun	Horticulture and Life Science	Adjunct Professor	Lee Joon-woong	Industrial Engineering
Adjunct Professor	Joung Seul-gi	Industrial Engineering	Adjunct Professor	Choi Deok-jai	Software
Adjunct Professor	Han Seung-hwoi	Mechanical Engineering	Adjunct Professor	Han Tae-ho	Agriculture
Adjunct Professor	Huh Jeong-gyu	Big Data	Adjunct Professor	Heo Jin-a	Cultural Anthropology and Archeology



# Graduate School of Education

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### ■ Graduate Studies in the Graduate School of Education

The Graduate School of Education (GSE) was established in 1975 for the purpose of retraining current teachers in modern educational theories and training prospective teachers in well-oriented, appropriate programs. GSE programs provide current and prospective teachers with creative problem solving abilities associated with their major studies and educational theories in order to instil passion in their instruction. Therefore, GSE graduates are expected to be professional teachers and educators equipped with the ability of leading regional education systems and contributing to the future of educational and social development according to the demand of the times.

There are 22 master's degree programs offered by the GSE, including Counseling Psychology, Korean Education, English Education, Mathematics Education, Physics Education, Chemistry Education, Biology Education, Earth Science Education, Music Education, Fine Art Education, Physical Education, Home Economics Education, Early Childhood Education, Computer Education, Electrical Electronic and Communication Education, Nutrition Education, Special Education, Librarian Education, Integrated Social Studies Education, Artificial Intelligence Convergence, Humanities-Social Science Convergence, School Education Reconstruction.

## **■** Degree Requirements

Students holding a bachelor's degree or its equivalent are eligible to apply for admission. Courses are offered during the summer and winter vacation periods. The length of the coursework is two years and six months or greater.

The minimum number of credits required for completion of the Master's Degree of Education is 27. A student may not take more than 6 credits per semester of his/her major courses.

A student whose field of specialization is different from his or her undergraduate major is required to earn a maximum of 15 additional credits in relevant undergraduate courses. Successful applicants should have CGPAs of C or higher. A total of up to 9 credits earned at other universities and colleges can be transferred to the master's degree program of the GSE.

A grade of C or better is acceptable for courses in the master's degree program, but the CGPA of graduate students should be a C or higher in order to be awarded the master's degree. Those with equivalent qualifications, as well as international students, can be accepted as special students through relevant examinations.

### Professors

Faculty members of the GSE are usually composed of 3 to 5 professors from each department of the College of Education.

# ■ What Do You Study?

### **Artificial Intelligence Convergence**

Topics In Artificial Intelligence Artificial Intelligence Programming Convergence Education in Digital Era Mathmatics for Artificial Intelligence Instructional & Learning Theories in AI Application Instructional Development for Social Problem Solving

Topics in Machine Learning esign and Development of Instruction for AI Educational

nstructional Development of Creative Convergence

for Science Class Mathmatics for Artificial Intelligence AI and Problem Solving Class onvergence Project for Cross Subject Matters Advanced Artificial Intelligence AI Education Policy Development Project Field Study of School Application

### **Home Economics Education**

Advanced Home Management Advanced Clothing Materials Advanced Food Science Advanced Child Development Methodology in Home Economics Education Advanced Research and Teaching of Home **Economics Materials** Advanced Course on Home Economics Logic and Essay Writing

Advanced Family Life and Welfare

Advanced General Housing Advanced Food History

Advanced Clothing Management

Statistics

Advanced Apparel Design

Advanced Culture of Clothing

Advanced Nutrition Advanced the Family

Advanced Home Economics Education

Advanced Meal Education

Seminar of Home Economics Education

#### Korean Education

Korean Language Education Korean Literature Education Korean Linguistics Education Policy on thr Korean Language Korean Grammar Education Korean Phonology Education Korean Semantics Education Ancient Korean Poetry Education Ancient Korean Fiction Education Oral Korean Literature Education Modern Korean Poetry Education Modern Korean Fiction Education Literary Criticism

The Korean Language Proficiency Evaluation Studies on Korean Literary History Studying Media Education Theories on Communication Education Studies on Teaching Materials of Korean History of Korean Language Education

### **Physics Education**

Quantum Physics Condensed Matter Physics Mathematics for Physics Physics Laboratory Materials in Physics Education Physics Education Laboratory Nuclear and Particle Physics

Researches in Physics Education

Modern Optics

Theory of Fluid

Advanced Physics Education Experiment

Theory and Practice in Teaching Physics

Psychology in Physics Learning

Physics Curriculum and Evaluation

Seminar in Physics

Statistical Thermodynamics

Studies on Physics Education for the Gifted

Education of Mechanical Concepts

Education of Electromagnetic Concepts

Studies in Physics Education

### **Fine Art Education**

History of Korean Art

Drawing

Theory of Art Education

Practice of Crafts

Practice of Design

Practice of Sculpture

Practice of Painting

Practice of Korean Painting

Aesthetics

Image Art

Techniques of Expression

Theory of Modern Arts

Art Teaching and Learning Methods

Logics and Writing of Art

Computer Lesson Support of Art

Expression and Development Stage of Children's

Art

Development and Application of Teaching Materials

for Art Education

The philosophical theory of korean art

Art and Culture

### **Counseling Psychology**

Psychology of Personality

Psychological Testing

Counseling of Special Children

Counseling Practicum and Case Studies

Group Counseling

Family Counseling

Counseling Theories and Practice

Behavior Modification

Abnormal Psychology

Career Counseling

School Psychology

### **Biology Education**

Advanced Vertebrate Zoology

Advanced Genetics

Advanced Animal Physiology

Advanced Plant Physiology

Advanced Invertebrate Zoology

Advanced Microbiology

Advanced Human Embryology

Advanced Environmental Biology

Advanced Ecology

Advanced Plant Taxonomy

Advanced Animal Taxonomy

Advanced Molecular Biology

Advanced Cell Biology

Studies in Biology Education

Biology Logic and Essay Writing

Secondary School Biology Curriculum and Teaching

Method

Action Research in Biology Education

Multimedia in Biology Education

### **Mathematics Education**

Teaching Materials for Algebra

Teaching Materials for Analysis

Pedagogy of Mathematics

Teaching Materials for Geometry

Topics in Algebra I

Topics in Algebra II

Topics in Analysis I

Topics in Analysis Ⅱ

Topics in Geometry

Topics in Topology

Topics in Mathematical Statistics

Combinatorics

Topics in Applied Mathematics
Mathematics Using Computer
Psychology of Learning Mathematics
History of Mathematics Education
Studies in Mathematics Education

Mathematics Teaching and Learning Materials

### **English Education**

English Language Learning and Teaching Methodology

Pedagogical English Grammar

Studies in British and American Culture

Second Language Acquisition History of the English Language

General Linguistics English Phonology

Seminar on British and American Poetry Seminar on British and American Fiction

Seminar in English Language Teaching Seminar on British and American Drama

Critical Perspectives on British and American Literature

Research Methods in English Education

Teaching English Literature
Teaching English Linguistics
Multimedia and English Teaching
ELT Materials Development
Testing in TEFL

### **Nutrition Education**

Advanced Nutrition Education and Counseling

Advanced Food Science Advanced Food Safety Advanced Nutrition

Advanced Nutrition in Life Cycle Advanced Foodservice in Institution Advanced Nutritional Assessment

Advanced Diet Therapy

Advanced Principles of Food Preparation Advanced Nutrition Education Method Advanced Public Health Statistics Advanced Community Nutrition Research on Foodservice Management Advanced Cultural Aspects of Food

Research of Teaching Materials and Methods in

Nutrition Education

Advanced Functional Food

Advanced Food Processing and Preservation

Seminar in Nutrition Education

### **Early Childhood Education**

Theoretical Foundations of Early Childhood Education

Curriculum and Instructional Resources in Early

Childhood Education

Research Methods in Early Childhood Education Instructional Methods and Practices in Early

Childhood Education

History and Philosophy of Early Childhood

Education

Developmental Psychology of Early Childhood Theories of Play in Early Childhood Education Study of Early Childhood Education Programs Study of Language Education in Early Childhood Study of Social Education in Early Childhood Study of Science and Mathematics Education in Early Childhood

Administration and Supervision in Early Childhood Institutions

Seminar in Parent Education

Field Study in Early Childhood Education Study on Counseling and Guidance for Young Children

Instructional Media for Young Children

Study of Children's Literature in Early Childhood

Education

Study of Creative Art Education in Early Childhood

Education

Study of Inclusive Education for Young Children Study of Early Childhood Teacher Education

### **Music Education**

A Course on Music Logic and Essay Writing Teaching Material and Pedagogy of Music Music Education Theory Psychology of Music Education

Music History

Seminar in Music Education

Curriculum of School Music Education

Introduction of Korean Traditional Music

Korean Music Major

Adapting Multi-MIDI in Music Classes

Advanced Music Theory

Teaching of Choir Class

Pedagogy and Music Education

### **Integrated Social Studies Education**

Common Sociology Logic and Essay Writing

Curriculum and Instruction in Social Studies

History of Political-Social Thought

International Political Economics

International Relation and Regional Politics

Local Government and Civics Education

Methods in Social Studies Education

Modern Society and Culture

Multimedia and Education

Participatory Research in Social Studies

Education

Social Problems and Welfare

Studies in Korean Unification

Teaching Method of Social Studies

Theories of Law

Theories of Political Science

Theory of Information and Society

Theory of Korean Economics

Theory of Korean Politics

Theory of Modern Democracy

# **Electrical Electronic and Communication Education**

Materials and Instructional Method in Industrial

Education

Theories of Teaching Logic and Logical Writings

in Industrial Education

Management of Industrial Education

Seminar in Technical Education

Research Methods in Technical Education

Action Research in Technical Education

Advanced Design of Digital Circuit

Advanced Microprocessor

Advanced Automatic Control

Advanced Electrical Engineering

Advanced Engineering Electromagnetics

General Electrotechnics and Electronics

Advanced Electronic Engineering

Advanced Electromagnetic Applications

Advanced Electronic Circuit

Advanced Computer Network

Advanced Computer Application Education

Advanced Communication Engineering

Advanced Circuit Theory

## **Computer Education**

Development & Implementation of the Computer

Education Curriculum

Design & Development of the Multimedia Assisted

Instruction

Topics in Data Structure

Research in Computer Education

Telecommunication & Distance Education

Teaching Materials in Computer Education

Advanced Computer Organization

Advanced Operating System

Theory of Compiler Construction

Topics in Programming Language

Design and Analysis Algorithm

Topics in Artificial Intelligence

Topics in Computer Networks

Topics in Software Engineering

Advanced Computer Graphics

Database Design and Modeling

Distributed Database System

Advanced Object-Oriented System

### **Earth Science Education**

Advanced Earth Science I

Advanced Earth Science II

Teaching Materials in Earth Science

Advanced Geophysics

Stellar Physics

Topics in Climatology

Advanced Applied Geology

Advanced Oceanography

Advanced Stratigraphic Paleontology

Micro-Meteorology

Astronomical Observation and Analysis

Global Tectonics

Petrogenesis

Advanced Mineralogy

Natural Disasters and Resources

History of Earth Science and Earth Science

Education

Multimedia and Earth Science Teaching Materials

Earth Science Education and Regional Environment

Studies in Science Education

### **Physical Education**

Measurement and Evaluation of Physical Education

History of Physical Education

Philosophy of Physical Education

Study on Teaching of Physical Education

Physical Education Theory

Physical Education Logic and Essay Writing

Physical Healthy Theory

Korean Dance

Physical Training

Sport Physiology

Physical Teaching Method

Sociology of Physical Education

Sport Psychology

Sport Biomechanics

Administration of Physical Education

Motor Learning and Control

Training Theory

### **Chemistry Education**

Topics in Physical Chemistry

Topics in Organic Chemistry

Topics in Chemistry Education

Topics in Inorganic Chemistry

Topics in Quantum Chemistry

Topics inInstrumental Analysis

Topics in Physical Organic Chemistry

Topics in Chemical Thermodynamics

Topics in Organic Reaction Theory

Topics in Chemical KineticsTopics in Biochemistry

Advanced Analytical Chemistry

A Course on Chemistry Logic and Essay Writing

Curriculum and Evaluation in Chemical Education

Teaching Methods and Material Development in

Chemical Education

Issues in Chemical Education

Research Method in Chemical Education

Teaching and Learning Theories in Chemical Education

Research Methodology in Chemical Education

Chemistry Logic and Essay Writing

Advanced Electrochemistry

### **Special Education**

Teaching methods and materials in Special Education

Research Methodology in Special Education

Introduction to Special Education

Education for Children with Intellectual Disabilities

Education for Children with Physical Disabilities

Education for Children with Emotional Disorders

Education for Children with Communication Disorders

Education for Children with Learning Disabilities

Inclusion of Children with Special Needs

Special Education Technology

Curriculum and Instruction in Special Education

Psychology and Education of Children with Disabilities

Special Education and Counseling

Special Education Administration

Assessment and Evaluation of Children with Disabilities

Applied Behavior Analysis

Education for Children with Visual Impairments

Education for People with Hearing Impairments

Movements of Thought in Modern Education

School Education and Society

Introduction to Early Childhood Special Education

### **Librarian Education**

Advanced Research Methodology in Library and Information Science

Studies in Classification Theory

Studies in Reading Education

Introduction to Education Materials and Media

Studies in Library & Information Center

Management

Theory of Bibliotherapy

Studies in Cataloging Theory

Advanced Library and Information Science

Studies in Indexing and Abstracting

Management of Internet Resources

Studies in Collection Management

Studies in Information Retrieval

Cultural Review of Information

Studies in Information Services

Information and Society

User Studies

Studies in Special Materials

Topics in School Library Management

Thesis

# **Humanities and social integration**

Advanced Climatology

Advanced Geographic History

Advanced Geomorphology

Education for Culture and Historical Geography

Education for Economic Geography

Education for Population Geography

Education for Regional Study in Korea

Education for Urban Geography

Geography Education Theory

Research in Education of World Regional

Geography

Seminar in Human Geography Education

Seminar in Physical Geography Education

Social Geography Seminar

Introductory Theory of History Education

History of Chinese Historiography

History of Korean Politics

History of Western Historiography

History of Western Socio-Economics

History of Korean Socio-Economics

History of Chinese Socio-Economics

Modern-Contemporary History of Korea

Modern and Contemporary History of Europe

Twentieth Century Modern History

Pre-Modern History of East Asia

Modern and Contemporary History of East Asia

Ancient and Medieval Korean History

Intellectual and Cultural History of Korea

Studies in Western Ethical Thoughts

Studies in Theories of Moral and Ethics Education

Studies in Korean Ethics Education

Seminar in Theories of Value Education

Studies in Modern Ethical Thought

Seminar in the Ethical Theory of Buddhism

Research on Welfare State

Topics in Classic Writings of Western Ethics

Studies in East Asian Ethics Education

Seminar in the Ethical Theory of Lao-tzu and

Chang-tzu

Studies in Moral Psychology and Moral

Development

Studies in Social Democracy

### **School Education Reconstruction**

Teacher's Leadership and Sineonseopan

Innovating My School: Power of One

Qualitative Research Methods in Education

Case Study Research and Applications

Functions/Dysfunctions of School Organizations

Understanding School Organization and

**Educational Innovations** 

The Role of Teacher in Community

Quantitative Research Methods in Education

# Graduate School Of Industry and Technology

\_\_Contact Information
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# ■ Graduate Studies in the Graduate School of Industry and Technology

The Graduate School of Industry and Technology was established in 1989. The School aims to teach students theories and applications of industrial technology so they can contribute to the development of the local community and nation as a whole. The school offers 13 master's degree programs and 1 non-degree program, the AISP (Advanced Industrial Strategy Program)

The 13 programs are offered through the Graduate School of Industry and Technology.

- Architectural Engineering
- · Civil Engineering
- Mechanical Engineering
- Industrial Engineering
- Mineral and Energy Engineering
- Textiles Engineering and Cloth Design
- Industrial Engineering
- Biochemical Engineering
- Electrical-Electronics-Computer Engineering
- Electrical Engineering
- Electronics Engineering
- Computer Engineering
- Material Engineering
- Chemical Engineering

- Environment and Energy Engineering
- Department of Eco-friendly Agriculture
  - Environmentally Friendly Agricultural Life
- Eco-friendly Animal Husbandry
- Food Science & Technology
- Rural Resources & Environmental Engineering
  - Rural Engineering
  - Rural Tourism & Local Development
  - Biosystem Engineering
  - Forest Resource
  - Landscape Architecture
- Electronics & Computer Engineering
- Department of Food Technology

# Degree Requirements

Anyone who has graduated from a four-year college and has been awarded a bachelor's degree, or who has a bachelor's degree or master's degree from a foreign university, or who is recognized by the Ministry of Education and Human Resources Development as having equivalent qualifications of course work requirements of a regular four year college program, is eligible for application for admission after passing the appropriate entrance examination.

The length of coursework shall normally be two years and six months.

A period of no longer than four years and six months shall be allowed for completion of the master's degree programs.

When a student is absent from lectures for more than one month because of illness or other unavoidable circumstances, he or she may petition for a temporary leave of absence of one year or less.

Class days must number 15 weeks or more each semester. A minimum of 24 credits are required for completion of the master's degree. The courses a student should take are divided into two types: required and elective courses.

Students are expected to attend more than two-thirds of their classes and receive a grade of C or higher to be considered acceptable. However, a student must earn a CGPA of 3.0 or better to be awarded a master's degree.

A master's degree shall be granted to candidates who have fulfilled all the requirements.

Applicants for research courses in the Graduate School of Industry and Technology should have graduated from an undergraduate program qualified by the Ministry of Education and Human Resources Development. International students or government officials who have equivalent qualifications can be accepted as special supernumerary students through an additional examination.

# ■ What Do You Study?

### **Architectural Engineering**

Advanced Course In Steel Structures

Theory Of Architectural Planning

Project Control On Building Construction

Theory Of Architecture

Theory Of Architectural Design 1

Theory Of Architectural Design 2

Advanced Theory Of Urban Planning

Principles Of Noise Control

Advanced Theory Of Contemporary Architecture

Advanced Theory of History of Oriental Architecture

Advanced Theory Of History of Korean Architecture

Principles of Building Facilities

Theory of Architectural Space

Advanced Theory of Contemporary Architecture

Theory of Urban Design

Computet Aided Advanced Estimation

Advanced Course in Steel Structure Design

Principles and Applications of Architectural Acou

Advanced Theory of History of Western Architecture

Theory of Environmental Psychology

Earthquake resistance design

Structural building system

Theory of mordern architecture

Construction Management

Advanced Decision Metholodogy

Safety Management in Construction Field

Eco-housing design

Architectural Programming

Reinforced concrete

Structural Analysis

Advanced Construction Materials

Methodologies for Integrative Design

Theory in Digital Architecture

**Building Information Modeling** 

Socio-Spatial Theory of Architecture

Construction Information Technology

Zero Energy Building Design and Project Management

Building Renewable Energy Systems

Building Energy Technologies: State of the Art

Practical Thesis Seminar

# **Civil Engineering**

Advanced Structural Engineering

Advanced Reinforced Concrete Structure

Design of Structural

Advanced Geo-Technical Engineering

Advanced Foundation Engineering

Advanced Urban Planning

Advanced Surveying Engineering

Applied Hydrology

Water Resource Engineering

Advanced Water and Waste Water Treatment

And Disposal

Introduction of Civil Engineering Environmental Impact Assessment

Advanced Traffic Engineering

Advanced Highway Construction Engineering

Advanced Highway Engineering

# **Mechanical Engineering**

Advanced Control Engineering

Advanced Course of Applied Mathematics

Advanced Design Engineering

Advanced Dynamics

Advanced Energy Conversion Advanced Fluid Dynamics

Advanced Internal Combustion Engine Advanced Manufaturing Engineering

Advanced Material Science Advanced Mechanical Vibration Advanced Solid Mechanics Advanced Thermodynamics

Alternative Energy

Automation In Manufacturing

Combustion & Systems

Composite Materials Conduction Heat Transfer Convective Heat Transfer

Design of Thermal System

F.E.M

Fluid Machinery

Fluid Power And Fluidics Fluid System Design Heat Exchanger Design

Measurement In Heat Transfer And Fluid Mechanics

Mechatronics

Metal Forming

Optimal Control

Practical Thesis Seminar

Robotics Seminar

Structural Dynamics

Welding Engineering

# **Industrial Engineering**

# ■ Mineral and Energy Engineering

Advanced Haulage Engineering

Advanced Resources and Safety

Special Issues on Resource Engineering

Research for Material Processing

Metallic Mineral Processing

Non-Metallic Mineral Processing

Applied Mineralogy Applied Geology

Gem Mineralogy

Advanced Industrial Waste Treatment

Advanced Industrial Waste Water Treatment

Air Pollution Control

Advanced Rock Mechanics

Advanced Blasting Engineering

Advanced Stress Analysis

Advanced Electrical and EM Prospecting

Advanced Seismic Prospecting

Advanced Ground Water Engineering

Advanced Industrial Sensors

Characterization of Industrial Materials

#### ■ Textiles Engineering and Cloth Design

Advanced Course of Fiber Material

Advanced Fiber Physics Advanced Theory of Dyeing

Advanced Instrumental Analysis Advanced Fiber Assemblies

Advanced Weaving Process

Physical Properties of Fiber

Advanced Textile Finishing

Advanced Textile Process System Analysis and

Control

Fashion CAD

Fashion Design

Fashion Research

Clothing Ergonomics

Applications of Advanced Textile Materials

Textile Materials and Product Evaluation

Textile CAD

Dyeing for Fashion Design

Information Analysis and Marketing Research

Analysis of Consumer Behavior

Advanced Fashion Marketing

Product Planning and Development

# **■ Industrial Engineering**

Advanced Human Engineering

Advanced Inventory Management

Advanced Operations Research

Advanced Project Management

Advanced Service Engineering

Advanced Statistics

Advanced Supply Chain Management

Advanced Theory of Constraints

Advanced Topics on Digital Manufacturing Systems

Advanced Topics on Human Interface Engineering

Advanced Topics on Knowledge Engineering

Case Studies of Industrial Engineering

Case Studies of Systems Engineering

Computer Programming

Decision Theory

Engineering of Product Development

**Evolutionary Algorithms** 

Experimental Designs

Management of Technology

Marketing and Management Strategy

Practical Thesis Seminar

Probability Theory and Its Applications

Production Management

Quality Control

Reliability & Maintenance Policy

Simulation and S/W Practice

Special Topics in Industrial Engineering

System Safety Engineering

Theory and Practice of Creative Problem Solving

## **■** Biochemical Engineering

Advanced Bioindustry

Advanced Industrial Microbiology

Advanced Aquaculture

Advanced Fisheries Food Processing

Advanced Fisheries Business Management

Advanced Biomedical Material

Advanced Animal and Plant Tissue Cultures

Advanced Agriculture Biotechnology

Advanced Soil Fertility

Advanced Crop Production

Advanced Genetic Engineering

Advanced Fermentation Engineering

Advanced Separation and Purification for

Biochemical Material

Advanced Marine Ecology

Advanced Marine Biotechnology

Advanced Fisheries Dynamics

Advanced Clean Technology

Advanced Bioprocess Engineering

Advanced Food Engineering

Advanced Instrumental Analysis

Seminar

Practical Thesis Seminar

#### Electrical •Electronics •Computer Engineering

# **■** Electrical Engineering

High Voltage Power Apparatus

Power System Protection

Power IT Engineering

High Voltage Insulation Theory

Photo-Electric Energy Conversion

Alternative Energy Conversion Theory

Advanced Digital Control

Advanced Electrical Applications

Electric Materials Engineering

Advanced Power Electronics

Electromagnetic Field Theory

Electric Network Theory

Power Transformation Theory

Advanced Power System Analysis

Power System Operation Theory

Lighting System Design and Applications

EMC/EMI

Switching Power Supply Design

Special Electric Machinery

Automatic Measurement System

Automation of Industrial Process

Power System Dynamic Modeling

Topics in Renewable Energy Systems

Energy Storage System Engineering

Power System Control

Introduction to Artificial Intelligence

Electric Machine Control System

Seminar

Practical Thesis Seminar

#### **■** Electronics Engineering

Computer Architecture

Advanced semiconductor design methodology

High Frequency Circuit Design

Opto-Electronics

Digital System

Advanced Digital Control

Digital Image Processing

Robotics

Multimedia Systems

Semiconductor Device Process Engineering

Semiconductor Device Physics and Technology

Nonlinear Control

Practical Thesis Seminar

Study for Industrial Thesis

Signal Processing

Antena Engineering

Mobile Communication Engineering

Electronic Device Engineering

Electromagnetic Field Theory

Information Theory

Control Application Engineering

Intelligent Control Engineering

Intelligent Control Theory

Integrated Circuits Engineering

Next generation memory semiconductor design

Next Generation Wireless Communication

Engineering

Next Generation Mobile Communication

Engineering

Next Generation Information Communication

Engineering

Next Generation Communication Engineering

Telecommunications network

Communication Theory

Stochastic Process

#### **■** Computer Engineering

Data Base

Data Communication

Digital System Design

Digital communications and channel coding

Deep Learning and IT Convergence

Multimedia And Application

Biomedical Artificial Intelligence

Practical Thesis Seminar

Study for Industrial Thesis

System Software

Signals And Systems Theory

Operating System

Mobile Communication Engineering

Artificial Intelligence

Embedded Hardware

Data Structure

Computer Architecture Principles

Computer Network

Computer Security

Computer Image Processing

Communication System Engineering

Communication Theory

Project Design and Seminar

Theory of Probability and Statistics

VLSI Design

Special Topics in Semiconductor Testing

#### **Materials Engineering**

X-Ray Diffraction

Advanced Metallurgical Thermodynamics

Special Topics In Metals And Alloys

Sintering And Crystal Growth

Advanced Foundary Engineering

Advanced Ferrous Process Metallurgy

Materials For Special Uses

Advanced Course Of Surface Processing

Theory Of Phase Transformation

Advanced Welding Engineering

Dislocation Theory

Advanced Inorganic Chemistry

Advanced Solid Thermodynamics

Advanced Crystallography

Corrosion and Protection of Metal

Metallic Biomaterials

Nano-materials and Processing

Bioengineering

Seminar

Advanced Instrumental Analysis

Practical Thesis Seminar

## **Chemical Engineering**

Advanced Polymer Material

Advanced Polymer Chemistry

Fine Chemical Process

Adsorption Phenomena

Organic Synthesis Theory

Advanced Polymer Processing

Advanced Functional Polymer

Advanced Process Control

Advanced Chemical Reaction Engineering

Advanced Chemical Engineering Thermodynamics

Heat Transfer for Chemical Engineering

Fluid Dynamics for Chemical Engineering

Mass Transfer

Advanced Separation Process

Chemical Engineering Design

Catalyst Engineering

Energy Engineering

Technical Informations and Patent Strategies

Advanced Instrumental Analysis

Seminar

Practical Thesis Seminar

# **Environment and Energy Engineering**

Advanced Air Pollution Control

Advanced Air quality management

Advanced Atmospheric Chemistry of Air Pollution

Advanced Environmental Hygiene

Advanced Environmental Impact Assessment

Advanced Environmental Microbiology

Advanced Renewable Energy

Advanced Waste Water Engineering

Advanced Water and Wastewater Engineering

Advanced Water Quality Management

Environmental Hydrology

Environmental Organic Chemistry

Environmental Policies and Management

Hydrogen Energy

Intellectual Property Protection in Environmental

Engineering

Microbial Fuel Cell Technology

Modern Renewable Energy Technology

Practical Thesis Seminar

Principles and Design of Hazardous Gas Treatment

Soil Pollution treatment and Management

Solid Waste Management And Treatment

#### **Department of Eco-friendly Agriculture**

#### **■** Environmentally Friendly Agricultural Life

Advanced Plant Genetics & Breeding

Advanced Plant Physiology & Ecology

Advanced Food Crops

Advanced Special Crops

Advanced Vegetable Crops

Advanced Floriculture

Advanced Insect Pest

Advanced Plant Pest

Advanced Pomology

Special Studies

Research for the Master's Degree

Advanced Agriculture

Advanced Fertilizers

Advanced Biochemistry

Advanced Plant Nutrition

Advanced Applied Microbiology

Advanced Chemistry of Natural Products

Advanced Soil Science

**Topics** 

Advanced Environmental Toxicology

Agricultural Marketing

Farm Management

Advanced Agricultural Finance

Agricultural Policy

Advanced Rural Survey

# **■ Eco-friendly Animal Husbandry**

Advanced Animal Reproduction

Advanced Animal Food Processing Technology

Advanced Animal Breeding

Sustainable Animal microbiology

Advanced Animal Metabolomics

Sustainable Forage Production & Utilization

Animal Bioactive Chemicals

Advanced Animal Production & Welfare

Advanced Beef Production

Advanced Animal Population Genetics

Advanced Animal Biotechnology

Advanced Germ Cells

Advanced Animal experiment design

Advanced Animal Hygiene

Industrial Paper Seminar

# Food Science & Technology

Special topics in Fermentation Sitology

Practical Thesis Seminar

Food Processing and Preservation

Food Functional Chemistry

Metabolic engineering in Food

Advanced Food Microbiology

Food Virology

Advanced Food Biotechnology

Food and Biostatistics

Advanced Food Biochemistry

Food Ingredient Technology

Advanced Food Ingredient Utilization

Advanced Food System Engineering

New product development

Advanced Food Hygiene

Advanced Food Packaging

Food Flavor Chemistry

Advanced Food Chemistry

Nutritional Physiology

Advanced Nutrition Chemistry

Advanced Food Lipids

Recent Technology for Food Processing

Carbohydrate Foods

Special Topics in Nutritions

Advanced enzyme biotechnology

# Rural Resources & Environmental Engineering

# ■ Rural Engineering

Landscape Planning & Practices

Agricultural Marketing

Rural Systems Engineering

Rural Watershed Management

Rural Surveying Methodology

Rural Development Theory

Non-point Source Pollution Management

Practical Thesis Seminar

Advanced Course in Structural Analysis

Rural Ecosystem Remediation

Advance Village Planning

Advanced Soil Science

Topics

Environmentally Sustainable Foundation Design

#### ■ Rural Tourism & Local Development

Landscape Planning & Practices

Green Care Policy & Planning

Interpretation for Agriculture & Rural Laws

Agricultural Marketing

Rural Development Planning

Rural Economy Development

Rural Tourism/ Development Seminar

Rural Tourism Planning and Management

Rural Villages Improvement

Rural Development Theory

Practical Thesis Seminar
Forestry Tourism Planning
Place Marketing Theory
Rural Community Development
Soil Environment Remediation
Topics

#### **■** Biosystem Engineering

Advanced Agricultural Processing Engineering
Agricultural Mechatronics
Agricultural Fluid Power System
Analysis of Agricultural Information
Advanced Farm Machinery 1
Practical Thesis Seminar
Advanced Data Communication and Networking for Biosystems
Automation of Agricultural Systems
Advanced Biosystems Engineering
Acquisition and Analysis of Bio-information
Advanced Food Processing Machinery
Advanced applied Biological Engineering
Advanced precision Agricultural Engineering
Topics

#### **■** Forest Resource

Advanced Dendrology

Advanced Erosion Control Engineering

Advanced Forest Civil Engineering

Advanced Forest Ecology

Advanced Mycology

Advanced Silviculture

Advanced Wood Mechanics

Forest Environmental Law

Forest Polic

Forest Proctection

Liggnocellulosic biorefinery

Muchanics of Materials

Practical Thesis Seminar

Topics

Wood Anatomy & LAD

Wood Chemistry

Wood Construction Mechanics

Wood Engineering

Wood Machining and Drying Wood Physics

#### **■** Landscape Architecture

Advanced Environmental Openspace Design/Planning Advanced Theories On Landscape Maintenance

Advanced Rural Landscape Planning

Advanced Site Planning

Advanced Landscape Structural Mechanics

Advanced Landscape Construction Materials

Advanced Theory of Regional Community

Advanced Landscape Architecture Planning

Integrated Approach for Rural Landscape Design

Advanced Landscape Gardening

Urban Place and Landscape Architecture

Practical Thesis Seminar

#### **Electronics & Computer Engineering**

Digital System Engineering

Advanced Opto-Electronics

Electronic Device Engineering

Modern Robotics

Intelligent Control Engineering

Signals and Systems Theory

Digital Signal Processing

Computer Network

Data Communication Engineering

Introduction to Communication System Engineering

Digital Communication Engineering

Next Generation Information Communication Engineering

Multimedia Signal Processing

Advanced Multimedia Systems

Multimedia Applications

Advanced Computer Security

Image and Communication System

Digital Image Processing

Computer Architecture

Advanced Embedded System Design

Database Processing

Advanced Data Structure

Software Engineering

Operating System Principles

Advanced Artificial Intelligence
Introduction Computer Vision
Introduction to Pattern Recognition
Neural Network and Fuzzy Systems
Web Engineering
Ubiquitous Computing
Probability and Statistical Theory
Special Topics in Computer and Electronics Engineering
Project Management
Research Seminar for the Master's Degree and

# **Department of Food Technology**

Introduction to Food Technology
Convergent Technologies for Food Technology
Law and Regulations in Food Technology
Automation of Food Processing
New Food Product Development
Business in Food Technology
Field studies of Food Technology
Capstone Design

Technical Writing
Study for Industrial Thesis
Small Business Technology Management
Advanced Electronic Circuits
Introduction to Optical Communication System
Advanced SoC Design

Graduate School of Industry-University Cooperation

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■ Graduate Studies in the Graduate School of Industry-University Cooperation

The Graduate School of Industry-University Cooperation (GIUC) was established in November 1993 and initially consisted of three master's degree programs. The aim of the School is to familiarize students with industrial technology theories and applications and help them become experts in high-tech

industries.

There are 20 master's degree programs offered through the GIUC, including programs in Corporate Management, Foreign Trade Management, Logistics and Transportation, Cultural Industry, Visual Information Design, Electronic Communication Engineering, Ocean Civil Engineering, Environmental System Engineering, Mechanical Design Engineering, Refrigeration Engineering, Chemical System Engineering, Electrical Engineering, Computer Engineering, Biotechnology Engineering, Automotive System Engineering,

Mobile Soft, Multimedia Contents, Architectural Design, and Global Business Administration.

Degree Requirements

Anyone who has graduated from a four-year college and has been awarded a bachelor's degree, or who has a bachelor's degree or master's degree from a foreign university is eligible for application for

admission after passing the appropriate entrance exam.

The length of coursework shall normally be two and a half years. Class days must number 15 weeks or more each semester. A minimum of 24 credits are required for completion of the master's degree. Students must also pass two types of additional exams for completion of the master's degree. One is the foreign language exam (English, for the most part), and the comprehensive exam consisting of at

least three major courses.

The Department Head appoints a member of his faculty as an academic advisor to individual students within the first semester, to guide students in their selection of coursework and thesis subjects.

■ What Do You Study?

**Department of Business Administration** 

■ Major in Management

Research Methods in Administration

Topics in International Marketing

-478-

Topics in International Trade Theory

Topics in Letter of Credit

Topics in International Financial Management

Topics in Foreign Direct Investment

Topics in Overseas Regional Economics

Topics in Economic Integration

Topics in International Financial Derivatives

Case Study on International Commerce

Topics in Electronic Commerce

International Trade Contract and Marine Insurance

Case Study on Distribution and Logistics

Topics in International Business Management

Topics in Theory of Foreign Exchange

Topics in International Business Strategy

Topics in International Finance

Topics in Multinational Enterprise
Topics in Marketing Management

Topics in Econometrics

Topics in International Trade Policy

Topics in International Resource and Environmental

**Economics** 

Topics in Corporate Foreign Exchange Risk

Management

Topics in Commercial Practice of International

Trade

Topics in EDI

Case Study on International Logistics

International Negotiation and Foreign Commercial

Custom

# ■ Major in Electronic Commerce

Digital Business Case Analysis

Digital Business Start-up

Elecronic Commerce System

Elecronic Payment System

Information Technology and Business Innovtion

Introduction to e-Business

Research Methodology1

Research Methodology2

Software Development and Management

Special Toics in Digital Business

Special Topics in Decision theory Special Topics in e-Marketing

Special Topics in Information Security Special Topics in Information System

Special Topics in Next Generation Intermet

Special Topics in System Managment

Special Topics in Ubquitous

Strategy for e-Business

Thesis Research

#### ■ Major in Transportation and Logistics

Master's Thesis Research

Advanced Research Methodology

Advanced Transportation Planning

Advanced Traffic Engineering

Urban Public Transportation

Advanced Study on National and Regional Planning

A description of Charles on Theorem and the Deliver

Advanced Study on Transportation Polices

Transportation Network Theory Urban Modeling Seminar

e-Supply Chain Management Seminar

Global Logistics Seminar

Service Management Seminar

Performance Management Seminar

Network Theory

Port Management Seminar

Material Handling System

Computer Simulation

Advanced Analysis of Traffic Flow

Seminar on Traffic Operations

Advanced Database Management for Transportation

and Logistics

Information Technology Application

Advanced Logistics Information System

Information Technology and Management

Innovation

Economic Evaluation for Transport Infrastructure

Investment

Urban Logistics Planning Theory

Freight Movement Theory

Transportation Economics Seminar

Transportation Planning Seminar

Advanced Green Logistics

■ Major in Cultural Industries

Culture and Industry

Introduction to Korean Culture

Study of Comparative Culture

Theories of Mass Culture

Aesthetics of Art

Cultural Criticism

Local Culture

Research of Korean Culture I

Research of Korean Culture II

Comprehension of Assets

Research of Cultural Industry Management

Research of Cultural Industry Policy

■ Major in Art and Design

Theory of Multimedia

Design Art Workshop 1

Design Art Workshop 3

Western Art Compared with Oriental Art

Major Photography 1

Expression and Media 1

Major Photography 3

Studies in Work 1

Brand Clinic

Theory of Design Representation

Design Psychology

Advertising Design

Advanced Theory of Marketing

Illustration Essay

Product in Culture

Theory of Visual Information Design

Major in Electronic Communication Engineering

Advanced Data Communication

Neural Networks

Advanced Intelligent Transport System

Logistics Polices Seminar

Advanced Industrial Location Theory

Advanced Capacity Analysis

Advanced Traffic Control

Cultural Industries Methodology

Marketing Research in Cultural Industry

Cultures and Communications

E-Business in Culture

Survey of Culture

Culture and Tourism

Study on Tourism Policy

Cultural Information and Mass Media

Analysis of Cultural Contents

Planning and Direction of Culture

Cultures and Films

Motion Graphics Workshop

Design Art Workshop 2

Design Art Workshop 4

Theory of Modern Visual Art

Major Photography 2

Expression and Media

Major Photography 4

Studies in Work 2

Design Comment

Theory of Design Future

Package Design

Theory of Design Development

Sign and Typography

Visual Environmental Design

Psychology of Visual Perception

Presentation Research

Advanced Electro-Magnetics

Graph Theory

Advanced Optical Communication

Digital Signal Processing

Data Communication and New Media

Measurements Engineering

Advanced Satellite Communication

Algorithms EMI and EMC

Data Communication Network

# ■ Major in Ocean Civil Engineering

Research for Master's Degree

Programing for Applied Civil Engineering

Theory of Elasticity
Advanced Soil Mechanics
Advanced Planning Theory

Advanced Hydrology Advanced Transportation Planning

Plastic Analysis of Structures

Finite Element Method

Earthquake Engineering
Advanced Hydraulics

Advanced Coastal Hydraulics

Earth Structures

# **■** Major in Computer Engineering

Advanced Operating System Advanced Artificial Intelligence

Advanced Computer Graphics

Computer Architecture Soft Computing

Advanced Database System

Advanced Data Communication

Digital Integrated Circuits

Advanced Image Processing

Interconnection Network System

MOS Integrated Circuit

Seminar ∏
Seminar ∏

Digital Logic Design

Advanced Digital Engineering

Acoustics Engineering

Advanced Microwave

Advanced Image Communication Advanced Automatic Control

Advanced Telecommunication Regulations

Advanced Antennas

Mobile Communication Engineering

Coastal Hydraulic Models Advanced Rock Mechanics

Advanced Foundation Engineering Advanced Reinforced Concrete

Structural Dynamics

Advanced Urban Planning Analysis of Special Structures Advanced Pre-stressed Concrete

Water Resource System

Advanced Harbor Engineering
Advanced Ocean Soil Mechanics

Pollution Diffusion

Digital Signal Processing

Advanced Software Engineering

Super Computer System

Computer Vision
Advanced Multimedia

VLSI Test

VLSI System Design

Artificial Intelligence Application Advanced Pattern Recognition Advanced Computer Networks Advanced Distributed Procession

Advanced Algorithm

# ■ Major in Environmental System Engineering

Advanced Air Pollution Engineering

Advanced Air Pollution Management

Modeling of Atmospheric Diffusion

Advanced Industrial Wastewater Treatment Research for Master's Degree

Noise Control Engineering

Advanced Water Pollution Engineering

Advanced Water Treatment Engineering

Applied Hydrology

Advanced Remediation Engineering
Advanced Waste Treatment Engineering
Advanced Waste Control & Management

Advanced Wastewater Treatment Advanced Environmental Analysis

Advanced Environmental System Engineering

# ■ Major in Mechanical design Engineering

Research for Thesis

Random Data

Multi-Phase Flow

Materials for Machines

Advanced Manufacturing Processes

Fracture Mechanics

Theory of Elasticity

Advanced Machine Design

Advanced Vibration Theory

Continuum Mechanics

Advanced Measurements Engineering

Advanced Fluid Mechanics

Advanced Fluid Mechanics

Internal Combustion Engines

Advanced Thermodynamics

Advanced Welding Process

Mechanics of Composite Materials Mechanical Behavior of Materials

Vibration of Plate and Shell Advanced Dynamics
Noise and Vibration Engineering Numeral Stresses Analysis

Advanced Automatic Control Experiment for Fluid Engineering

Advanced Combustion Engineering Advanced Heat Transfer

Finite Element Method Advanced Thermal Engineering

Nonlinear Vibration

Numerical Analysis
Theory of Composite Plates

Structural Vibration
Turbulence

Optimal Design

Gas Dynamics

Experimental Methods in Thermal Engineering

Computational Fluid Dynamics

Application of Image

Energy and Environment

Transport Phenomena

#### ■ Major in Refrigeration and Air-Conditioning Engineering

Advanced Refrigeration Engineering I Advanced Material Engineering Badvanced Air Conditioning Engineering I Advanced Refrigeration Engineering II Advanced Food Refrigeration I Advanced Air Conditioning Engineering II Badvanced Air Conditioning Engineering II Advanced Air Conditioning Engineering II Badvanced Air Condition

Advanced Engineering Mathematic Advanced Food Refrigeration II

Advanced Heat Transfer Advanced Refrigeration Mechanical Design II

Advanced Fluid Dynamics Advanced Cold Chain

Advanced Thermal Engineering Advanced Energy Utilizing Engineering

Advanced Refrigeration Mechanical Design I Advanced Sanitary Engineering
Advanced CAD/CAM Advanced Control Engineering

Advanced Environmental Engineering I Advanced Ultra Cryogenics-Engineering

Research for Master's Degree

# ■ Major of Chemical System Engineering

Advanced Engineering Mathematics Advanced Transport Phenomena

Advanced Organic Chemistry Fluid Phase Equilibria

Advanced Chemical Reaction Engineering Nano Chemical Technology

D.L. ... Characteris Physics and Physics Physi

Polymer Structure Polymer Rheology

Advanced Process Control Advanced Inorganic Industrial Chemistry

Advanced Engineering Physical Chemistry

Advanced Chemical Engineering Thermodynamics

Reaction Kinetics

Interfacial Chemistry

Reactor Analysis Design

Research for Master's Thesis

Advanced Numerical Analysis Advanced Chemical Engineering Safety

Advanced Fine Chemistry Advanced Environmental Chemical Engineering

New Material Engineering Advanced Nano and Bioengineering
Advanced Catalyst Engineering Advanced Bioseparation Engineering

Applied Polymer Engineering Advanced Biopolymer

Advanced Materials Science Advanced Tissue Engineering

# ■ Major in Biotechnology

Advanced Botany Advanced Food Biotechnology
Advanced Genetics Advanced Molecular Biology
Protein Chemistry Advanced Cell Culture
Bio-resource Engineering Bioprocess Engineering

Topics in Ecology Advanced Bioactive Material Fermentation

Topics in Breeding Technology

Topics in Functional Food Special Topics in Marine Ecology
Topics in Microbial Engineering Special Topics in Breeding

Topics in Fermentation Technology
Topics in Bioreactor Engineering
Advanced Microbiology
Special Topics in Food Biotechnology
Special Topics in Genetic Engineering
Special Topics in Enzyme Technology

Advanced Cell Technology Advanced Culture Engineering

Advanced Zoology Research for Master's or Doctoral Degree

#### ■ Major in Electrical and Semiconductor Engineering

Advanced Electromagnetics Advanced Digital Image Processing
Network Analysis and Synthesis Advanced Pattern Recognition

Power Electronics Systems Semiconductor Process Advanced Electrical Machinery VLSI Circuit Design

Economic Engineering of Power System Advanced Plasma Engineering

Fuzzy Theory Dielectric Engineering

VLSI Process Technology Power System Simulation
Intelligent Control Technology Power System Operation

Adaptive Control Technology Advanced Linear Control Theory
Advanced Microprocessor Advanced Non-Linear Control Theory

Fuzzy-Neuro Control Theory

Plant Diagnosis Theory Neuro Computing

Circuit Design and Simulation

Advanced Electronics

Advanced Power Electronics Neural Network Theory

Advanced Power System Engineering

Reliability Engineering of Power System

Advanced Control Theory

Advanced Semiconductor Engineering

# ■ Major in Automotive Engineering

Research Topics for Master's Degree

Advanced Dynamics

Advanced Vibration Theory
Advanced Solid Mechanics
Experiment for Stress Analysis
Advanced Combustion Engine
Advanced Fluid Mechanics

Applied Numerical Method of Engineering

Advanced Automatic Control Advanced Working Machine

Tribology

Advanced Numerical Dynamics

# ■ Major in Multimedia Contents

Web-Programming

Advertisement and Market Research Seminar

Special Topics on Multimedia Database

Distributed Multimedia

Software Development Management Special Issues on Information Systems Special Issues on Graphic and Moving

Image Processing

Management Science and Operations Research

Multimedia Authoring Basics

Logistics Information Systems

#### ■ Major in Architectural Design

Computer-aided Architectural Design Theory of Architectural Planning Advanced Digital Control Engineering

Advanced Robust Control Advanced Modern Control Robot and Machine Vision Thin Film Engineering Semiconductor Physics Sensor Engineering

Stability Engineering of Power System

Advanced Chaos Engineering

Emotion Engineering Biometrics System

Advanced Vehicle Dynamics Finite Element Analysis

Advanced Figure Mechanical Behavior Strength Design of Automotive Component

Advanced Thermodynamics Advanced Heat Transfer Advanced Mechatronics

Mechanical Instrumentation Theory and

Application

Advanced Manufacturing Special Machining

Artificial Intelligence

Special Issues on Electronic Commerce Artificial Intelligence Application New Multimedia Technology Seminar Web-based Decision Making Seminar Venture Business Start-up Seminar

Computer Vision

Special Topics on Software Quality

Multimedia Advertisement Multimedia Game Research Multimedia Authoring Application

Methodology of Architectural Planning

Theory of Architectural Space

Theory of Architectural Project
Theory of Architectural Beauty
Aesthetics of Architecture
Theory of Architectural Design 1
Theory of Architectural Design 2
Theory of Architectural Design 3
Theory of Architectural Design 4

Methodology of Architectural Design Psychology of Architecture Architectural Environment

Theory of Design's Valuation

Theory of Education Facility's Design Research for the Master's Degree

Theory of Complex's Design

Theory of City Planning
Theory of Urban Design

Methodology of Urban Design 1 Methodology of Urban Design 2 Theory of Welfare Facility's Design

Theory of Waterfront

Theory of Medical Facility's Design Japan and East History of Architecture Theory of Japan and East of Architecture

Theory of Garden's Design

Theory of Housing

Theory of Korea's Architecture Theory of Modern Architecture

# ■ Major in Global Master of Business Administration

Business administration Business Korean Language Marketing Strategy

Business Korean Language 2

e-business Strategy Global Management

Big data & business strategy

#### Professors

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#### **■** Major in Electronic Commerce

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#### ■ Major in Transportation and Logistics

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- Seung-Bong Park, Ph.D.
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- In-Seop Na, Ph.D.
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• Sang-Gu Kim, Ph.D.

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# **■** Major in Cultural Industries

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# ■ Major in Art and Design

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- Young-sang Kim, Ph.D.

#### ■ Major in Computer Engineering

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- Eun Sik Kim, Ph.D.
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#### Major in Refrigeration and Air-Conditioning Engineering

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#### ■ Major in Multimedia Contents

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 Hee-Teak Ceong, Ph.D.
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 Jeong-Seon Park, Ph.D.
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Won-Sik Jung, Ph.D.
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# creator@jnu.ac.kr]

# ■ Major in Architectural Design

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   [Professor, Architectural Planning and Design, jsjeong@jnu.ac.kr]
- Kum-ho Chung, Ph.D.
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- Jun Taek Kim, Ph.D.
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- seungwan LIM
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- Jaehoon BAE
   [Professor, Steel Structures, Seismic design, skycity-bjh@jnu..ac.kr]
- sunhyung KIM [Professor, Architectural Planning, sunhyung.kim@chonnam.ac.kr]

# ■ Major in Global Master of Business Administration

- Won-il CHO, Ph.D.
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- Joeng-Su Park, Ph.D.
   [Professor, Global Master of Business Administration, joengsu@jnu.ac.kr]

# Graduate School of Fisheries and Ocean Sciences

\_\_Contact Information

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# Graduate Studies in the Graduate School of Fisheries and Ocean Sciences

The Graduate School of Fisheries and Ocean Sciences was authorized by the Ministry of Education to open eight academic units (Department of Aquaculture, Ocean Environmental System Program, Department of Ocean Engineering, Department of Marine Production Management, Power System Engineering, Marine Food Science and Technology, Department of Aqua life Medicine) with an entrance quota of 30 applicants in October 2005. The Graduate School of Fisheries and Ocean Sciences offers night classes, and its master's program requires two-and-a-half years to complete. Applicants who apply for any program in the school are required to hold a bachelor's degree from a domestic or international university. This Graduate School aims to educate students on basic and practical theories and to provide research development that is applied to harbors, marine transport, marine resources, fishing industries, fish-raising industries, marine bio-manipulation, and food industries.

# **■** Degree Requirements

#### Credit Requirements

Applicants who apply for admission into the master's degree program should have one of the following qualifications at the time of application:

- Thesis degree: more than 24 credits
- Non-thesis degree: more than 36 credits

# ■ Foreign Language (English) and Comprehensive Final Examination

- Students taking the foreign language test should acquire more than 12 credits.
- The comprehensive final examination consists of three subjects. Applicants taking the examination should acquire more than 18 credits.

# Preparation of Thesis

The master's thesis should be prepared using the Guidelines for the Preparation of Theses, available from the Graduate School.

#### Submission of Thesis

Students who pass the foreign language test and comprehensive final examination, and complete degree program requirements or are expected to complete the degree program requirements in the semester of submission can submit a thesis.

# Advisors

The Department Head may designate a faculty member for each student upon admission to guide them in their studies.

# Limitations on Advisors

A faculty member may not be assigned more than three students to advise per year.

# Department of Power System Engineering

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# ■ Graduate Studies in Power System Engineering

Power System Engineering is an academic field combining the mechanical engineering and the electrical/electronics engineering. Power System Engineering deals with the design, manufacture, control, and management of power machinery, thermal-fluid machinery, electrical/electronics machinery, etc. The Department of Power System Engineering aims for nurturing experts with state-of-the-art technology in the field of power system engineering. The department consists of five laboratories: internal combustion engine, hydraulic-pneumatic control, heat-fluid, applied mechanics, and electro-mechanical energy conversion.

# **■** Degree Requirements

To earn a master's degree, graduate students should pass a foreign language test and a comprehensive final examination. Also, the students should have one of the following qualifications:

- Thesis degree: more than 24 credits

- Non-thesis degree: more than 36 credits

# ■ What Do You Study?

Advanced Numerical Analysis

Advanced Gas Turbine System Design(Capstone Design)

Advanced Solid Mechanics Advanced Combustion Engineering

Advanced Air Conditioning Advanced Thermal Power Engineering

Advanced Measurement System Advanced Thermodynamics
Advanced Engineering Mathematics Advanced Heat Transfer

Advanced Machine Tools Advanced Hydraulics-Pneumatics Control

Advanced Machine Design Advanced Hydraulic Engineering

Advanced Mechanical Vibration Dynamics Advanced Fluid Machinery
Advanced Engine Design Electromagnetic field theory

AdvancedInternal Combustion Engine Designand Control of Automatic System

Advanced Dynamics Advanced Electric Machinery
Analysis of Dynamic System Advanced Motor Control Theory
Advanced Robotics Advanced Accurate Machining
Advanced Mechatronics Advanced Optimal Design

dvanced Mechanomes Advanced Optimal Design

# Professors

- Kyong-Uk Yang, Ph.D.
   [Professor, Hydraulic-Pneumatic Control, yangku@jnu.ac.kr]
- Woo-Gyeong Wang, Ph.D.
   [Professor, Internal Combustion Engine. wangwk@jnu.ac.kr]
- Myung-Soo Choi, Ph.D.
   [Professor, Mechanical Vibration, engine@jnu.ac.kr]
- Kyung-Hun Shin, Ph.D.
   [Assistant Professor, Electric Machine. kshin@jnu.ac.kr]

# Laboratories

- Applied Mechanics Lab
- Hydraulic-Pneumatic Control Lab
- Internal Combustion Engine Lab

- Heat-Fluid Lab
- Electro-Mechanical Energy Conversion Lab

# Department of Aqualife Medicine

\_\_Contact Information

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URL: http://fishpath.jnu.ac.kr/

# **■** Graduate Studies in Aqualife Medicine

The Department of Aqualife Medicine revolves around the exploration of fish disease management and prevention strategies. Our department is composed of eight main laboratories: pathogenic microbiology, histopathology, fish disease diagnosis, environmental physiology, preventative medicine for fish, fish pharmacology, clinical fish pathology, fish virology and clinical diseases.

# **■** Degree Requirements

To get a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval. The foreign language and comprehensive examinations are administered in February and August of each year.

# ■ What Do You Study?

Research Methodology
Advanced Ontogeny
Advanced Invertebrate Anatomy
Microbial Genetics
Molecular Studies in Fish Pathology
Advanced Aquatic Toxicology
Applied Fish Pharmacology
Advanced Fish Immunology

Advanced Fish Anatomy
Applied Aqualife Microbiology
Advanced Diagnostic Fish Pathology
Advanced Fish Pathology
Advanced Fish Disease and Nutrition
Prevention of Epizootics
Advanced Environmental Analysis
Advanced Environmental Physiology

# Professors

 Eunheui Kim, Ph.D.
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Advanced Fish Histopathology

• Jung Sick Lee, Ph.D.

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Myung-Joo Oh, Ph.D.
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- Heung-Yun Kim, Ph.D.
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- Sung-ju Jung, Ph.D.
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- So Young Kang, Ph.D.

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- Toyohiko Nishizawa, Ph.D.
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- Wi-Sik Kim, Ph.D.
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# Department of Maritime Police Science

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# ■ Graduate Studies in Maritime Police Sciences

Due to South Korea being a peninsula and therefore facing the sea on three sides and the geopolitical nature of the region, there is growing importance for maritime law enforcement. We are therefore aiming at cultivating professionals in the Maritime Police and strengthening competitiveness in the workforce through further education. In addition, the academic and research-based composition of Maritime Police personnel with experience in various research fields are required to improve the organization.

# Degree Requirements

To get a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to graduate school regulations. Special graduate school students may earn up to 6 credits in principle per semester; this may be adjusted to within 3 credits with the President's approval.

# **■** What Do You Study?

Advanced Criminal Law
Advanced Law of the Sea
Advanced Marine Engine
Advanced Vibration Analysis
Advanced Fisheries Law
Advanced Marine Safety
Advanced Criminology
Studies in Maritime Law
Advanced Marine Navigation
Studies in public law

Advanced Response of Marine Oil Pollution

Advanced Fisheries Management
Advanced Computer Aided Design
Studies in Maritime Traffic Law
Basic Studies in International Law
Advanced Criminal Procedure
Advanced Seamanship of Naval Vessel
Advanced Marine policing
Organization and Management

Advanced Theory of police Investigation

Advanced Ship Dynamics

# Professors

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# Department of Marine Bio Food Science

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## ■ Graduate Studies in Marine Bio Food Science

In the marine field, the Department of Marine Bio Food Science is leading the study of food material, quality, process, storage, distribution, sanitation, safety, and processing technologies.

The basic characteristics of marine food, marine products and development of multiple processing, the use of special functional ingredients for continued exploration concentrated focus on basic scientific literacy and to foster talent and value of marine food acquiring knowledge about the features and, Fisheries with the increase in food hygiene safety technical, process knowledge, quality improvement, the study of the spread of seafood by practicing in the field of marine fisheries industry to increase adaptability to lead the marine biotechnology industry is to nurture talent.

# Degree Requirements

To obtain a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Special graduate school students may earn up to 6 credits in principle to semester. The foreign language and comprehensive examinations required are administered in February and August of each year.

# ■ What Do You Study?

Food Quality Control

Advanced Food Microbiology

Advanced Bio chemistry

Advanced Food Engineering

Advanced Food Enzymes

Advanced Nutritional Chemistry

Food Rheology

Advanced Food Preservation1

Advanced Canned Food1

Advanced Lipid Chemistry

Advanced Glucose Chemistry

Advanced Food Toxicology

Advanced Food Hygiene

Food Color Chemistry

Advanced Bioactive Substances

Food Stuff Technology

Marine Bioactive Substances

Advanced Antibiotics

Advanced Food Research

Advanced Food Chemistry

Food Analysis Technology

Advanced Food Flavour Chemistry

By-products Processing

Organoleptic Evaluation

Advanced Fermentation Technology

Lipid Food

Advanced Instrumental Analysis

Advanced Sea Weed Processing

Advanced Applied Microbiology Nutritional Biochemistry Functional Food Chemistry Physical Properties of Food Advanced Food Preservation2 Advanced Canned Food2 Advanced Vitamin Chemistry Advanced Food Biotechnology Advanced Food Analysis

Management for Food Hazard Point

Advanced Fisheries Chemistry

Advanced Food Additives

Advanced Seaweed Chemistry

Advanced Marine Resources Processing

Food Resources Processing

# Professors

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# Department of Marine Production Management

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# ■ Graduate Studies in Marine Production Management

The future of the marine environment requires sustainable management of marine biological resources such as the management of fisheries, high-quality seamanship skills and safe navigation, and marine reorganization with an emphasis on marine ecology awareness. The aim is to train competent and creative marine technical personnel and experts who will lead the marine production and shipping industry by educating theoretical and practical skills on marine production, marine navigation, and fishery systems.

# **■** Degree Requirements

To earn a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to the appropriate graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval.

# ■ What Do You Study?

Thesis Research

Writing Thesis

Advanced Seamanship

Theory of Ship's Position Error

Theory of Vessel Motion

Fisheries Engineering

Fisheries Oceanography

Fishing Gear Engineering

Advanced Fishing Gear Design

Mechanice Fishing Gear Materials

Fishing Behavior

Advanced Fishing Technology

Fishing Physics

Fishing Vessel Ability

Fishing Machinery

Advanced Fishery Biology

Fisheries Data Processing

Fishing Ground Mechanism

Artificioa Reet Engineering

Fishing Mechanism

Advanced Pelagic Fishery Technology

Acoustics Fishing Methodology

Measuring Instrumentin Navigation

Advanced Theory of Navigation

Advanced Navigation

Advanced Fisheries Law

International Marine Law

Advanced Marine Mateorology

Oceangraph Environmentalism

# Professors

- Doo-Jin Hwang, Ph.D.
   [Professor, Fisheries Acoustics, djhwang@jnu.ac.kr]
- Taeho Kim, Ph.D.
   [Professor, Fisheries
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- Hyong-Ho Shin, Ph.D.
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- Jihoon Lee, Ph.D.

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# **■** Laboratories

- Fishing gear and Measurement technology Lab
- Navigation Lab
- Fishing gear · Fishing Methodology Lab
- fishery system Lab
- Fishery Resources and Information Lab

# Department of Aqualife Science

\_\_Contact Information

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URL: http://aqua.jnu.ac.kr

# **■** Graduate Studies in Aqualife Science

The Department of Aqualife science is designed for aquaculture awareness and the conservation of aquatic organisms.

The main target areas are fishery aquaculture and seaweed aquaculture through the study of resource ecology, ecosystem modeling, reproductive biology, Advanced Bio-diversity and Conservational Biology, fish physiology, fish feeds, and Aquafarm Environmental Ecology studies.

The purpose of this program is to produce experts and researchers in the field of aquaculture through intensive study and study of both basic and applied sciences.

# Degree Requirements

Master's degree candidates are required to earn 24 credits over a minimum of 2 years and 6 months. Ph.D. candidates are required to earn an additional 36 credits. All graduate students are required to submit a thesis prior to graduation and pass a comprehensive exam and a foreign language exam. Students are encouraged to take 9 credits in their first semester. If their grade point average exceeds 4.0 in a semester, they are allowed to take up to 12 credits the following semester. Students are not allowed to take more than 6 credits of courses taught by their academic advisor in the first semester.

# ■ What Do You Study?

Advanced Genetics (3)

Advanced Developmental Biology (3)

Advanced Ichthyology (3)

Fishery Invertebrate Zoology (3)

Advanced FishFeeds (3)

Algal Physioecology (3)

Aquafarm Environmental Ecology (3)

Crustacea Culture (3)

Endocrinology (3)

Advanced Marine Fish Culture (3)

Management and Pathology of Aquatic Organism (3)

Invertebrate Zoology Culture of SeaWater (3)

Advanced Breeding Science (3)

Advanced Cell Biology (3)

Fish Population Dynamics Management (3)

Advanced Fisheries Administration (3)

Advanced Limmnology (3)

Advanced Feed Biology (3)

Advanced Biochemistry (3)

Advanced Fishery Animal Nutrition (3)

Advanced Phycocultivation (3)

Reproductive Ecology (3)

Advanced Marine Ecology (3)

Invertebrate Zoology Culture of FreshWater (3)

Taxnomy of Invertebrate (3)
Advanced Fish of Fresh-Water Culture (3)
Fish Ecology (3)
Semina 3 (3)

Semina 4 (3) Semina 2 (3) Thesis Research (3)

# Professors

- Won Kyo Lee, Ph.D. [Professor. Reproduction organism wklee@jnu.ac.kr, +82-61-659-7161]
- Kyoung Ho Kang, Ph.D.
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- Kyeong Ho Han, Ph.D. [Professor. Ichthyology Ecology and Taxonomy. aqua05@jnu.ac.kr, +82-61-659-7163]
- Kang Hee Kho, Ph.D.
   [Professor. Molecular Physiology kkh@jnu.ac.kr, +82-61-659-7168]
- Sang Duk Choi, Ph.D.
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# Naval Architecture and Ocean Engineering

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# ■ Graduate Studies in Naval Architecture and Ocean Engineering

Naval architecture and ocean engineering focuses on research and education in a variety of areas from basic theory to advanced technology on ships and offshore structures. The final goal of the Department lies in the design and production of reliable and cost-effective transport systems and offshore structures which can carry out missions successfully in harsh ocean environments. The research scopes of naval architecture consist of resistance and propulsion, propulsors, structures and materials, motion and maneuverability, noise and vibration, and welding. Ocean engineering involves various scopes of technical problems that arise during the design, construction, load-out, and operation of various forms of structures developed to meet the needs of the offshore petroleum and construction industries. Research on the ocean environment itself is also one of the major research fields of the Department. To meet increasingly complex technical demands, the Department extends research fields to cover rigorous analysis of detailed subjects using powerful computers. In particular, it offers on-board training courses on university-owned research and training ships.

# **■** Degree Requirements

To earn a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to the appropriate graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval.

# ■ What Do You Study?

Advance measurements engineering (3)

Advance manufacturing automation (3)

Ecosystem Engineering (3)

Advance manufacturing engineering of ship (3)

Advanced Theory of Ship Design (3)

Advance materials Science of ship (3)

Advanced Theory of Ship Propulsion (3)

Advanced Theory of Ship Resistance (3)

Advanced Fisheries Oceanography (3)

Advanced Numerical Methods (3)

Advanced Coastal Oceanography (3)

Advance welding process (3)

Advanced Hydrodynamics (3)

Finite Element Method (3)

Advanced Optimal Design (3)

Advanced Theory of Special Ships (3)

Advanced Potential Theory (3)

Sediment Transport and Littoral Processes (3)

AdvancedCoastalandHarborEnginering (3)
Coastal Numerical Modelling1 (3)
Coastal Numerical Modelling2 (3)
Advanced Marine Measurement (3)
Advanced Ocean Geoinformatics (3)
Introduction to Ocean Thought (3)

Advanced Dynamical Oceanography (3)
Advanced Operational Oceanography (3)
Advanced Ocean Remote Sensing (3)
Advanced Ocean Information Analysis (3)
Turbulent Diffusion Theory in the Ocean (3)
Advanced Marine Environmental Engineering (3)

#### Professors

- Moon-Ock Lee, Ph.D.
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- Il-Heum Park, Ph.D.

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- Jong-Kyu Kim, Ph.D.
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- Hee-Jong Choi, Ph.D.
   [Professor, Ship Design, chiohj@jnu.ac.kr]
- Jee-Hun Song, Ph.D.
   [Professor, Ship Structural Vibration, jhs.@jnu.ac.kr]

# Department of Environmental Oceanography

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## ■ Graduate Studies in the Ocean Environmental Systems

The Department of Ocean Environment Systems aims to carry out scientific and technological studies of the marine environment, the origin of life on earth. For students aspiring to be marine researchers, the Ocean Environment System Program is designed to provide advanced training in a specialized field.

#### **■** Degree Requirements

To earn a master's degree, students must accumulate over 24 credits over a minimum of 2 years and 6 months. Graduate students are also able to earn research credits according to graduate school regulations. Special graduate school students may earn up to 6 credits in principle; this may be adjusted to within 3 credits with the President's approval.

When students take lectures offered in the special graduate school (including supplementary subjects), master's degree candidates must achieve a grade of C or higher, while Ph.D. candidates must achieve a grade of B or higher.

# ■ What Do You Study?

Advanced	Aquatic Environmental Processes (3)	Advanced M	<b>Marine</b>	Conservation	Biology	(3)
Advanced	Biology of Water Pollution (3)	Advanced M	<b>Marine</b>	Conservation	Ecology	(3)
Advanced	Chemical Oceanography (3)	Advanced M	<b>A</b> arine	Ecology (3)		
Advanced	Coastal Oceanography (3)	Advanced D	Deep Se	ea Biology (3	)	

Advanced Community Ecology (3) Advanced Marine Planktology (3)
Advanced Ecology of Fisheries Resources (3) Advanced Marine Pollution (3)

Advanced Estuary Ecology 1 (3)

Advanced Marine Pollution Control (3)

Advanced Estuary Ecology 2 (3)

Advanced Marine Pollution Ecology (3)

Advanced Marine Sedimentology (3)

Advanced Fisheries Oceanography (3)

Advanced Marine Zooplanktology (3)

Advanced Ocean Bio-Genetics (3)

Major Electives

Advanced Ocean-Ecotoxicology 1 (3)

Advanced Geological Oceanography 1 (3) Advanced Ocean-Ecotoxicology 2 (3)

Advanced Geological Oceanography 2 (3) Advanced Ocean Environmental Condition (3)

Advanced Intertidal Ecology (3) Advanced Physical Oceanography 1 (3)
Advanced Marine Biology of Benthos (3) Advanced Physical Oceanography 2 (3)

Advanced Red Tides (3)
Environment Analysis of Fishing Area (3)
Environment of Fisheries Oceanography (3)
Fisheries Physical Oceanography (3)
Fluid Dynamics for Oceanography (3)
Instrumental Analytical Chemistry (3)
Marine Environmental Ecology (3)
Ocean Animal Behavior (3)

Ocean Eco-informatics (3)
Paleo Oceanography 1 (3)
Paleo Oceanography 2 (3)
Regional Oceanography (3)
Water Quality Control of Aquatic Culture
Systems (3)

#### Professors

- Yang Ho Yoon, Ph.D.
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- Hyo-Sang Choo, Ph.D.
   [Professor, Physical Oceanography, choo@jnu.ac.kr]
- Hyun Chool Shin, Ph.D.
   [Professor. Marine Benthic Ecology,

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Zooplankton Taxonomy (3)

- Hyeon Seo Cho, Ph.D.
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- Ho Young Soh, Ph.D.
   [Professor, Zooplankton systematics and Ecology, hysoh@jnu.ac.kr]
- Ihn-Sil Kwak, Ph.D. [Professor, Zoology, iskwak@jnu.ac.kr]

# Graduate School of Public Policy

\_\_Contact Information

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URL: http://cnugspp.jnu.ac.kr

#### ■ Graduate Studies in our School

Since 1980, the Graduate School of Public Policy has focused its efforts on teaching and studying the modern theories and applications of public policy. It also aims to contribute the development of the nation and local communities by educating competent leaders and administrators.

### **■** Degree Requirements

Candidates eligible for the master's degree program are those who have a bachelor's degree, or who are recognized by the Ministry of Education as having equivalent qualifications to the coursework requirements of a regular four-year college program.

Our school has four academic divisions: ① General Administration major, ② Society, Culture and Welfare Policy Division, and ③ Real estate & Community Development Policy Division, and ④ Psychological Health Services. The length of the each division's coursework shall normally be two years and six months. A period of no longer than four years and six months shall be allowed for completion of the master's degree program.

The number of class days must exceed 180 for each academic year. A minimum of 24 credits are required for completion of the master's degree. A student who has a different major area from that of his undergraduate courses will have to take some undergraduate courses. The GPA should be 3.0(B) or better.

Up to twelve credits earned at other foreign or domestic universities and colleges can be transferred for the master's degree program of the School. However, a maximum of 6 credits earned at other foreign or domestic universities or colleges before entering our school may be transferred for the master's degree program.

The courses offered in our school are evening classes. Students are required to attend more than two-thirds of their classes to get credits.

Master's degrees shall be conferred upon the candidate who has fulfilled all of these requirements: ① 24 credits hours, ② comprehensive examination, and ③ additional 6 credit hours or thesis writing and oral examination.

Our school may offer non-credit programs to individuals who need specialized or technical knowledge in order to carry out their jobs. International students or government officials who have equivalent qualifications may be accepted as special supernumerary students through an extra examination.

## ■ What Do You Study

#### **■** General Administration major

Urban Administration

Public Personnel Administration Research Methods in Public Policy

Local Administration Constitutional Law Korean Politics

Introduction of Modern Public Administration

Policy process theory Governmental Budgeting

General Theory of Administrative Law

Public Organization Theory Administrative Management

Public Policy Analysis and evaluation

Welfare Administration

Development Cooperation Administrative Law

Local Autonomy

Theory On Local Public Finance Korean Public Administration Philosophy of Public Administration

Public Conflict Management Electronic Government Comparative Administration

Regulation Policy

Science and Technology Policy

Environmental Policy

Local Governing Police System

Political Process

Seminar on Local Council

Gender Policy International Politics Foreing Policy Analysis Law of Local Autonomy

Law of Labour

Criminal Law & Economic Crimes

Police Administration

Theory of Disaster Management
Theory of Korea Unification Policy

Economic Policy

Organizational Behavior

Market and Government

#### ■ Society, Culture and Welfare Policy Division

Contemporary Society & Media Understanding of modern Society

Theories of Social Change Seminar on visual sociology Seminar on Community

Modern Society and Human Rights

Gender and Society
Deviation and Control
Social psychology
Cultural psychology
Organizational psychology
Information Policy Theory
Archival Records value theory
Public Information Service

Seminar on Archival Culture Seminar on Reading Culture Seminar on Information Culture Seminar on Information Society Seminar on Local Media

Seminar on Local Media
Seminar on mass Culture
Seminar on Cultural Study

Media & PR

Seminar on Media Policy Theory of Culture Industry Theory of Culture Policy

Seminar on Cultural Management Seminar on Culture and Tourism Policy

Globalization & Local Culture

Culture Policy of Cultural Interaction Culture Policy of Multiculturalism History on the Cultural Policy Introduction to Social Welfare

Social welfare policy Welfare for the Elderly

Social welfare program development and evaluation

Social Work with Families Seminar on Local Community Multiculturalism and Social Welfare

Cultural resources & DB Construction theory

Social Welfare case management

Human Behavior and Social Environment

#### Social Welfare Law

# Real estate & Community Development Policy Division

Regional Development Policy

Real Estate Policy

Urban Planning

Real Estate Industry

Urban Policy

Urban Regeneration Policy

Transportation Policy

Local culture theory

Case studies on Urban Policy

Case Studies on Regional Policy

Tourism development Policy

Rural Development Policy

Seminar on Community development

Urban Growth Management

Case Studies on Real Estate Policy

Green Urban Policy

Regional Landscape Planning

Seminar on Urban & Regional Economic Policy

Future Urban Structure

Case studies on Gwangju Urban Policy

Case studies on Jeonnam Regional development Policy

History of urban development

Real Estate Development

Modern Urban Theory

#### ■ Psychological Health Services

Health Psychology

Positive psychology

Counseling psychology

Communication skills

Personality theories

Behavioral modification

Psychology of interpersonal relationship

Psychological health in crisis and disaster

Psychological health service practice in field

Criminal psychology

Psychology of addictive behavior

Psychology of sexual behavior

Brain and behavior

Seminar in psychological health service policy

Special issues in psychological health service

# Graduate School of Plant Protection and Quarantine

\_\_Contact Information
Phone: +82-62-530-0397

Fax: +82-62-530-0398 URL: http://gpq.jnu.ac.kr

#### Graduate Studies in our School

The purpose of the Graduate School of Plant Protection and Quarantine is to train specialized personnel in diseases and pests control and inspection by focusing on practical field application, aiming to effectively protect crops from diseases and pests.

#### Degree Requirements

#### Degree Requirements

- ① Type of degree: Master of Agriculture
- ② Degree Requirements: 2.5 years (5 semesters) enrollment, completion of 27 credits, and submission of a master's thesis

#### Comprehensive Examination

- ① The method and timing of the comprehensive examination are determined by the graduate school dean each semester.
- ② To take the comprehensive examination, students must acquire 18 credits or more.
- ③ The comprehensive examination is conducted by examiners appointed by the dean from the faculty of the university.
- The comprehensive examination is evaluated on a scale of 100 points for each subject and a pass is awarded to those who earn an average score of 70 points or higher.

#### Thesis Writing

The degree-seeking thesis must be prepared in accordance with the regulations for preparing master's degree theses at this graduate school.

#### • Thesis Submission

- ① Those who have passed the comprehensive examination and have obtained the required credits for each course or are expected to obtain them by the end of the semester may submit a master's degree-seeking thesis and must pay the prescribed examination fee.
- ② The examination fee for the master's thesis is determined by the graduate school dean after deliberation by the graduate school committee.

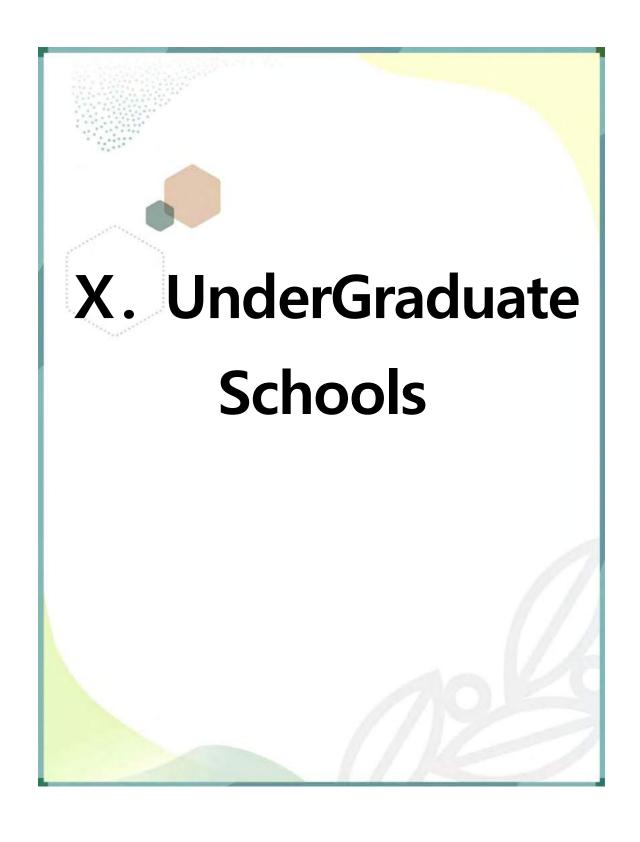
#### Limitation on the number of advised students

The number of students advised by each advisor is determined by the internal regulations of the department.

# ■ What Do You Study

Monitoring and Diagnosis of Plant Diseases
Field Applied Pest Management
Practice of Advanced Plant Quarantine
Practical molecular identification of phytopathogens
On-site application of biopesticides

Application Practice of Organic Materials Practice of Agricultural Environment management Application of beneficial microorganisms Crop bacterial disease control



# College of Nursing

#### \_Contact Information

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# Department

· Department of Nursing

# Affiliated Research Centers

- · Health & Nursing Service Design R&D Center
- · Center for Evidence-Based Nursing Education & Research
- · CARE Center
- · Center for Mental Health Promotion
- · Center for Multicultural Family Health Promotion

Nursing

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## **■** What is Nursing?

Nursing is defined as the diagnosis and treatment of human responses to health and illness. The following phenomena are the focus of nursing care and research:

- · Self-care process
- Physiological and pathophysiological processes such as rest, sleep, respiration, circulation, reproduction, activity, nutrition, elimination, skin, sexuality, and communication
- · Comfort, pain, and discomfort
- · Emotions related to health and illness
- · Meanings ascribed to health and illness
- · Decision making and the ability to make choices
- · Perceptual orientations such as self-image and control over one's body and environment
- Transitions across the lifespan, such as birth, growth, development, and death
- · Affiliative relationships, including freedom from oppression and abuse
- Environmental systems: Safety and Quality Management

# **■** College of Nursing at Chonnam National University

The Department of Nursing, which held its centennial anniversary in 2012, has the longest history among Chonnam National University's numerous departments. In 2005, the department was promoted to a nursing college, defining CNU as a leader of nursing in the Honam area. Based on truth, creation, and service, which are the missions of CNU, the educational purpose of the College of Nursing is to help students learn scientific nursing, knowledge, respect for clients they encounter in a variety of clinical settings, and develop communication skills necessary for collaborating with health professionals from other disciplines. Furthermore, the undergraduate curriculum is focused on training creative and talented global nurses as well as creating new jobs via innovative teaching/learning strategies.

After 4 years of study, students acquire licensure through the national board of nursing examination.

#### Professors

• Oh, Sang-Eun, Ph.D.

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- An, Min-Jeong, Ph.D.

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- Yu, Soo-Young, Ph.D.
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#### Professors Emeritus

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- Kim, Su-Jin, Ph.D. [pinehillkim@naver.com]

#### **■** Degree Requirements

To earn a bachelor's degree, completion of 130 credit hour courses is required, including 27 credit hours of general cultural courses, 78 credit hours of major core courses, and 35 credit hours of major elective courses.

## ■ What Do You Study

The freshman courses consist mostly of liberal arts subjects. Students take 10-12 courses, including General Biology 2, Convergence Thinking and Creative Problem Solving, Anatomy, and Introduction to Nursing, all of which are major requirements.

During the sophomore year, students undertake theory and practice in the principles of nursing care and basic health-related science courses and electives.

During the junior and senior years, students study theory and practice in Adult Care, Pediatrics, Women's Health Issues, Psychiatry, and Community Health Nursing. In addition, Nursing research and Evidence-based nursing must be completed. Electives are Gerontological Nursing, Clinical Nursing Practice and Theory, Health Education, and Multicultural Nursing.

#### ■ Core Courses (89 credits)

Preclinical Practicum (1) Mental Health and Psychiatric Nursing 2 (2)

Mental Health and Psychiatric Nursing Practicum (2)

Nursing Management 1 (2)

Evidence-Based Practice and Nursing Research (3)

Adult Health Nursing 3 (2)

Adult Health Nursing Practicum 3 (2)

Women's Health Nursing2 (2)

Women's Health Nursing Practicum (2)

Community Health Nursing 1 (2) Comprehensive Simulation1 (1) Nursing Management 2 (2)

Nursing Management Practicum (2)

Adult Health Nursing 4 (2)

Adult Health Nursing Practicum 4 (2)

Child Health Nursing 2 (2)

Child Health Nursing Practicum (2)

Community Health Nursing 2 (2)

Community Health Nursing Practicum (2)

Empathy Nursing Design (2)

Professional Communication in Nursing (2)

Evidence-Based Nursing Practicum (2)

Healthcare relevant laws and Bioethics (2)

Comprehensive Simulation2 (1)

Introduction to Nursing (2)

Convergence Thinking and Creative Problem Solving (2)

Gross Anatomy (3)

Fundamentals of Nursing 1 (3)

Fundamentals of Nursing Practice 1 (1)

Microbiology (2)

Pathophysiology 1 (2)

Pathophysiology 2 (2)

Human Understanding and Communication (3)

Health Assessment (2)

Health Assessment Practice (1)

Fundamentals of Nursing 2 (2)

Fundamentals of Nursing Practice 2 (1)

Adult Health Nursing 1 (3)

Child Health Nursing 1 (2)

Pharmacology (2)

Mental Health and Psychiatric Nursing 1 (2)

Adult Health Nursing 2 (2)

Adult Health Nursing Practicum 1 (2)

Adult Health Nursing Practicum 2 (2)

Women's Health Nursing1 (2)

#### **■** Electives

Global Citizenship (2)
Culture and Nursing Care (2)
Nursing Informatics (2)
Public Health (2)
Nutrition in Health & Nursing Care (2)
Gerontological Nursing (2)
Gerontological Nursing Practicum (1)
Complementary and Alternative Therapy (2)
Data Analysis (2)

Nursing & Artificial Intelligence (2)
Nursing Counseling with Family in Crisis (2)
Planning & Evaluating Health Programs (2)
Curriculum Design in Health Education (2)
Health Policy & Nursing Leadership (2)
Critical and Emergency Care Nursing (2)
Critical Care and Emergency Nursing Practicum (2)
Community Mental Health Nursing Practicum (1)

#### Careers

- · Clinical Nurses
- · Educators: Researchers, Professor, School Nurses
- Administrators: Civil Servants Related Health, Government Employees
- · Community Nurses: Occupational Health Nurses, Public Health Nurses
- · Other: Child Care Centers, Army Nurses, Welfare Facilities, Nursing Home Nursing Homes

# College of Business Administration

\_Contact Information

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Fax: +82-62-530-1539 E-mail: cba@jnu.ac.kr URL: http://cba.jnu.ac.kr

### ■ Profile of the College of Business Administration

The college was established in 1952, as one of the five founding colleges of Chonnam National University (CNU). It has turned out over 15,000 highly talented and qualified business professionals since 1955. The college consists of the Faculty of Business Administration and the Faculty of Economics. It offers masters and doctoral programs in 5 major areas of study.

## **■ Educational Goals and Strategies**

The vision of the college is to become one of the leading business schools in Korea. The college's mission is to cultivate leaders in various business sectors of society. It aims to produce highly competent graduates with a balance between theory and practice to develop the organizations in which they are employed. The College aspires to pursue the educational values of in-depth professional knowledge, high ethical standards and integrity, interdisciplinary teamwork, entrepreneurial spirit, global perspective, productive collaboration, and development of individual potential. To accomplish these values, the College has as its key educational goals for the cultivation of its students the following areas:

- · Practice-oriented knowledge: profound professional knowledge in business, ability to apply theory to solve real life problems
- · Global perspective: foreign language ability, global business issues
- · Innovative thinking and entrepreneurial spirit: entrepreneurial spirit and innovative activity, ability to make creative decisions
- · Ethical understanding: ethical aspects of complex business environments

# Faculty of Business Administration

\_Contact Information

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Fax: +82-62-530-1449 E-mail: cba@jnu.ac.kr URL: http://biz.ac.kr

## **■** Faculty of Business Administration

The Faculty of Business Administration helps students learn about general management theories and methodologies in logical and systematic ways. The learning goals of the faculty are to deepen practice-oriented professional management knowledge, promote global perspectives, enhance innovative thinking, and nurture entrepreneurship and ethical understanding with integrity. The faculty aims to cultivate competent and creative business leaders by instilling problem solving capabilities.

- Marketing: To learn a diverse range of issues of how to identify customers' potential needs, design
  products and services, promote them in effective ways, and set prices in order to create values to customers
  as well as firms and the society
- Operations and Technology management: To study various management topics encompassing operations
  and technology strategies, production planning, implementation, controlling, and coordination within
  an organization as well as among organizations in order to produce and deliver products and services
  in an efficient and effective way
- Organizational Behavior and Human Resource Management: To learn various issues regarding human behavior in an organization, human resource development at micro-levels as well as organization design and development in the macro-level
- Finance: To study various theories and cutting-edge practical financial techniques related to funding and running of capital for effective management of a firm, dividend policies, investment decisions, and management of financial institutions
- Accounting: To learn and train in methods related to a set of activities of in the gathering, booking, summarizing, and controlling of data and monetary information as well as communicating within an organization and with external stake-holders
- Management information systems: To learn a wide range of theories and practices regarding how to strategically utilize IT, the Internet, and various information resources of a firm
- International business: To cultivate practical decision making and problem solving capabilities under global business environments by learning theories and international trade, FDI, international finance, and the marketing of multinational enterprises

#### Professors

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# **■** Degree Requirements

Students are required to earn more than 130 credits. Among the 130 credits, students must earn at least 45 credits from Business Administration courses. If students take more than 45 credits from other major courses, they will have earned a joint-degree (double major). Students who earn at least 21 credits from other major courses will have earned a minor. Students who earn the minimum major credit requirements (45) by 21 credits will have earned an intensive major.

# ■ What Do You Study?

BUS2020 Management Information System	BUS2023 Intermediate Accounting2
BUS2012 Organizational Behavior	BUS3012 Management Analysis
BUS2004 Intermediate Accounting1	BUS3006 Advanced Accounting
BUS2018 Marketing Management	BUS3005 Management of Multinational Enterprise
BUS2017 Financial Management	BUS3008 Tax Accounting1
BUS3009 Production & Operations Management	BUS3001 Consumer Behavior
UNV4008 Field Practice1	BUS3002 Investment Theory
BUS1001 Principles of Management	BUS3003 Auditing
BUS1003 Introduction to International Trade	BUS3004 Accounting Information System
BUS1002 Principles of Accounting	BUS3018 International Finance Management
BUS2013 Mathematics for Management	BUS3034 Understanding and Using of Multimedia
BUS2032 Management Information and Big Data	BUS3021 Insurance
BUS2014 Organization Theory	BUS3015 Tax Accounting2
BUS2031 Business Communications and Negotiation	BUS3014 Marketing Research
BUS2001 Business Statistics	BUS3016 Strategic Management
BUS2027 Introduction to Civil Law	BUS3033 Governmental Accounting
BUS2010 Managerial Accounting Practices	BUS3022 Organizational Development
BUS2003 Managerial Accounting 1	BUS3030 Starting Business and Small Business
BUS2011 Financial Accounting Practices	Management
BUS2015 Managerial Accounting 2	BUS3035 Introduction to e-Business
BUS2035 Global Business Management	BUS4025 Management Innovation
BUS2021 Business Law	BUS3031 Global Marketing
BUS2030 Managerial Decision Making	BUS4005 Financial Institution Management
BUS3011 Human Resources Management	BUS4003 Labor Relations
BUS2029 Computerized Accounting	BUS3024 International Trade Practice

BUS4026 Service Marketing	BUS4028 Business Ethics
BUS4032 Quality Management and Environmental	BUS4033 Knowledge Management and Intellectual
Management	Property Right Management
BUS4034 Business Case Seminar	BUS4031 Options, Futures, And Other Derivatives
BUS4023 Advertising Management	BUS9081 Global Value Chain Management
BUS4035 Management of Technology and Innovation	BUS9072 Social Entrepreneurship Practice

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# Faculty of Economics

# **■ Faculty of Economics**

The learning goal of the Faculty of Economics is to grow economic-minded specialists who are able to solve a diverse range of economic problems with professional knowledge. This goal is being achieved through the educational strategies of the faculty:

- Problem-solving focused: fostering professional with economic mind and practical capabilities
- Market-community balanced: developing basic grounding in liberty, truth, and contribution to community and society
- Communicative skills: enhancing flexibility of educational programs to meet the demands of society and students
- Economics: To place great value on practical applications of economic theories and to strive to provide a market economy-oriented education. The instructional focus is on educating students to understand principles of economic activities forming the foundation of society, and learn various economics theories and applications how to tackle real-life economic problems
- The Regional Development: To help students gain an understanding of economic theories and their implications for urban planning, regional development, and the environment. The track educates students to build an understanding of modern methods of urban planning that will reduce the gap among different cities and regions, producing regional development experts with thorough theoretical and practical knowledge. Urban studies provides students with theories and techniques for urban planning and real estate development, while the Regional studies provides students with tools and understanding to solve various regional problems such as environmental, traffic, housing, logistics, etc.

#### Professors

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- Hyun-Ho Kim, Ph.D.
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## Degree Requirements

Students are required to earn more than 130 credits. Among the 130 credits, students must earn at least 39 credits from Economics courses. If students take more than 39 credits from other major courses, they will have earned a joint degree (double major). Students who earn at least 21 credits from other major courses will have earned a minor. Students who earn the minimum major credit requirements (39) by 21 credits will have earned an intensive major.

# ■ What Do You Study?

#### Required

Principles of economics 1 Principles of economics 2 Microeconomic Theory Macroeconomic Theory

#### Electives

**Economic Statistics** 

Mathematical Analysis for Economics

**Economic History** 

Market and Economic Regulation

Game Theory

Korean Economic History International Trade Theory Business Economics Labor Economics Industrial Organization Money and Banking

**Econometrics** 

Resource and Environmental Economics

History of Economic Theory Finance and Banking Economics

Digital Economics International Finance Public Economics

Economic Development Theory

Economics of Insurance

Financial Market Analysis
International Economic Policy
History of Economic Thought

Law and Economics

Theory of Political Economy International Commerce International Political Economy

Special Issues in Economics

Economics Seminar
Cultural Economics
East Asian Economy

Economics of Human Resources Introduction to Regional Development Introduction to Real Estate Science

Regional Economics
Transportation Economics
Introduction to Urban Studies
Principles of Economics 1
Principles of Economics 2

Urban Planning

Regional Community Development

Social Research Methods

Planning Law

Real Estate Mathematics

Urban Economics

Introduction to Urban Development Principles of Real Estate Development

Microeconomic Theory

Macroeconomic Theory

National and Regional Planning

Seminar in City and Regional Development

Overseas Regional Development

Resource and Environmental Economic Overseas Regional Development

Urban History

Urban Analytical Techniques

City and Regional Logistics Management

Urban Management Land Economics

Real Estate Market Analysis

Fundamentals of Real Estate Appraisal Urban and Regional Regeneration

Public Economics

National Logistics Polices

International Development and Cooperation

Regional Economic Analysis

# College of Engineering

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#### School of Architecture

· Architecture & Urban Design

- · Architectural Engineering
- School of Chemical Engineering
  - · Chemical Engineering Materials
  - · Chemical Process Engineering

- · Chemical Engineering Safety
- School of Materials Science and Engineering
  - · Metallurgical Engineering

· Energy Nanomaterials

- · Optoelectronic Materials
- School of Mechanical Engineering
- · Mechanical Engineering

- · Mechanical & Automotive Engineering
- School of Polymer Science and Engineering
  - · Polymer Engineering

- · Fiber Science Engineering
- Department of Biotechnology and Bioengineering
- Department of Civil Engineering
- Department of Electrical Engineering
- Department of Energy and Resources Engineering
- Department of Environment and Energy Engineering
- Department of Industrial Engineering
- Department of Computer Engineering
- Department of Electronic Engineering
- Department of Software Engineering

# School of Architecture

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#### What is Architecture?

Architecture is a profession where technology, ecology, philosophy, art, and science combine to solve the problems of the building environment.

The buildings we live and work in shape our experiences, our memories, and the way we view the world. Homes, office buildings, opera houses, art galleries, schools, and factories are all designed by architects. It is the role of the architect to analyze a client's needs and to design a building which fulfills those needs. The architect then documents the design and manages the construction process. The architectural engineer develops new technologies and materials to construct buildings.

## ■ School of Architecture at Chonnam National University

Emphasizing the awareness of social and cultural contexts that underpin the architectural practice, encouraging a comprehensive and creative thinking ability among students, and researching the conditions of the environment of human dwelling, the School of Architecture remains committed to educating architects who can contribute to social progress and welfare.

Founded in 1952, the School of Architecture continues to make efforts to be a core architectural institute leading regional academic research and quality education open to the community.

In 2002, the Department of Architecture was reorganized into the School of Architecture with a five-year Bachelor of Architecture program and a four-year Bachelor of Architectural Engineering program. With a common curriculum in the first semester of studies, students can select and advance to one of the two programs in their second semester.

To achieve this goal, the School of Architecture provides an opportunity for students to understand the methods of creating buildings and architectural environments through design and experiments. The objective is to develop creative, scientific, and future-oriented architect engineers with a professional and comprehensive overview in order to contribute to the creation of architecture culture and academic development of Korea.

In addition, the nationally funded Bio-housing Institute is both designing and researching various aspects of environmentally-friendly architecture based on ecology, health, and sustainability. The goal of the Institute is to develop models of bio-housing through the integration of traditional materials and high technology, and to educate professionals who are equipped with original future technologies and expertise.

Undergraduate and graduate students of the School of Architecture are eligible for various scholarships and funding for overseas training.

#### ■ Architecture & Urban Design Major

The Architecture & Urban Major provides education with the recognition that architecture is not only to provide places in which human beings live and aesthetic structures which gives pleasure but also to become a public device where individuals and society, as a whole, can gather and interact. On such recognition the program has set to realize architectural and urban products that secure human dignity, fulfill social responsibility and pursue aesthetic beauty. Therefore, the goals of the Architecture & Urban major is to cultivate creative and internationalized professional architects and urban designers who understand socio-cultural interconnections through a competitive curriculum including lectures, design studios, and an internship for developing students' architectural and urban professional skills in a comprehensive manner.

#### ■ Architectural Engineering Major

Architectural Engineering helps students fulfill their roles as competent professionals who can design, construct, and manage safe and rational buildings and structures after graduation.

The Architectural Engineering Major intends to develop competitive talents in architectural environments at home and abroad. It pursues realistic architecture by studying engineering applications with a focus on curricula such as Architectural Construction, Architectural Structure, and Architectural Environment and Equipment.

#### Professors

#### Architecture & Urban Design Major

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#### **Architectural Engineering Major**

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## **■** Degree Requirements

#### Architecture & Urban Design Major

Architecture & Urban Design students are required to earn 160 credits to graduate, taking an average of 18 credits per semester. The program is based on the Bachelor of Architecture program which normally takes 5 years to complete.

#### **Architectural Engineering Major**

Architectural Engineering students are required to earn 140 credits to graduate, taking an average of 18 credits per semester. The program is based on the Bachelor of Engineering Program which normally takes 4 years to complete.

## ■ What Do You Study?

#### Architecture & Urban Design Major

Architecture Environmental Control System Design Interior Planning
Reinforced Concrete Structure Design 1
Steel Structure Design 1
Asian Architecture
Region, Culture and Space
Advanced Course in Computer-Aided Architectural Design
Introduction to Urban Planning

Practical English
Contents of Urban Space

Theory of Contemporary Architecture

Architectural Estimation and Supervision
Regional Industry and Architecture
History of Western Architecture
Introduction to Building Structure
History of Korean Architecture
History of Modern Architecture
Architectural Mechanical System
Architectural Planning
Architectural Structure System
Practical Internship
Environmental Technology

Housing and Culture

Fundamentals of Computer-Aided Architectural Design

Environment-Friendly Architecture

**Building Materials** 

Building and City Codes

Site Planning

Urban Planning and Rehabilitation

Construction Management Professional Practice

Integrated Architectural Planning Architectural Space and Society

Structural Mechanics

Architectural Renewal Planning

Architectural Design Theory and Presentation

Architectural Design Methodology

Basic Design Studio 1

Basic Design Studio 2

Architecture Design Studio 1

Architecture Design Studio 2

Architecture Design Studio 3 Architecture Design Studio 4

Architecture Design Studio 5

Architecture and Urban Design Studio

Research and Advanced Design Studio Industry Cooperative Design Studio

Digital Architecture

Architecture, City and Culture

Urban Design and Landscape Architecture

Smart Building Smart City

**Architectural Engineering Major** 

Building Structure

Computer Science Foundation

Computer Science Application

Building Materials Experiment System of Building Structure

Architectural Equipment Application

Architecture Environmental Technology Experiment

Architectural Estimate

Architectural Acoustics

Soil & foundation engineering Building Code & Regulation Architectural Management Architectural Capstone Design 2

Architectural Engineering Design

Creative Architectural Engineering Design

Mechanics of Materials Engineering Mathematics 2

Statics

Building Structural Mechanics 1

Architecture Environmental Technology

**Building Materials** 

Architecture Environmental Control System Design

Construction Technology Structure Dynamics Architectural Equipment

Reinforced Concrete Structure Design 1

Steel Structure Design 1 Practical Internship

Architectural Capstone Design 1

Housing and Culture

Construction Method & Technique Design

Engineering Mathematics 1 Introduction to Creative Design

Building Information Modeling System Smart Building Technology and System

Basic Design Studio 1
Building Energy Simulation

Zero Energy Building Technologies

#### Careers

There is a diverse and exciting range of career opportunities for architecture graduates. As well as a career in private architectural practice, career opportunities include Architectural Design, Interior Design, Architectural and Urban Planning, Construction, Structural/Mechanical Engineering, Public Authorities, Project management, Property Development, Research, Restoration, and Conservation.

# School of Chemical Engineering

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# ■ What is Chemical Engineering?

The goal of the School of Chemical Engineering (SCE) is to promote the development of engineering education by improving standards and guidelines of educational programs for engineering colleges and related education, thereby performing certification and consultation, and ultimately producing competent engineers.

## School of Chemical Engineering

The SCE was established in March 2002 by merging the existing faculty of Chemical Engineering and faculty of Applied Chemistry. The newly restructured School of Chemical Engineering comprises the following three departments to foster understanding that is necessary for the development of engineering: chemical engineering materials, chemical engineering safety, and chemical process engineering.

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- Sangchul Roh, Ph.D.
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# **■** Degree Requirements

Students are required to earn 140 credits, with 84 credits from Chemical Engineering courses, and 40 credits from general courses.

Students in the ABEEK Program are required to earn 12 credits from general courses, 32 credits from MSC courses, and 75 credits from engineering topics courses.

# ■ What Do You Study?

#### **General Courses**

Core Courses

Writing for Self-reflection and communication Career Plan and Self Understanding Mathematics 1 General Chemistry 1 College Physics 1 Chemistry Laboratory 1 Computer for Real Life Mathematics 2 General Chemistry 2 College Physics 2 Chemistry Laboratory 2

# **Chemical Engineering Materials Major Courses**

#### Core Courses

Polymer Chemistry

Engineering Mathematics 1 Chemical Process Calculation 1 Instrumental Analytical Methods

Physical Chemistry 1
Organic Chemistry 1
Transfer Operations 1
Materials Science
Electro Chemistry

Introduction to Creative Design

Basic Experiment of Chemical Engineering Lab 1 Basic Experiment of Chemical Engineering Lab 2 Design of Chemical Engineering and Materials

Experiments for Chemical Materials

Chemical Engineering Lab.

Chemical Engineering Capstone Design

#### Electives

MATLAB Programming Chemistry of Interface

Introduction to Polymer Processing

Polymer Materials

Industrial Analytical Chemistry
Engineering Mathematics 2
Chemical Process Calculation 2
Chemical Process Thermodynamics
Chemical Process risk assessment

Chemical Process Control Fundamentals of Photonics

Fuctional Polymers
Display Engineering
Inorganic Materials
Inorganic Chemistry
Physical Chemistry 2

Semiconductor Photonic Devices Engineering

Semiconductor Device Fabrication

Reaction Engineering Separation Process

Separation And Purification Processes Nonuniform Reaction Engineering

Engineering Seminar 1 Engineering Seminar 2 Biochemical Engineering Petrochemical Industry

Combustion and Explosion Protection

Engineering

Organic Industrial Chemistry Organic Reaction Mechanism Organic Synthetic

Organic Synthetic
Organic Chemistry 2
Medicinal Chemistry
Transfer Operations 2
Catalyst Chemistry

Carbon Materials Engineering

Plant Safety Facility

Fundamentals & Design to Chemical process Numerical Analysis in Chemical Engineering

Chemical Safety Engineering

Chemical Engineering Termodynamics Chemical Engineering Quality Control Field Practice for Chemical Engineering 1 Field Practice for Chemical Engineering 2

Environmental Chemistry

# Chemical Enginieering Safety Major Courses

#### Core Courses

Introduction to Creative Design

Transfer Operations 1

Chemical Process Calculation 1

Physical Chemistry 1 Organic Chemistry 1 Engineering Mathematics 1

Basic Experiment of Chemical Engineering Lab 1
Basic Experiment of Chemical Engineering Lab 2

Chemical Engineering Lab
Chemical Safety Experiment

Chemical Engineering of Chemicals

Combustion and Explosion Protection Engineering

Chemical Precess risk assessment

Plant Safety Facility Chemical Process Design

Chemical Engineering Capstone Design

#### Electives

MATLAB Programming

Transfer Operations 2

Chemical Process Calculation 2

Organic Chemistry 2 Physical Chemistry 2

Engineering Mathematics 2

Basic Design of Chemical Engineering

Inorganic Chemistry

Materials Science

Chemical Engineering Thermodynamics

Reaction Engineering Separation Processes Chemical Process Control Petrochemical Industry

Nonuniform Reaction Engineering

Separation Purification Processes

Chemical Precess Control System Analysis

Chemical Precess Thermodynamics

Numerical Analysis in Chemical Engineering

Electrochemistry
Polymer Chemistry
Energy Engineering
Engineering Economy

Patent based Research and Development

Environmental Engineering
Instrumental Analytical Methods

Chemical Engineering Quality Control

Industrial Safety Regulations

Engineering Seminar 1
Engineering Seminar 2
Technology Management

Chemical Equipment and Facilities Energy Storage System Engineering Measurement Sensor Engineering

Field Practice for Chemical Engineering 1

Field Practice for Chemical Engineering 2

# **Chemical Process Engineering Major Courses**

#### Core Courses

Introduction to Creative Design

Transfer Operations 1

Chemical Process Calculation 1

Physical Chemistry 1
Organic Chemistry 1
Engineering Mathematics

Engineering Mathematics 1

Basic Experiment of Chemical Engineering Lab 1 Basic Experiment of Chemical Engineering Lab 2

Nonuniform Reaction Engineering Separation and Purification Processes Chemical Process Thermodynamics

Chemical Process Control System Analysis Numerical Analysis in Chemical Engineering

Chemical Engineering Lab

Chemical Engineering Intensive Lab

Chemical Process Design

Chemical Engineering Capstone Design

#### Electives

MATLAB Programming

Transfer Operations 2

Chemical Process Calculation 2

Organic Chemistry 2 Physical Chemistry 2 Engineering Mathematics 2

Basic Design of Chemical Engineering

Inorganic Chemistry Materials Science Reaction Engineering Separation Processes

Chemical Engineering Thermodynamics

Organic Composite Materials Petrochemical Industry Energy Engineering Electrochemistry

Chemical Process Control

Inorganic Materials

Measurement Sensor Engineering

Combustion and Explosion Protection Engineering

Polymer Chemistry

Organic Reaction Mechanism

Particle Engineering Transfer Phenomena

Chemical Safety Engineering

Computer Aided Design of Chemical Engineering

Catalyst Engineering
Engineering Seminar 1
Engineering Seminar 2
Green Chemistry Technology

Energy Storage System Engineering

Chemical Equipments and Facilities

Environmental Engineering
Instrumental Analytical Methods

Quality Control

Technology Management Engineering Economy

Chemical Technology and Patent Chemical Process risk assessment

Plant Safety Facility

Chemical Engineering Quality Control Field Practice for Chemical Engineering 1 Field Practice for Chemical Engineering 2

#### Careers

Graduates obtain employment in chemical plants (oil refinery, petrochemical, fertilizer, synthetic resin, oil and fat, food industry, inorganic chemistry, explosives, cement, glass, dye, rubber, paint, pulp and paper, metal, and smelting) in all parts of the country, including the Yeocheon and Ulsan districts, thermo-electrical and nuclear power plants, steel mills, photoelectron fields (semiconductor component/equipment, LCD, and photo component manufacturing), textile-related fields, sales fields for trading companies, pharmaceutical fields, cosmetics fields, polymer-related fields, research institutes, and civil service.

# School of Materials Science and Engineering

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#### **■** What is Materials Science and Engineering?

Materials Science and Engineering (MSE) is an interdisciplinary field that deals with the discovery and design of new or high-performance materials that constitute modern civilization and industrial developments. The field involves studying materials through the materials paradigm: synthesis, structure, properties, and performance. It incorporates elements of physics and chemistry and is at the forefront of nanoscience and nanotechnology research. The mechanical, electrical, optoelectronic, and electrochemical properties of metals and ceramic materials are utilized for transportation machinery, semiconductor devices, energy and environmental devices such as batteries, fuel cells, solar cells, and medical applications.

#### School of Materials Science and Engineering

In order to keep up with the worldwide trend and make the most of its interdisciplinary nature, the Department of Metallurgical Engineering and the Department of Ceramic Engineering were integrated in 1999 into the School of Materials Science and Engineering (SMSE) with two majors. In 2002, in response to regional and national industrial demands, the Optoelectronic Materials major was additionally established. Currently, SMSE consists of approximately 360 undergraduate students, 80 graduate students, and 16 faculty members. Since 2007, SMSE has implemented the ABEEK curriculum, and the Materials Science and Engineering Program was officially accredited in 2014.

Students are encouraged to aim for comprehensive knowledge and understanding of Materials Science and Engineering in general until their fourth year, when they choose a major to focus on. For the last decade or so, SMSE has conducted major large-scale education programs such as NURI, LINC, and CK-1. These programs provide undergraduates with scholarships and opportunities for language and engineering training courses (such as 6 Sigma, TRIZ, etc.), industrial internships, and domestic and international excursions.

Undergraduate students also greatly benefit from the research experience provided by the laboratories operated by the faculty members. The faculty's research activities, indicated by eminent national projects such as WCU, BRL, Get-Future, and BK21+, as well as numerous industrial projects and collaborations, are further supported by the continued studies of motivated undergraduate students in the graduate course.

#### Professors

- Ho-Sung Kim, symmetry@jnu.ac.kr
   [Crystal Structure Analysis & Crystal Growth]
- Kwangmin Lee, kmlee@jnu.ac.kr
   [Nano- & Bio-materials]
- Youngman Kim, kimy@jnu.ac.kr
   [Mechanical & Thermal Characterizations of Thin Films]
- Sung-Kil Hong, skhong@jnu.ac.kr
   [Light Metals, Mold & Automotive Parts Materials]
- Jin-Hyeok Kim, jinhyeok@jnu.ac.kr
   [Photonic Electronic Thin Film Growth & Characterization]
- Jaekook Kim, jaekook@jnu.ac.kr
   [Design, Synthesis, Characterization of Nano Energy Materials]
- June Key Lee, junekey@jnu.ac.kr
   [Semiconductor Process Design]
- Jong-Sook Lee, jongsook@jnu.ac.kr

- [Electroceramics]
- Sun-Ju Song, song@jnu.ac.kr
   [Ionics, Energy Materials]
- Chan-Jin Park, parkcj@jnu.ac.kr
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   Electrochemistry]
- FISHER JOHN GERARD, johnfisher@jnu.ac.kr
   [Green Energy Materials]
- Jaeyeong Heo, jheo@jnu.ac.kr
   [Nanodevices & Materials for Energy]
- Hoonsung Cho, cho.hoonsung@jnu.ac.kr [Biomaterials]
- Yeongho Kim, ykim2023@jnu.ac.kr [Next-generation Semiconductor]
- Tae-Hoon Kim, thk@jnu.ac.kr
   [Multiscale Microstructure Analysis]
- Kootak Hong, kthong@jnu.ac.kr
   [Advanced Electronic Materials and Devices]

# **■** Degree Requirements

Students are required to earn at least 140 credit hours (73 major required courses, 45 general courses and 22 elective courses), which normally takes four years of full-time study. Students have the option to double major or to earn additional submajor within Materials Science and Engineering or in other programs.

# ■ What Do You Study?

Instrumental Analytical Methods

Engineering Mathematics

Introduction to Engineering Design Materials Science Seminar 1/2/3/4

Introduction to Materials Science and Engineering 1/2

Special Lecture on Industrial Topics 1/2

Engineering Internship

Thermodynamics in Materials

Crystal Structures and Defects

Materials Engineering Project 1/2/3

Electrical and Magnetic Properties of Materials

Mechanical Properties of Materials

Electrical Engineering for Materials Engineers

X-ray and Electron Diffraction

Taguchi Method

Capstone Design 1/2

Design and Machining

Physical Chemistry

Numerical Methods for Materials Science and

Engineering

Nanocrystalline Materials and Biomaterials

#### Metallurgical Engineering Major

Mechanics of Materials

Ferrous Alloys
Metallography
Ferrous Production Metallurgy
Solidification Engineering
Nonferrous Materials
Metalworking
Corrosion and Oxidation
Materials Electrochemistry
Phase Transformation
Foundry Engineering
Materials Joining

3D Printing and Metal Powder Processing

Manufacturing Process of Light Metals

#### **Energy Nanomaterials Major**

Phase Equilibria
Diffusion and Crystal Defect
Electroceramics
Solid State Chemistry
Materials in Energy Applications
Theory and Phenomena of Sintering

Interfacial Engineering
Nano Composite Materials
Solid State Physics
Introduction to Organic Chemistry
Amorphous Energy Materials
Nanoceramics processing

#### Optoelectronic Materials Major

Electromagnetics
Quantum Mechanics
Optoelectronic Materials
Thin Film Process Engineering
Semiconductor Device Physics 1/2
Semiconductor Materials and Processing
Electronic Display Engineering
Optoelectronic Device Engineering
Optical Fiber Communications
Semiconductor Device Design
Sensor Materials Engineering
Optics

#### Careers

Graduates are currently playing major roles in various industrial fields of steel, automotive, semiconductor, display, optical communication, and energy storage devices. Many students study further in graduate courses and are trained for the research and development career path.

# School of Mechanical Engineering

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URL: http://mech.jnu.ac.kr

# ■ What is Mechanical Engineering?

Mechanical engineering encompasses a broad spectrum of engineering that revolves around the conception, fabrication, installation, and operation of engines, machinery, and manufacturing processes. This field engages a multitude of applications, ranging from the fundamental principles of dynamics, control systems, thermodynamics, heat transfer, and fluid mechanics, to the resilience of materials, materials science, electronics, and mathematics. It stands as an innovative and comprehensive academic discipline, where scientific imagination is concretely realized through avenues like mechatronics, nano/micro system technology, IT-driven intelligent mechanical systems, thermo-fluid dynamics, and energy systems.

Technological progress within the realm of mechanical engineering entails methodical materialization of technology via the application of scientific principles and meticulous engineering designs. With its ever-evolving nature, mechanical engineering continues to pave the way for modern industrial expansion, forming the bedrock of the impending industrial landscape. At its core, mechanical engineers assume pivotal roles across traditional sectors such as automotive, aerospace, architecture, civil engineering, plant management, energy production, and domestic appliances. Moreover, their influence is destined to shape future technologies, spanning from smart mobility, robotics, semiconductors, and energy materials to displays, sensors, sustainable energy solutions, micro-fluidics, high-precision optics, multiscale composites, AI, and deep learning.

# **■** School of Mechanical Engineering

The inception of the School of Mechanical Engineering at JNU dates back to 1970. Currently, the school boasts a faculty contingent of 22 members, catering to the academic journey of 600 undergraduate students and 80 graduate students. Our primary objectives encompass delivering a stellar education to both our undergraduate and graduate cohorts, alongside pioneering research endeavors in the realm of mechanical engineering.

The School of Mechanical Engineering has achieved noteworthy success through various government-backed initiatives, including the National Project to Foster Engineering Colleges ('94~'98), Brain Korea 21 (BK21, '99~'05), New University for Regional Innovation (NURI, '04~'09), post-BK21 ('06~'13), and CK-1 ('14~'19) programs. In 2013, the school was once again selected for the BK21+ project ('13~'20). These endeavors have consistently aimed at attracting exceptional new students, offering

substantial scholarships, facilitating short-term overseas language training and diverse educational activities, securing accomplished faculty members, nurturing collaboration with local industries, and enhancing educational facilities and laboratories.

Starting from 2023, the school has been designated as the Center for Education & Innovation in Future Vehicle Technology Convergence. By integrating ICT-based eco-friendly car characterization education, we are actively fostering regional strategic industry leaders and global creative talents. Presently, we are committed to furnishing world-class educational and research environments, state-of-the-art facilities, and scholarships through significant academic and research funds such as BK21-Four, Basic Research Lab (BRL), and Regional-Leading Research Center (RLRC).

The School of Mechanical Engineering is dedicated to ensuring that all students align with the swiftly evolving educational landscape, both domestically and internationally. Alongside this commitment, we offer inventive research prospects vital for pivotal industries and research establishments, aimed at preparing students for meaningful contributions within relevant sectors. A fundamental curriculum is mandatory for all students, expected to be completed by the initial semester of their junior year. Subsequently, students can opt for a major in either mechanical engineering or mechanical & automotive engineering. Moreover, it is worth highlighting that the School of Mechanical Engineering has recently garnered recognition from the government as a pivotal department in the advanced arena. Commencing from 2024, there will be an augmentation in the undergraduate admission capacity to accommodate over 130 students. This expansion is poised to facilitate the cultivation of an increased number of skilled professionals within the expansive realm of mechanical engineering.

#### **Mechanical Engineering Major**

The mechanical engineering major provides a foundational array of courses encompassing key areas within mechanical engineering. These include fundamental subjects like fluid dynamics, materials science, solid mechanics, controls, manufacturing processes, thermodynamics, and heat transfer. Additionally, students will engage in advanced computer courses focused on design principles and applications.

#### Mechanical & Automotive Engineering Major

The Mechanical & Automotive Engineering major delivers specialized expertise in the cutting-edge technological advancements within the realm of automotive applications of mechanical engineering. This encompasses a comprehensive understanding of internal combustion engines, vehicle dynamics and aerodynamics, utilization of industry-standard CAD tools, and exploration of renewable energy sources and alternative fuels.

#### Professors

Ki-Ju Kang, Ph.D.
 [Professor, Mechanical Metamaterials,

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· Bo-Seon Kang, Ph.D.

[Professor, Sprays, Optical Measurements, Fluid Mechanics, bskang@jnu.ac.kr]

- Hyun Wook Kang, Ph.D.
   [Professor, AI based thermal-fluidic Engineering, Microfluidics, Nano Engineering, kanghw@jnu.ac.kr]
- Seong-Yong Ko, Ph.D.
   [Professor, Medical robots, Intelligent robots, sko@inu.ac.kr]
- Woohyun Kim, Ph.D.
   [Associate Professor, Modeling, analysis and control of thermal systems, whkim@jnu.ac.kr]
- Chang-Sei Kim, Ph.D.
   [Associate Professor, Dynamics and Control, Biomedical System, ckim@jnu.ac.kr]
- Chang-bae Moon, Ph.D.
   [Associate Professor, Mobile Robot
   / Autonomous Vehicle, cbmoon@jnu.ac.kr]
- Gyuhae Park, Ph.D.
   [Professor, Noise/Vibration, Structural Health Monitoring, image processing, gpark@jnu.ac.kr]
- Jinsoo Park, Ph.D.

  [Assistant Professor, Microfluidics /
  Flow Visualization, jinsoopark@jnu.ac.kr]
- Seoung-Yun Seol, Ph.D.

  [Professor, Super Conductors, syseol@jnu.ac.kr]
- Young-Soo Yang, Ph.D.
   [Professor, Analysis of Welded Structures, ysyang@jnu.ac.kr]
- Dong-Weon Lee, Ph.D.
  [Professor, MEMS and NEMS, mems@jnu.ac.kr]
- · Bong-Kee Lee, Ph.D.

[Professor, Micro/Nano-molding, Mold design, b.lee@jnu.ac.kr]

- Wonoh Lee, Ph.D.
   [Professor, Composite Materials / Energy Materials, wonohlee@jnu.ac.kr]
- In-Su Jeon, Ph.D.
   [Professor, Mechanics of Materials, Soft materials, i jeon@jnu.ac.kr]
- Seunghun Jung, Ph.D. [Professor, Electrochemical energy system, hybrid vehicles, shjung@jnu.ac.kr]
- Byung-Chul Choi, Ph.D.
   [Professor, Combustion Engineering, Internal Combustion Engine, Technology for Emission After-treatment, bcchoi @jnu.ac.kr]
- Eunpyo Choi, Ph.D.
   [Associate Professor, Medical micro/nano robotics, eunpyochoi@jnu.ac.kr]
- Seunghwoi Han, Ph.D.
   [Assistant Professor, Laser engineering, nano optics, optical sensor, shan@jnu.ac.kr]
- Ki Joon Heo, Ph.D.
   [Assistant Professor, Bioaerosol, Antimicrobial surface, Filtration, k.heo@jnu.ac.kr]
- Soonwook Hong, Ph.D.
   [Assistant Professor, Thin-film Fuel Cell, Hydrogen Production, Nano-scale Catalysts, shong@jnu.ac.kr]
- Ayoung Hong, Ph.D.
   [Assistant Professor, Autonomous Intelligent Robotics, ahong@jnu.ac.kr]

## ■ Degree Requirements

The undergraduate programs are meticulously crafted to equip students with the essential comprehension and skills necessary to confront the complexities of contemporary technological demands within the realm of mechanical engineering. A minimum of 140 credit hours is mandatory for completion (comprising 80 from Department courses and 18 from elective courses), typically spanning a four-year duration of full-time study. Furthermore, students have the opportunity to pursue double majors or minors, facilitating a broader academic horizon and enriching their educational journey.

## ■ What Do You Study?

Advanced Mechanical Engineering Introduction to MEMS(micro electro mechanical

AI based Thermofluidic System systems)

Air Conditioning and Refrigeration Kinematics of Mechanisms Applied Fluid Mechanics Machine Element Design

Applied Heat Transfer Machine Learning for Mechanical Engineering

Applied Robotic Systems Manufacturing Processes with Practice

Applied Solid Mechanics Measurement Engineering Applied Thermodynamics Mechanical drawing

CAD/CAM with Practice Mechanical Engineering Capstone Design 1 Composite Materials in Mechanical Engineering Mechanical Engineering Capstone Design 2

Compressible Flow Mechanical Engineering Lab Control Engineering Mechanical Engineering Seminar

Creative Engineering Design Mechanical Materials **Dynamics** Mechanical System Design Mechanical Vibrations Electric vehicles

Environmental Mechanical Engineering Mechatronics

Engineering Mathematics 1 Numerical Analysis Engineering Mathematics 2 Optical Engineering Fluid Machinery Propulsion Engineering

Fluid Mechanics Reliability Engineering Fuel and Combustion Engineering Renewable Energy Fuel Cell Vehicles Robot Engineering

Heat Transfer Smart Manufacturing Engineering

Intelligent Vehicle Solid mechanics Internal Combustion Engine

Internship 1 System Dynamics and Signal Processing

Statics

Internship 2 Thermodynamics

Introduction of Electricity and Electronics Vehicle Dynamics and Control

Introduction to Automotive Engineering Welding Engineering Introduction to Engineering Design

## Careers Options

Upon graduation, individuals are well-equipped to embark on diverse career paths encompassing fields such as engineering, electronics, the automobile industry, and construction firms. An alternate avenue is enrollment in a graduate program within the domain of mechanical engineering to further hone their expertise. Graduates possess the qualifications to assume specific roles such as technical public officials and government officers, leveraging their comprehensive understanding of mechanical engineering principles and applications to contribute effectively within governmental contexts.

## School of Polymer Science and Engineering

\_Contact Information

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## ■ What is the School of Polymer Science and Engineering?

The primary goal of our department is to offer fundamental and cutting-edge academic and research programs. We provide educational programs with quality standards and guidelines and foster skillful polymer scientists and engineers.

## ■ School of Polymer Science and Engineering

Polymer Science and Engineering at Chonnam National University encompasses teaching and research and aims at developing scientists and engineers who can fill the need in industry, government, and academia. Our department consists of two majors: *Polymer Science and Engineering* and *Fiber Science and Engineering*.

#### Professors

- Yang-Il Huh, Ph.D.
   [Professor, Polymer Membranes, yihuh@jnu.ac.kr]
- Yoong Ahm Kim, Ph.D.
   [Professor, Nano Carbon Materials, yak@jnu.ac.kr]
- Jong-Jin Park, Ph.D.
   [Professor, Functional Polymer, Electronic Materials, jjpark@jnu.ac.kr]
- Hyeonseok Yoon, Ph.D.
   [Professor, Functional Nano Materials, hyoon@jnu.ac.kr]
- Mincheol Chang, Ph.D.
   [Professor, Polymer Semiconductor Materials & Devices, mcchang35@jnu.ac.kr]
- Hyungwoo Kim, Ph.D.

- [Professor, Polymer Synthesis, kimhw@jnu.ac.kr]
- Su-Mi Hur, Ph.D.
   [Associate Professor, Theory and Simulations for Soft Materials, shur@jnu.ac.kr]
- Doojin Lee, Ph.D.
   [Associate Professor, Smart Polymers Processing, dlee@jnu.ac.kr]
- Won Seok Chi, Ph.D.
   [Assistant Professor, Energy Material, wschi@jnu.ac.kr]
- Changhun Yun, Ph.D.
   [Assistant Professor, Electronic Polymer Materials, chyun2020@jnu.ac.kr]
- Yeongun Ko, Ph.D.
   [Assistant Professor, Polymer brushes, yeongunko@jnu.ac.kr]

## Degree Requirements

Students are required to earn 140 credits for graduation, which includes 72 credits from School of Polymer Science and Engineering and 42 credits from general courses.

Students in the ABEEK Program are required to earn 9 credits from general courses, 32 credits from MSC courses, and 63 credits from engineering topics courses, out of total 140 credits.

### ■ What Do You Study?

#### **Polymer Engineering Major Courses**

**■** Core Courses

Mathematics 1

Mathematics 2

General Chemistry 1

General Chemistry 2

General Physics 1

General Physics 2

Chemistry Laboratory 1

Chemistry Laboratory 2

Writing for Self-reflection and communication

Computer for Real Life

Career Plan and Self Understanding Introduction to Engineering Design

MATLAB Programming and Practice

Engineering Mathematics 1

Engineering Mathematics 2

Organic Chemistry 1

Physical Chemistry 1

Basic Engineering Lab.1

Basic Engineering Lab 2

Polymer Chemistry 1

Thermodynamics

Fluid Mechanics

Polymer Processing 1

Properties of Polymer 1

Engineering Lab. 1

Engineering Lab. 2

Separation Process

#### **■** Electives

Materials Science

Chemical Process Calculation 1

Energy Science and Technology

Organic Chemistry 2

Physical Chemistry 2

Chemical Process Calculation 2

Introduction to IT Convergence Engineering

Polymer Materials

Basic Design of Engineering

Polymer Chemistry 2

Instrumental Analytical Methods

Nano Surface Science

Functional Polymers

Reaction Engineering

Heat Transfer

Convergence Materials Testing

Computational Material Sience

Electronic Materials

Polymer Processing 2

Properties of Polymer 2

Polymeric Composite Materials

Rheology

Capstone Design 1

Capstone Design 2

Polymeric Nano-composites

Applied Engineering for Nano Materials

Biopolymer

Energy Materials

Electrochemistry

#### Fiber Science Engineering Major Courses

#### Core Courses

Mathematics 1

Mathematics 2

General Chemistry 1

General Chemistry 2

General Physics 1 General Physics 2 Chemistry Laboratory 1 Chemistry Laboratory 2

Writing for Self-reflection and communication

Computer for Real Life

Career Plan and Self Understanding Introduction to Engineering Design MATLAB Programming and Practice

Engineering Mathematics 1 Engineering Mathematics 2

Organic Chemistry 1
Physical Chemistry 1
Basic Engineering Lab.1
Basic Engineering Lab 2
Polymer Chemistry 1
Unit Operation
Fiber Physics
Engineering Lab. 1
Engineering Lab. 2
Fiber Function Design

Fiber Assembly Engineering

■ Electives

Materials Science

Synthetic Fibers

Energy Science and Technology

Physical Chemistry 2 Organic Chemistry 2

Introduction to IT Convergence Engineering

Polymer Materials
Polymer Chemistry 2

Basic Design of Engineering
Instrumental Analytical Methods

Nano Surface Science

Color Science

Convergence Materials Testing Computational Material Sience

Electronic Materials

Polymeric Composite Materials

Functional Fiber

Rheology

Capstone Design 1
Capstone Design 2

Property Design of Carbon Fibers

Polymeric nano-composites

Applied Engineering for Nano Materials

Biopolymer Energy Materials Electrochemistry

#### Careers

Graduates obtain an opportunity for employment in chemical plants (oil refinery, petrochemical, fertilizer, synthetic resin, oil and fat, food industry, inorganic chemistry, explosives, cement, glass, dye, rubber, paint, pulp and paper, metal, and smelting) in all over the country, thermo-electrical and nuclear power plants, steel mills, photoelectron fields (semiconductor component/equipment, LCD, and photo component manufacturing), textile-related fields, sales fields for trading companies, pharmaceutical fields, cosmetics fields, polymer-related fields, research institutes, and civil service.

## Department of Biotechnology & Bioengineering

\_\_Contact Information

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## ■ What is Biotechnology & Bioengineering?

Biotechnology & Bioengineering is believed to be one of the key disciplines leading to solve some of the most challenging problems that face our world today. Biotechnology & Bioengineering is defined as the biological application of engineering principles or engineering equipment in biological systems, food, energy, and the environment as well as healthcare. Incorporating recent advances in science and engineering including the fields of biology, chemistry, medicine, electrical and mechanical engineering, and information technology, Biotechnology & Bioengineering allows us to understand the phenomena of life and develops effective biology-based technologies.

## ■ Department of Biotechnology & Bioengineering

Our department has been creatively fusing a broad area of bioengineering and life sciences to train and foster students to have an impact in corporate, professional and academic communities. Our mission aims to provide a fundamental bioengineering discipline grounded in basic sciences and the ability in realizing many various biological applications powered by practical and comprehensive curricula. It will allow students to acquire a high degree of confidence and motivation as bio-technologists and bio-engineers and to become engines in the fields of biotechnology including foods, medicine, pharmaceuticals, cosmetics, bioenergy and the environment.

#### Professors

- Jong-il Choi, Ph.D.
  [Biomolecules Engineering, choiji01@jnu.ac.kr]
- Seung Hwan Lee. Ph.D.
  [Metabolic Engineering, leesh@jnu.ac.kr]
- Sooim Shin, Ph.D.
  [Protein Engineering, sooim.shin@jnu.ac.kr]
- Tae Wan Kim, Ph.D.
   [Bioprocess Development & Optimization,

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- Kibaek Lee, Ph.D.
   [Environmental Biotechnology, kibaek@jnu.ac.kr]
- Changman Kim, Ph.D.
   [Applied Microbiology & Biotechnology, cmkim@jnu.ac.kr]
- Youngung Seok, Ph.D.
   [Biosensors & Materials, stonehero@jnu.ac.kr]

## **■** Degree Requirements

The undergraduate programs are designed to help students learn bioengineering disciplines as well as mathematics, physics, chemistry and biology. Students also obtain broad exposure to Chonnam National University's other great classes offered in other departments and colleges such as humanities and social sciences. Undergraduate students are required to earn at least 140 credits of coursework for graduation (a minimum of 69 units in department courses, a minimum of 37 units in liberal arts courses and a minimum of 34 units in elective courses). It normally takes four academic years of full-time study. Students may also undertake a second major or minor to broaden the scope of their studies.

### ■ What Do You Study?

#### Core Courses

Writing for Self-reflection and Communication

General Physics 1
Mathematics 1
Mathematics 2
General Chemistry 1
Chemistry Laboratory 1

Career Plan and Self Understanding

General Biology 1 General Biology 2 Biology Laboratory 1 Biology Laboratory 2

Introduction to Engineering Design Biochemical Separation Process

Bio Engineering 1

Biochemical engineering Lab. 1 Biochemical engineering Lab. 2 Biochemical engineering Lab. 3

Microbiology

Bioprocess Engineering 1

Biochemistry 1 Organic Chemistry Physical Chemistry

Engineering Mathematics 1

Capstone Design Biostatics and practice

#### **■** Electives

Bio Engineering 2

Biochemical Process Calculation

Applied Microbiology

Introduction to Bioengineering and

Biotechnology Transfer Operation

Bioreaction Engineering and Design

Bioanalytical Chemistry Bioprocess Control Bioinfomatics

Metabolic Engineering

Plant Design

Bio Engineering Seminar 1

Fermentation Technology and Design Basic Research for Biotechnology &

Bioengineering 1

Basic Research for Biotechnology &

Bioengineering 2

MATLAB programing & Practice

Enzyme Engineering

Bioseparation and Purification Techniques

Special Lecture on Biotechnology and Bioengineering

Biomedical Engineering

Instrumental Analytical Methods

Protein Engineering

Introduction to Biomedical Engineering

Bioprocess Engineering 2

Biomaterials

Environmental Biotechnology

Biochemistry 2 Molecular Biology

Engineering Mathematics 2

Food Engineering
Genetic Engineering
Industrial Microgiology
Biomass and Bioenergy Laboratory
Bionano applications

Inorganic Materials
Inorganic Chemistry
Experimental Design analysis & Lab

#### Careers

Some undergraduate students continue their academic endeavor by entering graduate schools in Korea as well as abroad. Others take a position in academia, public and private research institutes, and the industry. Moreover, some become involved in bio-venture businesses quite successfully.

## Department of Civil Engineering

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## ■ What is Civil Engineering?

The fields of civil engineering offer careers in the planning, design, construction and management of the built environment as well as in the interaction between the built environment and the natural environment. Civil engineering plays an essential role to our community. There are significant interdisciplinary challenges in refining and maintaining the quality and sustainability of the infrastructure of interconnected systems, which are important to our quality of life. These systems include transportation, highways, rapid transit lines, airports, civil structures, construction materials, land surveying, stream channels, pipelines and wastewater treatment systems. The response of this infrastructure to natural hazards and environmental interaction is a critical challenge in this area. The faculty and staff within the civil engineering department are committed to educating the next generation of engineers and leading the development of this field through research and outreach.

## School of Civil Engineering at Jeonnam National University

The School of Civil Engineering is concerned with the control of the environment for the benefit of humankind. Civil engineers provide modern society with vital infrastructure and lifeline systems such as cities, roads, buildings, bridges, railroads, and water systems.

- 1951. 01: Establishment of Department of Civil Engineering
- 1999. 03: Reorganization of Departments of Civil, Earth, and Environmental Engineering
- 2002. 03: Reorganization of Departments of Civil, Geosystems, and Environmental Engineering
- 2009. 03: Reorganization of Department of Civil Engineering

#### Professors

- Tae-Jun Ha, Ph.D.
   [Professor, Traffic Engineering & Urban Planning, tjha@jnu.ac.kr]
- Inkyu Rhee, Ph.D.
   [Professor, Structural Mechanics and Material Science, rheei@jnu.ac.kr]
- Jong-in Rhee, Ph.D.
   [Professor, Coastal/Harbor Engineering

- jilee@jnu.ac.kr]
- Jae-min Kim, Ph.D.
   [Professor, Structural Engineering, jm4kim@jnu.ac.kr]
- Young-sang Kim, Ph.D.
   [Professor, Geotechnical Engineering, geoyskim@jnu.ac.kr]
- · Jeong-won Heo, Ph.D.

[Professor, Structual Engineering, jwonhuh@jnu.ac.kr]

- Dong-yeob Han, Ph.D.
   [Professor, Geospatial Informatics, hozilla@jnu.ac.kr]
- Chang-ho Rhee, Ph.D.
   [Professor, Geotechnical Engineering,

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· Jae-JIn Park, Ph.D.

[Associate Professor, Road Engineering, tjha@jnu.ac.kr]

• Young-Uk, Ryu, Ph.D.

[Assistant Professor, River and Coastal Engineering, yuryu@jnu.ac.kr]

## **■** Degree Requirements

The undergraduate programs are designed to help students develop the understanding and capabilities needed to meet the challenges of a modern technological society. Students are required to earn at least 130 credits (102 credits from Department courses and 28 from electives), which normally takes four years of full-time study to complete. The minor and the double major programs are offered to give students an opportunity to broaden the scope of their major fields.

## **■** What Do You Study?

#### Courses

Introduction to Civil Engineering &

Design

Surveying and Practice 1

Fluid Mechanics

Probability and Statistic

Hydraulics and lab Mechanics of Materials

Civil Engineering Materials and Lab

Civil Engineering (AI) Structural Mechanics

Engineering Mathematics 1

Engineering Mathematics 2

Surveying and Practices 2

Dynamics Hydrology

Applied Hydraulics

Environmental Engineering

Advanced River Hydraulics Soil Mechanics and Lab 1

Design of Concrete Structures 1

Highway Engineering and Design

Transportation Engineering Soil Mechanics and Lab 2

Photogrammetry

Design of Concrete Structures 2 Construction Works & Design

Water Supply, Sewage Engineering & Design

Steel Structural Engineering

Dam Engineering

Pre-stressed Concrete

Urban & Transportation Planning

Foundation Engineering & Design

Coastal & Harbor Engineering

Geospatial Information Surveying

Construction Environment Influence Valuation

& Design

Environmental Impact Assessment & Design

Noise and Vibration

Bridge Engineering

Railroad Engineering

Transportation Engineering

Rock Engineering & Design

Design for Soil Structure

Pavement Engineering & Design

Practical Design of Civil Engineering

Water Resources Engineering

Basic Computer Programming & Practice

Physics Laboratory 1
Chemistry Laboratory 1
Educational Theory in Construction
Study and Guidance on Constructional Teaching
Constructional Technology Logic and Essay Writing

Teaching Children with Learning Disabilities Practical Affairs for the Teaching Profession Teaching Practice 1 Teaching Practice 2

#### Careers

Graduates are currently playing active roles in central and local government organizations (e.g., Ministry of Construction and Transportation, Ministry of Environment, etc.), public corporations (Korea Water Resources Corporation, Korea SH Corporation, Korea Rural Community Corporation, Korea Highway Corporation, etc.), and research institutes (e.g., Korea Institute of Construction Technology). Also, private companies and corporations dealing with bridges, harbors, roads, and dams prefer to hire environmental engineers. Some graduates go on to graduate school to further specialize in their discipline in the field of civil engineering.

# Department of Electrical Engineering

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## **■** What is Electrical Engineering?

Electrical Engineering (EE) is based on sciences such as mathematics, physics, and chemistry. Electrical engineering students learn how to transform power sources such as fossil fuels, hydro-electricity, atomic, wind, solar light or heat, and tidal energy into electricity. Students learn how to transport this energy efficiently and steadily to distant places. Students also study how to transform electricity into other types of energy such as light, heat, and power. Ultimately, students search for the best materials, components, and systems when generating and transforming electricity.

## **■** Department of Electrical Engineering

The Department's primary educational goal is to train professionals who will play leading roles in the electrical engineering field. It also aims to cultivate students' abilities to earn careers in the industry by providing them with broad research opportunities that build on the academia-industry cooperation system.

The Department's goals can be broken down into the following practical aims:

- · acquiring systematic knowledge and skills about general electrical engineering fields
- · mastering the development, operation, and management ability of electrical application skills
- making effort toward the development of the electrical engineering industry.

The Department was chosen to participate in the Electrical Industry Basic Human Power Fostering Project and the New University for Regional Innovation Project by the Ministry of Commerce, Industry, and Energy. It provides students with various educational opportunities and scholarships. It recognizes the importance of rewarding scholarship systems to encourage outstanding students who have exceptional academic records and demonstrate good conduct, and welfare scholarship systems that support financially-limited students.

#### Professors

- Kyung-Woo Ryu, Ph.D.
   [Professor, Superconductivity Applications, kwryu@jnu.ac.kr]
- Joon-Ho Choi, Ph.D.
   [Professor, Power System and Electrical Apparatus, joono@jnu.ac.kr]
- Sung-Jun Park, Ph.D.
   [Professor, Design of Electronic System Based on Micro Processors, sjpark1@jnu.ac.kr]
- Seon-Ju Ahn, Ph.D.
   [Professor, Smart Grid, sjahn@jnu.ac.kr]
- Yong-Hoon Choi, Ph.D.

[Associate Professor, Wired/Wireless Innovative Technologies and Hybrid, yh.choi@jnu.ac.kr]

- Sang-Yun Yun, Ph.D.
  [Professor, Power System, drk9034@jnu.ac.kr]
- Dong-Hee Kim, Ph.D.

[Associate Professor, Energy Mechatronics, kimdonghee@jnu.ac.kr]

• Young-Woo Lee, Ph.D.

[Assistant Professor, Automatic Control, stork@jnu.ac.kr]

## **■** Degree Requirements

The undergraduate programs are designed to help students develop the understanding and capabilities needed to meet the challenges of a modern technological society. The students are required to take 140 credit hours (102 credits in a major of related courses and 38 credits in general studies courses), which normally takes four years of full-time study. The minor and double major programs are offered to give students an opportunity to broaden the scope of their major field.

## ■ What Do You Study?

#### ■ Major required

Engineering Mathematics

Vector Analysis

Applied Mathematics

Electrical Engineering Basic Lab

Power Electronics1

Electromagnetism 1

Electromagnetism 2

Circuit Theory 1

Circuit Theory 2

Automatic Control Engineering

Micro electronics Lab

Electric Machinery 1

Smart Power System Engineering1

Electric Machinery 2

Electronic Circuit

#### Major Electives

Internship

Introduction to Engineering Design

Engineering Software Applications

Computer Programming Language for Engineers

Data Analysis and Optimization

Digital Logic Circuit

Design of Microprocessor Applications

High Voltage and High Current Engineering

Digital System Engineering

Renewable Energy System Engineering

Power IoT and Sensor

Modern Control

Smart Power System Engineering 2

Theory of Electrical Materials Properties

Illuminating Design

Electric Vehicle and control

Electrical Engineering Capstone Design

Power Distribution System Engineering

Display Electronics

Electrical Energy Storage Systems

Information and Communication Technology for

Power System 1

Information and Communication Technology 1 for

Power System 2

Power System Operation Practice

Electricity Market Theory and Practice

Recent technical trends in Smart Grid

Electric Circuit Basic Lab

Electrical Engineering Seminar

Power Electronics 2

Introduction to Artificial Intelligence

#### Minor Required

Electromagnetism 1

Circuit Theory 1 Electric Machinery 1 Electric Machinery 2

and Hyundai Heavy Industries.

#### Minor Electives

At least 9 credit hours of the major courses should be chosen.

### Careers

Thanks to the fundamental engineering characteristics of electrical engineering, graduates are obtaining distinction in all industrial positions, including key national industrial companies and IT venture companies.

In particular, many graduates are currently employed by KEPCO, Samsung Electronics, LG Electronics,

# Department of Energy & Resources Engineering

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## ■ What is Energy & Resources Engineering?

These days, natural resources are essential to develop domestic economies. Each country is trying to secure natural resource stability due to a lack of resources. Currently, our government is making efforts to develop the technology of resource extraction and to encourage advanced resource engineers because the issue of gaining resources is not simply based on geopolitical situations. In order to meet the demands of the time, the Department of Energy & Resource Engineering deals with applied geology & geochemistry, geophysical prospecting, resource development engineering, petroleum engineering, mineral processing, mine safety & environment, drilling engineering, and resource economics.

#### Professors

- Kim Myungjun, Ph.D.
   [Professor, Hydro-metallurgy and Recycling, junkim@jnu.ac.kr]
- Lee Jong-Un, Ph.D.
   [Professor, Microbial Geochemistry, jongun@jnu.ac.kr]
- Lee Jeonghwan, Ph.D.
   [Professor, Petroleum & Natural Gas,

- jhwan@jnu.ac.kr]
- Kil Youngwoo, Ph.D.
   [Professor, Applied Geology & Geochemistry, ykil@jnu.ac.kr]
- Yoon Daeung, Ph.D.
   [Assistant Professor, Geophysical Prospecting, duyoon@jnu.ac.kr]

## **■ Degree Requirements**

Students are required to earn 140 credits, with 48 credits from core courses within the Department, and 29 from general electives. Students will also be required to submit a graduate thesis, and demonstrate ability in a foreign language.

## ■ What Do You Study?

#### Core Courses

Applied Geochemistry and Lab Energy & Resources Engineering Capstone Design Engineering Mathematics 1 Exploration Geophysics & Design Exploration of Geochemistry & Lab Field Training Hydrometallurgy and Lab. Introduction to Creative Design Petroleum Engineering Laboratory Petrology And Lab. Reservoir Engineering

Resource Development Engineering

Resource Economics

Resource engineering & CO2 utilization

Rock Mechanics and Design Seismic Prospecting & Lab

#### ■ Electives

Engineering for CO2 Geological Storage

Engineering Mathematics 2 Environmental geology

Future Energy Resources Development Engineering

Geomicrobiology and Lab.

GPR and Electromagnetic Prospecting

Industrial Mineralogy and LAB

Introduction of Energy Resources Engineering

Introduction to A.I. for energy resources

development

Mine Planning and Design

Mineral Processing & Plant Design 1 Mineral Processing & Plant Design 2

Mineralogy and Lab.

New and Renewable Energy Engineering

Numerical analysis

Petroleum Drilling Engineering

Petroleum geology

Petroleum Production Engineering
Python programming & practice
Resource evaluation and Policy design

Rock Blasting and Design

Safety Engineering for Resources Development

Science of Ore Deposits and Lab. Tunnel Engineering & Design

#### Careers

#### **Government Ministry**

Ministry of Environment Republic of Korea, Ministry of Knowledge Economy

#### **Institutes**

Korea Institute of Geoscience and Mineral Resources(KIGAM), Korea Ocean Research & Development(KORDI), Korea Environment Institute, Korea Institute of Science & Technology Evaluation and Planning, etc.

#### **Public Organization**

Korea National Oil Corporation(KNOC), Korea Resources Corporation(KORES), Korea Rural Community Corporation, Korea GAS Corporation (KOGAS), etc.

#### **Domestic Companies**

SK, SK Energy, GS Caltex, SK E&C, GS E&C, Samsung C&T, Posco, Daewoo International Corporation, Daewoo Shipbuilding and Marine Engineering, STX Energy, etc.

#### The others

Mine Reclamation Corporation, Korea Energy Management Corporation, Korea Petroleum Association, etc.

## Department of Environment and Energy Engineering

\_Contact Information

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## ■ What is Environment and Energy Engineering?

The main objectives of environment and energy engineering are controlled use and preservation of environment and developing new renewable energy. Environment and energy engineering applies engineering and scientific principles to protect human health and to maintain and improve eco-systems. Our graduates are trained to design, build, operate, and manage organizations and facilities that protect people and the environment by developing new renewable energy. Environment and energy engineering is generally treated as an independent engineering discipline by the engineering profession. We live amid intricate interactions and complex problems created between living beings and their environments, or by variabilities of nature itself. These problems can have disastrous consequences of enormous magnitude and are very difficult to resolve. Environmental researchers investigate these interactions to guard each being from the harmful effects of others.

## ■ Department of Environment and Energy Engineering at CNU

- 1992. 03: Establishment of Department of Environmental Engineering
- 1999. 03: Reorganization of Departments of Civil, Earth, and Environmental Engineering
- 2002. 03: Reorganization of Departments of Civil, Geosystems, and Environmental Engineering
- 2009. 03: Reorganization of Department of Environmental Engineering
- 2013. 03: Reorganization of Department of Environment and Energy Engineering

#### Professors

- Yong-Woon Lee, Ph.D.
   [Professor, Water Quality Management System, ywlee@jnu.ac.kr]
- Sung-Yong Cho, Ph.D.
   [Professor, Eco-Energy and Air Pollution Engineering, syc@jnu.ac.kr]
- Seong-Jun Kim, Ph.D.
   [Professor, Environmental Biotechnology, seongjun@jnu.ac.kr]
- Jeong-Hun Park, Ph.D.
   [Professor, Treatment of Contaminated Soils and

- Wastes, parkjeo1@jnu.ac.kr]
- Ho-Young Jung, Ph.D.
   [Professor, Environmental Energy Materials, jungho@jnu.ac.kr]
- Sok-Hee Jung, Ph.D.
   [Associate Professor, Microbial Fuel Cells Bioenergy, sokheejung@jnu.ac.kr]
- Yong-Gyun Park, Ph.D.
   [Associate Professor, Smart Water Grid and Water Digitalization, ygpark7@jnu.ac.kr]

## **■** Degree Requirements

The undergraduate programs are designed to help students develop both the understanding and capability needed to meet the challenges of a modern technological society. Students are required to earn at least 140 credit hours (69 from Department courses, 42 from cultural studies and 29 from electives), which normally takes four years of full-time study. Students may also earn double majors or minors as a means of broadening the scope of their studies.

## ■ What Do You Study?

#### Core Courses

Introduction to Engineering Design

Renewable Energy

Environmental Chemistry

Water Quality Management and Practice

Environmental Microbiology

Environmental Reaction and Design Engineering

Environmental Biotechnology and Practice

Coping Engineering with Air Pollution and Climate

Change

Design of Combustion Facilities

Waste Resource Treatment and Energy Engineering

Environmental Energy Engineering and Practice

Air Pollution Management

Energy System Design

Hazardous Wastes Management and Soil

Remediation Engineering

Environmental Engineering Capstone Design

Environmental Electrochemistry

#### ■ Electives

Green Energy

Fluid Mechanics

Probability and Statistics

Engineering Mathematics 1

Introduction to Environmental Engineering

Environmental Ecology

Environmental and Energy Engineering Laboratory

Engineering Mathematics 2

Wastewater Treatment Engineering and Practice

Environmental Fundamental Laboratory

Environmental Engineering Laboratory 1

Environmental and Climate Change Impact

Assessment

Atmospheric Particle Engineering and Experiments

Wastewater Treatment Engineering and Practice

Environmental Engineering Laboratory 2

Water Supply and Sewage Engineering

Energy Convergence Engineering

Waste Energy Engineering

Field Practice

Environmental Toxicology and Practice

Environment and Safety Engineering and Practice

Resources from Biomass

Bioenergy

Noise and Vibration

Environmental Chemistry of Soils

Industry-oriented Education and Practice

Environmental Process Design and Practice

Environmental Laws

Intellectual Properties in Environmental Energy

Engineering

#### Careers

Graduates are currently playing active roles in central and local government organizations (e.g., Ministry of Environment), some public corporations (Korea Water Resources Corporation, Korea Environment Corporation, Korea Electric Power Corporation) and research institutes (e.g., National Institute of

Environmental Research, Korea Institute of Energy Research).

Graduates also have careers in business corporations dealing with environmental impact assessment, air pollution control facilities, wastewater treatment, hazardous wastes treatment, environmental remediation, new renewable energy, and waste recycling facilities. They are usually in charge of the environment and safety of their company. Some graduates go on to graduate school to further specialize in their discipline of environment or energy engineering.

## Department of Industrial Engineering

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## **■** What is Industrial Engineering?

Industrial Engineering (IE), which plays a more important role in modern society than ever before due to the advent of the 4<sup>th</sup> industrial revolution, is a discipline that focuses on design, management, and improvement of systems composed of humans, machines, materials, energy, and information in a rapidly changing industrial environment. IE is primarily concerned with how to organize people, machineries, information, technologies, money, and materials to produce and distribute products and services more efficiently. Its main objectives are to improve the productivity, safety, and resilience of systems and to find their optimal operation schemes. It is an interdisciplinary program, using engineering analyses, design principles and methods as well as natural scientific theories, such as mathematics and physics, management, software-related studies, artificial intelligence, and professional knowledge of social sciences.

## **■** Department of Industrial Engineering

In the department of Industrial Engineering (IE), students learn about the design, management, and improvement of systems composed of human beings, machines, materials, energy, and information under rapidly changing industry surroundings, ultimately to determine the optimal operation schemes of a system and to improve system productivity and efficiency. The department of IE teaches students to analyze the cardinal characteristics of the industry and the business environment, and trains them how to utilize various methods towards optimal design, management and operation under given circumstances. The educational goals of IE program are to help students cultivate their management skills as well as engineering proficiency, to guide them to develop their problem solving and decision making skills, and to encourage them to be competent engineering leaders in a wide range of work domains.

Students are expected to obtain strong academic basics in undergraduate programs that are developed to offer classical as well as modern subjects in the field of IE in a systematic and logical manner.

#### Professors

- Chung, Sang Wook, Ph.D.
   [Professor, Reliability Engineering, swchung@jnu.ac.kr]
- · Lee, Joon-Woong, Ph.D.

[Professor, Computer Vision & Software Development for Autonomous Vehicles, joonlee@jnu.ac.kr]

· Lee, Jae Yeol, Ph.D.

[Professor, HCI Design, jaeyeol@jnu.ac.kr]

· Kim, Nam Ki, Ph.D.

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• Ham, Dong-Han, Ph.D.

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Jeong, Young-Seon, Ph.D.
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Intelligent Transportation Systems, young.jeong@jnu.ac.kr]

• Joo, Si-Hyung, Ph.D.

[Associate Professor, Management of Technology, innovation@jnu.ac.kr]

• Joung, Seul Gi, Ph.D.

[Assistant Professor, Optimization under uncertainty & Applications of OR, sgjoung@jnu.ac.kr]

## **■** Degree Requirements

Students are required to earn 130 credits to graduate, which compulsorily include 30 credits from liberal arts courses, 15 credits from department core courses, 33 credits from department electives, and 21 credits from the other courses in their own major, minor, or double major.

## ■ What Do You Study?

#### ■ Core Courses

Basics of computer programming
Introduction to Probability and Statistics
Operations Research 1
Production Management 1
Capstone Design for Industrial Engineering

#### **■** Electives

Guides for University Students Problem solving and algorithms Introduction to Industrial Engineering Introduction to Engineering Design

Engineering Mathematics

Case Studies of Industrial Engineering

Engineering Economy

Special Topics in Industrial Engineering

Work Systems Engineering
Manufacturing engineering
Matrix and Linear Algebra
Application of C Programming
Object-Oriented Programming
Management of Technology

DB Modeling

Data Analysis and its Applications

System Analysis & Design

Human Interface Engineering

Operations Research 2

Introduction to Data Mining

Design Engineering
Design of Experiments
Knowledge Engineering

Creative Problem Solving and Starting Up a Venture

Business

Quality Control

Software Applications for Industrial Engineering

Production Management 2

Special Topics in Systems Engineering

Human Factors Engineering

Artificial intelligence and applications Financial and Management Analysis

Quality Engineering MachineLearning

Complex Systems Engineering

Service Engineering

Simulation and S/W Practice

Systems optimization

Reliability Analysis & Design

Marketing and Technological Innovation Strategy Case Studies in Industrial Systems System Safety Engineering Product development engineering Project Management

#### Careers

Graduates often find lucrative careers in the manufacturing industry. Alumni have also found positions in academia, civil service, IT, and so on. (For a list of those job positions, see http://ie.jnu.ac.kr/joblist/.) The degree promises to be even more valuable in the future.

# Department of Computer Engineering

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## ■ What is Computer Engineering?

The goals of Computer Engineering (CE) are to introduce concepts in computer, information and communications engineering in an integrated manner; to motivate basic concepts in the context of real applications; to illustrate a logical way of thinking about problems and their solutions; and to convey excitement about the profession. These goals are attained through the analysis, construction, and testing of systems that incorporate concepts from a broad range of areas within computer, information and communications engineering.

### ■ Department of Computer Engineering

Electronic appliances, communication equipment, medical equipment, and information service systems that are easily seen in our daily lives result from the combination of electronic circuit technology, imbedded computer technology, and software operation technology. The combination of hardware and software occurs simultaneously in all the current industries and the combination of computer-based IT and other technologies can manufacture high value products. As hardware manufacturing technology becomes more diversified and generalized, engineers with hardware and software-related knowledge are needed in various fields of the industry.

Computer and Information Communications Engineering is the study of the technologies of mobile equipment such as Smartphones, and software technologies needed for the manufacturing of network systems such as clouds, internet service systems, etc. Courses include logic circuits, basic circuit theory, computer structures, digital synthesis design, etc. In addition, communication theory, data communication, and computer networking are taught for the understanding of information communication systems and intelligence systems, multimedia systems, imbedded systems, and computer medical systems as well as generic IT application systems.

In Computer and Information Communications Engineering, the concepts of hardware and software are taught and understood through experimentation. The combination of SOC (System on a Chip) design technology and computer OS helps students understand the technology needed for applied systems in IC components such as MP3 players. Also, understanding data communication and multimedia transmission technology software helps them experience futuristic multimedia systems, such as smart TVs, and students operate robots and vehicles through programming and acquire knowledge. Courses also provide chances for field experience in connection with industry (companies). Customized scholarship programs benefit

students in school and after graduation with the cooperation of prominent local companies, Samsung Electronics, LG Innotek, Hynix Semiconductor, Inc, and LG Display among others.

#### Professors

- Young-Chul Kim Ph.D.
   [Professor, System on Chip Design, yckim@jnu.ac.kr]
- Ji-Seung Nam Ph.D. [Professor, Computer Network, jsnam@jnu.ac.kr]
- Chil-Woo Lee Ph.D.
   [Professor, Computer Vision/Intelligent Human Interface, leecw@jnu.ac.kr]
- Yonggwan Won Ph.D.
   [Professor, Computational(Artificial) Intelligence,
   Biomedical Engineering, Healthcare System,
   ykwon@jnu.ac.kr]
- Jaehyung Park Ph.D.
   [Professor, State-of-the-Art of Network
   Technology and Security, hyeoung@jnu.ac.kr]
- Jin-Sul Kim, Ph.D.
   [Professor, Multimedia, QoS/QoE, Edge Computing, Intelligence Platform, Metaverse, AI, Digital Content, IT Convergence Technologies,

- jsworld@jnu.ac.kr]
- Hosung Park, Ph.D.
   [Associate Professor, Coding theory,
   Communications systems, Information theory,
   hpark1@jnu.ac.kr]
- Sunyong Yoo, Ph.D.
   [Assistant Professor, Bio and medical informatics, Artificial intelligence, Bigdata analysis, syyoo@jnu.ac.kr]
- Suhyung Park, Ph.D.
   [Assistant Professor, Medical Signal and Image Processing, suhyung@jnu.ac.kr]
- Young-woo Lee, Ph.D.
   [Assistant Professor, VLSI/SoC design, ylee@jnu.ac.kr]
- Myeongjin Kim, Ph.D.
   [Assistant Professor, VR&AR, Haptic, Artificial intelligence, Computer Graphics, Computer vision, myeongjin@jnu.ac.kr]

## Degree Requirements

Computer Engineering students are required to earn 140 credits including 12 credits from liberal arts, 26 credits from MSC courses, 36 credits from CE compulsory courses, 28 credits from CE electives, and 38 credits from general electives.

## ■ What Do You Study?

#### Core Courses

Introduction to Engineering Design
Engineering Mathematics 1
Logic Circuits Design
Linux System & Practice
Linear Algebra
Discrete Mathematics
C Programming & Practice

Advanced Computer Programming & Practice

Data Structures

Computer System Architecture Probability and Statistics Operating System Artificial Intelligence Embedded Software

Computer Engineering Project1(Capstone Design)
Computer Engineering Project2(Capstone Design)

#### Electives

Software Programming Basics & Practice

Basic Circuit Theory
IoT Computing

Data Communication

Signals and System Engineering

Open Source Application

Data Base Systems

Digital Signal Processing

Software Engineering & Application

System IC Design Web Programming

Digital Communication Engineering

Microprocessors

Neural Networks and Deep Learning

Computer Graphics

Computer Convergence Seminar

Computing Algorithm

Virtual Reality MachineLearning Digital Image Processing

Mobile Communication System

Smart Vehicle System

Embeded System

Intelligent ICT Convergence Seminar

Computer Networks Reinforcement learning

Routing Protocol
Distributed Systems
Big Data System
Advanture Project

AI Semiconductor design Computer Information Security

Cloud Computing

Communications and Future Technology

Human Interface

Field Practice of Intelligent ICT Convergence Field Practice of Computer Engineering

#### Careers

Graduates of Computer Engineering are actively working in various fields of society such as domestic companies, TV stations, and in public and venture companies as high-ranking public officers or patent agents.

Otherwise, they continue their studies at graduate schools for masters or doctoral degrees and become professors at universities or leading researchers in many industrial institutes or laboratories headed by large domestic companies and national and public laboratories. They include Samsung, LG, Daewoo, Hyundai, SK Hynix, TV stations, financial companies, KEPCO (Korea Electric Power Corporation), KT, SKT, NHN, ETRI, etc.

# Department of Electronic Engineering

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## What is Electronic Engineering?

Historically, Electronic Engineering, as a study to create, deliver, transform, and manage different forms of "information", includes telecommunications, radio wave engineering, semiconductor devices, design of the integrated circuit, control/robotics, and signal processing.

It is an area of engineering study to learn electronic appliances, telecommunication devices, software & hardware for industrial electronic equipment in terms of its principles, design, and manufacturing. Electronic Engineering has a distinctive nature of highly integrated technology and fast-moving innovations, where it continuously evolves with the rapid development of integrated circuits and computers.

In other words, it expanded from the hardware itself to the areas for system and applied software, which is now becoming an intellectual study in the fourth industrial revolution.

Particularly, control/robotics, signal processing, design of integrated circuits, etc. closely interconnected with the artificial intelligence technology; hence, it generates high-valued system and services.

This study emphasis professional knowledge and creative thinking which is suitable for the new wave of the fourth industrial revolution; further, focuses on making a comprehensive syllabus consisting of theory and design, hands-on experiments, and advanced education enabling autonomous project handling.

## **■** Department of Electronic Engineering

Electronic Engineering is everywhere in our daily appliances such as smartphones, televisions, game consoles, etc.; thus, it gives practitioners the benefits to broadly apply it to lots of areas. In particular, as the professors of the Electronic Engineering faculty of Chonnam National University focus on, the concerned studies embrace various applications to the modern technologies, including telecommunication, signal processing for image & sound, biometric & medical technologies, intellectual control, etc.

In addition, Electronic Engineering has distinctive characteristics of integration of different technologies as well as innovation-oriented nature. Furthermore, as a leading technology in the industry, it encourages the development of other disciplines at the time of its convergence with other technologies. Especially, it is essentially associated with pure electronics industries such as semiconductors, smartphones, etc., which involve technology-intensive but fast-growing businesses. Hence, such businesses demand a large number of highly educated manpower; accordingly, it gives students opportunities for quality jobs.

The faculty emphasizes logical reasoning and forward-thinking to deal with the wave of the fourth

industrial revolution. To do so, it mainly aims for students to be suitably qualified as experts in the electronic engineering discipline by developing their own competencies and encompassing: (i) a balanced syllabus having both theoretical and practical (design) classes; (ii) task-based experiments and practice; and (iii) an advanced educational program based on hands-on projects for students to enhance their creativity in practice.

#### Professors

- Jin Young Kim, Ph.D.
   [Professor, Signal Processing & Aartificial Intelligence, beyondi@jnu.ac.kr]
- Dae Jin Kim, Ph.D.
   [Professor, Digital Communication, djinkim@jnu.ac.kr]
- Sung-Hoon Hong, Ph.D.[Professor, Image Processing, hsh@jnu.ac.kr]
- Baek, Sung-June, Ph.D.
   [Professor, Digital Signal Processing, tozero@jnu.ac.kr]
- Dong Kook Kim, Ph.D.
   [Professor, Audio Signal Processing & Aartificial Intelligence, dkim@jnu.ac.kr]
- Taejin Jung, Ph.D.
   [Professor, Wireless Communication, tjjung@jnu.ac.kr]
- · Choi, Su-il, Ph.D.

- [Professor, Optical Communication & Embedded Systems, sichoi@jnu.ac.kr]
- Intae Hwang, Ph.D.
   [Professor, Mobile Communications, hit@jnu.ac.kr]
- Taeksoo Ji, Ph.D.
   [Professor, Semiconductor & Electronic device, tji@jnu.ac.kr]
- Myoung Jin Lee, Ph.D.
   [Professor, Semiconductor device & Circuit design, mjlee@jnu.ac.kr]
- Hyun Duck Choi, Ph.D.
   [Assistant Professor, Next Generation Intelligent Control & Aartificial Intelligence, ducky.choi@jnu.ac.kr]
- Jinseok Park, Ph.D.
   [Assistant Professor, RF/Analog Semiconductor Circuit Design, jinseok131@jnu.ac.kr]

## ■ Degree Requirements

Electronic Engineering undergraduate students are required to earn 140 credits including 20 credits from liberal arts education courses, 32 credits from MSC courses, 32 credits from EE compulsory courses, 27 credits from EE electives, and 29 credits from general electives.

## ■ What Do You Study?

#### Core Courses

C Programming & Practice
Engineering Mathematics 2
Advanced Programming Project
Circuit Theory 1
Logic Circuits Design

Basic Circuit Experiment
Microelectronics Lab.
Electronic Circuit 1
Electromagnetism 1
Signal and Systems
Basic Project of Electronic Engineering

Control Engineering
Communication Theory

Microprocessor Capstone Design

Microwave Engineering
Digital Image Processing

Capstone Design Digital System Design

#### **■** Electives

Introduction to Engineering Design
Electronic Engineering Seminar
Engineering Mathematics 1
Probability and Statistics
Linear Algebra
Circuit Theory 2
Data Structures
Digital Signal Processing

Electromagnetism 2 Electronic Circuit 2 Physical Electronics

Digital Communication Engineering

Integrated circuit Design Semiconductor Engineering

Intelligent Control RF Circuit Design Embedded System Artificial Intelligence

Data Networks

Semiconductor Process Technology

SOC Design

Robots Engineering TCP/IP Networks

AI Semiconductor designy

#### Careers

Many alumni who studied Electronic Engineering at Chonnam National University show good working performance in various organizations such as companies, TV broadcasting centers, government-run corporations, venture companies, public institutions, etc.

For another career path, some students continue their studies at graduate schools for masters or doctoral degrees so that they become either professors at universities or leading researchers in technical institutes or laboratories. The researching job for the professionals are not limited to those but include the conglomerates such as Samsung, LG, LIG, Hyundai, SK Hynix, Korea Electric Power Corporation("KEPCO"), KT, SKT, NHN, etc. in addition to the public organization such as Korea Broadcasting System ("KBS"), ETRI, etc.

# Department of Software Engineering

\_Contact Information

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URL: http://sw.inu.ac.kr

## **■** What is Software Engineering?

It has been increasingly crucial to foster the software industry. With the growing need for software and artificial intelligence professionals, the basic goal of the Department of Software Engineering is to train professional programmers to participate in software system development.

By cultivating the ability to use various types of programming languages, acquiring basic theories and applied technologies necessary for designing software systems, and then going through the process of developing Linux-based systems and systems used on the Internet, the curriculum of the department aims to nurture essential high-level manpower.

In addition, basic knowledge and software development skills in artificial intelligence, cloud service, embedded systems, and mobile and IoT (Internet of Things) fields, which have emerged as the main trends in the computer technology field, will be cultivated.

## **■** Department of Software Engineering

Now the world is in a software supremacy struggle. It accounts for 52.4% of the automobile industry, 40.9% of the medical industry, and 51.4% of the warplane industry.

Korea was ranked 10th in the world economy due to a combination of basic industries such as automobile, steel, electronics, and software industries. However, as the demand for manpower in software development increases, the supply of highly-skilled people is insufficient. The majority of people working in the software industry are non-specialists.

Technologies and methods in developing and utilizing computer software are taught in software engineering. There are many departments for computer engineering in other universities, but there are only a few universities specializing in computer software. Software Engineering at Chonnam National University trains talented persons in combined software technology to lead the future information society. CNN Money announced the top 100 jobs in America, based on quality of life, and software designer was ranked at the top. Software designers are technicians developing and utilizing software, and making blueprints that are equivalent to those of an architect.

Microsoft, the leader in the global operation systems market; Apple, the leader in the intelligent mobile phones market with the iPhone; Google the dominant force in the information search market (and currently gaining a foothold in telecommunications); and Naver, leading the domestic information search market are all prominent software companies.

These companies have also grown rapidly in recent times. Dear young people, full of passion and dreams, challenge yourselves and embrace the learning. Software engineering awaits you. Find your own Blue Ocean and become an important person in the infinity of cyberspace.

Machines like Smart phones enable us to access anything. Mobile phone operation systems such as Android, iOS, or Windows as well as game or utility apps, can be made and installed by you.

#### Professors

- Hyeongseok Lim, Ph.D.
   [Professor, hslim@jnu.ac.kr]
   (Algorithm)
- Deokjai Choi, Ph.D.
   [Professor, dchoi@jnu.ac.kr]
   (Computer Network)
- Hyukro Park, Ph.D.
   [Professor, hyukro@jnu.ac.kr]
   (Information Retrieval)
- Hyungjeong Yang, Ph.D.
   [Professor, hjyang@jnu.ac.kr]
   (Application Software)
- Kyungbaek Kim, Ph.D.
   [Professor, kyungbaekkim@jnu.ac.kr]
   (Distributed Network System)
- Kwanghoon Choi, Ph.D.
   [Professor, kwanghoon.choi@jnu.ac.kr]
   (Programing Language & Compiler)

- Heiyong Jeong, Ph.D.
   [Associate Professor, h.jeong@jnu.ac.kr]
   (Intelligent Robot Control & Signal Processing)
- Seokbong, Yoo, Ph.D.
   [Associate Professor, sbyoo@jnu.ac.kr]
   (Visual Intelligence, Image Processing)
- Yeongjun, Cho, Ph.D.
   [Assistant Professor, yj.cho@jnu.ac.kr]
   (Computer Vision)
- Soohyung Kim, Ph.D.
   [Professor, shkim@jnu.ac.kr]
   (Artificial Intelligence)
- Seungwon Kim, Ph.D.
   [Assistant Professor, Seungwon.Kim@jnu.ac.kr]
   (VR(Virtual Reality) / AR(Augmented Reality))
- Taejune Park, Ph.D.
   [Assistant Professor, taejune.park@jnu.ac.kr]
   (Information Security / Network Security)

## **■** Degree Requirements

Software Engineering undergraduate students are required to earn 140 credits including 12 credits from liberal arts education courses, 26 credits from MSC courses, 64 credits from CE compulsory courses & CE electives, and 38 credits from general electives.

## ■ What Do You Study?

#### **Software Engineering Major Courses**

#### Core Courses

C Programming & Practice
Introduction of Engineering Design
Engineering Mathematics 1
Java Programming & Practice

Linear Algebra
Discrete Mathematics
Linear Algebra
Data Structures
Computer Architecture

Probability and Statistics Data Base Systems

Theory of Software Engineering

Operating Systems Career Exploration

Algorithm

Computer Networks

Software Engineering Integrated Project (Capstone

Design)

Theory of Programming Languages

#### **■** Electives

Logic Circuits Linux System

Software Engineering Basic Projects C++ Programming & Practice Object-oriented Design Project Windows Programming Project

Data Communication
Problem Solving Project

Intelligent HCI

Computer Graphics

Network Programming
Database Design Project

Mobile Application Software

Industry-academic Cooperation Project (Capstone Design)

Web Programming & Practice

Embedded Software Theory of Computation Machine Learning

Digital Image Processing Software Reverse Engineering

Artificial Intelligence

Intelligent ICT Convergence Seminar Computer & Networks Security

Virtual Reality
Deep Learning
Distributed Systems

Compilers

Intelligent ICT Convergence Field Practice

Practical Software Projects 1 Practical Software Projects 2

#### Careers

Graduates of Software Engineering are actively working in various fields of society such as domestic companies, global software platform companies, and in public and venture companies as high-ranking civil servants or patent agents.

Otherwise, they continue their studies at graduate schools for masters or doctoral degrees and become professors at universities or leading researchers in many industrial institutes or laboratories headed by large domestic companies and national and public laboratories.

#### \* Careers and Employment after Graduation

- IT/SW development/game-related fields: Social open markets (social commerce) such as Kakao Corporation, Naver (Line), eBay Korea, Coupang, Timon, WeMakprice, Netmarble, Gamevil Com2uS Corporation, Nexon, and N Media Platform, etc.
- Public corporations and public institutions: Korea Electric Power Exchange (KPX), Korea Electric Power Corporation (KEPCO), KEPCO KDN, KEPCO KPS, Internet & Security Agency (KISA), Korea Tobacco and Ginseng Corporation (KT&G), Korea East-West Power, Korea Southern Power, Incheon International Airport Corporation, KORAIL, Korea Hydro & Nuclear Power, Korea Information Society Agency, Forestry

Cooperative, etc.

- Telecommunication/Broadcasting/Electronics: SK Telecom, SK Broadband, KT, LG U+, Nuri Telecom, Lotte Data Communication Company, KBS, KBC, MBC, Samsung Electronics, LG Electronics, LG Display, LG Innotek, Doosan, Amkor Technology Korea, Korea Alps, etc.
- Hospitals/public service/financial sector/media companies/accounting firms: Computing department at university hospitals, public servants in IT fields, Kwangju Bank, Kookmin Bank, Nonghyup Bank, Maeil Economic Daily, EY (Ernst & Young Global Limited) Hanyoung, Customs Office (HTNS Customs Corporation), etc.

## College of Engineering Sciences

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#### School of Electrical and Computer Engineering

- · Major in Electrical and Semiconductor Engineering
- · Major in Computer Engineering
- Department of Electronic Communication Engineering
- Department of Mechanical Design Engineering
- Department of Mechanical System Engineering
- Department of Mechatronics Engineering
- Department of Refrigeration and Air Conditioning Engineering
- Department of Marine and Civil Engineering
- Department of Environmental System Engineering
- Department of Integrative Biotechnology
- Department of Chemical and Biomolecular Engineering
- Department of Architecture
- Department of Biomedical Engineering
- School of Healthcare and Biomedical Engineering
- Department of Petrochemical Materials Engineering
- Department of Industrial Technology Convergence Engineering
- Affiliated Research Centers
  - · Ocean Civil Engineering Research Center
  - · Refrigerating Techniques Research Center
  - · Chemical and Safety Engineering Research Center
  - · Environmental Research Center
  - · Innovation cener of education-Engineering

# Electrical and Computer Engineering

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## ■ What is Electrical and Computer Engineering?

In the school of Electrical Computer Engineering, advanced engineers are cultivated to develop and apply appropriate technologies. Every major in the school focuses on high-level technology, and there are interesting fields such as new generation mobile communications, computer communications, optical communication, servomechanism and electronic measurement, power electronics, semiconductor, power system, digital and computer circuit layout, computer graphics, design and application of embedded systems, artificial intelligence, computer program development, ubiquitous systems, and web application developing fields. To fulfill student expectations, there are several education programs, such as special education programs.

### ■ School of Electrical and Computer Engineering

In this school, education is supported by offering numerous scholarships and overseas training opportunities, as well as employment guidance and field experience.

Students are able to participate in many programs. In their first year of study, students are provided with a wide range of courses from basic to high technology education, and in their second year of study will decide a specific major (such as Computers and Electrical and Semiconductor Engineering). Students must study major theories, hardware and their experiments. These studies focus on both theory and practice, and students can apply skills acquired from these studies to future fields.

#### Professors

#### Major in Electrical and Semiconductor Engineering

- Nam-Sup Choi, Ph.D.

  [Professor, Power Electronics, nschoi@jnu.ac.kr]
- Buhm Lee, Ph.D.

  [Professor, Power Systems, buhmlee@jnu.ac.kr]
- Yang-Hee Joung, Ph.D.
   [Professor, Semiconductor Materials and Processes, jyanghee@jnu.ac.kr]
- Young-Chul Bae, Ph.D.
   [Professor, Chaos, Artificial Intelligence,

- Cyberphysical System (CPS), Instrumentation and Automation, ycbae@jnu.ac.kr]
- Kyoung-Min Kim, Ph.D.
   [Professor, Image/signaling and computer vision, system automation, kkm@jnu.ac.kr]
- Seong-Jun Kang, Ph.D.
   [Professor, Functional Materials and Devices, VLSI Process, ferroksj@jnu.ac.kr]

#### Major in Computer Engineering

- Kang-Chul Kim, Ph.D.
   [Professor, VLSI Design and Embedded Systems, kkc@jnu.ac.kr]
- Chang-Gyoon Lim, Ph.D.
   [Professor, Artificial Intelligence, cglim@jnu.ac.kr]

- Gwang-Jun Kim, Ph.D.
   [Associate Professor, Computer Communication, kgi@jnu.ac.kr]
- Tai-Hoon Kim, Ph.D.
   [Professor, Cyber Security, taihoonn@jnu.ac.kr]

## **■** Degree Requirements

Students are required to earn 140 credits, with 27 credits from electives (15 credits from cultural studies courses) and 82 credits from department courses (32 credits from core courses).

### ■ What Do You Study?

#### Major in Electrical and Semiconductor Engineering

Core	Courses	Advanced	Engineering	Mathematics

Living English 1 Digital Circuit Lab

Mathematics 1 Introduction Capstone Design

Mathematics 2 Solid State Electronic Device

Solid State Electronic Device Engineering 2

General Physics 1 Artificial Intelligence
Electrical Engineering Basic Lab Automatic Control 2
Electromagnetics 1 Electric Machinery 2

Electromagnetics 2 Electric Energy Conversion Engineering

Circuit Theory 1 Power Engineering 2
Circuit Theory 2 Electronic Circuit 2

Solid State Electronic Device Engineering 1 Microelectronics Design and Lab

Robot Engineering

Field Practice (Electrical and Semiconductor)

Automatic Control 1

Field Practice 1 (Electrical and Semiconductor)

Electric Machinery 1

Field Practice 2 (Electrical and Semiconductor)

Power Engineering 1

Field Practice 3 (Electrical and Semiconductor)

Electronic Circuit 1 VLSI Process 1

Electives VLSI Process 2

Introduction to Electrical and Semiconductor

Signals and System Engineering

Engineering Applied Power Electronics

Engineering Mathematics

Digital Circuit Design 1

Digital Circuit Design 2

Experience Intern 1

Experience Intern 2

Semiconductor Engineering Electrical Machinery and Lab

Applied Computer Power Systems

Applied Computer

Programming Language

Programming Language

Flectronic Display Engineering

Control system Design Digital Signal Processing Microprocessor and Lab

Electrical Engineering Materials

Physical Electronics

Instrumentand Lab
Soft computing

Creative Engineering Design 1 (Capstone Design) Creative Engineering Design 2 (Capstone Design)

#### Major in Computer Engineering

#### Core Courses

Living English 1 Mathematics 1

Introduction of Artificial Intelligence

Database Management

Introduction to Embedded Hardware

Design of Computer Architecture & Practice1

Network and Socket Programming Actual Training

Software Engineering Embedded Programming Computer Graphics

Design of Microprocessor Applications & Practice

#### Electives

C language Programming and Practice Game Programming & Practice 1 Introduction to Data Science and Lab

Data Structures & Practice
Discrete Mathematics
Computer Network
Computer programming I

Game Programming & Practice 2

Engineering Mathematics

Data and Computer Communication Digital Circuits Design & Practice

Python Programming

Big Data Analysis and Lab

Algorithms

Operating System

Design of Computer Architecture & Practice 2

Field Practice1
Machine Learning
Image Processing

Operating System Design and Practice

Embedded System
Capstone Design 1
Field Practice

Application of Machine Learning

Multimedia System

Mobile Programming application

Parallel Computer Architecture and Programming

and Practice

Capstone Design 2

Introduction to R data analysis

#### Careers

Graduates tend to advance to positions in domestic and foreign graduate schools, educational organizations (middle schools), government and public offices, broadcasting fields, communication enterprises, computer network industries, information investment organizations, semiconductor companies, electronic companies, semiconductor device research organizations, Bio-metric System companies, CCTV companies, security maintenance companies, Korean Electric Power, Korean Water Resources, nuclear power generation fields, game planning fields, game graphic design fields, game programming production fields, character design fields, advertisement design fields, game graphic fields, web design fields, H/W fields, venture foundation, and other related fields.

## Electronic Communication Engineering

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#### ■ What is Electronic Communication Engineering?

Electronics and communications engineering is a broad field of engineering that includes electrical and electronics, hardware and software, covering a wide range of topics ranging from basic studies to applications.

There are artificial intelligence (AI), wireless communication (5G, 6G), Internet of Things (IoT), big data, embedded systems, microwave and antenna engineering, integrated circuit design, voice recognition and signal processing, and automatic control. This is the ICT technology that is the basis of the Fourth Industrial Revolution.

There is a need for a large number of talent to lead the 6th generation mobile communication technology worldwide.

#### ■ Department of Electronic Communication Engineering at CNU

Chonnam National University's Department of Electronics and Telecommunications Engineering was established in 1971 and operates bachelor's, master's, and doctoral programs.

This place offers a pleasant educational environment and various experimental practices, and a wide range of major education allows you to obtain certificates in adjacent fields and employ various related jobs. Student education is provided with the following educational goals.

- 1. Cultivate engineers with creativity to research and develop a wide range of advanced applications
- 2. Computer simulation training fosters various circuit interpretation and design skills
- 3. Training professional engineers who will play a pivotal role in the globalization and information age
- 4. Training excellent engineers with creativity to lead the era of the 4th Industrial Revolution

#### Professors

- Ki-Ryang Cho, Ph.D.
   [Professor, Optimization, krcho@jnu.ac.kr]
- Seung-Yeop Rhee, Ph.D.
   [Professor, Microwave Engineering, ysrsy@jnu.ac.kr]
- Dae-Ik Kim, Ph.D.

[Professor, Integrated Circuit Design, daeik@jnu.ac.kr]

 Han-Seung Jang, Ph.D.
 [Associate Professor, IoT & Machine-to-Machine Communications, Smart Grid, hsjang@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn at least 140 credit (99 from Department courses and 41 from electives), which normally takes four years of full-time study, and pass foreign language qualifying exams or a dissertation.

#### ■ What Do You Study?

#### ■ Core Courses

Basic English

English for Global Communication 1

Electro-Magnetics

Optimization Programming Communication Theory Digital System Design

Communication Circuit Design & Experiments 1

#### Electives

Electronic Communication Introduction Software Programming Basics & Practice

Engineering Mathematics Basic Circuit Experiment

Linear Algebra
Circuit Theory

Basic Microprocessor Digital Engineering Big Data Processing Numerical Analysis and Laboratory Applied Engineering Mathematics

Radio Engineering

Artificial Intelligence and Machine Learning

Electromagnetic Field

Electronic Circuit Experiments 1

Computer Communications

Internet of Things and Autonomous Driving

Signal Processing

Electronic Circuit Experiments 2

Creative Engineering Design(Capstone Design)

Microwave Engineering

Smart Factory

Antenna Engineering
Acoustic Engineering

Complete Design for Creative Engineering

(Capstone design)
Sensor Engineering
RF Circuit Design

#### Careers

Graduates tend to advance to positions in domestic and foreign graduate schools, government and public offices, broadcasting fields, communication enterprises, computer network industries, information investment organizations, semiconductor companies, electronic companies, semiconductor device research organizations, Korean Electric Power, Korean Water Resources, nuclear power generation fields, and other related fields.

# Department of Mechanical Design Engineering

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# ■ Department of Mechanical Design Engineering at Chonnam National University

This department focuses on fostering creative and specialized mechanical design engineers necessary for the overall industry (machinery, automobile, aerospace, construction, chemistry, refrigeration, etc.) through various theoretical education, experiments, and practice.

To this end, mathematics and computer learning are emphasized as basic subjects, and material mechanics, fluid mechanics, thermodynamics, and dynamics, which are basic subjects of mechanical design engineering, are learned. It learns various application subjects such as sensor and measurement engineering, mechanical design, fluid machinery, heat transfer, thermal fluid flow, automatic control, vibration, robotics, renewable energy, etc.

It also focuses on developing simulation and mechanical design skills using computers by expanding the use of comprehensive design and analysis software (CAD/CAE programs).

#### Professors

- Sang-Kyoo Park, Ph.D.
   [Professor, Fluid Engineering and Turbulence, psk@jnu.ac.kr]
- Young-Wann Kim, Ph.D.
   [Professor, Mechanical Design and Mechanics of Composite Materials, wannkim@jnu.ac.kr]
- Ki-Seong Kim, Ph.D. [Professor, Heat and ParticleImaging Velocimeter,

- sngkim@jnu.ac.kr]
- Seung-Uk Ko, Ph.D.
   [Professor, Dynamics Control and Biomedical, kos2@jnu.ac.kr]
- Sang-Hun Kim, Ph.D.
   [Assistant Professor, Applied solid dynamics, shkim83@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 140 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

#### ■ What Do You Study?

Core Courses

Statics

Thermodynamics 1 Fluid Mechanics 1

Mechanics of Materials 1

**Dynamics** 

Mechanical Design Automatic Control

Energy Conversion Engineering

Fluid Machinery Captone Design 1

#### **■** Electives

Engineering Mathematics

Introduction to Electrical Engineering Materials in Mechanical Engineering

Mechanical Element Drawing

Thermodynamics 2 Fluid Mechanics 2 Mechanics of Materials 2

Sensor and Experiment Engineering

Heat Transfer

Artificial Intelligence

Field Training1

Mechanical Vibration

Robot Engineering

Design Optimization

Field Practice 2

Comprehensive design using CAD

Internal Combustion Engine

Mechatronics & Practice

Hydraulic Engineering

Computational Mechanical Design

Field Practice

Field Practice 3

Renewable Energy

Fluid thermodynamics and Practice

Captone Design 2

Field Practice

#### . Careers

Graduates are able to pursue careers in engineering, electronics, automobile, and construction firms. They may also enroll in graduate programs in the field of mechanical design engineering.

Graduates may be qualified to work as heavy industry employees, technical public officials, and government officers.

# Department of Mechanical System Engineering

\_\_Contact Information

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URL: https://mechse.jnu.ac.kr

#### ■ What is Mechanical System Engineering?

The Department of Mechanical Systems Engineering is a place to learn the "mechanical engineering" required by machinery, metals, shipbuilding and plants to suit the characteristics of the national industrial complex in Gwangyang Bay. Based on mechanical engineering, education is provided faithful to basic mechanical engineering studies such as the relationship between motion and force, energy conversion, and material flow control, and current adaptive mechanical engineering studies necessary for design processing. Through this, it operates curricula and comparative courses aimed at fostering talents who can play a pivotal role in mechanical engineering at industrial sites and research institutes and creatively solve problems in future high-tech industries.

The curriculum is designed to combine theoretical and practical skills through basic mechanics, computer-aided design (CAD), laboratory / laboratory and capstone design, field practice, and mechanical engineering projects. In addition, various comparative courses are conducted to nurture engineers who have a sense of professional ethics, cooperative ability, and sound personality as members of the industrial society.

#### Professors

- Kyung-Jo Park, Ph.D.
   [Professor, Dynamics and Vibration, kjpark40@jnu.ac.kr]
- Chung-Youb Kim, Ph.D.
  [Professor, Solid Mechanics, kimcy@jnu.ac.kr]
- Hei-Cheon Yang, Ph.D.
   [Professor, Thermal and Fluid Engineering,
- hcyang@jnu.ac.kr]
- Hoon Kim, Ph.D.
   [Professor, Mechanics Control and Measurements, khoon97@jnu.ac.kr]
- Bong-Ho Moon, Ph.D.[Professor, Tribology, mbh@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 140 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

#### ■ What Do You Study?

Core Courses

English for Global Communication 1

Mathematics 1 General Physics 1 General Physics 2 Statics mechanics Thermodynamics 1 Fluid Mechanics 1

Mechanics of Materials 1 Mechanical Element Drawing

**Dynamics** 

Introduction to Electrical and Electronic

Engineering

Machine Tools Act 1 Automatic control

Design Of Machine Elements 1

**■** Electives

Kinematics of Mechanisms

Mechanical Design and Drawing

Material Mechanics 2 Hydrodynamics 2 Thermodynamics 2

Programming and Practice Measurement engineering

Heat and substance transfer and practice

Rigid Dynamics and Practice

Capstone Design Lab1

Welding engineering and practice

Machine Tools Act 2

Field training 1

Non-destructive inspection engineering

Mechanical materials

Next Generation Transport System Sensors and the Internet of Things

CAD 3D

Vibration engineering

Field training 2

Capstone Design Lab2 precision processing Vehicle dynamics

Energy air conditioning system

Field training 3

Capstone Design Lab3 Mechatronics System

Mechanical design and practice

Safety engineering Structural analysis Noise engineering Field training 4

Capstone Design Lab4

Mechanical System Design Lab Energy conversion system

#### . Careers

Graduates are able to pursue careers in engineering, electronics, automobile, and construction firms. They may also enroll in graduate programs in the field of mechanical systems engineering.

Graduates may be qualified to work as heavy industry employees, technical public officials, and government officers.

# Department of Mechatronics Engineering

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URL: https://mechatronics.jnu.ac.kr

#### What is Mechatronics Engineering?

The Department of Mechatronics Engineering learns mechanical engineering and electronic engineering technology, a compound word of machine mechanics and electronics, and develops or operates automated systems by fusion of engineering knowledge such as machinery, electronics, ICT, computers, control engineering, intelligent robots, and smart plants. As a department with an educational goal of nurturing experts in.

That is, micro-system design and control technology, micro-mechatronics, which is a microsystem field of micro sensors and actuators, biomechatronics, a convergence field of robotics and neuroscience, including biology, mechanical engineering, and electronic engineering, detects the surrounding environment and detects the external environment. It trains intelligent robots that interact with and perform tasks by changing their behavior accordingly.

In addition, according to the Yeosu National Industrial Complex, basic knowledge related to smart plants made by the convergence of information and communication technology (ICT) is educated, and the goal is to nurture and produce competent manpower leading the cutting-edge field in the era of the 4th industrial revolution.

#### Professors

- Kang Chung, Ph.D.
   [Professor, Noise and Vibration Engineering, Numerical Analysis and Structural Vibration, ckang@jnu.ac.kr]
- Yang-kyu Park, Ph.D.
   [Associate Professor, Micro actuator & sensor, yangkyu.park@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 140 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

#### ■ What Do You Study?

Introduction to Static Dynamics

Introduction to Dynamics

Introduction to Mechatronics

Visual Programming

Applied Engineering Mathematics

Mechanics of Materials Electrical equipment

Introduction to Electrical and Electronic

Engineering

Instrumentation Sensor Engineering

Manufacturing Processes Mechanical metal materials

Microprocessor

Introduction to Semiconductor Engineering

Electronic circuit and practice Machine Element of Design Mechanical System Design Lab1 Biomechatronic introduction

Biomechanics Numerical Analysis Artificial intelligence Robot control ai

Kinematics of Mechanisms

Electromechanical Engineering Experiment

Mechanical System Design Lab2

Digital Circuit Engineering

Robotics

Machine learning Actuator Engineering Field Training1 Mechanical system

Mechanical Capstone Design 1
Micro Electromechanical System
Embedded System Design
Autonomous driving system
Vibration Engineering
Field Training2

Mechanical Capstone Design 2

**Bio-robotics** 

Production System Design Intelligent Robot Experiment

Computer vision
CAD and Practice

#### . Careers

Graduates are able to pursue careers in engineering, electronics, automobile, and construction firms. They may also enroll in graduate programs in the field of mechanical engineering.

Graduates may be qualified to work as heavy industry employees, technical public officials, and government officers.

# Department of Refrigeration and Air-Conditioning Engineering

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#### ■ What is Refrigeration and Air Conditioning Engineering?

The Department of Refrigeration Engineering was established in 1988, and was then reorganized as the Department of Refrigeration and Air Conditioning in 2007. Refrigeration and Air Conditioning Engineering studies have become essential to achieving energy efficiency and product optimization. The range of applications includes computer and electronic cooling systems, medical processes and equipment, semiconductor and microprocessor fabrication, and power and energy industries.

Refrigeration engineering plays an important role in manufacturing and production processes, including food preservation technologies (processing, freezing, storage and transportation), to provide sufficient quantities to feed the growing population. Air Conditioning Engineering has been applied to provide and maintain controlled environments in buildings such as offices, houses, and factories (Korea leads the world in small air conditioner exports), as well as other large structures, such as tunnels. In the aviation fields, its application includes human-occupied spaces, aircraft equipment operation, satellites, and space stations. It is also present in manufacturing and fabrication technologies and within pharmaceutical processes to provide controlled atmosphere conditions. The Refrigeration and Air Conditioning industries are developing technical know-how to support the increasing rate of growth in Korea.

The Department of Refrigeration and Air Conditioning Engineering perseveres in its efforts to improve its curriculum and educational environment which international students are also able to study. The Department offers a variety of scholarships to international and domestic students.

### School of Department of Refrigeration and Air Conditioning at Chonnam National University

The educational goal of the Department of Refrigeration and Air Conditioning Engineering is to cultivate talented thinkers who develop ideas in these fields of engineering. The faculty members teach and train international and domestic students in the design of refrigeration and air conditioning systems, the design of refrigeration plants including chemical processes and food storages, design of energy-saving machines and mechanical systems including heat exchangers, effective use of energy including natural and unused energy, and fundamental theoretical applications of engineering. The Department offers students the best conditions in relation to their study and discipline and life on campus.

The Department aims to cultivate engineers and researchers who are able to contribute to the national

development of science, engineering, and industry in the field of refrigeration and air conditioning and other related fields upon graduation.

#### Professors

 Min-Young Kim, Ph.D.
 [Professor, Food Refrigeration Engineering, kmy@jnu.ac.kr]

Ki-Won Park, Ph.D.
 [Professor, Air Conditioning Engineering,

pkw@jnu.ac.kr]

 Young-Woo Shin, Ph.D.
 [Professor, Mechanical Engineering, (Material Forming), shin5381@jnu.ac.kr]

#### **■** Degree Requirements

The Department prepares students to meet the challenges of new ideas and technical developments in their professional fields. Students are required to earn 140 credits, with 66 credits from core courses and 28 credits from electives over a 4-year period.

Assessment is generally made based on results from exams, homework, and lab assignments.

#### **■** What Do You Study?

Programming Design of Sanitary Equipment
Differential Equations Refrigeration Engineering

Fluid Mechanics Food Freezing

Thermodynamics Refrigeration and Air Conditioning

Electrical Engineering System Control
Refrigeration and Cooling Pipe Engineering

Differential Mechanics Manufacturing Process of Machines
Heat Transfer Design of Refrigeration Machinery and

Mechanics of Materials Heat Exchanger

Physical Chemistry Air Conditioning Equipment

Electronic Engineering Principle of Refrigeration and Air-Conditioning

Fluid Mechanical Equipment

Food Freezing Theory

Principle of Refrigeration and Air-Conditioning

Mechanical Drawing Low Temperature Physics

Air Conditioning Engineering Exercises of Refrigeration and Air-Conditioning

Machine Element Design Design of Refrigeration Equipment

2 cong.: 2 c

Sanitary Engineering Cold Chain and Equipment

Design of Air Conditioning Equipment CAD/CAM

District Heating and Cooling

Ultra Cryogenic Engineering

Energy Utilizing Engineering

Design of Thermal Systems

#### Careers

Graduates may seek careers both in Korea and overseas, in engineering firms, construction companies, industrial refrigeration firms, marine and transportation refrigeration companies, public enterprises, automobile firms, and in the civil service.

# Marine and Civil Engineering

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#### ■ What is Marine and Civil Engineering?

Civil engineering serves the planning, design and construction of infrastructure, including paths and roads, harbors, airports, bridges, tunnels, power plants, dams and water supply, drainage, and public transportation systems. Traditionally, civil engineering includes the following studies: structural, hydraulic and water resource engineering, geotechnics, surveying, construction materials, transportation, and construction management.

Marine and civil engineering involves the planning and preservation of oceans, the training of interdisciplinary engineers in the field of oceanography, as well as the classical fields of civil engineering. Marine and civil engineering is required in the construction of ocean support structures and IT-related functions.

#### Professors

- Jae-min Kim, Ph.D.
   [Professor, Structural Engineering, jm4kim@jnu.ac.kr
- Dae-hyon Kim, Ph.D.
   [Professor, Highway and Traffic Engineering, daehyon@jnu.ac.kr
- Jung-won Huh, Ph.D. [Professor, Structural Reliability Engineering.jwonhuh@jnu.ac.kr]
- Young-sang Kim, Ph.D.
   [Professor, Geotechnical Engineering,

- geoyskim@jnu.ac.kr]
- Dong-yeob Han, Ph.D.
   [Associate Professor, Geomatics Engineering, hozilla@jnu.ac.kr]
- Jong-in Lee, Ph.D.
   [Professor, Coastal and Harbor Engineering, jilee@jnu.ac.kr]
- Chang-ho Lee, Ph.D.
   [Assistant Professor, Geotechnical Engineering, changho@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

#### Core Courses

Introduction to Marine Civil Engineering and

Engineering Ethics
Mechanics of Materials and Lab
Surveying and Practice
Structural Mechanics and Lab
Elementary Fluid Mechanics
Soil Mechanics and Lab 1

Hydraulics and Lab 1
Creative Design in Civil Engineering 1
Design of Reinforced Concrete Structure 1
Creative Design in Civil Engineering 2
Civil Engineering Construction
Coastal Hydraulics and Lab

#### Electives

Engineering Mechanics
Civil Engineering Drawing
Civil Engineering Materials and Lab
Engineering Mathematics
Ocean Surveying and Field Training
Transportation Engineering
Computational Structural Engineering
Soil Mechanics and Lab 2
Design of Steel Structures
Foundation Engineering
Highway Engineering
Hydraulics and Lab 2
Design of Reinforced Concrete Structure 2
Ocean Hydraulics and Experiment
Water Supply and Sewage Engineering

Intelligent Transportation Systems Surveying Practice Geology Engineering Pre-stressed Concrete Structures Bridge Structure Design Transportation Facilities Design Reclamation and Dredging Engineering Disaster Prevention Engineering Hydrology and River Engineering Harbor Engineering Design Practice for Coastal Structure Ocean Civil Engineering Construction Water Resource Design Rock Mechanics Remote Surveying Introduction to Finite Element Method Design for Soil Structures Design Practice for Port and Harbor Structure Offshore Structural Engineering

Students are required to earn 130 credits, normally

over a period of 4 years. Students on average earn

18 credits per semester.

#### ■ What Do You Study?

Structural Engineering
Geotechnics
Transportation Engineering/Surveying
Hydraulics/Ocean Hydraulics/Harbor Engineering

#### Careers

Graduates currently play active roles in central and local government organizations (e.g., Ministry of Construction and Transportation, Ministry of Environment), public corporations (Korea Water Resources Corporation, Korea Land Corporation, Korea Highway Corporation), and research institutes (e.g., Korea Institute of Construction Technology). Private companies and corporations dealing with bridges, harbors, roads, and dams require the expertise of environmental engineers. Some graduates go on to graduate school to further specialize in their disciplines in the field of civil engineering.

# Environmental System Engineering

#### \_Contact Information

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#### ■ Introduction of Environmental System Engineering

Environmental System Engineering provides the solution for the environmental problems such as water and air pollution, waste disposal, and public health issues. Environmental system engineers have knowledge of advanced principles of multidisciplinary engineering, biology, chemistry, and environmental science to protect wildlife and natural resources as well as human life. The important role of environmental system engineers is to support the optimal ways for obtaining safe drinking water, the treatment of wastes, air quality maintenance, water pollution control and remediation of contaminated sites by disposal of hazardous substances. In addition, environmental system engineers can inspect and evaluate industrial and municipal facilities and programs to assess their compliance with environmental regulations. Environmental system engineers can work with environmental scientists, planners, hazardous waste technicians, engineers, and other specialists to address environmental problems in industrial and academic fields.

#### Professors

- Byeong Cheon Paik, Ph.D.
   [Professor, Water and Wastewater Treatment System, bpaik@jnu.ac.kr]
- Seong Gyu Seo, Ph.D.
   [Professor, Air Pollution Control Engineering, sseo@jnu.ac.kr]
- Eun Sik Kim, Ph.D.
  [Professor, Environmental Materials and

- Membrane Water Treatment, eskim@jnu.ac.kr]
- Min Jin Hwang, Ph.D.
   [Associate Professor, Industrial Environmental engineering, vip7080@jnu.ac.kr]
- Seong Yun Kim, Ph.D.
   [Assistant Professor, Water Quality engineering, seongyun.kim@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years. Students on average earn 18 credits per semester.

#### Curriculum

Mandatory Courses

Hydraulics

Air Pollution Engineering
Water and Wastewater Treatment Engineering I

Environmental Microbiology and Lab Solid Waste Engineering II Environmental System Engineering and Design

#### **■** Selective Courses

Introduction to Environmental Engineering Unit Operation of Water and Wastewater Treatment Environmental and Fundamental Lab I Physical Chemistry for Environmental Engineers Applied Mathematics for Environmental Engineers Micrometeorology Analytical Chemistry and Lab Hydrology Solid Waste Engineering I Environmental and Fundamental Lab II Air Pollution Management Air Pollution Treatment and Lab Planning and Design of Water Supply and Sewerage System Water Quality Management and Lab Water and Wastewater Treatment Engineering II

Instrumental Analytical Methods Water Supply and Sewage Engineering Water Quality Engineering Practice I Design of Water and Wastewater Treatment Plant and Lab Water Treatment Engineering Solid Waste Management and Lab Environmental Chemistry Air Pollution Engineering Practice I Water Quality Engineering Practice II Solid Waste Engineering Practice Marine Pollution Legislation for Environmental Protection Air Pollution Engineering Practice II Water Quality Engineering Practice III Environmental Safety Engineering Environmental Impact Assessment Environmental Project Lab Resources recycling

#### **■ Future Careers**

Environmental engineers find careers in many places, such as the following:

- Environmental engineers find careers in many places, such as the following:
- · Engineering consulting firms that design and construct air and water pollution control systems
- · Industries that need to treat their air or wastewater discharges
- · Private and municipal agencies that supply drinking water
- · Companies that treat and dispose of hazardous chemicals
- · Companies that operate treatment facilities for municipalities or industries
- Government agencies that monitor and regulate waste discharges
- · Universities that teach and conduct research on environmental control
- · Private and government laboratories that develop the new generations of pollution control systems
- · International agencies that transfer knowledge and technology to the developing world
- · Public interest groups that advocate environmental protection

# Department of Integrative Biotechnology

#### \_Contact Information

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E-mail: mpo92@jnu.ac.kr URL: http://biotech.jnu.ac.k

#### ■ What is Department of Biotechnology?

Biotechnology is a broad term that applies to all practical uses of living organisms containing plants, animals, and microorganisms, as well as biological processes created for human benefit. For example, biotechnology is used to produce some valuable foods, pharmaceuticals, tests for diseases, and waste removal. It has made rapid progress over the last quarter of the 20th century. Much of this success is due to the expectation that the development of new technologies can produce various compounds beneficial to the daily lives of human beings and preserve environmental health. It utilizes the sciences of biology, chemistry, physics, engineering, computers, and information technology to develop tools and products that hold great promise and interest.

The Department of Integrative Biotechnology combines new biotechnology and other technologies in all areas of the pharmaceutical, bio, AI (Artificial Intelligence) big data-based digital pharmaceutical industry and stem cell and biomaterials.

#### **■** Department of Biotechnology

This department has a vision to be a viable target for students who wish to pursue a degree program in bio-technology, and to undertake and produce research at an international standard.

The department contributes to several undergraduate and graduate programs. The teaching activities in the department are well-supported by dedicated faculty members, responsible for a large number of courses. More specific descriptions can be found online.

#### Professors

- Jin-Man Kim, Ph.D.
   [Professor, Molecular Biology, jinmank@jnu.ac.kr]
- Seung-Hwan Yang, Ph D.
   [Associate Professor, cell technology,
- ymichigan@chonnam.ac.kr]
- Byoung-San Moon Ph D.
   [Associate Professor, Stem cell engineering, bsmoon@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 130 credits, and pass qualifying exams or a dissertation.

#### **■** What Do You Study?

#### ■ Core Courses

Writing

Global English

#### **■** Biotechnology Major Courses

Microbiology 1

Genetics

Biochemistry 1 Bioindustry 1

Molecular Biology 1

#### **■** Electives

Bioindustry 2

Food Biotechnology Lab.

Study for Functional capacity of useful materials

Study of Antioxidants

Industrial Microbiology & Lab.

Food Biotechnology 1 Medical Resources

Cell Culture Engineering and Lab

Microbial engineering Lab.

Selected Topics in Biotechnology

Life Pharmaceutics

Biotechnology Information and Patent

Microbial Engineering 2

Microbiology 2

Microbiology Lab

Molecular biology and biotechnology

Stem Cell Engineering

Cell Biology

Molecular Biology 2

Enzymology Cancer Biology Neurobiology

Bioenergy Technology

Biochemistry 2

Organic Chemistry 1

Organic Chemistry 2 Fermentation Technology

Genetic Engineering

Microbial Engineering 1

Cell Signaling

#### Careers

Graduates may pursue careers in public or private research institutes, biotech companies, graduate or medical schools, and chemical plants.

# Department of Chemical and Biomolecular Engineering

\_Contact Information

Tel: +82-61-659-7290

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#### ■ What is Chemical and Biomolecular Engineering?

The Chemical and Biomolecular Engineering involves the study and research for the development, design, operation and management of chemical, physical, and bio-processes to provide necessary materials, which are required in cultural living of humans from natural and bio-resources. The integration of chemical and biomolecular engineering fields is a new research field reflecting the trend of fusion technologies in the advanced 21st century. Conventional chemical and biomolecular engineering deal with crude oil processing, fabrication of plastic and synthetic fibers, synthetic rubber, the separation of gases from air, environmental problems, fertilizers and foods, isolation of isotopes and development of medicines and antibiotics; these studies provide us a wealthier and more comfortable life. The chemical and biomolecular engineering takes a major role in leading the future development through nanotechnology, biotechnology, information technology, energy/environmental technology, as well as the fusion of all these technologies. The study will open the way to substantiate the future technologies in our actual human beings.

#### ■ Department of Chemical and Biomolecular Engineering

The Department of Chemical and Engineering has the educational aim to provide knowledge about the manufacturing processes of bio-chemical products and operations for the conversion of raw materials into final products, as well as to cultivate creativity and a challenging spirit toward new things. To reach this goal, the department presents a curriculum that centers on teaching the basics in chemistry, physics, and biochemistry, which form the basis of natural science and on helping students to experiment and practice. The spectrum of research and educational opportunities in our department also includes biomolecular engineering, biochemical engineering, environmental engineering, chemical reaction engineering, particle technology, electrochemical engineering, semiconductor processing, and polymer and material engineering. The department has produced engineers who have greatly contributed to the nation's industrial development as sophisticated experts in inorganic and organic industrial fields including petrochemicals, fertilizers, acid-alkali, rubber, synthetic fibers, biosensors, fine chemicals, ceramics and fine polymers.

#### Professors

Youn-Sop Kim, Ph.D.
 [Professor, Polymer Chemistry,

yskim1@jnu.ac.kr]

· Ho-Joon Seo, Ph.D.

[Professor, Catalytic Reaction Engineering, hjseo@jnu.ac.kr]

• Hun-Soo Byun, Ph.D.

[Professor, Thermodynamics and Separation Processes, hsbyun@jnu.ac.kr]

· Soon-Do Yoon, Ph.D.

[Professor, Process and Control of Chemical

Engineering Materials, yunsd03@jnu.ac.kr]

• Heon-Ho Jeong, Ph.D.

[Associate Professor, Bio-application Engineering, jeonghh29@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 140 credits, and pass qualifying exams or a dissertation

#### ■ What Do You Study?

#### Core Courses

Physical Chemistry 1

Chemical Process Calculation 1

Chemical Engineering Thermodynamics 1

Chemical Engineering Lab 1 Chemical Engineering Lab 2 Chemical Engineering Lab 3

An Introduction to Industrial Chemistry

#### **■** Electives

Polymer Chemistry Polymer Materials

Chemical Engineering Fluid Mechanics

Chemical Process Calculation 2 Engineering Mathematics 1 Engineering Mathematics 2

Inorganic Chemistry
Physical Chemistry 2
Organic Chemistry 1
Organic Chemistry 2
Inorganic Material Design

Chemical Reaction Engineering 1

Chemical Reaction Engineering 2

Chemical Engineering Thermodynamics 2

Chemical Plant Design

Chemical Engineering Unit Operation 1 Chemical Engineering Unit Operation 2

Petro Chemical Engineering

Computer Calculation in Chemical Engineering

Chemical Safety Engineering Transport Phenomenon

Biopolymer

Properties of Polymer Energetics Seminar

Basic Design of Chemical Engineering Recent fusion technology and understanding

Chemical Plant Design

Process Dynamics and Control

Process Systems Analysis and Control

Computer Program and Practice of Chemical

Engineering

Environmental Chemical Engineering(Project Lab1)

Analytical Chemistry 1 Bioprocess engineering Biological Chemistry Bioprocess Engineering

Organic Synthesis Engineering(Capstone Design)

ProjectLab2

#### Careers

Graduates may pursue careers in public or private research institutes, biotech companies, graduate or medical schools, and chemical plants.

# Department of Architecture

\_\_Contact Information

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#### ■ What is Architecture?

The Department of Architecture aims to understand the basis of architectural development considering the background of architecture's comprehensive character, rapid innovation of technology, and recognition of various cultures and values. The department cultivates students' abilities to think critically and comprehensively. In addition, students are encouraged to understand nature, society, and technology through studies in architecture.

#### ■ Dept. of Architecture at Chonnam National University

The educational goal of the Department of Architectural Design is to "cultivate creative architects who contribute to the sustainability of society" in connection with the educational goals of Chonnam National University.

In other words, the goal is to cultivate architects with integrated problem-solving skills that combine convergent thinking and creativity based on architectural expertise by training architects with practical skills and expertise as well as experts who will contribute to the sustainability of local communities such as culture and nature.

Students in the Department of Architectural Design will become experts in the design and construction of buildings and will have strategic thinking in dealing with the problems of the construction environment. Furthermore, you will learn the leadership you can show in your society.

In order to achieve the basic educational goal of fostering architects who contribute to the sustainability of society by combining practical skills and cultural knowledge with convergent thinking and creative skills based on architectural expertise, the department intends to produce as follows.

- Architect who practices roles and responsibilities in a sustainable society Public Good Keeper
- Architect with Analytical Thinking and Creative Problem Solving Analytical Designer
- Architect to understand and value local culture, resources and environment Culture Coordinator

#### Professors

- Hyun-tae Kim, Ph.D.
   [Professor, Architectural Planning and Design, htkim@jnu.ac.kr]
- Joo-seong Jeong, Ph.D.
   [Professor, Architectural Planning and Design,
- jsjeong@jnu.ac.kr]
- Kum-ho Chung, Ph.D.
   [Professor, Architectural Planning and Design, kumho@jnu.ac.kr]
- Jun Taek Kim, Ph.D.

[Professor, Architectural Design and urban Design, juntaek.kim@jnu..ac.kr]

• seungwan LIM

[Professor, High Performance Design Lab, swl.gonsw@jnu..ac.kr]

· Jaehoon BAE

[Professor, Steel Structures, Seismic design, skycity-bjh@jnu..ac.kr]

• sunhyung KIM

[Professor, Architectural Planning, sunhyung.kim@chonnam.ac.kr]

#### **■** Degree Requirements

Students are required to earn 160 credits, normally over a period of 5 years. Students on average earn 18 credits per semester.

#### **■** What Do You Study?

Introduction to Architecture

Architectural Design 1
Architecture Expression

Career Plan and Self Understanding

Architectural Design 2

Introduction to Building Structure

Digital Design 1 Architectural Design 3 Environmental Technology

Digital Design 2

History of Western Architecture

Structural Analysis Architectural Design 4

Theory of behavior in architecture & Barrierfree Space

History of Korean Architecture

Architectural Design 5 Architectural Equipment

English for Architectural Practical

**Building Materials** 

Architectural Design 6

History of Modern Architecture

Site Planning

Digital Design analysis
Architecture and Urbanism
Architectural Structure System
Building Code & Regulation
Architectural Design 7
Architectural Design 8

MethodologyArchitecturalDesign

Construction Technology

Architectural & Design Practice sustainable Urban Design

Theory of Contemporary Architecture

Architectural Design 9

Ecological Friendly Buliding System

Architectural Business Planning & management

Architectural Design 10 Urban Planning practice

History of Oriental Architecture

#### Careers

Students may receive scholarships and funding to pursue educational opportunities overseas. Upon graduation, they may pursue careers in the architecture design sector, architecture construction sector, architecture structure sector, and architecture safety diagnosis office, in public and private institutes, and with public companies such as the Korea National Housing Corporation and Ministry of Construction and Transportation.

# Department of Biomedical Engineering

#### \_Contact Information

Tel: +82-61-659-7360 Fax: +82-61-659-7369

E-mail: hyuny@jnu.ac.kr URL: http://bme.jnu.ac.kr

#### ■ What is Biomedical Engineering?

Biomedical engineering (BME) is the application of engineering principles and design concepts to medicine and biology for healthcare purposes. BME is advancing rapidly and producing important innovations that improve the quality of human life. The aim of BME is to create new technologies which can improve the work done in such areas as disease diagnosis, patient monitoring, medical treatment, and lifestyle improvement after illness or injury.

#### ■ Department of Biomedical Engineering at Chonnam National University

The Department of BME at Chonnam National University was established in 2012 as a next-generation growth engine. The BME undergraduate degree program emphasizes engineering design in preparation for employment in biomedical industries and for graduate study.

This department is integrated science including medicine, electronic engineering, computer engineering, mechanical engineering, and a wide range of basic and applied biology knowledge. The courses and academic programs of BME are linked to the biomedical industry that requires substantial overall knowledge and skills.

#### Professors

- Chang-Moon Lee
   [Professor, Molecular Imaging and Therapy, Nanomedicine, Biomaterials, Drug Delivery System, cmlee@jnu.ac.kr]
- Jihoon Kang
   [Associate Professor, Medical Imaging System, jihoon.kang@jnu.ac.kr]
- Dowon Kim
   [Associate Professor, Neuroengineering, Biomedical Signal Processing, dowon.kim@jnu.ac.kr]
- KangJu Lee

- [Assistant Professor, Bio/micro medical devices, Micro/nano fabrication, Functional biomaterials, Regeneration applications, knjulee@jnu.ac.kr]
- Young-Jin Jung
   [Associate Professor, Biomedical signal and Image processing, Intelligent rehabilitation engineering, Brain engineering, yj@jnu.ac.kr]
- Bo Kyeong Yoon
   [Assistant Professor, Biosensor,
   Nanobiotechnology, Antibacterial agent,
   Antiviral agent, bkyoon@jnu.ac.kr]

#### **■** Degree Requirements

The undergraduate programs are designed to help students develop both the understanding and capability needed to meet the challenges of a modern technological society. Students are required to earn at least 140 credit hours (109 from Department courses and 31 from electives), which normally takes four years of full-time study. Students are also able to earn double majors or minors as a means of broadening the scope of their studies.

#### ■ What Do You Study?

Human Anatomy Human Physiology

Body structure and Function

Medical Terminology
Digital Fundamentals

Circuit Theory & Practices

Biomaterials

Signals and Systems

Introduction to Biomedical Engineering

Medical polymers

Biomedical Instrumentation
Biomedical Advanced Programming and Practices
Biomedical Digital System Design and Practices

Biomedical Electronic Circuits and Practices

Biomedical Signal Processing and Practices Biomedical Image Processing and Practices Biomedical System Design and Practices

Biomedical Programming language and Practices

LabView Programming and Practices Matlab Programming and Practices Adcanced VHDL Practices

Brain Engineering

Digital Signal Processing Microprocessor and Practices

Mobile Programming and Practices

Bionanotechnology Biosensor Engineering Biomedical radiology

Hospital Information System

Biomechanics Biochemistry Cell Biology Organic Chemistry

Medical Devices Regulation

Biomedical Equipment and System Biomedical Optical Engineering Understanding of Clinical Medicine

Rehabilitation Engineering

Tissue Engineering and Regenerative Medicine

#### Careers

Graduates are employed at universities, in industry, in hospitals, in research facilities of educational and medical institutions, and in agencies for medical devices.

They often serve a coordinating or interfacing function, using their background in both the engineering and biomedical fields. Graduates may also enroll in a graduate program in the field of biomedical engineering.

# School of Healthcare and Biomedical Engineering

\_Contact Information

Tel: +82-61-659-7360, 7390

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URL: http://hme.jnu.ac.kr

#### ■ What is Healthcare and Biomedical Engineering

New diseases are emerging, and the current diseases are also evolving in various ways as society and environment change. Modern medical technology has made remarkable advances in our ability to diagnose and treat these diseases. In recent, a new biomedical paradigm is being born through the unprecedented convergence of information and communication technology (ICT), artificial intelligence (AI), data science biotechnology (BT), nanotechnology (NT), medicine, and pharmaceutics. Healthcare medical engineering is a study that goes beyond existing methods in the future medical industry to suggest new treatment methods for diseases, early prevention of diseases, and a new medical ecosystem that can manage individual health.

#### ■ School of Healthcare and Biomedical Engineering at CNU

School of Healthcare and Medical Engineering aims to train the next-generation advanced medical glocal core experts who will lead the future medical industry. School of Healthcare and Medical Engineering includes Major of Bio-Healthcare and Digital Healthcare. Based on biotechnology and medical/pharmaceutical knowledge, in Major of Bio-Healthcare, students learn the fields of bio-analysis/diagnosis, genetic engineering, pharmaceuticals, cosmetics, etc. to care for the human body. Major Bio-Healthcare aims to nurture talents who lead future healthcare by acquiring new-concept healthcare, and customized precision medicine. Major of Digital Healthcare aims to nurture talents who can provide personalized medical services anytime, anywhere based on future technologies such as medical big data, artificial intelligence, medical IoT, and advanced medical devices.

#### Professors

- Chang-Moon Lee
   [Professor, Molecular Imaging and Therapy,
   Nanomedicine, Biomaterials, Drug Delivery
   System, cmlee@jnu.ac.kr]
- Jihoon Kang
   [Associate Professor, Medical Imaging System,
   jihoon.kang@jnu.ac.kr]
- Dowon Kim
   [Associate Professor, Neuroengineering, Biomedical Signal Processing, owon.kim@jnu.ac.kr]
- KangJu Lee
   [Assistant Professor, Bio/micro medical devices,
   Micro/nano fabrication, Functional biomaterials,

Regeneration applications, knjulee@jnu.ac.kr]

Young-Jin Jung

[Associate Professor, Biomedical signal and Image processing, Intelligent rehabilitation engineering, Brain engineering, yi@jnu.ac.kr]

· Bo Kyeong Yoon

[Assistant Professor, Biosensor,

Nanobiotechnology, Antibacterial agent, Antiviral agent, bkyoon@jnu.ac.kr]

### **■** Degree Requirements

The undergraduate programs are designed to help students develop both the understanding and capability needed to meet the challenges of a modern technological society.

Students are required to earn at least 140 credit hours (75 from Department courses and 65 from electives), which normally takes four years of full-time study.

Students are also able to earn double majors or minors as a means of broadening the scope of their studies.

#### ■ What Do You Study?

Introduction to Healthcare Medical Engineering

Engineering Mathematics Medical Terminology

Body structure and Function

Ethics for Healthcare & Medical Engineer

Biomedical Instrumentation

Introduction to Computer Programming

Future Healthcare Industry and Innovative Start-Up

Probability and Statistics Circuit Theory & Practices

Quantitative Analysis

Biomaterials
Biochemistry
Cell Signaling
Genetic Engineering

Virology and Biotechnology

**Bio-Optics** 

Cell and Animal Experiment

Organic Chemistry

Pharmaceutical Instrument analysis and practice

Healthcare Sensor Engineering
3D Bio-Printing and Biofabrication

Immunology

Bioanalytical Instruments

Radiation Measurement Theory and Practice

Medical polymers Cosmeceuticals Bioinformatics

Drug Delivery System

Stem Cell Engineering and Bioreactor

**BioMEMS** 

**Smart Theranostics** 

Pharmacological Toxicology

Understanding of Clinical Medicine

Linear Algebra

Signals and System Engineering

Biomedical Programming Computer System Architecture Circuit Theory with Practice

Advanced Biomedical Programming

Introduction to Data Science Digital Signal Processing Introduction to Opensource

Computer Networks

Microcontroller and Practices

Mobile Programming and Practices

Biomedical Signal Processing and Practice

Medical Pattern Recognition

Biomedical Mechatronics
Introduction to Artificial Intelligence
Digital Health
Medical Data Analysis
Introduction to Deep Learning
Internet of Medical Things System Design and

Practice
Introduction to Neuroengineering
Biomedical Image Processing and Practices
Bigdata Engineering
Hospital and Medical Information System

#### Careers

Graduates are employed at universities, in industry, in hospitals, in research facilities of educational and medical institutions, and in agencies for medical devices.

They often serve a coordinating or interfacing function, using their background in both the engineering and biomedical fields. Graduates may also enroll in a graduate program in the field of biomedical engineering.

# Department of Petrochemical Materials Engineering

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URL: https://pcme.jnu.ac.kr

#### ■ What is Petrochemical Materials Engineering?

Petrochemical Materials Engineering is helping solve the world's most daunting challenges in health, energy, and the environment by improving the products that people use every day. Products made from petrochemicals—derived from crude oil and other fossil fuels such as coal and natural gas or from renewable sources such as sugar cane, corn, and other biomass—are found in products as diverse as automobiles, smartphones, computers, clothes, luggage, boats, fertilizers, pesticides, drugs, soaps, paints, flooring, and insulating materials, which are crucial in modern civilization.

### Department of Petrochemical Materials Engineering at Chonnam National University

The Department of PCME at Chonnam National University was established in March 2021 by new promotion policy of the Korean Ministry of Education for cultivating the future talent by equipping them with the skills required in the upcoming society. With the advent of the 4th Industrial Revolution, the high technologies are becoming ever more sophisticated, and the society we live in now demands different set of skills compared to past generations. The PCME is building the differentiated educational environment to meet future industrial demand and to be conducive making our students competitiveness freely. The PCME comprises the following two majors to foster understanding that is necessary for the development of engineering: petrochemical convergence materials engineering and green chemical process engineering.

#### Professors

- Hyosung An
   [Assistant Professor, Functional polymeric and composite materials, 3D Electron tomography, hyosungan@jnu.ac.kr]
- Byun Jaewon
   [Assistant Professor, Process Systems Engineering, jaewonbyun@jnu.ac.kr]

#### Degree Requirements

Students are required to earn at least 130 credit (99 from Department courses and 31 from electives), which normally takes four years of full-time study, and pass qualifying exams or a dissertation.

#### ■ What Do You Study?

Fundamentals of petrochemical materials engineering Introduction of chemical engineering and process technology

Petrochemical Engineering Materials Design Artificial Intelligence and Advanced Technologies

Basic Design of Chemical Engineering

Leadership Communication and Business mind

Physical Chemistry 1,2 Organic Chemistry 1,2 Engineering Mathematics 1,2

Basic Experiment Of Chemical Engneering

Calculations in Chemical Engineering

Process Control

Materials Science

Polymer Chemistry

Polymer Physics

Reaction Engineering

Process Design and Analysis

Chemical Engineering Thermodynamics

Chemical Process Thermodynamics

Field Practice for PettroChemical material Engineering1,2

Heat and Mass Transfer Phenomena

Electrochemistry Design

green Chemical Process Design

Chemical Engineering Thermodynamics Special Topic in Renewable Energy Systems

Chemical Plant Design

Chemical Process risk assessment

Green Process Design Catalyst Chemistry

Chemical Engineering Experiment Capstone Design Practices 1,2

Capstone Design Practices 1,2

Chemical Safety and Quality Control Chemical Electronic Materials Design

Reaction Engineering

Petrochemical Engineering Materials Design

Petrochemical Industry

#### Careers

Graduates obtain employment in public research institutes and chemical plants (petrochemical, oil refinery, fertilizer, synthetic resin, oil and fat, food industry, inorganic chemistry, explosives, cement, glass, dye, rubber, paint, pulp and paper, metal, and smelting) in all parts of the country, including the Yeosu.

# Department of Industrial Technology Convergence Engineering

\_\_*Contact Information* Tel: +82-61-659-7750

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URL: https://itce.jnu.ac.k

#### ■ What is Industrial Technology Convergence Engineering?

The Department of Industrial Technology Convergence Engineering fosters convergence-type talents with humanities imagination and scientific and engineering creativity to lead the era of the 4th industrial revolution for industrial workers who graduated from specialized high schools or late learners.

In addition, a dedicated course for post-learners (lifelong education system) is established and operated to promote regional strategic industry, future new industries, and the development of local communities. We carry out education specialization of education tailored to the industry's demand and field-oriented practical education curriculum. By operating the creative convergence job competency strengthening program of the 4th industrial revolution required by companies and society, we nurture talented people with customized professional knowledge centered on job expansion, re-employment, and second start-up.

In particular, high tech education required for industrial sites in Gwangyang Bay Area and Yeosu National Industrial Complex based on ICT and artificial intelligence is carried out. By educating various courses such as basic competency reinforcement, chemical engineering field competency reinforcement, plant field competency reinforcement, industrial automation field competency reinforcement, etc. it trains professional manpower who can lead the 4th industry and future information society.

#### **■ Major Industrial Technology Convergence Engineering**

- Business competency enhancement: A course to cultivate in-depth professional knowledge necessary for self-development and job competency enhancement
- Reinforcement of competence in chemical engineering: A process to understand chemical processes and acquire specialized knowledge applicable to practice
- Reinforcement of plant field competency: A course to nurture practical skills for measurement and control to achieve high efficiency in plant work
- Reinforcement of industrial automation competency: Artificial intelligence and IoT-based industrial automation technology learning and advancement course

#### **■** Degree Requirements

Students are required to earn 130 credits, with 15 credits from core courses, and 33 credits 28 credits from electives over a 4-year. Students are also required to take a graduation exam, and demonstrate proficiency in a foreign language.

#### Professors

Gwang-jun Kim, Ph.D.
 [Professor, Computer Communication, kgj@jnu.ac.kr]

#### ■ What Do You Study?

**General Courses** 

General Chemistry 1 (3) Chemistry Laboratory 1(1)

Mathematics 1 (3)

English for Global Communication (3)

**Core Courses** 

Introduction to Industrial Convergence (3)

Basic of Computer Programming (3)

Introduction to Smart Factory (3)

P&ID Practice (3)

Capstone Design for Industrial Technology

Convergence Engineering I (3)

**Electives** 

Digital Circuit Design (3)

Introduction to Smart Electrical and Eletronic

Engineering (3)

Organic Chemistry (3)

Basic Design of Chemical Engineering(Adventure

Design) (3)

Introduction to Chemical Process (3)

Petrochemical Industry (3)

Case Studies of Industrial Engineering (3)

Information & Communication Systems (3)

Chemical Safety Engineering (3)

Chemical Safety Engineering (3)

Computer Aided Design of Chemical Engineering (3)

Instrumentation Control Practice (3)

Separation and Purification Process (3)

Industry Safety Engineering (3)

Embedded System (3)

Object-Oriented Programing (3)

Process Operation Practice (3)

Design Engineering (3)

Internet of Things (3)

System Analysis & Design (3)

Quality Control (3)

Introduction to Chemical Process (3)

Production Management (3)

Energy Engineering (3)

Artficial Intelligence and Application (3)

Plant Safety Facility (3)

Filed Practice (3)

Engineering Economy (3)

Engineering Economy (3)

Factory Energy Management (3)

Technology and Entrepreneurship (3)

Capstone Design for Industrial Technology

Convergence Engineering Ⅱ(3)

Industrial Automation Robots (3)

Product Developement Engineering (3)

#### Careers

Industrial Technology Convergence Engineering majors go on to jobs in precision chemistry, semiconductor chemistry, heavy industries, the petrochemical industry.

- Chemicals and Petroleum companies
- Steel industry company
- Electrical and semiconductor sectors
- Research Institute: Researcher at the Institute of Private Enterprises

- Government Agencies
- Korea Water Resources Corporation, Korea Environmental Corporation, National Institute of Environmental Sciences

# College of Agriculture and Life Sciences

\_Contact Information

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- Department of Applied Plant Science
- Department of Horticulture
- Department of Applied Biology
- Department of Forest Resources
- Department of Wood Science and Engineering
- Department of Agricultural & Biological Chemistry
- Department of Food Science and Technology
- Department of Molecular Biotechnology
- Division of Animal Science
- Department of Rural and Biosystems Engineering
- Department of Agricultural Economics
- Department of Landscape Architecture
- Department of Bioenergy Science and Technology
- Department of Convergence Biosystems Engineering
- Research Centers
  - · Institute of Agricultural Science and Technology
  - · Asian Pear Research Institute
  - · Bioenergy Research Center
  - · Institute of Environmentally-Friendly Agriculture

# Department Of Applied Plant Science

#### \_Contact Information

Phone: +82-62-530-2050 Fax: +82-62-530-2059

URL: https://agro.jnu.ac.kr/agro\_eng

#### ■ What is Applied Plant Science?

The Department of Applied Plant Science teaches basic and applied scientific theories and methodology, technique and practice related to the production of indigenous crops for human life and health such as edible and special crops, quality new variety breeding and crop physiology. Currently, the professors provide a variety of educational and research spectrums ranging from crop breeding to global climate change countermeasures.

To clarify the life phenomena from crop molecular units to populations at the point of genetic, environmental, and interrelationships, and apply the principles to improve the productivity and quality of crop. It also deals with theories and techniques of crop production that harmonize with the natural and production ecosystems of human survival.

This major aims to create a new variety by using molecular biology techniques, to search for adaptation mechanism of crops to bad environment, to search for new functional plant resources, to identify the substance, to search for mechanism of action, to minimize the biological obstacles of crop production, To identify the responses of crops to global environmental changes, and to develop countermeasures.

Graduates are employed by national and public research institutes, government agencies, researchers and leaders of various seed and pesticide companies.

#### Professors

#### ■ Applied Plant Science

- Han-Yong Kim, Ph.D.
  [Rice Crop Science, hyk1020@jnu.ac.kr]
- Jonghan Ko, Ph.D.
   [Crop Environmental Ecology, jonghan.ko@jnu.ac.kr]
- Ok Ran Lee, Ph.D.

[Special Crop Science, mpizlee@jnu.ac.kr]

- Bo-Keun Ha, Ph.D.

  [Crop Genetics & Breeding, bkha@jnu.ac.kr]
- Jaeil Cho, Ph.D.
   [Climatological Crop Physiology, chojaeil@jnu.ac.kr]

#### ■ What Do You Study?

#### ■ General Courses

General Biology 1 (3) General Chemistry 1 (3)

#### Core Courses

Basic Lab of Crop Production 1 (2) Basic Lab of Crop Production 2 (2)

#### **■** Electives

Industrial Crop Science and Practice (3)

Plant Breeding and Experiment (3)

Food Crops 1 and Practice (3)

Food Crops 2 and Practice (3)

Principles of Crop Production (3)

Climatological Crop Physiology (3)

Plant Biochemistry (3)

Genetics (3)

Agricultural Meteorology (3)

Seed Science (3)

Soil and Production Environment (3)

Crop Ecology (3)

Environmental Vegetation Ecology (3)

Biostatistics (3)

Environmental Vegetation Management and

Practice(3)

Molecular Crop Breeding (3)

Crop Molecular Genetics (3)

Quality Assessment and Management (3)

Pragmatic management of climatic damage (3)

Crop Growth Modeling (3)

Farm Management (3)

Principles of Crop Protection (3)

Medicinal Plant Science (3)

Production of Functional Materials (3)

Environment Conservative Plant Production (3)

Management of Crop Post-harvest (3)

Plant Tissue Culture (3)

Understanding of Agricultural Science (3)

Capstone Design Practice (3)

Field Practice 1 (2)

Edible Plant Resources (3)

Integrated Agro-ecosystem (3)

Crop Production Systems (3)

Introduction of Environmental Agriculture (3)

#### Minor Courses

21 credits must be chosen.

# Department of Horticulture

#### \_\_Contact Information

Phone: +82-62-530-2060 Fax: +82-62-530-2069 E-mail: vohong@inu.ac.kr

URL: http://hort.jnu.ac.kr/

#### ■ What is Horticulture?

Department of Horticulture deals with theories and techniques for plant production harmonized with nature and agro-ecosystems, which are the basis of life. It also pursues the exploration of life phenomena in crop plants at various levels from plant molecular to community through understanding heredity, environment, and their interrelationships, in order to ensure both the productivity and quality of crop plants. The goal of the Department is to promote global talents through teaching and training on (1) breeding novel crop varieties using traditional and molecular tools, (2) understanding the mechanisms of plant adaptation to abiotic and biotic stresses, (3) identifying, understanding, and producing new substances in industrial and medicinal plants having specific functions, (4) establishing sustainable agricultural systems by minimizing limiting factors to crop production, and (5) understanding crop responses to global environmental change (GEC) and strategies to cope with GEC.

#### Professors

- Tae-Ho Han, Ph.D.
  [Ornamental Plant Science, hanth@jnu.ac.kr]
- Jeong-Hyun Lee, Ph.D.
  [Greenhouse Horticulture, leetag@jnu.ac.kr]
- Sung-Gil Kim, Ph.D.
   [Horticultural Crop Breeding & Genetics,

dronion@jnu.ac.kr]

• SangHyeon Lee, Ph.D.

[Pomology & Reproduction, pear@jnu.ac.kr]

• Young Boon Lee, Ph.D. [Horticultural Corp Quality Managements, dudqns2@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 130 credits to graduate.

#### ■ What Do You Study?

#### ■ General Courses

General Biology 1 (3)

General Chemistry 1 (3)

Understanding of Science History (3)

Writing in the Natural Sciences and Engineering(3)

Career Plan and Self Understanding (2)

#### Electives

Field Practice 1 (5)

Field Practice 2 (5)

#### Core Courses

General Botany (3)

Introduction of Vegetable Crops (3)

Introduction of Ornamental Plant Science (3)
Introduction of Pomology (3)

Genetics (3)

#### Electives

Introduction to the horticultural sciences (3)

Vegetable seedling (3)

Molecular Biology (3)

Biochemistry 1 (3)

Plant Physiology 1 (3)

Proposal construction for farming settlement(Capstone) (2)

Basic principle and practice for farming settlement 1 (3)

Promotion of Agricultural Business (3)

Actual principle and practice for farming settlement 1 (3)

Advanced principle and practice for farming settlement 1 (3)

Propagation of Horticultural Crops (3)

Horticultural Crop Product (Capstone Design) (3)

Field vegetable production and agriphotovoltaic practice (3)

Plant Pathology (3)

Soilless Culture (3)

Business administration in Agriculture (3)

Basic principle and practice for farming settlement 2 (3)

Actual principle and practice for farming settlement 2 (3)

Advanced principle and practice for farming

settlement 2 (3)

Design of horticulture equipment(Capstone Design) (3)

Ornamental Plant Breeding (3)

Quality management of floricultural plant (3)

Introduction of Pomology (3)

Climate Change on Horticulture Industry (3)

Biostatistics (3)

Greenhouse horticulture (3)

Principle of Plant Breeding (3)

Plant morphology (3)

Law and Regulation in Horticulture (3)

Horticultural Plant Resources (3)

Molecular Breeding of Horticultural Crops (3)

Floral Design and Entrepreneurship1 (3)

ICT adaptation of Horticultural Field Crops (3)

Plant ecology (3)

Greenhouse climate control (3)

Advanced Vegetable Crop Science (3)

Floral Design and Entrepreneurship 2 (3)

Landscape and management of floricultural plant (3)

Laboratory and Field Practice for Horticulture and

Biotechnology1 (3)

Laboratory and Field Practice for Horticulture and

Biotechnology2 (3)

Horticultural Therapy (3)

Metabolomic research and practice for horticultural

crops (3)

Postharvest Management of Horticultural Crops (3)

Seed Production (3)

## **■** Teaching Profession Courses

A Research Of Biology Teaching Materials &

Teaching Method (3)

Biology Education (3)

A Course on Biology Logic and Essay Writing (2)

#### Minor Courses

General Botany (3)

Introduction of Vegetable Crops (3)

Introduction of Ornamental Plant Science (3)

Introduction of Pomology (3)

Genetics (3)

#### Minor Electives

6 credits must be chosen

#### Careers

Students become experts in agricultural industries. They find work as educators or researchers in government laboratories or private institutions. Other employment opportunities exist in seed and seedling companies, agro-chemical companies, agricultural cooperatives, and plant quarantine organizations. University positions such as assistantships in the areas of teaching and/or conducting are open to graduate students.

# Department of Applied Biology

\_\_Contact Information
Phone: +82-62-530-2070

E-mail: yckimyc@jnu.ac.kr URL: http://agribio.jnu.ac.kr/

# **■** What is Department of Applied Biology?

The Department of Applied Biology at Jeonnam National University is composed of 3 main fields: Plant Pathology, Entomology, and Stress Biology. The educational goal at Department of Applied Biology is to foster professional individuals who learn both basic and applied sciences on plant response to pathogens, agricultural pests, and environmental stresses that significantly diminish plant and crop productivity.

Plant Pathology field focuses mainly on plant-pathogen (bacteria, fungi, virus) interactions, molecular genetics to understand mechanisms and biological control of plant diseases, and ecology and evolutionary biology of plant-associated microbes. Entomology field focuses mainly on the damage analysis and integrated pest management by the fundamental studies of classification, phylogeny, chitin biotechnology, and ecology of insect pests. Interactions between microbial natural enemy and insect pests are also studied for the eventual biological control of agricultural insect pests. Stress Biology field focuses mainly on the identification and determination of potential genes involved in plant responses to environmental stresses (drought, high and low temperatures, salt, UV), which would provide novel means to develop stress-tolerant agronomic crops.

The Department's curricula cover all necessary subjects for basic and applied sciences. We will educate students with a vision of becoming leading scientists in future agriculture.

## Professors

- Hun-Seung Kang, Ph.D. [Biochemistry, hskang@jnu.ac.kr]
- Young-Cheol Kim, Ph.D.
   [Plant Pathology, yckimyc@jnu.ac.kr]
- Yeon-Soo Han, Ph.D. [Insect Pathology, hanys@jnu.ac.kr]
- Cheol-Soo Kim, Ph.D.
   [Plant Functional Genomics, cskim626@jnu.ac.kr]

- Kwang-Yeol Yang, Ph.D.
   [Molecular Plant Pathology, kyyang@jnu.ac.kr]
- Ik-Soo Kim, Ph.D.
   [Insect Molecular Phylogenetics and Ecology, ikkim81@jnu.ac.kr]
- Yasuyuki Arakane, Ph.D.
   [Insect Chitin Biotechnology,
   Yasuyuki Arakane@jnu.ac.kr]
- Rae-Dong Jeong, Ph.D.
   [Plant Virology, jraed2@jnu.ac.kr]

#### Laboratories

· Plant Molecular Biology Lab

• Plant Pathology Lab

- · Insect Pathology Lab
- Plant Molecular Biology Lab
- Plant Functional Genomics Lab

- Insect Molecular Phylogenetics and Ecology Lab
- · Insect Chitin Biothecnology Lab
- · Plant Virology Lab

# Degree Requirements

Students are required to earn 130 credits to graduate.

# ■ What Do You Study?

#### Core Courses

Insect Pests of Plants (3)

Plant Pathology (3)

Laboratory and Field Practice for Applied biology (3)

#### Electives

Insect Physiology (3)

Quarantine Insect Pest (3)

Functional Insect Genomics (3)

Insect Innate Immunity and its application (3)

Insect Diversity (3)

Insect Molecular Diagnosis (3)

Insect Physiology (3)

Insect Biotechnology (3)

Insect-inspired biomimetics (3)

Insect Ecology (3)

Insect gut symbionts and its application (3)

Insect cuticle structure and function (3)

Climate Response and Plant Stress Control (3)

Climate Smart Plant Disease Control (3)

Molecuar Insect Pathology (3)

Molecuar Vector Entomology (3)

Molecular Biology (3)

Biostatistics (3)

Biochemistry 1 (3)

Biochemistry 2 (3)

Cell Biology (3)

Introduction of Plant Quarantine (3)

Plant Virology (3)

Plant Pathology Lab. (1)

Phytobacteriology (3)

Clinical Plant Pathology (3)

Molecular Plant Pathology (3)

Plant Molecular Physiology (3)

Plant Molecular Genetics (3)

Plant Molecular Biotechnology (3)

Plant Physiology 1 (3)

Plant Physiology 2 (3)

Plant Biotechnology (3)

Plant Genetic Engineering (3)

Undergraduate research in plant doctor (3)

Phytopathogenic fungal pathology (3)

Botany (3)

Insect Pest Experiment (1)

Plant Environmental Physiology (3)

Trends in RNAi-based pest control (3)

Genetics (3)

General Microbiology (3)

Resource Entomology (3)

Crop production and management (3)

Medical Vector Biology (3)

Insect Control (3)

Introduction of Plant-Microbe Interactions (3)

#### ■ Teaching Profession Courses

Biology Education (3)

A Research of Biology Teaching Materials &

Teaching Method (3)

A Course on Biology Logic and Essay Writing (2)

#### Minor Courses

Insect Pests of Plants (3)

Plant Pathology (3)

Laboratory and Field Practice for Applied biology (3)

#### ■ Minor Electives

12 credits must be chosen

# Careers

Students become experts in agricultural industries. They find work as educators or researchers in government laboratories or private institutions. Other employment opportunities exist in seed and seedling companies, agro-chemical companies, agricultural cooperatives, and plant quarantine organizations.

University positions such as assistantships in the areas of teaching and/or conducting are open to graduate students.

# Department of Forest Resources

\_\_Contact Information
Phone: +82-62-530-2080

URL: http://forestry.jnu.ac.kr

# ■ What is Forest Resources?

Forests occupy 65% of the land area in Korea. The mission of the Major in Forestry is to educate and engage the next generation of scholars, practitioners, and users of the forests, to conduct distinctive problem-solving and fundamental research on nature and use of forests and related resources, and to share discoveries and knowledge with others.

# **■** Major in Forest Resources

The Major in Forestry is dedicated to the understanding, effective management, and sustainable use of forests to support the national economy and public welfare, and to conserve the wider forest ecosystem.

## Professors

 Ki-Wan An, Ph.D.
 [Professor, Forest Policy, kiwan@jnu.ac.kr, 062-530-2085]

 Kye-Han Lee, Ph.D.
 [Professor, Forest Ecology, khl@jnu.ac.kr, 062-530-2087]

Young-Sang Ahn, Ph.D.
 [Associate professor, Forest Environment

Conservation Engineering, ysahn@jnu.ac.kr, 062-530-2081]

 Mi-Young Noh, Ph.D.
 [Assistant professor, Forest Protection, annemi@jnu.ac.kr, 062-530-2083]

 Hyun-Jun Kim, Ph.D.
 [Assistant professor, Silviculture, hjkim0837@jnu.ac.kr, 062-530-2082]

# ■ Degree Requirements

Students are required to earn 130 credits with a minimum grade point average of 1.75 (out of a scale of 4.5). Students must also enroll for 4 years and pass a comprehensive exam.

# ■ What Do You Study?

#### Core Courses

Introduction to Forestry (2) Dendrology (3) Silviculture 1 and Practice (3) Dendrology Practice (2) Forest Management (3) Forest Protection (3)

#### Electives

Seminar in Elementary Forestry (1)

Surveying and Practice (3)

Principles and Practices for Farming

Settlements 1 (3)

Principles and Practices for Farming

Settlements 2 (3)

Economic Plants in Forests (3)

Practice in Forest Entomology (1)

Forest Entomology (3)

Forest Measurement and Practice (3)

Forest Recreation Resource Management (3)

Forest Hydrology & Practice (3)

Mushroom Cultivation and Practice (3)

Forest Breeding and Tree Improvement (3)

Field Trip to College Forest (Silviculture) (1)

Silviculture 2 and Practice (3)

Nature Interpretation and Practice (3)

Forest Management Practice (2)

Forest Ecology and Practice (3)

Forest Soil Science (3)

Range and Wildlife Management (3)

Forest Machinery and Practice (3)

Forest Civil Engineering and Practice (3)

Engineering of Forest Environment

Conservation and Practice (3)

Forest Policy and Practice (3)

Proposal Construction for Farming Settlements (1)

Forest Pathology (3)

Urban Forestry (3)

Forest Resources Capstone Design 1 (3)

Forest Resources Capstone Design 2 (3)

Forest Resources Field Practice 1 (2)

Forest Resources Field Practice 2 (2)

Practice in Forest Entomology (1)

Tree Physiology (3)

Forest CAD (3)

Geographic Information System in Forests (3)

Forest Laws and Practice (3)

Forest Recreation Research Methods and

Practice (3)

Field Practice 2 (18)

#### Careers

Graduates may find work in the Korean Forestry Service, Korea National Arboretum, or National Plant Quarantine Service. They can also work in many other public organizations such as the Korea Highway Corporation, Korea National Park Service, the National Forestry Cooperatives Federation, and mushroom production companies.

Graduates who earn certificates in forest management or forest seeding may work in private nurseries and work as private forestry technicians.

# Department of Wood Science and Engineering

\_\_Contact Information
Phone: +82-62-530-2096

Tax: +82-62-530-2099 URL: http://wood.jnu.ac.kr

# ■ Major in Wood Science and Engineering

After the UN Rio Environmental Summit in 1992, international interest in woody biomass-produced forests has grown due to their important roles in environmental conservation and bioenergy. The undergraduate program in Wood Science and Engineering is dedicated to extending wood resources to meet the growing needs of society through research on manufacturing and processing of wood-based materials which are indispensable to enhancing the quality of human life.

The program offers a wide variety of challenging career tracks: wood anatomy, wood physics, wood processing, wood improvement for design and construction of wood-framing structures, bioenergy, wood biotechnology, and wood chemistry. More specific wood chemical/biological processing programs also address the question of harnessing the environment for fiber and energy production in the near future.

## Professors

- Hyoung-Woo Lee, Ph.D. [Wood Processing and Machineries, hwlee@jnu.ac.kr]
- Jae-Won Lee, Ph.D.

  [Wood Chemistry, Bioenergy, ljw43376@jnu.ac.kr]

- Gi-Young Jeong, Ph.D. [Wood Engineering, gjeong1@jnu.ac.kr]
- Jongsik Kim, Ph.D.
   [Wood Anatomy and Preservation, jongsik.kim@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 8 semesters, in accordance with university regulations.

# ■ What Do You Study?

#### Core Courses

Introduction to Wood Science & Engineering (2)

#### Electives

Wood Anatomy & Lab. (2)
Applied Mathematics in Forest Products (3)
Furniture Manufacturing and Lab. (3)

Practice of Wooden Furniture Design and Drafting (3)

Wood Physics & Lab (3)

Wood Mechanics (3)

Wood Chemistry and Lab. (3)

Bioenergy (3)

Materials for Ecological Building Construction (3)

Plant Biopolymer (3)

Drying Technology in Forest Products Industry (3)

Unit Operations in Forest Products Industry (3)

Wood Improving and Lab. (3)

Climate Change and Living Environment (2)

Design of Wood Frame Construction & Buildings (3)

Logging Operations (3)

Instrumental Analysis of Lignocellulose (3)

Wood based composite analysis (3)

Plant and Wood Biotechnology (3)

Field experience in wood science area (3)

Forest Microbiology and Lab. (3)

Renewable wood materials and wood construction (3)

Pulp & Paper Technology (2)

Theory of Engineering Wood (2)

Wood Preservation and Lab. (3)

Extractives in Wood (3)

Lignocellulosic biorefinery (3)

Operations Management in Forest Products Industry (3)

Machinery in Forest Products Industry (3)

Subject of wood science & engineering (2)

Data writing in wood science area (3)

Forest Products (3)

Capstone design(3)

# Careers

Students may pursue various careers in wood- processing industries including lumbering, plywood, and furniture manufacturing and production.

Other industries include particle boards and fiber boards, pulp and paper, and the bio-fuel production industry.

# Department of Agricultural and Biological Chemistry

\_\_Contact Information

Phone: +82-62-530-2130 Fax: +82-62-530-2139

URL: http://agrochem.jnu.ac.kr/

# ■ What is Agricultural and Biological Chemistry?

Agricultural and Biological chemistry covers the understanding and application of biology and chemistry to agricultural systems for the purpose of benefitting agricultural production.

The main objective of Agricultural and biological chemistry is to provide students with the combined knowledge of plant nutrition and physiology, biochemistry, molecular biology, natural chemistry, soil science, microbiology, and environmental pesticide science for pursuing studies and careers related to agricultural environment and life sciences.

Agricultural and Biological chemistry contains as its main subjects fertilizer science, plant nutritional science, biochemistry, molecular biology, analytical chemistry, natural chemistry, organic chemistry, soil science, soil microbiology, pesticide science, general chemistry, biology, environmental chemistry, and their related laboratories and practical experiments.

#### Professors

- Kil-Yong Kim, Ph.D.
   [Professor, Soil Microbiology, kimkil@jnu.ac.kr]
- In Seon Kim, Ph.D.
   [Professor, Environmental Pesticide Science, mindzero@jnu.ac.kr]
- Hyang Burm Lee, Ph.D. [Professor, Environmental Microbiology, hblee@jnu.ac.kr]
- Woo Jin Jung , Ph.D.
   [Professor, Plant Resources Science,

- woojung@jnu.ac.kr]
- Jin-Cheol Kim, Ph.D.
   [Professor, Plant Growth Regulators Science, kjinc@jnu.ac.kr]
- Yeonjong Koo, Ph.D.
   [Associate Professor, Biofertilizer, yeonjong@jnu.ac.kr]
- Eun Hea Jho, Ph.D.
   [Associate Professor, Agricultural Environment, ejho001@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits including 27 credits from core courses.

# ■ What Do You Study?

■ Core Courses
General Chemistry I (3)

General Chemistry II (3) General Biology I (3) General Biology II (3) Quantitative Analysis (3) Organic Chemistry (3) Soil Science (3) Pesticide Science (3) Biochemistry 2 (3)

#### Electives

Agricultural and Biological Chemistry (3)

Agricultural Radio Chemistry (3) Agriculture Inspection Science (3)

Agro-Environmental Chemistry and Toxicology (3)

Biochemistry 1 (3) Biocontrol Science (3)

Biological and Environmental Chemistry (3)

Biological Chemistry research (2) Biological Control Science (3)

Bioremediation (3) Biostatistics (3)

Chemistry of Natural Products (3)

Crop Science (3)

Environmental Assessment Theory (3)

Environmental Chemistry for Agriculture (3)

Environmental Ecology (3)

Environmental Safety and Asesment (3)

Environmental Toxicology (3)

Exercise in Agricultural Chemistry (3)

Fertilizers (3)

General Microbiology (3) Insect Pests of Plant (3)

Introduction in Instrumental Analysis (3)

Introduction to Biotechnology (3)

Introduction to environmentally-friendly agriculture(3)

Lab Work of Applied Chemistry (2) Lab Work of Fundamental Chemistry (2)

Microbial & Biological Chemistry experiment (2)

Molecular Biology (3)

Mycology (3)

Organic Chemistry 2 (3) Pesticide Toxicology (3) Plant Nutrition (3)

Plant Pathology (3)

Plant Resources Science (3)

Principles and Practice for Farming Settlement 1 (3)

Principles and Practice for Farming Settlement 2 (3)

Principles of Crop Production (3)

Proposal Construction for farming Settlement (1)

Soil Microbiology (3)

#### Careers

Graduates are able to find meaningful employment in agricultural companies related to pesticides and fertilizers, academic schools and institutes related to environmental and biological research, national institutes related to agricultural areas, industrial companies related to pharmaceutical areas, and national institutes related to analytical and toxicological areas.

# Department of Food Science and Technology

\_Contact Information

Phone: +82-62-530-2140 Fax: +82-62-530-2149 E-mail: A5204@jnu.ac.kr

URL: http://foodsci.jnu.ac.kr/

# ■ What is Food Science and Technology?

Food Science and Technology emphasizes food technological issues related to human health and the food industry. The program trains students as food scientists or technologists armed with chemical, microbiological, biological fundamentals as well as engineering methodology for a comprehensive understanding of the physicochemical properties of food, processing and preservation of food materials and other biotechnological applications.

#### Professors

- Jong-Bang Eun, Ph.D.
   [Professor, Food Processing and Preservation, jbeun@jnu.ac.kr]
- Jae-Hak Moon, Ph.D.
   [Professor, Nutrition and Functional Chemistry, nutrmoon@jnu.ac.kr]
- Du-Woon Kim, Ph.D.
   [Professor, Food Microbiology and Food Biochemistry, dwkim@jnu.ac.kr]
- Young-Min Kim, Ph.D.
   [Associate Professor, Food Engineering and Enzyme Engineering, u9897854@jnu.ac.kr]
- Jeong-Yong Cho, Ph.D.
   [Associate Professor, Food and Natural Product Chemistry, jyongcho17@jnu.ac.kr]
- Soo-Jung Kim, Ph.D.
   [Associate Professor, Food System Engineering, bioksj@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits including 17 credits from core courses.

# ■ What Do You Study?

#### Core Courses

Food Analysis and Lab 1 (1)

Food Chemistry (3)

Food Engineering (3)

Nutrition Chemistry (3)

Food Fermentation Engineering (3)

Food Microbiology and Lab (3)

Food Processing (3)

#### Electives

Introduction to Food Biotechnology (3)

Introduction to Food Science (3)

General Microbiology (3)

Basic Food Biochemistry (3)

English for Food Technology (3)

Understanding managerial activities of food

engineering and career research (1)

Organic Chemistry 1 (3)

Food Analysis and Lab 2 (1)

Statistics for food science (3)

Organic Chemistry 2 (3)

Food Processing and Engineering Lab. (2)

Natural Products Utilization (3)

Food Hygiene (3)

Food Enzyme Technology (3)

Food and Bio Venture Design & Practice (3)

Food Biotechnology (3)

Food Packaging (3)

Food Quality Control (3)

Food Chemistry (3)

Applied Food Biochemistry (3)

Industrial Microbiology (3)

Marine Food Processing (3)

Food Technology Research 1 (1)

Food Science and Technology Capstone Design

Practice (3)

Sensory Evaluation of Foods (3)

Food Toxicology (3)

Food Design Engineering (3)

Applied Biotechnology (3)

Food Technology Research 2 (1)

Seminar for Food Professional Development (1)

Food Instrumental Analysis (3)

Food Sanitation Act (3)

Food Oils and Fats (3)

## **■ Teaching Profession Courses**

Theories of Agricultural Education(3)

Research of Agriculture Teaching Materials &

Teaching Method(3)

Logic and Essay Writing in Agricultural (2)

#### Minor Courses

24 credits must be chosen.

#### Careers

Graduates of the Food Science and Technology Department become food scientists at food companies, the FDA, RDA, Agricultural Research & Extension Service, and the Research Institute related with Food and Biotechnology. They also become government officers related with hygienists, and processors(R&D, Quality Control, Production, Marketing).

# Department of Molecular Biotechnology

\_\_Contact Information

Fax: +82-62-530-2169

E-mail: westlife-jeong@jnu.ac.kr

URL: http://mimb.jnu.ac.kr/

# ■ What is Molecular Biotechnology?

A broad term of biotechnology is generally used to describe the use of biology in industrial processes such as agriculture, brewing, and drug development. The term also refers to the production of genetically modified organisms(GMOs) or the manufacture of products from genetically modified organisms. It involves the use of plants, animals, and micro-organisms to create products or processes. Traditional applications include animal breeding, brewing beer with yeast, and cheese making with bacteria. Recent developments include the use of enzymes or bacteria in a wide range of applications, including waste management, industrial production, food production and remediation of contaminated land. Modern biotechnology, molecular biotechnology, also includes the use of gene technology, which allows us to move genetic material from one species to another. Biotechnology combines disciplines like genetics, molecular biology, biochemistry, embryology, and cell biology.

# ■ Department of Molecular Biotechnology

Molecular Biotechnology focuses on the study of regulation and function of genes at the levels of DNA, RNA, and protein in living organisms.

Biotechnology aims to expand its usefulness by identifying and cloning new genes and traits, developing new diagnostic tests, and continuing to use these tools to better understand plants, animals, and microorganisms that make up the world.

## Professors

- Oksoo Han, Ph.D.
   [Professor, Biochemistry, oshan@jnu.ac.kr]
- Kyoungwhan Back, Ph.D.
   [Professor, Plant Genetic Engineering, kback@jnu.ac.kr]
- Jeong-Il Kim, Ph.D.
   [Professor, Protein Biochemistry, kimji@jnu.ac.kr]
- Suk-Whan Hong, Ph.D.
   [Professor, Molecular Genetics and Breeding,

- sukwhan@jnu.ac.kr]
- Jun Ho Lee, ph.D.
   [Associate Professor, Neuro Biotechnology, leejunho@jnu.ac.kr]
- Don-Kyu Kim, ph.D.
   [Associate Professor, Molecular Endocrinology, dkkim2@jnu.ac.kr]
- Hyunkyu Sang, Ph.D.
   [Assistant Professor, Molecular Microbiology, hksang@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits including 12 credits from core courses.

# ■ What Do You Study?

#### Core Courses

Molecular Biology 1 Biochemistry 2

Animal Genetic Engineering Plant Genetic Engineering

#### **■** Electives

Genetic Engineering and Human Life

Organic Chemistry 1 Organic Chemistry 2 Molecular Biology 2

Biochemistry 1
Biochemistry 3
Cell Biology 1
Cell Biology 2
Biostatistics

Animal Physiology Analytical Chemistry Analytical Chemistry Lab General Microbiology

Genetics

Molecular Genetics Developmental Biology Molecular Cell Biology

Plant Physiology Biotechnology Lab Molecular Breeding Crop Physiology

Animal Cell Culture and Lab

Immunology Virology Enzymology

Recombinant DNA Lab Plant Tissue Culture Protein Engineering

#### Careers

Graduates of the Molecular Biotechnology Department obtain jobs at government research institutes (Korea Research Institute of Bioscience & Biotechnology, KIST, Korea Research Institute of Chemical Technology), National Research Institute, Rural Development Administration, Korea Food Research Institute, companies related to biotechnology, pharmaceutical companies, Bio-venture companies, and at the School of Dentistry/Medicine/Pharmacy, patent attorneys, government officials (Korea Food & Drug Administration, local extension workers, researchers), Graduate school, Studying abroad.

# Division of Animal Science

\_Contact Information

Phone: 82-62-530-2120 Fax: 82-62-530-2129

E-mail: A0049@jnu.ac.kr

URL: http://animalscience.jnu.ac.kr/

## ■ What is Animal Science?

The division of Animal Science (DAS) was founded in 1995 by merging the Department of Animal Science (founded in 1969) and the Department of Dairy Science (founded in 1973). Our division has made major contributions to research and supporting farmers in the meat, dairy, and feed industries.

## ■ Division of Animal Science

## Our educational goals:

- 1) To provide high quality education and training for undergraduate and graduate students to serve internationally competitive and sustainable animal agriculture;
- To provide new knowledge through basic and applied research in selected areas to improve efficiency in the production and quality of animal products.

The Division operates two research units (pet and special animals and small-to-large sized animals) and three information centers (119, SOS, and Sustainable Animal Research Center) to support research and teaching. This major offers various options so that students can select numerous areas to help them pursue a variety of employment opportunities.

## Professors

#### · Division of Animal Science

- Major in Animal Bioresource
- Sun, Sangsoo, Ph.D. [Animal Physiology, sssun@jnu.ac.kr]
- Chin, Koobok, Ph.D. [Meat Science, kbchin@jnu.ac.kr]
- Lee, Jiwoong, Ph.D.
   [Animal Breeding and Genetics, jwlee@jnu.ac.kr]
- Kim, Minseok, Ph.D. [Animal Nutritions, mkim2276@jnu.ac.kr]
- Yun Jinhyeon, Ph.D.
   [Pig production, pilot9939@jnu.ac.kr]

- · Major in Animal Biotechnology
- Kim, Taehwan, Ph.D. [Forage Physiology & Biochemistry, grassl@jnu.ac.kr]
- Kang, Manjong, Ph.D.
   [Transgenic Animals, mjkang@jnu.ac.kr]
- Oh, Sejong, Ph.D.
   [Animal Microbial Technology, soh@jnu.ac.kr]
- Jeon, Teail, Ph.D.
  [Animal Metabolomics, tjeon@jnu.ac.kr]
- Kim, Sunghak, Ph.D. [Molecular biochemistry, sunghakkim@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits to graduate.

# ■ What Do You Study?

#### · Division of Animal Science

Animal Life Science (1) Introduction to Animal Resources Science (1) Pet Animal Science (1)

## • Major in Animal Bioresource

Reproductive Physiology and Lab. (2)
Animal Feeding and Lab. (2)
Animal Nutrition & Lab. (2)
Livestock Farm Practice (2)
Animal Physiology & Lab (2).
Animal Biochemistry and Lab. (2)
Meat Processing and Lab. (3)
Animal Breeding Principles and Lab. (3)

## · Major in Animal Biotechnology

Forage Production and Utilization and Lab. (2) Animal Cell Biology and Lab. (2) Animal Biochemistry and Lab1 (2) Animal Biochemistry and Lab 2 (2) Dairy Food Processing and Lab. (3)

# Department of Rural and Biosystems Engineering

\_Contact Information

Phone: +82-62-530-2150

E-mail: rbe-2150@jnu.ac.kr

URL: http://rbe.jnu.ac.kr

# ■ What is Rural and Bio-Systems Engineering?

The Department of Rural and Bio-systems Engineering, aim to build a climate-intelligent regional system that integrates regional infrastructure (design and construction), water environment (water management and non-point pollution control), and soil environment (soil quality management and carbon sequustration), atmospheric environment (fine dust and air pollution management), and policy/planning for sustainable agriculture—to realize climate-smart agriculture—. After graduating from the department, graduates can play a pivotal role in national and societies by taking jobs in national and regional government, public corperation (e.g., Korean Rural Community Corporation and K-Water), and research institute (e.g., National Institute of Agricultural Science, National Institute of Environmental Research).

# ■ Department of Rural and Bio-Systems Engineering

The Department of Rural and Bio-Systems Engineering pursues global competitiveness in agriculture and the sustainable development of rural communities through the application of integrated knowledge on engineering, natural science, and humanities and social sciences to agricultural and rural systems. The principal contents of research and education of the department are rural amenities, soil and water management, construction and management of infrastructure. Through research and education, the department serves industries and societies and achieves its reputation as a leader in the Rural and Bio-Systems engineering sector.

The Department develops graduates who can pursue engineering careers in industry, academia, consulting, or government. The curriculum is designed to educate the students to:

- possess engineering knowledge and skills on rural amenities and planning, environmental management, water resource conservation, soil remediation and management, and construction and management of rural infrastructure;
- be able to become successfully employed in engineering jobs in industry, government, or academia;
- · educate graduates who continue to be engaged in professional development.

Students learn to apply fundamental knowledge of biological and physical sciences, mathematics, and engineering principles to formulate and solve engineering problems. Engineering design is integrated throughout the curriculum, along with opportunities to develop communication, learning, and teamwork skills, culminating in a capstone design experience. Electives in the curriculum allow students to specialize in:

- Rural Planning and Construction: Overall design, planning, and construction of rural systems for conservation and development of rural environments and communities.
- Environmental and Natural Resources Engineering: Development of water and soil resources management technologies for sustainable development of rural and agricultural systems.

Students select courses with the assistance of faculty advisors on an individual basis. Faculty members also assist with professional development and job placement for students.

## Professors

## ■ Rural System Engineering Major

- Kwang-Sik Yoon, Ph.D.
   [Professor, Rural Environmental Water, ksyoon@jnu.ac.kr]
- Woo-Jung Choi, Ph.D.
   [Professor, Environmental Soil Science, wjchoi@jnu.ac.kr]
- Won-Jin Baek, Ph.D.
   [Professor, Rural Infrastructure Engineering, bwj215@jnu.ac.kr]
- Seung-Hwan Yoo, Ph.D.

  [Associate Professor, Rural Water Resources Engineering, yoosh15@jnu.ac.kr]
- Se-Woon Hong, Ph.D.
   [Assistant Professor; Ag. Facilities and Environment, hsewoon@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, with 15 credits from core courses.

# ■ What Do You Study?

# Rural Systems Engineering Major Courses Core Courses

Spatial Information Analysis and Practice (3)
Applied Mechanics of Structures (3)
Irrigation & Drainage Engineering (3)
Agricultural Environment and Ecology (3)
Soil Mechanics and Practice II (3)

#### Electives

CAD (3)

Engineering Mathematics (3)

Fluid Mechanics (3)

Applied Analytical Chemistry (3)

Applied Calculus (3)

Statics (3)

Rural System Seminar on Industrial Topics (3)

Surveying and Practice (3)

Construction Materials (3)

Hydraulics (3)

Applied Surveying and Practice (3)

Mechanics of Materials (3)

English for Rural Systems Engineer (3)

Environmental Soil Science (3)

Reinforced Concrete 1 (3)

Soil Mechanics and Practice 1 (3)

Green Engineering Hydrology (3)

Environmental Pollution Analysis Lab (3)

Construction Methods and Equipments (3)

Rural Land Use Planning (3)

Rural Environmental Engineering (3)

Onsite Water Treatment Engineering (3)

Reinforced Concrete 2 (3)

Land Remediation and Reclamation (3)

Foundation Engineering (3)

Statistical analysis of Climate-Smart Information (3)

Rural Planning (3)

Rural Tourism (3)

Rural Infrastructure Design (3)

Capstone Design for Rural System Engineers 1 (3)

Climate-Smart Disasters Prevention Engineering (3)

Farm Structures (3)

Rural Road Engineering (3)

Rural Settlement Planning (3)

Capstone Design for Rural System Engineers 2 (3)

#### Careers

Graduates who obtain a broad engineering background through the Department's program are sought after by a wide variety of employers. The following is a list of current employers:

- · Government Agencies
- · Korea Rural Community Corporation
- · National Institute of Agricultural Science
- · Korea Water Resources Corporation
- · Rural Research Institute
- · Korea Electric Corporation
- · Korea National Housing Corporation
- · Korea Highway Corporation
- · Korea Railroad
- · Construction Companies

- · National Institute of Crop Science
- · National Institute of Environmental Research
- · Korea Hydro and Nuclear Power Corporation
- · Korea Gas Corporation
- Mechanical and Electrical Engineering-related Companies
- · Food Production Companies
- · Crop Storage and Handling Companies
- · Agricultural Production Consultant Companies
- · Korean Army and Police

# Department of Agricultural Economics

\_Contact Information

Phone: +82-62-530-2170

E-mail: scsa13@jnu.ac.kr URL: http://ae.jnu.ac.kr/

# ■ What is Agricultural Economics?

The purpose of the Agricultural Economics (AE) major is to enable students to think like economists in solving problems related to the agricultural sector. Thinking like an economist involves using chains of deductive reasoning to help understand phenomena as well as problem-solving and creative skills in the agricultural sector.

Our goals are to increase understanding of economic behavior and improve students' ability to understand and predict agricultural economic phenomena.

The main subjects of the Department of Agricultural Economics are agricultural economics, farm management, agricultural product price analysis, farm statistics, and resource and environmental economics.

#### Professors

- Gue-Dae Cho, Ph.D.
   [Professor, Agricultural Policy, Agricultural Product Trade, gcho6011@jnu.ac.kr]
- Hye-Jung Kang, Ph.D.
   [Professor, Farm Management, Production Economics, Food Consumption Economics, hjkang@jnu.ac.kr]
- In-Seog Kim, Ph.D.

- [Professor, Agricultural Marketing and Agribusiness, i.kim@jnu.ac.kr]
- Yoon-Hyung Kim, Ph.D.
   [Associate Professor, Benefit-cost Analysis, Agricultural Development, yonhk@jnu.ac.kr]
- Hanpil Moon, Ph.D.
   [Associate Professor, Applied Econometrics, hanpil@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters). Students must also demonstrate proficiency in English and in using computers.

# ■ What Do You Study?

#### Core Courses

Agricultural Economics (3)
Farm Management (3)
Mathematics for Agricultural Economics (3)
Agricultural Prices Theory (3)
Agricultural Policy (3)

Resources and Environmental Economics (3)

#### Electives

Agricultural Prices Theory (3)
Resources and Environmental Economics (3)
Rural Sociology (3)
Micro-analysis of Agricultural Economics (3)

Agricultural Accounting (3)

Regional Agricultural Economics (3)

Statistics for Agricultural Economist (3)

Agricultural Production Economics (3)

Study of Korean Economy (3)

Agricultural Extension Service (3)

Korean Agricultural History (3)

Agricultural Math Economics (3)

Agricultural Project Appraisal (3)

Agricultural Product Trade (3)

Agricultural Econometrics (3)

Agricultural Systems Analysis (3)

Farm Finance (3)

Rural Survey (3)

Cooperatives (3)

Farm Management Analysis (3)

Agricultural Development (3)

Practice in Economics (3)

Agricultural Marketing (3)

Agricultural Information (3)

Macro-analysis of Agricultural Economics (3)

Globalization and Food Security (3)

## Careers

Possible careers extend to a multitude of organizations including the Rural Development Administration, Agricultural Research and Extension Services, government public institutions, research center, Agricultural Cooperative Association, Agricultural Technology Center, and other private sector firms.

It is also possible to enter graduate school or study abroad.

# Department of Landscape Architecture

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Fax: +82-62-530-2109 E-mail: a4723@jnu.ac.kr URL: http://inula.inu.ac.kr/

# ■ What is Landscape Architecture?

Landscape architecture is the art and science of arranging the spaces and objects upon land for the benefits of natural environment and human society. It involves the analysis, planning, design, construction, management, and stewardship of the natural and built environments. It includes the systematic study of large land areas based upon the ecological concern and visual quality. It deals with the location of buildings and the organization of the spaces between them. Projects cover parks and recreation, resorts, campuses, gardens, green roofs, interior landscapes, streetscapes, public spaces, urban design, and restoration of streams and wetlands.

# **■** Department of Landscape Architecture

The Department of Landscape Architecture offers three degree programs; Bachelor, Master and Doctor of Philosophy in Landscape Architecture. It emphasizes the art and techniques of creating landscapes with a concern for ecology, natural resources, and social services. The faculty specializes in design, planning, construction, management, representation, technology, history and theory. Students will have skills to investigate characteristics of the site, identify solutions and its usage. Our programs guide students to have ability to restore disturbed landscapes, create sustainable ecosystems, and develop suitable and comunities. They are introduced to the various scales of practice from small scaled spaces such as gardens, small parks, and green streets to large scaled ones such as communal parks, resorts, stream corridors, wetlands, cities, and regional watersheds. The program also includes visual and digital media based on programs such as computer aided design, Photoshop, and geographic information system.

#### Professors

- Tong-Buhm Cho, Ph.D.
   [Professor, Landscape Design, tobcho@jnu.ac.kr]
- Eun-Il Kim, Ph.D.
   [Professor, Environmental Design, eikim@jnu.ac.kr]
- Ki-Yeol Lee, Ph.D.
   [Associate Professor, Landscape Engineering,

kylee@jnu.ac.kr]

- Yoon-Ku Kwon, Ph.D.
   [Assistant Professor,
   Landscape and Regional Planning,
   ykkwon@jnu.ac.kr]
- Sang-Wook Park, Ph.D.
   [Assistant Professor, Landscape Planting Design, psw04@jnu.ac.kr]

# ■ Degree Requirements (Bachelor)

Students are required to earn 130 credits, normally over a period of 8 semesters, in accordance with university regulations.

# **■** What Do You Study in undergraduate?

#### Core Courses

Landscape Planning Design and Pratice (3)
Practice and Field Trip for Landscape Plants (3)
Landscape Architectural Design 1 (3)
Garden Design (3)

Graduation Design Studio (Capstone Design) (3)

#### Electives

Tourism and Recreation Planning (3)

Perspective Techniques (3)

Computer-Aided Landscape Planning and Design (3)

Landscape Surveying and Practice (3)

Landscape Design Media Studio 2 (3)

Principles of Landscape Planning (3)

Landscape Architectural Construction Materials (3)

History and Field Trip of western Landscape Architecture(3)

Landscape ecology (3)

Indoor Landscape and Practice (3)

History and Field Trip of Oriental Landscape Architecture(3)

landscape shaping Practice (3)

Landscape Structural Mechanics and Practice (3)

GIS and Urban Spatial Analysis (3)

Ecological survey and analysis (3)

Understanding of Landscape Architectural Profession(3)

Landscape Architecture Field Practice 1 (2)

Environmental Openspace Design (3)

Landscape Architecture Construction (3)

Case Study on Contemporary Landscape Project (3)

Landscape Maintenance and Practice 1 (3)

Ecological restoration planning (3)

Landscape Architectural Design 2 (4)

Park Planning and Design Studio (3)

Urban Woodlands Planning (3)

Cost Estimate in Landscape Architecture (3)

Space Composition of traditional landscape architecture(3)

Site Design and Practice (3)

Climate change informatics (3)

Landscape Aesthetics & Design Issues (3)

landscape assessment (3)

Cultural Property and Practice (3)

Theory of Urban and Regional Planning (3)

Landscape Facilities Structural Design (3)

Landscape Maintenance and Practice 2 (3)

Environmental Impact Assessment (3)

Landscape Architecture Seminar on Industrial Topics (3)

Park management (3)

Environmental Ecological Climate Plan (3)

#### **■** Teaching Profession Courses

Research of Educational Text and Teaching (3) Method of Plant Resources and Landscape

Architecture (3)

Educational Theories in Plant Resources and

Landscape Architecture (3)

#### Careers

Graduates may seek employment in the Ministry of Construction and Transportation, Ministry of Environment, Ministry of Government Administration and Home Affairs, local governments, Korea National Housing Corporation, Korea Land Corporation, Urban Development Corporation, Korea Highway Corporation, and private enterprises for landscape planning, design, construction, and management.

# Department of Bioenergy Science and Technology

\_\_Contact Information

Phone: +82-62-530-204; Fax: +82-62-530-2047 F-mail: A4705@inu.ac.kr

URL: http://bioenergy.jnu.ac.kr/

# ■ What is Bioenergy Science and Technology?

Global demand for energy has tremendously increased due to the accelerated growth of the human population and the improvement of human life. Although natural gas and atomic energy have been utilized to supply a portion of the energy demand, petroleum resources will become depleted within this century. In addition, the increased consumption of fossil fuels will steadily increase emissions of carbon dioxide, augmenting greenhouse gases in the atmosphere. Thus, energy and the environment are inextricably linked. Reducing dependence on fossil fuels and imported oil is a challenge of vital importance to national security, the economy, and the environment. Bioenergy, based on biomass, has drawn attention as a sustainable energy source that may help cope with the rising prices of fossil fuels, and address environmental concerns about greenhouse gas emissions. Bioenergy science and technology is about basic biological and biochemical science on plant biomass and enabling technology, not only for the improvement of the yield and quality of cellulosic biofuels and biodiesels, but also for the production of biofuels.

# ■ Department of Bioenergy Science and Technology

The Department of Bioenergy Science and Technology was newly established in 2010 and selected as part of the World Class University (WCU) system by the Ministry of Education, Science and Technology until 2013. We will establish a pioneering education system for expanding learning opportunities from various academic backgrounds, such as plant biology, molecular biology, chemistry, biochemistry, biochemistry, biochemical engineering, and bioprocess engineering. This innovative education system is intended to accelerate basic research in the development of sustainable bioenergy, including cellulosic ethanol and other biofuels. The final aim of this new department is to provide experts with scientific and technological knowledge that will afford economic and social benefits to agriculture and the environment and, thus, improve the quality of life.

## Professors

- Kim, Jungmook, Ph.D.
   [Plant Molecular Cell Biology, jungmkim@jnu.ac.kr]
- Bae, Hyeun-Jong, Ph.D.
   [Bioenergy & Biotechnology, baehj@jnu.ac.kr]

- Ahn, Sung-Ju, Ph.D.
   [Energy Crop Physiology, asjsuse@jnu.ac.kr]
- Lee, Won-Heong, Ph.D. [Microbial Engineering, wonhlee@jnu.ac.kr]

Cho, Chul-Woong, Ph.D.
 [Environmental Chemical Engineering, choicejoe@jnu.ac.kr]

• Lee, Dong Wook, Ph.D. [Plant Cellular Systems Biology, ldw4844@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

# ■ What Do You Study?

#### ■ General Courses

General Biology 1 (3 credits)

Mathematics 1 (3)

General Chemistry 1 (3)

Career Plan and Self Understanding (2)

General Chemistry 2 (3)

#### Core Courses

Biochemistry 1 (3)

Bioenergy (3)

Plant Physiology 1 (3)

Industrial Microbiology (3)

Biochemical Engineering (3)

#### Electives

Introduction to Bioenergy Science and

Technology (3)

General Plant Biology & Lab (3)

Campus Life and Career Roadmap (2)

Molecular Biology 1 (3)

Cell Biology1 (3)

Organic Chemistry 1 (3)

Molecular Biology 2 (3)

Biochemistry 2 (3)

Physical Chemistry (3)

Organic Chemistry 2 (3)

Genetics (3)

Cell Biology 2 (3)

Plant Ecology and Environment (3)

Bio-Nano Technology (3)

Bioinfomatics (3)

Principles and Methods of Gene Manipulation (3)

Plant Molecular Biotechnology (3)

Bioenergy Engineering Capstone Design 1 (3)

Biostatistics (3)

Bioprocess Engineering (3)

Quantitative Analysis (3)

Enzymology (3)

Plant Physiology 2 (3)

Environment and microbiology (3)

Bioenergy Engineering Capstone Design 2 (3)

Current Biomass Science (3)

Plant Seed Science (3)

What are Bioactive materials (3)

Microbial Engineering (3)

Fermentation Technology (3)

Microbial metabolic regulation engineering (3)

Crop physiology (3)

#### Careers

Bioenergy Science and Technology job opportunities include: biofuel or bioengineering or energy-related corporations, professors or researchers in plant biology, biology, or bioengineering, rural development administration staff, National Institute of Agricultural Biotechnology, Korea Research Institute of Bioscience and Biotechnology, agricultural research and extension services staff, Ministry of Agriculture and Forestry staff, National Plant Quarantine staff, Agricultural Cooperative Association staff, Agricultural Technology Center staff, the private sector (biotechnology and bioengineering or related) staff, etc.

# Department of Convergence Biosystem Engineering

\_\_Contact Information
Phone: +82-62-530-2150

URL: http://bse.jnu.ac.kr/

# ■ What is Convergence Biosystems Engineering?

The Department of Convergence Biosystems Engineering deals with mechanical, artificial intelligence, electricity, electronics, robots, materials, and bioengineering for biological systems such as plants, animals, and humans. In other words, it deals with knowledge necessary for unmanned and intelligent production of biological resources, advanced biomaterialization, and digital informatization, and fosters convergent professional talents with both agricultural and life sciences and engineering knowledge. Through this, we aim to contribute to the development of the future agricultural and bio industries.

# ■ Department of Convergence Biosystems Engineering

The Department of Convergence Biosystems Engineering conducts education and research on advanced biosystems that combine engineering technologies such as machinery, electrical/electronic, computer and information and communication. Key research areas include intelligent agricultural machinery, smart farms and plant factories, robots and artificial intelligence, biomaterials and nanobioengineering, and biofabrication, and are gradually expanding to bio, food, energy, environment, and healthcare.

Students learn to apply fundamental knowledge of biological and physical sciences, mathematics, and engineering principles to formulate and solve engineering problems. Engineering design is integrated throughout the curriculum, along with opportunities to develop communication, learning, and teamwork skills, culminating in a capstone design experience. Electives in the curriculum allow students to specialize in:

Agricultural Machinery Development and Automation: Development and automation of agricultural machines for crop planting, harvesting, and processing.

Biological Engineering and Bionanotechnology: Development of innovative bio-platforms for improving life of living systems.

Students select courses with the assistance of faculty advisors on an individual basis. Faculty members also assist with professional development and job placement for students.

#### Professors

- Young-Soo Choi, Ph.D.
   [Professor, Biosystems Machine Control, y-choi@jnu.ac.kr]
- Kyeong-Hwan Lee, Ph.D.

[Professor, Sensors and Intelligent Biosystems, khlee@jnu.ac.kr]

Hyoung Il Son, Ph.D.
 [Professor, Human-Centered Robotics

and Automation, hison@jnu.ac.kr]

• Jangho Kim, Ph.D.

[Professor, Nanoengineered Biomaterial Systems, rain2000@jnu.ac.kr]

• Hee-Gyeong Yi, Ph.D.

[Assistant Professor, Bio-Manufacturing Systems, hgyi@jnu.ac.kr]

· JooSeon Oh, Ph.D.

[Assistant Professor, Off-road mobility system, jooseon.oh@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, with 18 credits from core courses.

# **■** What Do You Study?

#### ■ Core Courses

Electronic Circuit for Biosystems and Practice (3)

Field Machinery and Practice (3)

Biomechanics and Tissue Engineering and Practice (3)

Biosystems Robotics (3)

Environment Control in Biosystems Structures (3)

Computer Aided Engineering Design (3)

#### Electives

CAD (3)

Engineering Mathematics (3)

Biology for Biosystems Engineering (3)

Fundamental Science for Biosystems (3)

Applied Calculus (3)

Statics (3)

Computer Programming (3)

Manufacturing Processes (3)

Dynamics (3)

Biosystems Engineering Lab (3)

Biosystem Mechatronics and Practice (3)

Fluid Mechanics for Biosystems (3)

Mechanics of Materials for Biological Applications (3)

Biosystems Modeling and Practice (3)

Bio-Industrial Machine Design (3)

Mechanics of Bio-Industrial Machine (3)

Thermodynamics (3)

Fluid Machinery (3)

Precision Agricultural Engineering(3)

Tractor Engineering and Practice (3)

Design of Biosystems Engineering (3)

Field Practice in Biosystems Engineering 1 (2)

Introduction to computer engineering (3)

Biosystem Measurements (3)

Field Practice in Biosystems Engineering 2 (2)

Seminar on Industrial Topics 1 (1)

Biosystems Automation (3)

Capstone Design of Biosytstems I (3)

Environmental Control in Agricultural Structures (3)

Bio-Resource Process Engineering (3)

Nanobioengineering (3)

Seminar on Industrial Topics 2 (1)

Capstone Design of Biosytstems 2 (3)

Sensors for Bio-industry (3)

Hydraulics System Engineering (3)

#### Careers

Graduates who obtain a broad engineering background through the Department's program are sought after by a wide variety of employers. The following is a list of current employers:

- · Government Agencies
- · Korea Rural Community Corporation
- · Korea Water Resources Corporation
- · Rural Research Institute
- · Korea Electric Corporation
- · Korea National Housing Corporation

- · Korea Highway Corporation
- · Korea Railroad
- · Construction Companies
- · Agricultural Machinery Manufacturers
- · Agricultural Machinery Research Institute
- · Korea Hydro and Nuclear Power Corporation
- · Korea Gas Corporation

- Mechanical and Electrical Engineering-related Companies
- Food Production Companies
- · Crop Storage and Handling Companies
- · Agricultural Production Consultant Companies
- · Korean Army and Police

# College of Culture and Social Sciences

# \_Contact Information

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Fax: +82-61-659-7509 URL: http://yculture.jnu.ac.ki

# ■ Division of International Studies

- · Department of English
- · Department of Japanese Studies
- · Department of Chinese Studies

# ■ Division of Global Business

- · Major of International Trade and Commerce
- · Major of Global Business

# ■ Department of Logistics and Transportation

# Division of Culture Contents

- · Department of Multimedia
- · Department of Electronic Commerce

# ■ Department of Culture and Tourism Management

## Affiliated Research Centers

- · Yi Sunshin Marine Culture Research Center
- · Information Technology Research Institute
- · East Asia Institute

# Division of International Studies

## Contact Information

Tel: +82-61-659-7580 Fax: +82-61-654-3560

E-mail: A0331@jnu.ac.kı

URL: http://inter.jnu.ac.kr/inter/index.dc

#### ■ What is International Studies?

The Division of International Studies provides a solid background in regional studies and an understanding of foreign languages for students who aspire to be international experts of the 21st century.

# ■ Division of International Studies at Chonnam National University

The Division of International Studies offers comprehensive interdisciplinary courses related to global concerns in English, Chinese, and Japanese. With a remarkable combination of faculty, staff, programs, and state-of-the-art facilities, the division provides the best education possible for motivated students who aspire to be international leaders of the 21st century.

Considering these educational objectives, the division offers a variety of programs ranging from overseas language study and internships to special lectures for employment.

## Professors

- YoungSoon Cho, Ph.D.
   [Professor, Department of English ysncho@chonnam.ac.kr]
- Sung-Kap Yang, Ph.D.
   [Professor, Department of English yangtop@chonnam.ac.kr]
- Kwan-Young Oh, Ph.D.
   [Professor, Department of English okyoung@chonnam.ac.kr]
- Han-Nae Yu, Ph.D.
   [Associate professor, Department of English ambrosia@gmail.com]
- Ji-hyun Kang, Ph.D.
   [Professor, Department of Japanese Studies, jihyun@chonnam.ac.kr]
- Ji-yeon Won, Ph.D.
   [Professor, Department of Japanese Studies, jywon@chonnam.ac.kr]

- Byeong-hoon Lee, Ph.D.
   [Professor, Department of Japanese Studies, leebh@chonnam.ac.kr]
- Kyung-kuk Kim, Ph.D.
   [Professor. Department of Chinese Studies, kmkyk@chonnam.ac.kr]
- Seung-hyun Choi, Ph.D.
   [Professor, Department of Chinese Studies, cchx5278@chonnam.ac.kr]
- Won-il Cho, Ph.D.
   [Professor, Department of Chinese Studies, mengzi@chonnam.ac.kr]
- Young-uk Um, Ph.D.
   [Professor, Department of Chinese Studies, uyu123@chonnam.ac.kr]
- Jin-hee Song, Ph.D.
   [Professor, Department of Chinese Studies, fu286599@chonnam.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits. Students may normally earn 18 credits per semester (up to 21 credits in exceptional cases). Students are also required to pass a graduation exam and demonstrate proficiency in a foreign language.

# ■ What Do You Study?

**English Studies Major Courses** 

Understanding English & Americans (3)

World Englishes (3)

Survey on British Literary Works (3)

English Grammar (3)

Tour Guide English (3)

Media English (3)

Practical English (3)

English Sentence Structure (3)

English Pronunciation 1 (3)

Introductory English Linguistics (3)

English Conversation 1 (3)

British & American Drama (3)

English Listening Comprehension (3)

English Vocabulary (3)

English Conversation 2 (3)

Survey on American Literature (3)

Culture of American Society (3)

Understanding of British and American Poetry (3)

Cultural Background of the English Language (3)

English Semantics (3)

English Conversation 3 (3)

English Composition (3)

Literature and Film (3)

Business English 1 (3)

Understanding British and American Novels (3)

English Discourses (3)

English to Korean Translation (3)

History of English (3)

Business English 2 (3)

Essay Writing in English (3)

Presentation English (3)

Reading English Prose (3)

English Syntax (3)

Environmental Writings (3)

Current English (3)

Practice of Practical English (3)

Topics in English Linguistics (3)

Interview English (3)

**Chinese Studies Major Courses** 

Chinese for Beginning (3)

Understanding of Chinese Culture (3)

Basic Chinese conversation (3)

Elementary Chinese vocabulary (3)

Exposition of Chinese classics (3)

Chinese Grammar (3)

Basic Chinese Conversation 2 (3)

Reading Comprehension on Ancient Chinese Words (3)

Trip to Chinese Literature (3)

Chinese Reading Comprehension (3)

Intermediate level Chinese conversation (3)

Practice of Chinese Listening (3)

Intermediate Chinese vocabulary (3)

History of Exchange in east and west culture (3)

Chinese Learned via Film (3)

Appreciation of Chinese Classical Poetry (3)

Intermediate Chinese Conversation 2 (3)

Special Course in Chinese Language Study (3)

Beginning level HSK (3)

History of Chinese Literature (3)

Selective reading on Chinese current affairs (3)

Advanced Chinese Conversation (3)

Chinese composition 1 (3)

Strolling through Chinese History (3)

Intermediate level HSK (3)

Appreciation of Chinese Classical Prose (3)

China and Overseas Chinese (3)

Reading Chinese Literature (3)

Chinese composition2 (3)

Chinese Translation and Interpretation (3) Understanding of Chinese philosophy (3)

Tourism Chinese (3)

Understanding the Chinese Economy (3)

Reading Chinese Newspaper (3)

Chinese Politics and Diplomacy (3)

Special Course in Chinese Regional Study (3)

East Asian Regional Study (3)

Chinese Interview Practice (3)

The Culture of Chinese Tea and Healing (3)

Practical Trade Business Chinese (3)

## **Japanese Studies Major Courses**

Japanese Literature and Sensitivity with Media (3)

Japanese for Practice (3)

Biginner for japanese conversation1 (3)

Introduction to Japan Study (3)

Japanese Grammar 1 (3)

Biginner for japanese conversation2 (3)

Tourism Japanese Exercise (3)

Japanese Grammar 2 (3)

Japanese Listening Exercise (3)

Japanese Pre-modern History (3)

Beginner's Japanese Conversation (3)

Modern Japanese History and Relationship between

Korea-Japan (3)

Japanese Culture Reading (3)

Japanese Phrase Practice (3)

Intermediate Japanese conversation1 (3)

Beginner's Japanese Composition (3)

Practical Japanese (3)

Japanese Reading Comprehension (3)

Intermediate Japanese Composition (3)

Intermediate Japanese Conversation2 (3)

Japanese Document Preparation for Employment

Modern Japanese politics and society (3)

Advanced Japanese Composition (3)

Advanced Japanese conversation (3)

Business Japanese (3)

Understanding of Japanese Economy (3)

Contemporary Japanese society and popular culture

Japanese of Current Topics (3)

Japanese literature Storytelling and Cultural

Tourism industry (3)

Expert in Japanese Translation Exercise (3)

Japanese interview for business communication (3)

Business practice between Korea and Japan (3)

Journey to Japan based on culture and heritage (3)

Understanding of Japanese Study (3)

Appreciation of Japanese theater and art (3)

Special Lecture on Contemporary Japanese (3)

## Careers

Students who have successfully completed the Division programs have worked for leading companies such as GS Caltex, Yeocheon NCC, Kumho PandG, LG Petrochemical Plant, Honam Oil Company, BASF, Kwangyang LST, Suncheon Carf, Lotte Hotel, Doobee Trade Company, Cam Zone Trade Company, J&D International, Incheon International Airport, and POSCO. Many graduates have worked as school teachers, public officers, interpreters, tour guides, flight attendant and professional translators.

# Division of Global Business

\_Contact Information

Tel: +82-61-659-7530, 7630

Fax: +82-61-659-7639

URL: http://cur.jnu.ac.kr

## Division of Global Business

The Division of Global Business aims to produce talented people with and international sense to lead the era of globalization based on the international society and global management. Also, we cultivate global talents with business and economics knowledge, trade practice and foreign language skills. Our division composes majors in international trade and global business, and focuses on nurturing global business talents who could be advantageous for employment and start-up through differentiated international management, economy, trade practice and global business courses and scholarship support.

In the first year of the Division of Global Business, students take the liberal arts courses and the basic courses of Division of Global Business. As students advance to the second year, they select one major from International Trade and Global Business to study in-depths for each major.

# ■ Major of International Trade and Commerce

A major in International Trade and Commerce is a practical discipline that includes both theoretical and practical knowledge. The International Trade and Commerce Major aims to help students understand rapidly changing trade environments at home and abroad and to foster professional trade personnel with the qualities to enhance Korea's status as the center of global trade. A major in International Trade and Commerce is based on the vision to pursue excellence in education with an aim to cultivate experts in international business management and international economic activities. Graduates are equipped with expertise relating to global business, both in theory and in practice. They are capable of applying such expertise to growing their problem-solving skills in the real world and contributing innovatively to society or organizations for which they work.

# ■ Major of Global Business

A major in Global Business was established to provide an education related to Korean language and culture for international students, as well as theory and practice of global business to facilitate employment for domestic and foreign students. The major aims to nurture global business professionals who can contribute to the development of national and regional economy in the global era. In this major, students cultivate an ability of theoretical analysis on business, economy, international relations, language and culture, and they acquire global business manners and marketing knowledge. As a curriculum, students learn about

Business Trade English, Marketing Principles, International Relations Theory, Popular Culture Theory and more as major basics. Also, as major advanced, they will learn about Global Society and Korea, International Business Strategy, and Comparative Culture Theory and more courses regarding Global Business. Graduates can contribute to organizations in the global business field, such as civil servants, business-related public and state institutions, as well as entering domestic and foreign graduate schools.

#### Professors

- Cheol Lee, Ph.D.
   [Professor, International Economics, clee1@chonnam.ac.kr]
- Bok-jae Park, Ph.D.
   [Professor, International Commerce, bjpark73@chonnam.ac.kr]
- Gil-sung Kim, Ph.D.
   [Professor, International Business, kikis@chonnam.ac.kr]

- Young-moon Kang, Ph.D.
   [Professor, International Commerce, wto3@chonnam.ac.kr]
- Seok-gang Park, Ph.D.
   [Professor, Strategic Management, parksg1214@chonnam.ac.kr]
- In-hye, Lee, Ph.D
   [Assistant Professor, Korean Studies & Korean Language, Education, leei@chonnam.ac.kr]

# **■** Degree Requirements

Students are required to take a total of 130 credits to graduate: 27 credits from cultural studies courses, 3 credits from required cultural studies courses, 21 credits from core major courses, and more than 39 credits from elective major courses. Students are also required to submit a thesis (or acquire a certificate regarding the business field) and demonstrate proficiency in English.

# ■ What Do You Study?

## ■ Division of Global Business Courses

Introduction to International Trade (3)
Introduction to International Business (3)

Introduction to Economics (3)

#### ■ Major of International Trade and Commerce Courses

International Business (3)

International Finance (3)

Business Communication (3)

Business and Management in East Asia (3)

Distribution and Inauguration of Trading Companies (3)

Practical Letter of Credit (3)

Principles of Accounting (3)

Asian Culture and Business (3)

International Finance (3)

International Manner and Overseas Areas Studies (3)

Microeconomics (3)

Electronic Trade Simulation (3)

Trade English (3)

Case Studies of Global Companies (3)

Principles of Marketing (3)

International Tourism Economics (3)

International Commerce (3)

International Political Economy Seminar (3)

Money and Banking (3)

Macroeconomics (3)

International Trade Practice (3)

International Negotiation and Business Contract (3)

International Marketing Strategy (3)

Verbal Expression in English for International

Commerce 1 (3)

Verbal Expression in English for International

Commerce 2 (3)

Verbal Expression in English for International

Commerce 3 (3)

Verbal Expression in English for International

Commerce 4 (3)

Coporate Finance Policy (3)

International Economics (3)

International Logistics and Exhibition Convention (3)

International Business Strategy (3)

International Trade Seminar with CEOs(Capstone

Design) (3)

■ Major of Global Business Courses

Principles of Accounting (3)

Strategic Management (3)

Business Statistics (3)

Globalization (3)

Global Business Korean (3)

Research Methods (3)

Business Trade English (3)

Multinational Enterprise Analysis (3)

Principles of Marketing (3)

Public Diplomacy (3)

Management and Trade Korean (3)

Asian Economy (3)

Modern Theory of Management (3)

Global Business Strategy (3)

Popular Culture (3)

Global Business Seminar (3)

International Finance (3)

Global Marketing (3)

Global Society and Korea (3)

Global Business Organization (3)

Political Economy of Japan (3)

Cross-Cultural Management (3)

International Financial Management (3)

Global Advertising and Brand Strategy (3)

Introduction to International Relations (3)

Innovative Management (3)

International Business Strategy and Organization (3)

Technical Management Strategy (3)

Asian Market Research(Capstone Design) (3)

Korean Studies Seminar (3)

International Political Economy (3)

Economics of International Development (3)

#### Careers

As the division is related to commerce and business, graduates can find jobs in diverse fields.

The major of International Trade and Commerce cultivates experts in international trade, distribution management, cyber trading, foreign exchange management, and e-commerce management. The graduates work mainly in the field of international trade-related business in various companies, and financial institutions. Moreover, they can work as public servants in local and central government related to trade and commerce. The major of Global Business cultivates experts in international business and marketing. The graduates work in the field of international business-related business in various companies and financial instituitions. Moreover, they can work as public servants in local and central government related to business.

# Department of Logistics and Transportation

\_Contact Information

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URL: http://logistics.jnu.ac.kr

# Department of Logistics and Transportation

Logistics and Transportation is an area of study highlighted as a leading field of the 21st century. Performance of businesses as well as national competitive power is related to logistics and transportation. We aim to strengthen international competitiveness by optimizing logistics systems in both public and private sectors, and by improving transportation problems over the country.

Many companies surrounding Yeosu City where our department is located, such as the Gwangyang container terminal, the free economic zone in the Gwangyang Bay, the Yeosu National Industrial Complex, and the Yulchon Regional Industrial Complex, provide internship and employment opportunities for graduates.

#### Professors

- Byungin Park, Ph.D.
   [Professor, Business Logistics, bipark@chonnam.ac.kr]
- Sang-gu Kim, Ph.D.
   [Professor, Traffic Operations, kim-sg@chonnam.ac.kr]
- Jong-wook Bae, Ph.D.
   [Professor, Logistics System, jwbae@chonnam.ac.kr]
- · Chang-hyun Kim, Ph.D.

[Professor, Logistics Information Systems, chkim@chonnam.ac.kr]

- Chang-ho Choi, Ph.D. [Professor, Freight Transportation, jc1214@chonnam.ac.kr]
- Seung-sik Shin, Ph.D.
   [Professor, Logistics Policy & Environment Logistics, shin2han@chonnam.ac.kr]

# Degree Requirements

Students are required to take a total of 130 credits to graduate: 30 credits from cultural studies courses, 21 credits from core major courses, and more than 39 credits from elective major courses. Students are also required to submit a thesis (or pass a graduation exam) and demonstrate proficiency in a foreign language.

# ■ What Do You Study?

Principles of Management(3)
Understanding of Economics(3)
Introduction to logistics(3)

Business Statistics(3)
Introduction to Transportation(3)
Global logistics trend(3)

Management Science(3)
Transportation Planning(3)
Logistics Data Analysis(3)

Logistics Laws(3)

Logistics Accounting(3)

E-commerce transport management(3)

Traffic safety(3)
Urban Logistics(3)

Logistics Management/Supply Chain Management(3)

A Lecture on Logistics Big Data(3)

Warehousing and Material Handling Management(3)

Research Methodology(3)

Transportation Demand Analysis(3)
Global Supply Chain Management(3)

Capstone Design(3)

Logistics and e-Business(3)

Service Management(3)

International Transport of goods(3) Economic Decision Analysis(3)

Traffic Operation(3)

Purchasing Logistics Management(3)

Logistics Facility Planning(3)

Introduction to Distribution Logistics Management(3)

Port Operations and Management(3)

Maritime Transportation(3)
Traffic Impact Evaluation(3)
Logistics Information System(3)
Advanced logistics technology(3)
Integrated Logistics Management(3)
Supply Chain Management(3)

Introduction to Logistics Simulation(3)

Traffic Theory and Practice(3)

Green Logistics(3)

### Careers

Graduates of the department of logistics and transportation can mainly enter not only the logistics sector but also the transportation sector. At the logistics sector, they can go into logistics-related organizations such as international shipping companies, forwarders, couriers, port authorities, terminal operating companies as well as general companies as logistics officers after obtaining the certifications such as "Certified Professional Logistician" and "International Certified Professional Logistician". In the transportation sector, they can advance transport-specialized officials, traffic-related authorities and corporations as well as engineering companies after acquiring professional qualifications such as "Engineer Transportation" and "Industrial Engineer Transportation".

# Division of Culture Contents

\_Contact Information

Tel: +82-61-659-7440

E-mail: A0442@jnu.ac.ki

### What is Culture Contents?

The Division of Cultural Contents refers to the diverse range of culture based arts being stored, distributed and enjoyed in the form of visual and digital media in the genre of games, animation, music, characters, broadcasting, and e-books.

### ■ Division of Culture Contents at Chonnam National University

The Departments of Multimedia and Electronic Commerce were merged into the school of Culture Contents in 2006. The Division of Culture Contents is now training undergraduate students to compete with world professionals in the field of digital contents for culture industry, and IT infrastructure for a ubiquitous society. The school aims to train students to be leading specialists in all fields of the culture industry, including creation of digital contents, mobile software, and electronic commerce. The school's students can obtain excellent qualifications in Gaming Graphics, Multimedia Content Authorship, Network Expertise, Web Page Expertise, Web Mastery, OCP(Database), Java Programming(SCJP) and CPL.

### Professors

- Soon-Hee Han, Ph.D.
   [Professor, Compiler and Mobile Systems, shhan@jnu.ac.kr]
- Young-Man Kang, Ph.D.
   [Professor, Computer Network and Digital Broadcasting Systems, ymkang@jnu.ac.kr]
- Jun-Seok Lee, Ph.D.
   [Professor, MIS and Computer Games, iexpert@jnu.ac.kr]
- Min-Suk Yoon, Ph.D.[Professor, MS and IS, msyoon@jnu.ac.kr]
- Hee-Teak Ceong, Ph.D.
   [Professor, Distributed Systems and Multimedia, htceong@jnu.ac.kr]
- Yong-Min Kim, Ph.D.

- [Professor, Information Security and Electronic Commerce Systems, ymkim@jnu.ac.kr]
- Jeong-Seon Park, Ph.D.
   [Professor, Multimedia Programming and Pattern Recognition, jpark@jnu.ac.kr]
- Seung-Bong Park, Ph.D.
   [Professor, e-Business, parks@jnu.ac.kr]
- Won-Sik Jung, Ph.D.
   [Assistant Professor, Film and Digital Media, creator@jnu.ac.kr]
- In-Seop Na, Ph.D.
   [Associate Professor, Artificial Intelligence/Big Data Processing, ypencil@jnu.ac.kr]
- Byung-il Moon, Ph.D.
   [Professor, Physical, m20011002@jnu.ac.kr]

# **■** Degree Requirements

- Major Requirements: At least 18 credits
- · Major Electives: 30 credits or more
- · General Education Requirement: 3 credits or more
- · General Education Electives: 27 credits or more
- General Electives: 31 credits or more
- · Graduation Credits: At least 130 credits or more

# ■ What Do You Study?

### **Division of Culture Contents**

### ■ Major Requirement (6)

Introduction to Electronic Commerce (3)
Introduction of Multimedia and Practice (3)

### ■ General Education Requirement (3)

Introduction To Logic (3)

### Major Courses

Computational Thinking (3)

Web Production and Practice (3)

### **Department of Multimedia**

### **■ Major Requirements** (12)

Multimedia Data Structure (3)

Practice of Multimedia Authoring (3)

Programming Language and Laboratory (3)

Web-Server Implementation and Practice II (3)

#### Major Courses

Basic of video and animation production (3)

Contents Design Practice (3)

Contents Management (3)

Creative Engineering Design1(Capstone design) (3)

Creative Engineering Design2(Capstone design) (3)

Creative Planning (3)

Cultural Content Industry Research (3)

Game Graphics (3)

Game Planning and Analysis (3)

Image Processing Practice (3)

Intelligent App Application and Practice (3)

Introduction to Artificial Intelligence and Practice (3)

Introduction to Mobile System (3)

Mobile Application and Practice (3)

Multimedia Big Data Processing (3)

Multimedia Convergency Practice (3)

Multimedia Data Processing and Practice (3)

Multimedia Database (3)

Multimedia Image Planning (3)

Multimedia Information Communication (3)

Multimedia Programming and Practice (3)

Multimedia Project (3)

Multimedia System (3)

Multimedia System Analysis and Design (3)

Operation System Practice (3)

Production of Portfolio (3)

Production Theory of Game and Practice (3)

Research on Network game (3)

Video Prodution Techniques (3)

Visual Content Design (3)

Visual Content Storytelling (3)

Web Client Producing and Practice (3)

Web-Server Implementation and Practice I (3)

Windows Programming Practice (3)

### **Department of Electronic Commerce**

### **■ Major Requirements** (12)

e-Research & Methodology (3)

Introduction to Information Technology (3)

Electronic Commerce Web Programming and Practice (3)

Electronic Commerce Design 1(Capstone design) (3)

### Major Courses

Artificial Intelligence (3)

Basics of Web Programming (3)

Basic Operating System (3)

Big Data Analysis (3)

Business Start-up & Technology Management(3)

Customer Relationship Management (3)

Data Science (3)

Data Structure Application and Practice (3)

Database Design and Management (3)

Database System (3) Decision Making (3)

Digital Contents Business (3)

e-Business Strategy(3)

Electronic Commerce Design2(Capstone design) (3)

Electronic Commerce Platform and Practice (3)

Electronic Commerce System Analysis And Design (3)

Electronic Commerce System Implementation (3)

Enterprise Resource Planning (3)

Field Practice1 (2) Field Practice2 (2)

Financial Analysis (3)

Internet Marketing (3)

Introduction to Information Security (3)

Logistics & Distribution (3)

Management Information System (3)

Mobile Business (3)

Mobile Introduction (3)

Mobile Programming Practice (3)

Principles of e-Management (3)

Programming Data Structure (3)

Project Management (3)

Security for Electronic Transaction (3)

Software Design and Practice (3)

System Information Security (3)

Web Information Retrieval (3)

### Careers

After graduation, students are expected to be engaged in all aspects of the IT-related industry such as multimedia, mobile, or game programming to name but a few.

In addition, graduates have become high-level civil servants or academics. Many of our graduates can be found playing important roles in the IT-related industry.

# Department of Culture and Tourism Management

\_\_Contact Information

Fax: +82-61-659-7649

E-mail: kimdan01@jnu.ac.k

URL: http://ctm.jnu.ac.kr

# ■ What is Culture and Tourism Management?

The Department of Culture and Tourism Management is a distinct department combining culture with tourism, and aims to train global creative talent to promote local tourism such as cultural and marine tourism, and contribute to the tourism industry as a strategic industry to enhance national competitive power. The tourism sector is expanding as much as its importance with more public attention. The department of culture and tourism management at Chonnam National University was established with community needs and social change.

# Department of Culture and Tourism Management at Chonnam National University

The Department of Culture and Tourism Management is operated as a curriculum extending beyond the scope of tourism management, and this differentiation will provide more opportunities for students after graduation. In addition, stationed in Yeosu city which is the best tourist destination in Korea, it has an optimal learning environment with plenty of cultural tourism resources. We will train cultural tourism professionals by providing field education and practical education on various subjects, and will continue to develop school to work education programs reflecting regional characteristics to expand high-quality employment opportunities for students.

The Culture and Tourism Management Department operates a customized talent training curriculum for each grade to maximize employment capabilities, and implements team coaching by department professors after segmenting students into specific areas of interest. In particular, we plan to actively support the employment of public companies and public institutions in preparation for the mandatory hiring of local talent by public policy.

# **■** Degree Requirements

Students are required to take a total of 130 credits to graduate: 30 credits from liberal arts (3 credits of compulsory subject and 21 credits of elective subjects), 39 credits form elective major courses, and 21 credits from intensive major courses. Students are also required to pass a graduation exam (or pass four other options and demonstrate proficiency in a foreign language.

### ■ What Do You Study?

Introduction of Tourism (3)

Introduction to Culture Tourism Content (3)

English for Cultural Tourism (3)

Tourism Resources (3)

Storytelling and Cultural Tourism (3)

Tourism Law (3)

Theory of Culture Tourism (3)

Geography of Tourism (3)

Tourism Accounting (3)

Humanistic Understanding of Tourism (3)

Tourism Transportation (3)
Theory of Urban Tourism (3)

Tourism Marketing (3)

Financial Management of Tourism (3)

Venture of Management of Tourism (3)

Cultural Arts and Tourism (3)

Local Community and Festival Management (3)

Theory of Leisure (3)

Analysis of Tourism Data (3)

Capstone Design of Tourism (3)

Theory of Convention and Exhibition Planning (3)

Field Practice 1 (3)

Hospitality Management (3)

International Tourism (3)

Event and Convention Marketing (3)

Theory of Consumer Behavior (3)

Theory of Tourism Strategy Management (3)

Theory of Tourism Market Survey (3)

Service Management of Cultural Tourism (3)

Exhibition & Convention Industry Management (3)

Economics of Tourism (3)

Tourism and Culture Anthropology (3)

Theory of Tourism Development (3)

Marine Tourism (3)

Urban Regeneration and Tourism (3)

Field Practice 2 (3)

### Careers

After graduation, students will go into following fields;

- Public enterprises, public institutions (Tourism Foundation, Cultural Foundation, Tourism Organization, public officials, etc.)
- Tourism companies (MICE companies, Hotels, Travel agencies, Food-service companies, etc.)
- Culture industry (Culture and Arts Agency, Arts Management Support Center, etc.)
- Tourism-related enterprises (Cosmetics, Duty-free shops, Franchises, etc.)

### Professors

- Dae-Hyon Kim, Ph.D
   [Professor, Urban Planning & Smart Tourism, daehyon@jnu.ac.kr]
- Eun Jeong Noh, Ph.D
   [Assistant Professor, Tourism Marketing,
   Sustainable Tourism, noheun@jnu.ac.kr]
- Joonho Kim, Ph.D.
   [Associate Professor, Tourism Strategy, Cultural Tourism, joonho@jnu.ac.kr]
- Hyo-Yeun Park, Ph.D.
   [Associate Professor, MICE, hyopark@jnu.ac.kr]

# College of Education

### \_Contact Information

Phone: +82-62-530-2305, 2306

Fax: +82-62-530-2302 URL:http://education.jnu.ac.kr

- Department of Education
- Early Childhood Education
- History Education
- Geography Education
- Ethics Education
- Korean Language Education
- English Language Education
- Mathematics Education
- Physics Education
- Chemistry Education
- Biology Education
- Earth Science Education
- Home Economics Education
- Music Education
- Physical Education
- Division of Special Education

# Department of Education

\_\_*Contact Information* Phone: +82-62-530-2340

URL: http://educate.jnu.ac.kr

### Overview

The Department of Education at the heart of Chonnam National University aims to educate students to be 1) qualified secondary school teachers, 2) competitive researchers and practitioners of secondary education, higher education, industrial education and lifelong education, and 3) highly competent researchers of educational research institutes. To achieve these ends, the department teaches students foundational knowledge and theories to understand and improve educational practices, as well as professional methods to study, design and develop the alternatives. The department puts emphasis especially on enhancing students' ability to logically and scientifically analyze and solve the problems which occur in schools, colleges, companies and lifelong education settings. The department offers students core courses and electives in the areas of educational philosophy, educational history, educational sociology, curriculum development, educational psychology, school psychology, counseling psychology, pedagogy, educational technology, educational evaluation, educational administration, etc. In addition, the department tries to help students adapt to school life, achieve their educational goals, and learn social leadership through various extra-curricular activities such as mentoring programs, learning and career counseling, supervisory programs, voluntary services for communities, and so on.

Undergraduate students can get a teacher's certificate of Educational Study, a high school elective subject after completing all the requirements of the department. Students also can choose other areas of study as their double major in order to get another teacher certificate. Many graduates of the Department of Education are employed as secondary teachers, central or local government officers, college professors, researchers, educational administrators, counselors, instructional designers, etc. Some graduates advance their education by pursuing a master's and/or a doctoral degree in the department.

### Professors

- Hoisoo Kim, Ph.D.
   [Professor, Educational Technology, kimh@jnu.ac.kr]
- Sichang Yum, Ph.D.
   [Professor, Educational Evaluation, sichang@jnu.ac.kr]
- Hyeonsook Shin, Ph.D.

[Professor, School Psychology, shinphd@jnu.ac.kr]

- Min-ho Yeom, Ph.D.
   [Professor, Educational Administration, minho@jnu.ac.kr]
- Jeeheon Ryu, Ph.D.
   [Professor, Educational Technology,

jeeheon@jnu.ac.kr]

- Sung-Hyun Cha, Ph.D.
   [Professor, Educational Finance, shcha@jnu.ac.kr]
- Ju Ri Joeng, Ph.D.
   [Associate Professor, Counseling Psychology, jjoeng@jnu.ac.kr]
- Jumi Lee, Ph.D.
   [Associate Professor, Educational Psychology, jlee@jnu.ac.kr]
- Eun-young Hong, Ph.D.
   [Associate Professor, Philosophy of Education, aporia@jnu.ac.kr]

• Haram Jeon, Ph.D.

[Associate Professor, Sociology of Education, haraming@jnu.ac.kr]

• Ji Hae Lee, Ed.D.

[Assistant Professor, Counseling Psychology, leeji@jnu.ac.kr]

• Kyunghee Shin, Ph.D.

[Associate Professor, Curriculum,

khshin5@jnu.ac.kr]

• Robert Otto Davis, Ph.D.

[Assistant Professor, Educational Technology, rdavis@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 140 credits to graduate. In addition, students should pass a comprehensive examination.

# ■ What Do You Study?

### ■ Core Courses

Educational Psychology (3)

Sociology of Education (3)

Philosophy of Education (3)

Educational Administration (3)

Curriculum Theories and Practices (3)

History of Education (3)

School Counseling (3)

Instructional Technology (3)

Measurement and Assessment in Education (3)

Logical Thinking and Essay Writing in Education (2)

Practical Affairs for the Teaching Profession (2)

Teaching Children with Learning Disabilities (2)

Education Volunteer Service (2)

Student Teaching Internship (2)

School Violence Prevention and Understanding of

Students (2)

Instructional Theory of Education (3)

Design and Development of Instructional Materials

for Educational Studies (3)

Understanding Education (3)

English for Global Communication 2 (3)

Writing for Self-reflection and Communication (3)

Multimedia and Education (3)

Career Plan and Self Understanding (2)

### **■** Electives

Total: 94 credits

### Minor Courses

38 credits should be taken.

# Early Childhood Education

\_\_Contact Information
Phone: +82-62-530-2360

URL: http://ecedu.jnu.ac.kr/

# ■ What is Early Childhood Education?

Early childhood education is defined as educational programs offered for young children under the age of six. Certified early childhood teachers work with young children and their families in kindergartens or child-care centers. The teachers are individuals who are trained and prepared for childhood development, early childhood curricula, parent education, and other content areas related to the education of young children.

# **■ Department of Early Childhood Education**

Established in 1983, the Department has been committed to educating and preparing undergraduate students for teaching careers with professional knowledge, skills, and field experiences needed to become highly effective teachers for young children.

### Professors

- Mi-Sook Choi, Ed.D.
   [Professor, Child Development and Evaluation, mschoi@jnu.ac.kr]
- Kyung-Sook Kim, Ph.D.
   [Professor, Early Childhood Inclusive Education, kim2366@jnu.ac.kr]
- Kyee-Yum Kwon, Ed.D.
   [Professor, Early Childhood Teacher Education,

kwon0301@jnu.ac.kr]

- Hyo-Jin Kim, Ed.D.
   [Assistant Professor, Early Childhood
   Curriculum and Instruction, kimhyoj@jnu.ac.kr]
- Jeong-Ae Lee, Ed.D.
   [Assistant Professor, Early Childhood Social Education, jalee2021@jnu.ac.kr]

### Degree Requirements

Students are required to earn 150 credits to graduate.

# ■ What Do You Study?

### ■ Required Courses (minimum 45 credits)

Curriculum (2)

Teaching Method and Technology (2)

Educational Sociology (2)

Educational Psychology (2)

Philosophy and History of Education (2)

Educational Assessment (2)

Introduction to Education (2)

Educational Administration and Management (2)

Introduction to Early Childhood Education (3)

Logic and Essay Writing in Early Childhood
Education (2)
Teaching Children with Learning Disabilities (2)
Multimedia and Instructional Materials for
Young Children (3)
Play & Play Therapy (3)
Curriculum in Early Childhood Education (3)
Education Volunteer Service (2)
Practical Affairs for the Teaching Profession (2)

Method of studying and Teaching Subject (3) Instructional Practice in Early Childhood Education (3) Student Teaching Internship (2) Parent Education (3)

- **■** Electives (minimum 27 credits)
- Minor Courses (minimum 14 credits)

### Careers

Students who complete degree requirements may earn certificates for kindergarten teaching as well as child-care teaching. Most graduates work at kindergartens or child-care centers.

# History Education

\_\_Contact Information
Phone: +82-62-530-2370

Fax: +82-62-530-2379 URL: http://hisedu.jnu.ac.kr/

# ■ What is History Education?

This program offers the subjects of history and history teaching methods to educate students to become history teachers or professional historians.

# **■** Major in History Education

The goal of this program is to provide students with various kinds of history courses, including those on Korean history, Asian history, and European history to help them become competent history teachers or professional historians.

### Professors

- Young-Hyo Lee Ph.D.
   [Professor, Western History/ History Education, yhlee678@jnu.ac.kr]
- Young-Ok Lee Ph.D. in History [Professor, Ming & Qing China, youngok@jnu.ac.kr]
- Kyong-Tae Kim Ph.D. in History
   [Assistant Professor, History of Chosun Dynasty,

kimkt@jnu.ac.kr]

- Yeongkwang Jo Ph.D. in History
   [Assistant Professor, Ancient Korean History, joyk@jnu.ac.kr]
- Ji-Hye Shin Ph.D. in History
   [Assistant Professor, Western History,
   jhyshin@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 150 credits to graduate, including 48 credits from core courses, 24 credits from electives, and 30 credits from liberal arts courses.

Students must also pass a graduation qualifying test and demonstrate proficiency in a foreign language. Students will be issued a teacher's license when all requirements are satisfied.

# ■ What Do You Study?

### Core Courses

Introduction to Education

Educational Assessment

Educational Sociology

Educational Administration and Management

Philosophy and History of Education

Curriculum

Educational Psychology

Teaching Methods and Technology

Practical Affairs for the Teaching Profession

Student Teaching Internship
Education Volunteer Service
Teaching Children with Learning Disabilities
Theory and Practice of School Violence Prevention
Introductory Theory of History Education
Teaching of Readings in Western History
A Course on History Logic and Essay Writing
Teaching of Readings in Asian History
Research of Education Text and Teaching Method
of History
Readings in Historical Sources

Readings in Historical Sources Introduction to Korean History Introduction to History of East Asia Introduction to Western History

### Electives

Study of Korean History Texts Seminar in Korean History Education Topics in Korean History Education Topics in Asian History Education Topics in Western History Education

Pre-Modern History of Korea Pre-Modern History of Europe Diplomatic History of Korea Ancient History of East Asia Pre-Modern History of East Asia Modern History of Europe Ancient History of Korea Medieval History of Korea Socio-Economic History of Korea Contemporary History of Europe Contemporary History of Korea Current Research Trends and Issues on Korean History Modern History of East Asia History of Historiography Modern History of Korea Interpretation of Korean Historical Documents Cultural History of Korea

Intellectual and Cultural History of Korea

Contemporary History of East Asia

### Careers

Graduates may become teachers in middle and high schools, as well as historians, curators, and journalists.

# Geography Education

\_Contact Information

Phone: +82-62-530-2380 Fax: +82-62-530-2389

URL: http://geoedu.inu.ac.kr/

# **■** What is Geography Education?

The principal purpose of geography education is to train educators in geography. The department especially focuses on teaching students to comprehend living space on the earth through basic concepts and theories, and to embody knowledge and behaviors desirable for secondary school education. Students who will be future teachers in geography are trained with geographical knowledge about places and locations, regions and spatial interactions, and relationships between human and natural environments. Democratic and patriotic citizenship is also encouraged through a balanced geography education - objective rather than subjective.

# **■** Major in Geography Education

Students become educated in geographical contents, research, and teaching methods proper for the geography education for secondary schools, and have opportunities and abilities to advance to upper echelons of educational institutions and graduate schools.

Students pursue theoretical matters and other practical phenomena skills as well, usually with field experience that is offered twice a year.

### Professors

- Jin-Kwan Kim, Ph.D.
   [Associate Professor, Physical Geography, Geomorphology, jinkwankim77@gmail.com]
- Kyong-Hwan Park, Ph.D.
   [Professor, Social and Economic Geography, kpark3@gmail.com]
- Su-Jeong Kim, Ph.D.
   [Assistant Professor, Urban and Cultural Geography, sjkim108@jnu.ac.kr]
- Yong-Gyun Lee, Ph.D.
   [Professor, Regional and Population Geography, yonggyunlee@hanmail.net]

# ■ Degree Requirements

Students are required to earn 150 credits, with 45 from core courses, 27 from electives, and 24 from liberal arts courses.

Students are required to write a bachelor's thesis and to demonstrate computer and foreign language proficiency. Students will be issued a teacher's license when all but the computer proficiency requirement are satisfied.

# ■ What Do You Study?

#### ■ Core Courses

Introduction to Education

Philosophy and History of Education

Geography Education in Contemporary Society

Understanding of Physical Geographic Environment

Educational Sociology

Educational Psychology

Teaching Children with Learning Disabilities

Education of Geomorphology

**Educational Assessment** 

Educational Administration and Management

Curriculum

Education of Economic Geography

Education of Urban Geography

Theory of Geography Education

Teaching Method and Technology

Education Volunteer Service

Thinking and Writing in Geography Education

Practical Affairs for the Teaching Profession

Research Method and Techniques in Geography

Student Teaching Internship

Theory and Practice of School Violence Prevention

### **■** Electives

Education of World Regional Geography

Education of Regional Geography of Korea

Education in Geographic Fieldwork: Level 1

Education in Geographic Fieldwork: Level 2

Education of Tourism Geography

Education of Rural Settlement Geography

Education in Geographic Fieldwork: Level 3

Social Geography Education

Education of Climatology

Education of Cultural Geography

Education of Industrial Location Theories

Education of Regional Geography of America

Education of Historical Geography

Education of Population and Resource Geography

Teaching Practicum of Human Geography

Practices in Physical Geographic Education

International Development and Politics

Education of GIS and Cartography

Evaluation in Geographic Education

Education in Geographic Fieldwork: Level 4

Education in Geographic Fieldwork: Level 5

Education in Geographic Fieldwork: Level 6

Critiques in Geography Education

History of Geography Thought Education

Development Geography

Community-making Education

Environmental Geography Education

Education of Geographic Information Systems (GIS)

Essays Education of Human Geography

Essays Education of Physical Geography

Geographical Education and Geographical thought

World Geomorphology

Method of Geographical Research

Climatic geomorphology

Travel Geography

Research of Geographical Instructional Materials and

Media

Political Geography Education

Education on Cities in the World

Education of Regional Geography of Europe-Africa

Education of Regional Geography of Asia-Oceania

### Careers

All students are able to obtain the qualifications for the secondary school teachers with graduation. Students can choose from many kinds of jobs related to geography education: second school teachers, administrators, research instructors, GIS specialists, and academic professors.

# Ethics Education

\_\_Contact Information

Phone: +82-62-530-2400

URL: http://ethicsedu.jnu.ac.kr

### ■ What is Ethics Education?

The Department of Ethics Education currently offers programs intended for students to become qualified ethics teachers in secondary schools. The purpose of the Department is to study Western ethics, Korean & Eastern ethics, Sociology and teaching methods in moral education, and to cultivate talented teachers with desirable teaching skills in the rapidly changing contemporary society. Graduates work in various fields such as secondary schools, research institutes, government affairs, journalism, and business.

### **■** Department of Ethics Education

This Department offers courses in pedagogy, ethics, philosophy, and politics for the purpose of cultivating good moral teachers. Other fields such as philosophical anthropology, religion, and sociology are the interdisciplinary basis for ethics education.

The intellectual mission of this Department can be classified into three parts:

- I . Foundations of Ethics, which encompasses the history of ethics and core concepts in the philosophical study of ethics;
- II. Ethics in Action, which relates theory to practice in key domains of social life, including bioethics, business and political ethics, and ethics in the public sphere;
- III. Ethics in Education, which lets students prepare for careers as teachers.

Prospective teachers of ethics education must be trained in the subject matter, practiced in the arts of pedagogy, attuned to the needs of students, and astute to the interplay of theory and practice.

The courses include such issues as the integration of moral values education and civics within the academic curriculum, as well as appropriate and effective methods of classroom management and student discipline compatible with students' moral growth. The main focuses of the courses are teaching methods, students' moral development, moral autonomy, and the assessment of social and moral development.

### Professors

- Kee-Hyeon Kim, Ph.D.
   [Professor, East Asian Ethics, 47korea@hanmail.net]
- Young-Ran Roh, Ph.D.
   [Professor, Western Ethics, yrroh@hanmail.net]

- Tak-Joon Jung, Ph.D.
   [Professor, Moral Education, jungtj1@hanmail.net]
- Gu-Sup Kang, Ph.D.
   [Professor, Unification Education, gusupkang@gmail.com]

# ■ What Do You Study?

### Core Courses

- Curriculum (2)
- Teaching Method and Technology (2)
- Educational Sociology (2)
- Educational Psychology (2)
- Philosophy and History of Education (2)
- Educational Assessment (2)
- Introduction to Education (2)
- Educational Administration and Management (2)
- Introduction to Ethics (3)
- Ethical Thoughts in East Asia (3)
- Teaching children with Learning Disabilities (2)
- Democracy and Positive-sum Morals (3)
- Western Ethics and Thoughts (3)
- School Violence Prevention and Understanding of Students (2)
- Practical Affairs for the Teaching Profession (2)
- Education Volunteer Service (2)
- Ethical Thoughts in Korea (3)
- Student Teaching Internship (2)
- Theory of Ethics Education (3)
- Research Method And Techniques in Ethics Education (3)
- Studies on Unification Education (3)

Total Credits: 50

### ■ Electives (3)

- Contemporary Moral Issues and Traditional Ethics in Korea
- · Communitarianism and ethics
- International relations and ethics
- Modern Ethical Thoughts
- Study of multi-cultural education
- · Logics and Ethics Education
- · Lao-Zhuang's Ethics Education
- · Understanding of moral education
- Teaching-Learning Methodology & Assessment in Moral-Ethical Subjects
- · Curriculum and method of moral education
- The purpose of moral education
- · A Course on Logic and Essay Writing in Ethics

#### Education

- · Moral Psychology and Moral Philosophy
- Readings of the Classics in East Asian Ethics
- · Understanding of North Korean society
- · Buddhistic Ethics Education
- · Classics of the Social thoughts
- · Social Ethics
- Social Justice and ethics
- Ethical Thoughts of Sung-Ming Period
- Theories of Citizenship Education
- Reading of the Classics in Ethics
- · Applied Ethics
- Anthropology
- · Studies on Education of Traditional Ethics in Korean
- Political Philosophy and ethics
- · Philosophy and Ethics Education
- · Studies in Moral Psychology
- Introduction to moral education
- Issues of Contemporary Ethics
- The present state and future of Moral subject education

Total Credits: 96

### ■ Liberal Arts Courses

- Writing (3)
- Logic (3)
- English for Global Communication2 (3)
- Career Plan and Self Understanding (2)

Total Credits: 11

#### Minor Courses

- Theory of Moral Education (3)
- A Course on Logic and Essay Writing in Ethics Education (3)
- Democracy and Positive-sum Morals (3)
- Analysis of Curriculum and Textbook of Moral Ethical Course (3)
- Western Ethics (3)
- Textual Studies in Korean Ethics (3)

Total Credits: 18

# ■ Pedagogy Courses

- Theory of Moral Education (3)
- A Course on Logic and Essay Writing in Ethics Education (3)
- Research Methods and Techniques in Ethics Education (3)

Total Credits: 9

# Korean Language Education

\_\_Contact Information

Phone: +82-62-530-2410

E-mail: koreaedu2410@daum.net

URL: http://koredu.jnu.ac.kr

# **■** What is Korean Language Education?

The Department of Korean Language Education was established in 1978. Since that time, students have accumulated their elite knowledge of Korean language and literature, polishing their teaching and leadership skills.

Along with undergraduate courses, there are graduate courses in the Graduate School of Education, as well as Ph.D. programs in Korean Language Education. These courses are organized to link the process of studies and to run concurrently.

Faculty members in the Department of Korean Language Education believe that Korean language and Korean culture represent the root of Korea as a nation, and strengthening the field of Korean education will enable the country to better participate in globalization.

To this end, the Department conducts various activities such as direct investigations, folk custom excursions, academic exhibitions, and literary investigations and seminars. These activities are meant to connect studies with practical experiences in the field.

# **■** Department of Korean Language Education

The goal of the Department of Korean Language Education is to cultivate teachers who understand and are able to teach the correct usage of the Korean language in secondary schools and in society at large. The Department accomplishes this by enabling its students to analyze linguistic phenomena and appreciate literary works. The whole range of Korean language and culture is covered in the academic curriculum.

Many types of courses are available in the Department to allow for the study of specific subjects within such majors as Korean Linguistics, Korean Language Education for International students, Korean Classical Literature Education and Korean Modern Literature Education, Korean Folklore and Culture Education, Korean Creative Writing Education, and Korean Listening, Speaking, Reading, and Writing Skills Education.

#### **Educational Objectives**

- to offer students greater opportunities to acquire general knowledge in the area of Korean language and literature and enhance scholastic teaching ability in the educational field by practicing refined Korean language from a teacher's perspective;
- 2) to contribute to the scholarship and education of Korean language and culture for the purpose of meeting the challenges of globalization in the 21st century.

### Professors

- Cheol Noh, Ph.D.
   [Professor, Modern Korean Poetry Education, nochul@jnu.ac.kr]
- Young-Hee Yang, Ph.D.
   [Professor, Middle Korean, Grammar Education, chamnamu@jnu.ac.kr]
- Keun-Ho Kim, Ph.D.
   [Professor, Modern Korean Novel Education, critik7@jnu.ac.kr]
- Jin-Su Jo, Ph.D.
   [associate Professor, Korean Modern Linguistics, Grammar Education, jojinsul@jnu.ac.kr]
- Ji-Hyoung Cho, Ph.D.
   [Assistant Professor, Korean Classical Literature, kaisercho@jnu.ac.kr]
- Yun-Mi, Chae, Ph.D.
   [Assistant Professor, Korean Classical Novel, ymchae82@jnu.ac.kr]

# Degree Requirements

- Credit transfer: 150
- Graduation Qualification
  - 1. Pass final exams
- 2. Pass English for Global Communication
- 3. Exploration for Literature and Language studies(twice).

# ■ What Do You Study?

#### ■ Core Courses

Korean Teaching Material Research & Guidance

Introduction to Education

Educational Assessment

Educational Sociology

Educational Administration and Management

Philosophy and History of Education

Curriculum

Educational Psychology

Teaching Method and Technology

Practical Affairs for the Teaching Profession

Prevention and Countermeasures of School Violence

Student Teaching Internship

Education Volunteer Service

Teaching Children with Learning Disabilities

Theories of Teaching Korean Language

Educational Theory of Fiction

Theories in Teaching Korean Poetry

A Course on Korean Logic and Essay Writing

Korean Grammar

History Of Korean Language

Korean Literature History

### Electives

Education Of Literature

Educational Theory of Korean Essays

Educational Theory of Korean Classical Poetry

Instruction

Reading Korean Modern Literary Works

Practice in Teaching Literature

Education of Korean Grammar

Educational Theory of Reading

Korean literary criticism and it's education

Practice of Creative Writing

Reading Korean Ancient Literary Works

Korean Language Norms Education

Education of Social Linguistics

Teaching Theory of Drama

Introduction to Korean Literature

Graphemics

Educational Studies in Hyang-Ga&Poetry in Koryo Dynasty

Modern literary education

Korean Semantics Education
Selected Readings on the Korean Linguistic History
Materials
Theory of Korean Writers and Works and it's
Education
Practice in Korean Grammar Education
Special Lecture of Modern Literary Education
Special Lecture of Korean Classical Literary
Education

Educational Theory of speech
Educational theory of Writing
Media and Korean Language Education
Theories of Korean Language Education
Theories in Teaching Korean Classical Novel
Theories in Teaching Sino - Korean Literature
Introduction to Korean Linguistics
Korean Phonology
Practice in Teaching Literature

### Careers

Graduates receive a secondary degree teaching certificate in Korean Language Education. Students have a broad range of career options, from education to journalism: secondary school teachers, journalists, administrators, public servants, research instructors, junior supervisors, academic professors, attorneys, and Korean language education specialists.

# English Education

\_\_*Contact Information* Phone: +82-62-530-2430

Fax: +82-62-530-2449 URL: http://engedu.jnu.ac.kr

# ■ What is English Education?

The Department of English Education strives to develop our students' language competences and teaching skills in keeping with the professional demands of this information-rich era of globalization. We develop our students' communication skills through English while fostering the critical perspective that is essential for a professional EFL teacher in the field of contemporary English Education.

The courses in the program are focused on the studies of English Language and Literature and English Education, which are diverged into three channels of introductory British and American literature courses, the basic theories of English language, and English education. The curriculum of the department is structured to enable students to acquire an in-depth theoretical foundation of knowledge, and to further understand how this knowledge becomes applied pedagogy through practical courses including English Teaching Methods, English Teaching Practice, EFL Teaching Materials Development, and English language evaluation. Language skills courses such as English Conversation, English Writing, and English Grammar are complemented by the broader perspective offered in courses focused on English Literature and Understanding wider English (Anglophonic) and British Culture.

# Department of English Education

Since 1972, the Department of English Education has produced leaders and experts in the field of English education who play key roles in the future development of English education by equipping them with a profound knowledge in their field and fostering their capabilities to apply that acquired knowledge to the sites where they work. The students study the nature and structure of the English language while exploring a wide variety of English literary works, as well as achieving a comprehensive grounding in linguistics.

It also helps students to better understand the history of British and American literature. Additionally, it develops methods and methodology of teaching English in regard to curricula, teaching materials, and the theory of testing, among others.

As a result, students become more qualified with both commanding and capable teaching skills while also keeping pace with developments in information and globalization. These in-depth studies foster professional English teachers of secondary schools, as well as help graduate students study English philology, literature, and education.

### Professors

- Byung Kyoo Ahn, Ph.D.
   [Professor, English Education, ahnbk@jnu.ac.kr]
- Chul Joo Uhm, Ph.D.
   [Professor, English Education, cjuhm@jnu.ac.kr]
- Hui Sok Yoo, Ph.D.
   [Professor, 19th Century American Novels, yoohuisok@yahoo.com]
- Jee Hyun Ma, Ph. D.
   [Professor, English Education,

jeehyun@jnu.ac.kr]

- Mun-Hong Choe, Ph.D.
   [Professor, English Education, munhong@jnu.ac.kr]
- Seung-a Ji, Ph.D.
   [Associate Professor, English Drama, shange@jnu.ac.kr]
- Christopher Lashwood, M.A.
   [Invited Professor, Applied Linguistics(TESOL), chrislashwood@gmail.com]

# Degree Requirements

Students are required to earn 150 credits, with 45 credits from core courses, 48 credits from electives, 30 credits from liberal arts courses, and 27 credits from general electives.

Liberal Arts Credits: 30General Electives Credits: 27

### ■ What Do You Study?

#### Core Courses

Introduction to Education (2)

Educational Assessment (2)

Educational Sociology (2)

Educational Administration and Management (2)

Philosophy and History of Education (2)

Curriculum (2)

Educational Psychology (2)

Teaching Method and Technology (2)

Practical Affairs for the Teaching Profession (2)

Student Teaching Internship (2)

Education Volunteer Service (2)

Teaching Children with Learning Disabilities (2)

School Violence Prevention and Understanding of

Students (2)

Teaching Grammar in EFL (3)

Principles of English Language Teaching (3)

Teaching Critical Writing in English (2)

EFL Teaching Materials Development (3)

Intermediate English Writing (3)

English Phonetics & Phonology (3)

Survey on British Literary Works (3)

Survey on American Literature (3)

Total Credits: 49

### Electives

Teaching English Literature (3)

Visual Text and English Education (3)

Teaching British and American Culture (3)

Teaching English as a Foreign Language (3)

Multimedia for English Language Teaching (3)

English Speech (3)

Classroom English Practice (2)

English Teaching Practice (3)

English Education Curriculum Development (3)

Seminar in English Language Teaching (3)

English Evaluation (3)

Basic English Reading (3)

Beginning English Conversation (3)

Teaching Reading in EFL (3)

Teaching Writing in EFL (3)

Introduction to English Linguistics (3)

Educational Drama (3)

Intermediate English Conversation (3)

Media English Reading (3)

History of English Culture (3)

History of American Culture (3)

Understanding of English Novels (3)

Practical English Writing (3)

Understanding English Poetry (3)

Advanced English Reading (3)

English Language Acquisition (3)

History of English Language (3)

Modern English Grammar (3)

Understanding English Classics (3)

Advanced English Writing (3)

Seminar on English Literature (3)

Applied English Phonetics (3)

Understanding English Drama (3)

Teaching Speaking in EFL (3)

Reading English Prose (3)

Total Credits: 104

### ■ Minor Required

Teaching Grammar in EFL (3)

Principles of English Language Teaching (3)

Teaching Critical Writing in English (2)

EFL Teaching Materials Development (3)

English Phonetics & Phonology (3)

Survey on British Literary Works (3)

Total Credits: 17

### ■ Minor Electives

21 credits should be chosen.

### Careers

A large number of graduates work at middle and high schools or English education-related institutes, government-sponsored organizations as teachers, consultants, professors, or administrators. Others become graduate students or go abroad to work or study.

We expect that the program will deepen the students' insights into not only their own experience but also the collective experience of the society to which they belong and thus help students find a way to further study in medical science, dentistry, psychology, business, or education as well as in English. The graduates of English Education department play a key role as teachers, leaders, educational administrators, consultants, journalists, professors, or public officers at middle and high schools or English-related institutes, as well as government-sponsored organizations who actively participate in the field of English education. Those who have enthusiasm for pursuing their intellectual goals as professionals can apply for graduate courses at home and abroad and further their academic career in the areas of English language, literature, and education as researchers in these fields.

# Mathematics Education

\_\_Contact Information

Fax: +82-62-530-2479 E-mail: A0088@jnu.ac.kr

### What is Mathematics Education?

Mathematics education is a field of study focusing on teaching and learning, curriculum, psychology, philosophy, technology, history, and gender issues based on mathematical content, coupled with general theories of education and mathematics education.

### Department of Mathematics Education

The mission of the Department of Mathematics Education is to educate students as secondary school teachers so that they may someday take a central role as excellent instructors in mathematics. The curriculum for the Department of Mathematics Education consists of basic and intensive levels of modern mathematics, including various theories of mathematics education in order to prepare our students for this field. The Department of Mathematics Education provides a well-designed student teaching program for Chonnam National University, along with College of Education affiliated middle and high schools. This opportunity provides our students with first-hand experience, applying what they learn in their undergraduate program to real situations. Furthermore, the Department of Mathematics Education has exclusive use of computer laboratories, rooms with pertinent materials, and classrooms equipped with the latest modern technology. In addition, the Department holds a pivotal position in the field of mathematics education within the Gwangju and Chonnam regions. As part of its commitment to enhancing mathematics education, the department organizes the annual "Yongbong Mathematics Education Conference".

The Department of Mathematics Education not only strives to nurture teachers who are indispensable in the field of education, but also makes constant efforts to contribute to the development of the field of mathematics education by suggesting the direction in which mathematics education should head.

### Professors

- Bomi Shin, Ph.D.,
   [Professor, Mathematics Education, bomi0210@jnu.ac.kr]
- Chunyoung Oh, Ph.D.,
   [Professor, Mathematical Biology and Complex Analysis, cyoh@jnu.ac.kr]
- · Sik Lee, Ph.D.,

[Professor, Topology, slee@jnu.ac.kr]

- Sungmo Kang, Ph.D., [Professor, Geometry and Topology, skang4450@jnu.ac.kr]
- Yeansu Kim, Ph.D.,
   [Associate Professor, Algebra and Number theory, ykim@jnu.ac.kr]

· Injo Hur, Ph.D.,

[Associate Professor, Analysis, injohur@jnu.ac.kr]

• Keunyoung Jeong, Ph.D.,

[Assistant Professor, Algebra and Number theory, keunyoung@jnu.ac.kr]

### **■** Degree Requirements

Mathematics education students are required to take 150 credit hours. In detail, 93 credits are within the major, 30 credits in liberal arts, and 27 credits in common electives.

# ■ What Do You Study?

### ■ Core Courses

Curriculum (2)

Teaching Methods and Technology (2)

Educational Sociology (2) Educational Psychology (2)

Philosophy and History of Education (2)

Educational Assessment (2) Introduction to Education (2)

Educational Administration and Management (2)

Advanced Calculus 1 & Practice (3)

Mathematical Statistics (3)

Teaching Children with Learning Disabilities (2)

Theory of Mathematical Education (3) Complex Analysis 1 and Practice (3)

Teaching for Secondary School Mathematics (3)

A Course on Mathematics Logic and Essay

Writing (2)

Topology 1 and Practice (3)

Abstract Algebra 1 and Practice (3)

Education Volunteer Service (2)

Practical Affairs for the Teaching Profession (2)

Student Teaching Internship (2)

#### Electives

Set Theory and Laboratory (3)

Linear Algebra 1 and Laboratory (3)

Linear Algebra 2 (3)

Discrete Mathematics and Laboratory (3)

Introduction to Mathematics Education (3)

Differential Equations and Laboratory (3)

Theory of Numbers (3)

Introduction to Geometry (3)

Mathematics Education and coding (3)

Advanced Calculus 2 (3)

Mathematical modeling for teachers (3)

Artificial Intelligence and Mathematics Education (3)

Psychology of Mathematics Education (3)

Computer Based School Mathematics (3)

Abstract Algebra 2 (3)

Differential Geometry 1 (3)

Topology 2 (3)

Complex Variables 2 (3)

Assessment of Teaching & Learning in

Mathematics (3)

Differential Geometry 2 (3)

History of Mathematics (3)

Real Analysis (3)

Topics in Abstract Algebra (3)

Geometry and School Mathematics (3)

Algebra and School Mathematics (3)

Analysis and School Mathematics (3)

Problem Solving Education Theory (3)

Topics in Analysis (3)

### Minor Courses

Advanced Calculus 1 & Practice (3)

Theory of Mathematical Education (3)

Teaching for Secondary School Mathematics (3)

A Course on Mathematics Logic and Essay

Writing (2)

Topology 1 and Practice (3)

Abstract Algebra 1 and Practice (3)

### Careers

The majority of our alumni are engaged in instructing mathematics within both public and private secondary educational institutions. A subset of graduates assume roles as accomplished administrators within their domain at the Office of Education, while others leverage their postgraduate qualifications to offer instruction in mathematics or mathematics education at the university level. Notably, within the Department of Mathematics Education, we take particular pride in boasting the highest national success rate in the annual administration of the National Teacher Employment Exam. A significant portion of those who achieve success in this endeavor presently hold positions as mathematics educators in Gwangju, Chonnam Province, and the Seoul-Gyeonggi metropolitan area.

# Physics Education

\_\_Contact Information
Phone: +82-62-530-2489

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URL: http://physicsedu.jnu.ac.kr

# **■** What is Physics Education?

The main themes of Physics Education are (1) to define the nature of physics and physics education based on philosophy, history, and psychology of physics and theory of education; (2) to identify and understand students' cognitive processes when they learn physics concepts, conduct scientific inquiry and solve physics problems; (3) to establish relationships between students' physics learning and their everyday life, interests and creative attitudes; (4) to develop and implement various effective teaching strategies using concept maps, epistemological V, demonstration, cognitive conflict, analogy, computers, discussion, and argumentation; and finally (5) to formulate the theory of physics learning, theory of physics curriculum development, and theory of assessment of physics learning.

# **■** Department of Physics Education

Physics is a pure science that studies the diverse phenomena of the natural world. Its foundational theories and experimental approaches provide a crucial foundation for other applied science fields. The importance of physics is increasingly being recognized, making the training of competent and passionate physics educators a vital task. In the Physics Education Department, continuous efforts are made to train secondary school teachers with the ability to effectively guide students.

To achieve this goal, the Physics Education Department offers comprehensive curricula that include both the fundamental subjects of physics (such as mechanics, electromagnetism, and quantum mechanics) and applied subjects (like electronic physics). These curricula also encompass courses on physics education theory, research on physics teaching materials, and teaching methods. Both theoretical and practical/experimental courses are included. Through this process, students are equipped with the practical qualities and research abilities needed as science and physics educators.

Upon graduation from the Physics Education Department, students receive a certification to teach physics and general science in secondary schools. Most of these graduates primarily become teachers in secondary schools, while some pursue advanced studies in graduate schools on physics or physics education. Based on their research experiences, some contribute to academia as professors, while others stand out as researchers or in various industries, demonstrating their expertise across different spheres of society.

### Professors

- Jongwon Park, Ph.D.
   [Professor, Physics Education, jwpark24@jnu.ac.kr]
- Won-Young Hwang, Ph.D.
   [Professor, Quantum Optics, wyhwang@jnu.ac.kr]
- Jaehyeok Choi, Ph.D.
   [Professor, Physics Education,

choi@jnu.ac.kr]

- Yung Ho Kahng, Ph.D.
   [Professor, Emerging Materials Devices, yhkahng@jnu.ac.kr]
- Jeongwoon Hwang, Ph.D.

  [Associate Professor, Condensed Matter theory, phyjhwang@jnu.ac.kr]

# ■ What Do You Study?

### Core Courses

Introduction to Education (2)

Philosophy and History of Education (2)

Educational Psychology and Counseling (2)

Educational Sociology and Lifelong Education (2)

Practical Affairs for the Teaching Profession (2)

Mechanics Education 1 (3)

Physics Education (3)

Electricity and Magnetism Education 1 (3)

Curriculum and Evaluation (2)

Educational Administration and Management (2)

Research of Physics Teaching Materials and

Teaching Methods (3)

Thermal·Statistical Physics Education 1 (3)

Teaching Methods and Technology (2)

A Course on Physics Logic and Essay Writing (2)

Education Volunteer Service (2)

Quantum Physics Education 1 (3)

Wave and Optics Education (3)

Student Teaching Internship (2)

Teaching Children with Learning Disabilities (2)

Total Credits: 45

### Electives

General Biology Inquiry Laboratory 1 (1)

General Chemistry Inquiry Laboratory 1 (1)

Earth Science Inquiry Laboratory 1 (1)

General Physics Inquiry Laboratory 1 (1)

General Biology Inquiry Laboratory 2 (1)

General Chemistry Inquiry Laboratory 2 (1)

Earth Science Inquiry Laboratory 2 (1)

General Physics Inquiry Laboratory 2 (1)

Problem Solving for Physics 1 (2)

Problem Solving for Physics 2 (2)

Physics Education Exp. 1 (1)

Basic Electronic Circuit Lab. (2)

Philosophy of Science and Science Education (2)

Physics Curriculum and Teaching Practice (3)

Evaluation in Physics Learning (2)

Practice of Mechanics Education (2)

Practice of Mechanics Education 2 (2)

Mathematics for Physics 1 (3)

Practice of Mathematics for Physics (2)

Computers in Physics and Practice (3)

Modern Physics Education 1 (3)

Mechanics Education 2 (3)

Physics Education Exp. 2 (1)

Practice of Electricity and Magnetism Education (2)

Physics Educations and Multimedia (3)

Mathematics for Physics 2 (3)

Modern Physics Education 2 (3)

Electricity and Magnetism Education 2 (3)

Physics Education Exp. 3 (1)

Practice of Thermal and Statistical Physics

Education (2)

Electronic Physics (3)

Physics Education Exp. 4 (1)

Thermal·Statistical Physics Education 2 (3)

Experiment Data Analysis (3)

Practice of Quantum Physics Education (2)

Practice of Wave and Optics Education (2)

Practice of Electricity and Magnetism

Education 2 (2)

Practice of Electronic Physics (3)

Development Materials in Physics Learning (3)

Physics Education Exp. 5 (1)

Quantum Physics Education 2 (3)

Fluid Physics (3)

Condensed Matter Physics (3)

Theory of Teaching Physics Inquiry (3)

Seminar on Physics Education (3)

Physics Education Exp. 6 (1)

Topics in Condensed Matter Physic (3)

Nuclear and Particle Physics for Science

Teachers (3)

Gifted Education in Physics 1 (2)

Gifted Education in Physics 2 (2)

Total Credits: 109

#### Minor Courses

Mechanics Education 1 (3)

Physics Education (3)

Electricity and Magnetism Education 1 (3)

Research of Physics Teaching Materials and

Teaching Method (3)

Quantum Physics Education 1 (3)

A Course on Physics Logic and Essay Writing (2)

Total Credits: 17

### Careers

Graduates earn teaching certificates, qualifying them to become physics teachers in public schools. Other careers available to graduates include those in academia and research institutes. Some graduates opt to pursue graduate studies in Korea and abroad.

# Chemistry Education

\_Contact Information

Phone: +82-62-530-2490 Fax: +82-62-530-2499

URL: http://chemedu.jnu.ac.kr/

# ■ What is Chemistry Education?

The undergraduate program in Chemistry Education was established to meet the needs of creative secondary school teachers who have professional knowledge of chemistry, and teaching skills relating to educational processes in chemistry.

### Professors

- Sang Kwon Lee, Ph.D. [Professor, Chemistry Education, lsk1213@jnu.ac.kr]
- Soon Hyung Kang, Ph.D.
   [Professor, Analytical Chemistry, skang@jnu.ac.kr]
- Si Kyung Yang, Ph.D.
   [Professor, Organic Chemistry,

sky223@jnu.ac.kr]

- Kyoung Chul Ko, Ph.D.
   [Associate Professor, Physical Chemistry, kcko1982@jnu.ac.kr]
- Jonghoon Choi, Ph.D.
   [Assistant Professor, Inorganic Chemistry, jonghoon92@jnu.ac.kr]

# Degree Requirements

Students are required to earn 150 credits (45 credits from core courses, 27 credits from electives, 32 credits from liberal arts courses, 21 credits from enhancement courses, and 25 credits from general electives).

# ■ What Do You Study?

### Core Courses

Introduction to Education (2)

Educational Assessment (2)

Educational Sociology (2)

Educational Administration and

Management (2)

Philosophy and History of Education (2)

Curriculum (2)

Educational Psychology (2)

Teaching Method and Technology (2)

Practical Affairs for the Teaching Profession (2)

Student Teaching Internship (2)

Education Volunteer Service (2)

Teaching Children with Learning Disabilities (2)

School Violence Prevention and Understanding of

Students (2)

History of Chemistry and Chemistry

Education (3)

A Course on Chemistry Logic and Essay writing (2)

A Chemistry Education (3)

Research of Chemical Teaching

Materials and Teaching Methods (3)

Physical Chemistry Education 1 (3)

Analytical Chemistry Education 1 (3)

Organic Chemistry Education 1 (3) Inorganic Chemistry Education 1 (3)

Total Credits: 49

### Electives

General Biology Inquiry Laboratory 1 (1) General Chemistry Inquiry Laboratory 1 (1) Earth Science Inquiry Laboratory 1 (1) General Physics Inquiry Laboratory 1 (1) General Biology Inquiry Laboratory 2 (1) General Chemistry Inquiry Laboratory 2 (1) Earth Science Inquiry Laboratory 2 (1) General Physics Inquiry Laboratory 2 (1) Philosophy of Science and Science Education (2) Physical Chemistry Inquiry Laboratory 1 (2) Physical Chemistry Education 2 (3) Physical Chemistry Education Exercises 1 (1) Physical Chemistry Inquiry Laboratory 2 (2) Analytical Chemistry Education 2 (3) Analytical Chemistry Inquiry Laboratory 1(2) Analytical Chemistry Inquiry Laboratory 2 (2) Theory of Teaching Chemistry Inquiry (3) Physical Chemistry Education 3 (3) Physical Chemistry Education Exercises 2 (1)

Organic Chemistry Education 2 (3)
Organic Chemistry Research Laboratory 1 (2)
Chemistry Curriculum and Evaluation (2)
Quantum Chemistry Education (3)
Organic Chemistry Education 3 (3)
Organic Chemistry Research Laboratory 2 (2)
Advanced Organic Chemistry Education (3)
Instrumental Analysis Education (3)
Inorganic Chemistry Education 2 (3)
Inorganic Chemistry Inquiry Laboratory (2)
Advanced Physical Chemistry Education (3)
Advanced Analytical Chemistry Education (3)

Coordination Chemistry Education (3)

Total Credits: 67

### Minor Courses

Physical Chemistry Education 1 (3)
Organic Chemistry Education 1 (3)
Chemistry Logic and Essay Writing (2)
Chemistry Education (3)
Inorganic Chemistry Education 1 (3)
Research of Chemical Teaching Materials and Teaching Methods (3)

Total Credits: 17

### Careers

Most graduates are employed as teachers in secondary schools, professors, educational administrators, or researchers in the field of chemistry and education.

# Biology Education

\_\_*Contact Information* Phone: +82-62-530-2500

Fax: +82-62-530-2509 URL: http://bioedu.jnu.ac.kr

# **■** Major in Biology Education

The Department of Biology Education aims to educate students to become science and biology teachers at middle and high schools, and experts in biology or biology education. For this purpose, we strives to develop our students' understanding of life science and teaching skills in keeping with the professional demands of the knowledge based society of information.

The curriculum of the department is structured to enable students to acquire an in-depth theoretical foundation of life science, and to further understand how this knowledge becomes applied pedagogy through practical courses. The courses such as Genetics, Cytology, Taxonomy, Embryology, Physiology, and Biology Field Practice are to help students go get in-depth knowledge of life science. And the courses such as Biology Education and Research of Biology Teaching Materials & Teaching Method are offered to prepare students to become the competent secondary school biology teachers.

### Professors

- Dong-Woog Choi, Ph.D.
   [Professor, Plant Molecular Genetics, dwchoi63@jnu.ac.kr]
- Eunyoung Jeong, Ph.D.

  [Professor, Biology Education, jey@jnu.ac.kr]
- Kyung-Bon Lee, Ph.D.
   [Professor, Developmental Biology,

kblee@jnu.ac.kr]

- Jung-Hyun Lee, Ph.D.
   [Associate Professor, Plant Taxonomy/ Conservation Genetics, quercus@jnu.ac.kr]
- Su-Man Kim, Ph.D.
   [Assistant Professor, Immunology, kimsm3324@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 150 credits, with 45 credits from core courses, 32 credits from liberal arts courses, 25 credits from general courses, 27 credits from electives, and 21 credits from enhancement courses. Students are also required to pass a comprehensive exam and demonstrate proficiency with computers and in a foreign language.

# ■ What Do You Study?

Core Courses

Introduction to Pedagogy (2)

Educational Assessment (2) Educational Sociology (2) Educational Administration and Management (2) Plant Embryology (3) Philosophy and History of Education (2) Plant Embryology Lab (1) Curriculum (2) Vertebrate Anatomy (3) Educational Psychology (2) Biology Inquiry Practice (3) Teaching Method and Technology (2) Evaluation in Science Learning (3) Cytology (3) Genetic Engineering (3) Genetics (3) Microbiology (3) Molecular Biology (3) Ecology Lab (1) Animal Taxonomy (3) Microbial Physiology (3) Animal Physiology (3) Diversity and Change of Life (3) Introduction to Ecology (3) Molecular Biology (3) Practical Affairs for the Teaching Profession (2) Plant Physiology (3) Teaching Children with Learning Disabilities (2) Philosophy of Science and Science Education (2) Theory and Practice of School Violence Prevention (2) Microbiology Lab (1) Education Volunteer Service (2) Principles of Biology Inquiry (3) Student Teaching Internship (2) Phycology (3) Biology Education (3) Phycology Lab (1) Research of Biology Teaching Materials & Biology in the Human Context (3) Teaching Method (3) Entomology (3) A Course on Biology Logic and Essay Writing (2) Entomology Lab (1) Animal Physiology Lab (1) Electives Immunology (3) General Biology Inquiry Lab 1 (1) Historical Approach for Biology Learning (3) General Biology Inquiry Lab 2 (1) Animal Embryology (3) General Physics Inquiry Lab 1 (1) Animal Embryology Lab (1) General Physics Inquiry Lab 2 (1) Biostatistics (3) General Chemistry Inquiry Lab 1 (1) Environmental Biology (3) General Chemistry Inquiry Lab 2 (1) Mycology (3) Earth Science Inquiry Lab 1 (1) Genomics (3) Earth Science Inquiry Lab 2 (1) Biology Field Practice (1) Minor Courses Plant Morphology Lab (1) Cytology (3) Plant Taxonomy Lab (1) Molecular Biology (3) Intertidal Zone Biota Inquiry (1) Animal Taxonomy (3) Biological Chemistry (3) Genetics (3) Cytology Lab (1) Biology Education (3) Animal Taxonomy (3) A Course on Biology Logic and Essay Writing (2) Animal Taxonomy Lab (1) Research of Biology Teaching Materials and Plant Morphology (3) Teaching Methods (3) Total Credits: 17 Plant Taxonomy (3)

Genetics Lab (1)

# Careers

The graduates of our department can get the certificate of secondary school science teacher. Most graduates work for secondary schools as science and biology teachers. Some of them keep researching in postgraduate programs and then become experts in biology or biology education.

# Earth Science Education

\_\_Contact Information
Phone: +82-62-530-2510

URL: http://earthedu.jnu.ac.kr/

### ■ What is Earth Science Education?

The Department of Earth science education aims to train science and earth science teachers at middle and high schools. The goal is to train qualified earth science teachers with general understanding of earth science - geology, astronomy, atmospheric science, and oceanography - and the overall field of science, effective teaching methods, and morality to positively influence students.

# **■ Major in Earth Science Education**

The Department of Earth Science Education is committed to training and developing exceptionally well informed, enthusiastic, dedicated and highly-skilled earth science educators and practitioners for middle and high schools, higher education, and research and development. All of our programs are devoted to fostering critical thinking and a spirit of innovation.

The educational program has many highly developed general and specialized courses, including geology, astronomy, atmospheric science, oceanography, and earth science education, as well as presenting an opportunity for hands-on experience through experiments in laboratory settings. In addition, we have recently been developing programs that address environmental problems and space science. Teaching certificates are awarded upon completion of terms and the required courses.

### Professors

- Jong-Hee Kim, Ph.D.
   [Professor, Earth Science Education, earthedu@jnu.ac.kr]
- Suyeon Oh, Ph.D. [Professor, Astronomy, suyeonoh@jnu.ac.kr]
- Tae-Won Park, Ph.D.
   [Associate Professor, Atmospheric Science,
- park2760@jnu.ac.kr]
- Sungshil Kim, Ph.D.
   [Assistant Professor, Structural geology, neogeo94@jnu.ac.kr]
- Chang-Pyo Jun, Ph.D.
   [Assistant Professor, Paleontology, cpjun@jnu.ac.kr]

# ■ Degree Requirements

Students are required to earn 140 credits, with 45 credits from core courses, 27 credits from electives, 21 credits from other (enhancement) courses, 32 credits from liberal arts courses, and 15 credits from general electives.

# ■ What Do You Study?

### Core Courses

Astronomy (3)

Atmospheric Science (3)

Introduction to Education (2)

Educational Assessment (2)

Educational Sociology (2)

Educational Administration and Management (2)

Philosophy and History of Education (2)

Curriculum (2)

Educational Psychology (2)

Teaching Method and Technology (2)

Practical affairs for the Teaching Profession (2)

Student Teaching Internship (2)

Education Volunteer Service (2)

Teaching Children with Learning Disabilities (2)

School Violence Prevention and Understanding of

Student (2)

Paleontology and Stratigraphy (3)

Earth Science Education (3)

A Course on Earth Science Logic and Essay

Writing (2)

Material Evaluation and Teaching Method in

Earth Science (3)

Geology (3)

Oceanography (3)

### Major Electives

Stellar Astronomy (3)

Basic Astronomy (3)

Astronomical Information and Data Analysis (3)

Position Astronomy (3)

Galaxy and Universe (3)

Astrophysics (3)

Meteorological Observation and Analysis (3)

Basic Atmospheric Science (3)

Dynamic Meteorology (3)

Synoptic Meteorology (3)

Atmospheric Physics (3)

General Biology Inquiry Laboratory 1 (1)

General Biology Inquiry Laboratory 2 (1)

General Chemistry Inquiry Laboratory 1 (1)

General Chemistry Inquiry Laboratory 2 (1)

Philosophy of Science and Science Education (2)

Evaluation in Earth Science Learning (2)

Education for Earth Science Gifted (2)

Guidance method of Earth Science (3)

Earth Science Inquiry Laboratory 1 (1)

Earth Science Inquiry Laboratory 2 (1)

Minerals and Optical mineralogy (3)

Earth Science Inquiry Instruction and Practice (3)

Education of Petrology and Practice (3)

Sedimentary Petrology (3)

History of the Earth and Korean Peninsula (3)

History of Earth Science and Earth Science

Education (3)

Guidance of Earth Science History (3)

General Physics Inquiry Laboratory 1 (1)

General Physics Inquiry Laboratory 2 (1)

Climatology (3)

Inquiry of Microfossils (3)

Environmental Science of the Earth (3)

Geochemistry Education (3)

Field Geology and Practice (3)

Resources Geology (3)

Geophysics (3)

Inquiry of fuel Geology (3)

Natural Disasters and Energy Resources (3)

Inquiry of Physical Oceanography (3)

#### Minor Courses

Astronomy (3)

Atmospheric Science (3)

Geology (3)

Earth Science Education (3)

A Course on Earth Science Logic and Essay

Writing (2)

Material Evaluation and Teaching Method in

Earth Science (3)

# Careers

The majority of our graduates go on to teach science in the national education system at middle or high schools and contribute greatly to educational development in real teaching contexts. A significant minority develop their careers in other areas such as research institutes, universities, government departments, and related companies.

# Home Economics Education

\_\_Contact Information
Phone: +82-62-530-2520

URL: http://homeedu.jnu.ac.kr/

### **■** What is Home Economics Education?

The Department of Home Economics Education aims to train Home Economics teachers for employment at middle schools and high schools. The goal is to train qualified Home Economics teachers with a general understanding of a beneficial dietary life, clothing, housing, household management, and family life coupled with a home economics education philosophy, effective teaching methods, and morality to positively influence students.

### **■** Department of Home Economics Education

The Department of Home Economics Education aims to cultivate students' practical problem-solving abilities, life independence ability, and relationship-forming abilities related to family life issues and the surrounding environment. We help students recognize and address issues in family life, enabling them to create a healthy and happy family culture. Our curriculum is rooted in home economics, covering topics such as family life, consumer behavior, food and nutrition, apparel, housing, and family welfare. Courses include Family Education Theory, Home Education Curriculum Research and Instruction, and Family Education Seminars. Through theoretical and practical coursework, including lab experiments and field training, we graduate competent secondary school home economics teachers equipped with comprehensive expertise and personal qualities.

After graduation, students receive a level 2 home economics teaching certificate of secondary education, allowing them to pursue careers as secondary school teachers, scholars, vice-principals, and principals. Graduates also find opportunities in various educational, home economics-related businesses, government agencies, as well as advancing to graduate school for further studies, leading to careers in universities, research institutions, corporations, and community educational organizations.

### Professors

- Lan-Hee Jung, Ph.D.

  [Professor, Food Science, lhjung@jnu.ac.kr]
- Eun-Hah Wee, Ph.D.

  [Professor, Apparel science, weh@jnu.ac.kr]
- · Seo-Yeon Lee, Ph.D.

- [Assistant Professor, Family Relationships, sy0929@jnu.ac.kr]
- Seong-Youn Choi, Ph.D.
   [Assistant Professor, Home Economics Education, taeresa@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 150 credits, with 45 credits from core courses, 27 credits from electives, 21 credits from other (enhancement) courses, 30 credits from liberal arts courses, and 27 credits from general electives.

# ■ What Do You Study?

### Core Courses

Applied Food Science (3)

Apparel Design (3)

Philosophy and History of Education (2)

Educational Administration and Management (2)

Educational Sociology (2)

Child Development (3)

Teaching Method and Technology (2)

Home Management (3)

Educational Assessment (2)

Educational Psychology (2)

Introduction to Education (2)

Curriculum (2)

Practical Affairs for the Teaching Profession (2)

Student Teaching Internship (2)

Research & Teaching of Home Economical Materials (3)

Theory of Home Economics Education (3)

A Course on Home Economics Logic and Essay Writing

Education Volunteer Service (2)

Teaching Children with Learning Disabilities (2)

School Violence Prevention and Understanding of

Students (2)

Housing (3)

#### Electives

Colouring and Design (3)

Apparel Care and Experimental Lab. (3)

Apparel Materials and Experimental Lab. (3)

Fashion Coordination Guidance (3)

Fashion Education Media Production (3)

Fashion Style Drawing (3)

Textile Finishing and New Materials (3)

Culture of Costume (3)

Coaching in Handicrafts (3)

Psychology of Dress (3)

Current Issues in Home Economics Education (3)

Laboratory of Korean Cooking Education (3)

Education of Enabling and Empowering Families (3)

Theory & Practice in Apparel Making (3)

Laboratory of Foreign Cooking Education (3)

Theory & Practice in Traditional Costume (3)

Seminar of Home Economics Education (2)

Multimedia in Home Economics Education (2)

Family Life Education (3)

Meal Management Education (3)

Nutrition Teaching Education (3)

Introduction to Food Science (3)

Food Hygiene (3)

Nutrition (3)

Nutrition in Life Cycle (3)

Experiment of Food Nutrition (3)

Experiment of Dietary Life Education (3)

Experiment of Nutrition education (3)

Diet Therapy (3)

Meal Culture (3)

Food Preservation (3)

The Family (3)

Household Equipment & Lab (2)

Household Economics (3)

Parent Education (3)

Interior Design (3)

Adolescence Development (3)

Consumer Education (3)

Family Life and Welfare (3)

27 credits should be chosen.

#### Minor Courses

Apparel Design (3)

Applied Food Science (3)

Theory of Home Economics Education (3)

Home Management (3)

Research and Teaching of Home Economical Materials (3)

Home Economics Logic and Essay Writing (2)

### Minor Courses

21 credits should be chosen.

### Careers

Graduates may pursue careers as secondary school teachers. They may also work for research institutes and private companies.

# Music Education

\_Contact Information

Tel: +82-62-530-2530

E-mail: klarminji@jnu.ac.kr

URL: http://musicedu.jnu.ac.kr/

### ■ What is Music Education?

Consider for a moment the power of music. Music is everywhere. To take it one step further, music is in the songs of birds, in the crashing of waves, and in the beating of the heart. Music is inescapable. Once we acknowledge this fact, we must learn to appreciate and understand the need for music.

Music strengthens the mind, stimulates brain cells, and encourages creative thoughts and imagination. The need for music education, then, is clear. Children who understand music do better in life.

### **■** Department of Music Education

The Department of Music Education is committed to training future teachers, who are also musicians, involved in both music and teaching at the highest professional level.

The objectives of the course series is to learn the role of music in their lives, to develop theories of musical learning development, and to practice methods and approaches for teaching music (Orff, Kodaly, Dalcroze).

Through a sequence of courses and pre-service teaching experiences, students who successfully complete the program fulfill the requirements for Certification in Secondary Music Education.

Students study various practical techniques of the major, including Solfege, Harmony, Counterpoint, History of Western Music, Orchestration, Chorus, Orchestra, Theory of Music Education, Teaching Material and Pedagogy of Music, Traditional Korean Music, Computer Music, Keyboard Harmony, and Techniques of Digital Piano, among others.

### Professors

- Ji-Hyang Oh, Ed.D. [Professor, Music Education, ojh212@jnu.ac.kr]
- Mi-Kyung Lee, Ph.D.
   [Professor, Musicology,

mklee3@jnu.ac.kr]

 Dae-Jin Bang, Diplom Superior [Associate Professor, Voice, bang.daejin@gmail.com]

# **■** Degree Requirements

Students are required to earn 150 credits, with 44 credits from core courses, 28 credits from electives, 30 credits from liberal arts courses, 27 credits from general courses.

Students minoring in Music Education are required to earn 38 credits, with 14 credits from minor courses, and 24 credits from minor courses.

Liberal Arts Credits: 30General Electives Credits: 27

# ■ What Do You Study?

Core Courses

Instrument Major 2 Educational Psychology Introduction to Education

Practice of Korean Tradition Instrumental Music 2
Practice of Korean Tradition Vocal Music 2

Composition & Theory of Korean Tradition Music 2

Voice Major 2 Composition Major 2 Piano Major 2

Instrument Major 3

Philosophy and History of Education

Practice of Korean Tradition Instrumental Music 3
Practice of Korean Tradition Vocal Music 3

Composition & Theory of Korean Tradition Music 3

Voice Major 3

Theory of Music Education

Composition Major 3

Piano Major 3 Instrument Major 4

Teaching Method and Technology

Educational Sociology

Practice of Korean Tradition Instrumental Music 4 Practice of Korean Tradition Vocal Music 4 Composition & Theory of Korean Tradition Music 4

Voice Major 4

Composition Major 4

Teaching children with Learning Disabilities

Piano Major 4

Education Volunteer Service

Instrument Major 5

Curriculum

Educational Administration and Management Practice of Korean Tradition Instrumental Music 5 Practice of Korean Tradition Vocal Music 5 Composition & Theory of Korean Tradition Music 5

Voice Major 5

Composition Major 5

Piano Major 5

Instrument Major 6

Educational Assessment

Practical Affairs for the Teaching Profession

Practice of Korean Tradition Instrumental Music 6

Practice of Korean Tradition Vocal Music 6

Composition & Theory of Korean Tradition Music 6

Voice Major 6

Composition Major 6

Piano Major 6

Theory and Practice of School Violence Prevention

Instrument Major 7

Practice of Korean Tradition Instrumental Music 7 Practice of Korean Tradition Vocal Music 7

Composition & Theory of Korean Tradition Music 7

Voice Major 7

Teaching Material and Pedagogy of Music

Composition Major 7

Piano Major 7

Student Teaching Internship

Instrument Major 8

Practice of Korean Tradition Instrumental Music 8 Practice of Korean Tradition Vocal Music 8 Composition & Theory of Korean Tradition Music 8

Voice Major 8

Teaching Logic and Essay Writing in Music

Education

Composition Major 8

Piano Major 8

Total Credits: 132

#### Electives

Teaching Methods of Vocal Music 1

Instrument Major 1

Practice of Korean Tradition Instrumental Music 1

Practice of Korean Tradition Vocal Music 1

Composition & Theory of Korean Tradition Music 1

Popular Guitar

Wind Instrument Class Techniques

Band & Ensemble

Voice Major 1

Sight Singing & Ear Training 1

Music Theory

Composition Major 1

Piano Major 1

Chorus 1

Teaching Methods of Vocal Music 2

Teaching Methods of Music Appreciation

Music History 1

String Class Techniques

Sight Singing & Ear Training 2

Collaborative Piano 1

Chorus 2

Music History 2

Collaborative Piano 2

Chorus 3

Harmony 1

An Introduction to Korean Traditional Music 1

Music History 3

Music Pedagogy

Collaborative Piano 3

Piano Accompanying Techniques 4

Chorus 4

Harmony 2

An Introduction to Korean Traditional Music 2

Curriculum and Evaluation in Music Education

Teaching Methods of Choral and Conducting

Chorus 5

Korean Traditional Wind Instrument 1

History of Korean Music

Chorus 6

Korean Traditional Wind Instrument 2

Sight Singing & Ear Training 3

Music History 4

Sight Singing & Ear Training 4

Total Credits: 88

### Minor Courses

Instrument Major 2

Practice of Korean Tradition Instrumental Music 2

Practice of Korean Tradition Vocal Music 2

Composition & Theory of Korean Tradition Music 2

Voice Major 2

Composition Major 2

Piano Major 2

Instrument Major 3

Practice of Korean Tradition Instrumental Music 3

Practice of Korean Tradition Vocal Music 3

Composition & Theory of Korean Tradition Music 3

Voice Major 3

Theory of Music Education

Composition Major 3

Piano Major 3

Instrument Major 4

Practice of Korean Tradition Instrumental Music 4

Practice of Korean Tradition Vocal Music 4

Composition & Theory of Korean Tradition Music 4

Voice Major 4

Composition Major 4

Piano Major 4

Teaching Material and Pedagogy of Music

Teaching Logic and Essay Writing in Music

Education

Total Credits: 50

#### ■ Minor Electives

24 credits should be chosen among Major

Electives.

# Careers

A large number of graduates work at middle and high schools. Others go on to graduate school to pursue more advanced careers.

# Physical Education

\_\_Contact Information

Phone: +82-62-530-2550 Fax: +82-62-530-2569

URL: http://physicaledu.jnu.ac.kr

# **■** What is Physical Education?

The Department of Physical Education was established to develop physical education teachers in March 1973. In the years since that time, the department has produced over 1,000 physical education teachers. This department has seven faculty members in various branches of learning. Currently, there are 100 students enrolled in this department.

# ■ Department of Physical Education

Physical education is a subject in which students seek to improve quality of life, to develop physical strength, and promote health, steadiness of emotion, and socialization. The department seeks a successful development of physical education and sports culture at the same time.

Students of this department also participate in improving physical strength and motor skills, mastering knowledge about exercising and health, and learning desirable attitudes and socially valuable rules in various sports to accomplish this purpose.

The Department offers all students the curriculum to master knowledge about sports philosophy and history, sports psychology, exercise physiology, sports biomechanics, sports sociology, health and hygiene, and training courses to master ball sports, physical strength, gymnastics exercise, individual and collective exercises, dancing, and swimming.

This Department produces graduates who become teachers in middle and high schools, as coaches and instructors in elite sports and health centers, and as researchers in sports institutes.

### Professors

- Jong-Soo Baek, Ph.D.
   [Professor, Sports Pedagogy, bjs0508@jnu.ac.kr]
- Young-Kwan Kim, Ph.D.
   [Professor, Motor Mechanics, ykkim01@jnu.ac.kr]
- Jun Kim, Ph.D.
   [Associate Professor, Sports Sociology,

- aquaspo@jnu.ac.kr]
- Dae-yeol Kim, Ph.D.
   [Associate Professor, Exercise Physiology, kimdaeyeol@jnu.ac.kr]
- Park Saengryeol, Ph.D.
   [Assistant Professor, Sports Psychology, elebpark@gmail.com]

# Degree Requirements

Students are required to earn 150 credits, with 117 credits from core and related courses, and 33 credits from general courses. Students must also demonstrate proficiency with computers and in a foreign language.

### ■ What Do You Study?

#### Core Courses

Curriculum (2)

Teaching Method and Technology (2)

Educational Sociology (2)

Educational Psychology (2)

Educational Psychology (2)

Philosophy and History of Education (2)

Educational Psychology (2)

Clinical Agrange (2)

Educational Assessment (2) Chinese Classic in Korean (3)
Introduction to Education (2) Physical Education Logic and Essay Writing (2)

Educational Administration and Management (2) Teaching Physical education (3)

Teaching children with Learning Disabilities (2)

#### Electives

Rhythmic Aerobic 1 (2) Soccer 1 (2) swim 1 (2) Tennis 1 (2)

Sport Socialogy (3) Health Education (3)
Athletic 1 (2) Education Dance 2 (2)

History of Physical Education (3)

Gymnastic 1 (2)

Table tennis 1 (2)

Teakwondo (2)

Basketball 2 (2)

New sports 2 (2)

Winter Sports 2 (2)

Vollyball 2 (2)

Winter sports 1 (2) The Seashore Training (2)

Rhythmic Aerobic 2 (2) Test And Measyrement In Physical Education (3)

Swim 2 (2)
Sport philosophy and ethics (3)
Athletic 2 (2)
Soccer 2 (2)
Tennis 2 (2)
Basketball 3 (2)

Human Anatomy and Computer Practice (3)

Gymnastic 2 (2)

Table tennis 2 (2)

Dance Sports 1 (2)

Vollyball 3 (2)

Radminton 1 (2)

Table tennis 2 (2)

Educational dance 1 (2)

Badminton 1 (2)

Sports Medical and Treatment of Injury (3)

basketball 1 (2) Korea Dance (2)
New sports 1 (2) Physiology Of Exercise (3)
Vollyball 1 (2) Biomechanics of Sports sport (3)

Vollyball 1 (2) Biomechanics of Sports sport (3)
Psychology of Sports and Motor Learning (3) Soccer 3 (2)

The Curriculum of Physical Education (3) Dance sports 2 (2)

nutrition Science Of sports (3)

Golf 2 (2)

Badminton 2 (2) Experimental Approach of Sport Sciences (2)

Baseball (2) Camping 1 (2) Motor control (3)

Golf 1 (2)

Introduction to Sports for All (3)

Swim 3 (2)

Sports Technology and Biomechnics (3)

Camping 2 (2)

Motor Development (3)

Athletic 3 (2) Gymnastic 3 (2) Recreation (2)

Sports Training and Exercise Prescription (3) Administration of Physical Education (3)

### Careers

A large number of graduates work at middle and high schools. Others go on to graduate schools to pursue more advanced careers.

# Division of Special Educ<u>ation</u>

\_Contact Information

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URL: http://spededu.jnu.ac.kr/

# ■ What is Special Education?

Special education refers to a range of services that can be provided in different ways and in different settings. There's no 'one size fits all' approach to special education. It's tailored to meet the needs of students with disabilities. Special education focuses on helping students with disabilities learn.

## ■ The Division of Special Education

The division of special education offers undergraduate and graduate programs in special education. We have produced professionals in special education including outstanding teachers, superintendents, school administrators, consultants, and researchers. Our program is designed to prepare prospective educators to teach students with mild to moderate disabilities, as well as those with severe and multiple disabilities in a variety of educational settings. We also focus on transition and post-school employment for persons with disabilities. In addition, we provide research opportunities related to students with disabilities.

The division of special education consists of three departments: Early childhood special education, elementary special education, and secondary special education.

### **Early Childhood Special Education**

The department of early childhood special education trains prospective educators to acquire professional knowledge and skills to teach kindergarteners with disabilities. The program focuses on practical experiences working with young children with special needs and families in the field.

### **Elementary Special Education**

The department of elementary special education trains prospective educators to acquire professional knowledge and skills to teach elementary school students with disabilities. The program focuses on practical experiences working with children (Grades 1-6) with special needs, school-related professionals, and families in the field.

### **Secondary Special Education**

The department of secondary special education trains prospective educators in the professional knowledge and skills needed to teach secondary school students with disabilities. The program focuses on practical experiences working with middle and high school students with special needs, their families, and professionals in a special education area.

### Professors

 Hyun-Jong Song, Ph.D.
 [Educational Psychology and Counseling Psychology, hjsong@jnu.ac.kr]

 Doohyoo Lee, Ph.D. [Educational Policy, doohlee@jnu.ac.kr]

 Hongjoong Cho, Ph.D.
 [Education of Children with Physical Disabilities, chohj@jnu.ac.kr]

 Soon-Ja Lee, Ph.D.
 [Methodology of Early Childhood Education, jelmana@jnu.ac.kr]

• Eun Ko, Ph.D.

[Education of Language Auditory Children with Language and Auditory Impairments, eunko@jnu.ac.kr]

· Hyeseung Choi, Ph.D.

[Autism Spectrum Disorder, Emotional and Behavioral Disorders, hchoi2004@jnu.ac.kr]

 Sook-Hyun Oh, Ph.D.
 [Curriculum for Early Childhood Education, shoh04@jnu.ac.kr]

 Tae-Su Lee, Ph.D.
 [Learning Disabilities, Subject Education, taesu811@jnu.ac.kr]

 Woori Kim, Ph.D.
 [Mild Disabilities, Teaching and Learning Methods in Special Education, rnell777@jnu.ac.kr]

Chung-Eun Lee, ph D.
 [Education of Children with intellectual disability,
 Family support,
 celee@jnu.ac.kr]

# ■ Degree Requirements

Students are required to earn 150 credits to graduate.

#### **Core Courses**

### General Studies

English for Global Communication 2 (3)
Chinese Classic in Korean (3)
Career Plan and Self Understanding (2)
Childhood Development and Education (3)
Teaching children with Learning Disabilities (2)
Educational Psychology (2)
Theoretical Foundations of Special Education (3)

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### **■ Early Childhood Special Education**

Educational Sociology (2)
Introduction to Farly Chil

Introduction to Early Childhood Education (3) Curriculum in early childhood education (3) Social Studies in Early Childhood Special Education (3) Assensement and Evaluation of Early Childhood with Special Needs (3)

Education for Early Childhood with intellectual

disability (3) Curriculum (2)

Subject Education to Early Childhood Special Education (3)

Language Education for Children with Disabilities (3) Inclusion for Young Children with Disabilities and Individualized Family Support (3)

Education for Early Childhood with Emotional and Behavioral Disorders (3)

Education for Early Childhood with Multiple and Physical Disabilities (3)

Curriculum in School for the Handicapped (3) Education for Early Childhood with Visual Impairment (3)

Early Childhood Special Education Profession (3) Early Childhood Special Education Law and Policy (3) Art Education for Young Children with Disabilities (3) Behavior Modification for Young Children with Disabilities (3)

Education for Early Childhood with Hearing Impairments (3)

Education for Young Children with Learning Disabilities (3)

Material Analysis and Teaching Techniques for Early Childhood Special Education (3)

Administration and Management in Early Childhood SpecialEducation Centers (3)

Education for Early Children with Communication Disorders (3)

Education for children with autism spectrum disorder (3) Natural Sciences Education for the Early Childhood with Special Needs (3)

Parents Education for Young Children with Disabilities (3)

Arithmetic Education for the Early Childhood with Special Needs (3)

Teaching Method and Technology (2)

Education Volunteer Service (2)

A Course on Logic and Essay writing (2)

Technology of Early Childhood Special Education (3)

Music in Special Early Childhood Education (3)

Theory and Practice of School Violence Prevention (2)

Student Teaching Internship (2)

Philosophy and History of Education (2)

Educational Assessment (2)

Educational Administration and Management (2) Practical Affairs for the Teaching Profession (2) Health and Safety Education for Children with

Disabilities (3)

Play Development and Movement Intervention for Early Childhood with Special Needs (3)

### **■** Elementary Special Education

Educational Sociology (2)

Education for Student with intellectual disability (3)

Education for Student with Hearing Impairments (3)

Natural Sciences Education for the Handicapped (3)

Art Education for the Handicapped (3)

Integrated Subject of Elementary school (3)

Clinical Assessment and Evaluation for the

Handicapped (3)

Curriculum (2)

Education for Student with Emotional and Behavioral Disorders (3)

Education of the Multiple and Physical Disabilities (3)

Language Education for the Handicapped (3)

Music Education for the Handicapped (3)

Theory of Mainstreaming for the Handicapped (3)

Curriculum in School for the Handicapped (3)

Education for Student with Visual Impairment (3)

Social Sciences Education for the Handicapped (3)

Practical Arts Education for the Handicapped (3)

Curriculum in Elementary School (3)

Education for Student with Learning Disabilities (3)

Law & Policy in Special Education (3)

Behavior Modification (3)

Education for Student with Communication Disorders (3)

Material Analysis and Teaching Techniques for Special Education (3)

Arithmetic Education for the Handicapped (3)

Physical Education for the Handicapped (3)

Management of Classroom for the Handicapped (3)

Education for the Handicapped's Parent (3)

Counseling for Exceptional Children (3)

Teaching Method and Technology (2)

Education Volunteer Service (2)

Theory of Transitional Education for the Handicapped (3)

A Course on Logic and Essay writing (2)

English Education in Elementary Special Education (3)

Theory and Practice of School Violence Prevention (2)

Student Teaching Internship (2)

Philosophy and History of Education (2)

Educational Assessment (2)

Educational Administration and Management (2)

Practical Affairs for the Teaching Profession (2)

Special Subject Education (3)

Professionals in Special Education (3)

Technology of Special Education (3)

### **■** Secondary Special Education

Educational Sociology (2)

Education for Student with intellectual disability (3)

Education for Student with Hearing Impairments (3)
Law & Policy in Special Education (3)
Clinical Assessment and Evaluation for the
Handicapped (3)
Curriculum (2)

Education for Student with Emotional and Behavioral Disorders (3)

Education of the Multiple and Physical Disabilities (3) Career and Vocational Education for the Handicapped (3)

Mathematics Education for the disabled (3) Curriculum in School for the Handicapped (3)

Education for Student with Visual Impairment (3)

Education for Student with Learning Disabilities (3)

Theory of Mainstreaming for the Handicapped (3) Behavior Modification (3)

Education for Student with Communication Disorders (3)

Material Analysis and Teaching Techniques for Special Education (3)

Korean Language Education for Secondary School Students with Disabilities (3)

Management of Classroom for the Handicapped (3)

Counseling for Exceptional Children (3) Teaching Method and Technology (2)

Education Volunteer Service (2)

Special Subject Education (3)

A Course on Logic and Essay writing (2)

Technology of Specail Education (3)

Theory and Practice of School Violence Prevention (2)

Student Teaching Internship (2)

Philosophy and History of Education (2)

Educational Assessment (2)

Educational Administration and Management (2)

Practical Affairs for the Teaching Profession (2)

### Careers

Students who graduate in this program will receive the special education teacher certification. The graduates work as special education teachers in schools or in disability rehabilitation centers; or alternatively as consultants, researchers in academic institutions, and as professors.

# College of Social Sciences

\_\_Contact Information

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# Departments

- · Department of Political Science and International Relations
- · Department of Sociology
- · Department of Psychology
- · Department of Library and Information Science
- · Department of Communication
- · Department of Geography
- · Department of Cultural Anthropology and Archaeology
- · Department of Public Administration

# Research Institutes

- · Center for Democracy & Community
- · Press and Public Relations Research Institute
- · Geographic Information Science Research Institute
- · Research Institute to Knowledge Resources
- · Public Administration Research Institute
- · Multi-cultural Society Center
- · The Social Sciences Research Institute

# Political Science and International Relations

\_\_Contact Information

Fax: +82-62-530-2639

URL: http://politics.jnu.ac.kr

### ■ What is Political and International Relations?

Political Science is a discipline that aims to find the best way to improve political systems in which human beings can manage their lives with happiness and freedom. In this sense, political science is a systematically and theoretically academic major.

### School of Political and International Relations

The Department of Political Science teaches theories and practices on domestic politics and international relations in general. The Department focuses on educating students who will actively work in various fields in the near future.

The Department aims at educating professionals in real politics as well as academic researchers on politics. To this end, the Department encourages students to learn research methodology and theories to understand political phenomena scientifically. To accomplish these purposes, both critical examination of existing theories and introduction to new theories are emphasized. The Department offers various undergraduate courses, of which the curriculum is divided into four general areas: Political Thoughts, Comparative Politics, International Relations, and Korean Politics.

### Professors

- Yong Cheol Kim, Ph.D.
   [Professor, Comparative Politics and Korean Politics, kimyc@chonnam.ac.kr]
- Kyung-Taek Oh, Ph.D. [Professor, International Politics, ktoh@chonnam.ac.kr]
- Euikyung Park, Ph.D.
   [Professor, Gender Politics and Political Thoughts, pek2000@chonnam.ac.kr]
- Jung-Kwan Cho, Ph.D.
   [Professor, Korean Politics,

- hr23@hanmail.net]
- Jae-Kwan Kim, Ph.D. [Professor, Chinese Politics, jkkim543@chonnam.ac.kr]
- Jae-Gi Kim, Ph.D.
   [Professor, Diaspora Politics, jgkimm@hanmail.net]
- Eunjung Choi, Ph.D.
   [Professor, Comparative
   Politics, ejchoi76@jnu.ac.kr]
- Youngmi Choi, Ph.D.
   [Associate Professor, International Political Economy,ymchoi@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits and demonstrate proficiency in foreign language.

# ■ What Do You Study?

A History of Ancient & Medieval Political

Thought (3)

A History of Modern Political Thoughts (3)

American Politics (3)

Chinese Foreign Policy (3)

Chinese Politics (3)

Comparative Politics (3)

Congressional Politics (3)

Contemporary Political Thought (3)

Diaspora and Politics of Integration (3)

Elections and Parties (3)

Foreign Policy (3)

Global Politics of the Environment (3)

History of International Relations (3)

International Area Disputes (3)

International Organizations and Non-Governmental

Organizations (3)

International Political Economy (3)

International Relations (3)

Internet and Political Process (3)

Korea in International Politics (3)

Korean Politics (3)

Labor Politics (3)

Latin American Political Economy (3)

Law and Politics (3)

Media and Politics (3)

Overseas Korean Networks (3)

Political Behavior (3)

Political Economy in East Asia (3)

Political Leadership (3)

Politics of North Korea (3)

Relations of South-North Korea (3)

Research Methods in Political Science (3)

Russian Politics (3)

Special Topics in Area Studies (3)

United States Foreign Policy (3)

Urban and Local Politics (3)

Women and Politics (3)

#### Minor Courses

39 credits should be chosen

### **■** Teaching Profession Courses

Educational Theories of Social Studies (3)

Research of Educational logic and Teaching

Discussion of Social Studies (2)

Research of Educational Text and Teaching Method

of Social Studies (3)

### Careers

Graduates of the Department take a variety of career paths. Among them are government positions, politics-related fields, law, education, and private business sector positions as well.

# Public Administration

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URL: http://jnupa.jnu.ac.kr

### ■ What is Public Administration?

Today, the world has been confronted by the age of globalization. The importance of localized information has increased. In light of these trends, the Department of Public Administration concentrates its efforts on educating future administrative professionals with comprehensive problem-solving capabilities and task performance abilities through theoretical and practical studies on administrative phenomena. The efforts would equip them with various knowledge and skills, including those in planning, policy making, research analysis, organization management, and office management necessary for administrating governments and solving social problems.

Additionally, many graduates work in government agencies after passing various kinds of civil service examinations. Furthermore, graduates with a comprehensive problem-solving capacity have broader opportunities to make advances as they are undertaking central roles as competent managers in their fields.

### Professors

- Yung-Chul Lee, Ph.D.
   [Professor, Administration Organization, yunglee@chonnam.ac.kr]
- Sung-Wook Choi, Ph.D.
   [Professor, Administration Organization culture, csw4pa@chonnam.ac.kr]
- Choong-Geun Song, Ph.D.
   [Professor, Public Policy analysis, solip@chonnam.ac.kr]
- Hou-Gyun Kim, Ph.D.
   [Professor, Public Administration Organization Theory, khg1427@chonnam.ac.kr]
- Joon-Kyo Seo, Ph.D.
   [Professor, Urban Policy, seo66386@chonnam.ac.kr]

- Mi-Seung Shim, Ph.D.
   [Professor, Welfare Administration, msshim@chonnam.ac.kr]
- Jung-Ah Bae, Ph.D. [Associate Professor, Financial Administration, jb07e@jun.ac.kr]
- Geun-Pil Ryu, Ph.D.
   [Associate Professor, Public Personnel Administration, gpryu@jnu.ac.kr]
- Dae-Wook Kim, Ph.D.
   [Assistant Professor, Local Administration, kdw@jnu.ac.kr]
- Sun Jung Oh, Ph.D.
   [Assistant Professor, Policy Sciences, sunjungoh@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, with 39 from Department courses.

# ■ What Do You Study

Community & Social Welfare

Readings in Public Administration

Administrative Organization

Macroeconomic Theory
Microeconomic Theory

Public Personnel Administration

Information communication Technology and

public administration Local Autonomy

Community Welfare and Practice

Administrative Management

Social Research Method in Public Administration

Crisis Management Financial Administration Local Administration

Quantitative Analysis of Public Affairs

Public Conflict Management

Global times and public administration

Urban Administration Study of Leadership Public Policy Analysis Evaluation

Local Public Finance

General Theory of Administrative Law

Public Economics

Social Welfare Administration

Regional Socioeconomic Development Administration of Korean Government Detailed Theory of Administrative Law

Public Choice
Public Enterprises

Comparative Public Administration

Government Organization and Civil Society

Special Issue of Public Administration

Public Bureaucracy

Digital Age and Government Innovation

Social Welfare Policy Government Regulation Policy Science Seminar

Philosophy of Public Administration

Environmental Administration

#### Careers

There are many career paths for graduates from the Department of Public Administration, such as becoming administrative bureaucrats. Graduates are also able to land positions in state-owned enterprises or public corporations. Furthermore, graduates can pave the way in private businesses, especially in the financial industry, such as with banks and security corporations.

Meanwhile, there are MPA and Ph.D. courses for students to pursue. Accordingly, the Department has a large number of graduate students enrolled, many of whom have continued their studies at many prominent international universities, becoming academic experts.

# Sociology

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# **■** What is Sociology?

Sociology involves the study of the relationship between humans and lifestyles of human being and society. In other words, sociologists study the structual changes of human society as a conglomerate of people who interact with each other.

# ■ Department of Sociology

Sociology is divided into several fields as contemporary society changes rapidly. The Department of Sociology plays an important role in nurturing experts in the field.

### Professors

- Soo-Jong Yoon, Ph.D.
   [Professor, Organization, Rural Sociology, sjyoon@jnu.ac.kr]
- Jun-Woo Kim, Ph.D.
   [Professor, Urban Sociology, Social Statistics, junewoo@jnu.ac.kr]
- Jung-Gie Choi, Ph.D.
   [Professor, Deviance and Social Control, jgchoi@jnu.ac.kr]
- Julia Jiwon Shin, Ph.D.
   [Professor, Industrial Sociology,

juliashin@jnu.ac.kr]

- Jin-Yeon Kang, Ph.D.
   [Assosciate Professor, Historical Sociology, Sociological Theory, jinyeon@jnu.ac.kr]
- Su-Nam Jung, Ph.D.
   [Assistant Professor, Emotional Sociology, sunam2013@jnu.ac.kr]
- Myeong-Soo Kim, Ph.D.
   [Assistant Professor, Social Statistics, Social Change, kimmyeongsoo@jnu.ac.kr]

# Degree Requirements

Students are required to earn 27 credits from electives and 36 credits from minor courses.

# ■ What Do You Study?

Comparative Sociology
Contemporary Society and Culture
Contemporary Society and Human Rights
Contemporary Sociological Theories
Deviance and Social Control
Economic Sociology

Educational Theories of Social Studies
Environmental Sociology
Family and Sexuality
History of Social Thought
History of Sociology
Industrial Sociology

Introduction to Sociology

Medical Sociology

Methodology of Social Sciences Methods in Social Research

Political Sociology

Reading of Sociological Writings

Religion and Society

Research of Educational Text and Teaching Method of Social Studies

Rural Sociology

Seminar in Social Research

Sexuality and Society

Social Change

Social History of Korea

Social Movements

Social Organization Theory

Social Problems

Social Psychology

Social Statistics 1

Social Statistics 2

Social Stratification

Sociology of Art

Sociology of Leisure

Sociology of Literature

Special Lecture on Sociology

Studies on the Asian Society

Urban Sociology

Visual Sociology

Writing

### Careers

Graduates are able to obtain teaching certification and acquire positions as social research analysts.

# Psychology

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URL: http://psyche.inu.ac.kr

# ■ What is Psychology?

Psychology is the modern science of the mind. Psychologists pursue scientific understanding of how the mind and behavior work. Students are encouraged to develop critical views and learning competencies in order to build their knowledge base of psychology and reach their academic goals.

## Department of Psychology

The Department of Psychology was founded in 1978, and began to offer a master's degree program in 1984 and Ph.D. program in 1996. In 2013, there are 9 full-time faculty members and 9 part-time instructors, and over 70 graduate and 130 undergraduate students in the Psychology Department. As the only department that offers extensive psychology courses in the region of Gwangju and Jeonnam province, excellent education and research programs are offered in various areas of psychology including cognitive, developmental, biological/learning, social, clinical, counseling/personality, health, and industrial/ organizational psychology. The Department provides one of the best research facilities among all the social and humanities departments at CNU.

The department has several labs for psychological testing, cognitive, and clinical neuropsychology experiments (including EEG, EMG, SCR, and HR acquisition systems), behavioral observation and monitoring, and other various kinds of psychological experiments. The students and the faculty members in the Department have been working closely together to build a healthy research environment and to provide community services needed in the Gwangju and Jeonnam region.

### Professors

- Munsoo Kim, Ph.D.
   [Professor, Physiological Psychology, mkim@jnu.ac.kr]
- Hyun Kyun Shin, Ph.D.
   [Professor, Clinical Psychology, shk2004@jnu.ac.kr]
- Young-Shin Kang, Ph.D.
   [Professor, Counseling Psychology, lavieenrose@jnu.ac.kr]
- Hye jeen Lee, Ph.D.
   [Professor, Clinical Psychology,

- hjl2013@jnu.ac.kr]
- Samuel Suk-hyun Hwang, Ph.D.
   [Associate Professor, Neuro Psychology, hwansana@jnu.ac.kr]
- Jieun Shin, Ph.D.
   [Associate Professor, Social Psychology, jieunshin@jnu.ac.kr]
- Soyoung Kim, Ph.D.
   [Assistant Professor, Psychometrics, soyoungkim@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, normally over a period of 8 semesters. Students must also demonstrate proficiency with computers and in a foreign language.

# ■ What Do You Study?

### Core Courses

General Psychology (3)

Methodology of Psychological Research (3)

Psychological Statistics (3)

### **■** Electives

Psychology of Rehabilitation (3)

Psychology in English (3)

Industrial Psychology (3)

Counseling Psychology (3)

Psychological Test & Practicum (3)

Seminal in Psychology (3)

Cognitive Psychology (3)

Clinical Psychology (3)

Group Counseling (3)

Psychological Statistics (3)

Physiological Psychology (3)

Development Psychology (3)

Psychological Measurement & Practicum (3)

Abnormal Psychology (3)

Psychology of Personality (3)

Sensation & Perception (3)

Social Psychology (3)

Evolutionary Psychology (3)

Psychology of Language & Thought (3)

Positive Psychology (3)

Cognitive Process & Practicum (3)

### **■** Teaching Profession Courses

Theory of Counseling Education (3)

Counseling Teaching Material Study and

Instructional Methods (3)

Career Counseling (3)

Criminal Psychology & Practicum (3)

Research Methodology in Psychology (3)

Psychology of Aging (3)

Psychology of Emotion (3)

History of Psychology (3)

Cultural Psychology (3)

Brain & Cognition with Practicum (3)

Counseling for Exceptional Children (3)

Psychology of Advertising (3)

Psychology of Learning (3)

#### Electives

21 credits should be chosen

#### Careers

Every semester faculty members and students meet for career guidance and counseling. Students are encouraged to pursue professional certificates in psychology. Special lectures and colloquia are offered to aid career goals. Major field settings for professional careers include counseling centers in the community, mental hospitals, social welfare institutions, schools, social survey and research sectors, corporations for human resource development/management and organizational development, and the public sector.(courts, police stations, rehabilitation centers, armies, etc.)

# Library and Information Science

\_\_Contact Information

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■ What is Library and Information Science?

Library and information science is the study of issues related to libraries and the information fields. This study includes academic subjects concerning how library and information resources are used and how people interact with library and information systems. It also deals with ideas and methodologies about the relations and management of knowledge, information, and library issues.

Library and information science mostly consists of spreading knowledge for the efficient retrieval of relevant information. Basic topics include the acquisition, cataloging, classification, and the preservation of library and information materials. A contemporary branch of the discipline is information architecture.

## ■ Department of Library and Information Science

The Department of Library and Information Science intends to educate students through full coursework that includes basic and upper training issues related to libraries and the information fields. The guidelines of the Department include educational purposes that are academic and practical subjects in information service and information utility. After graduating, most of students begin their graduate studies or join public libraries or academic libraries, national or local archives, or school libraries among other career choices. Graduates deal with ideas and methods about the relations and management of knowledge, information, and library issues that are studied from the Department of Library and Information Science.

The Department consists of several branch areas, but the most important goal of the department is to get the knowledge of efficient retrieval of relevant information. Basic topics include the acquisition, cataloging, classification, and preservation of library and information materials. In a more present-day view, a fervent outgrowth of LIS is information architecture.

### Professors

- Hyun-Jin Hong, Ph.D.[Professor, Bibliometrics, hjhong@jnu.ac.kr]
- Jeong-Hyun Kim, Ph.D.
   [Professor, Knowledge Organization, jhgim@jnu.ac.kr]
- Myoung-Gyu Lee, Ph.D.
   [Professor, Information Material Organization, gyulee@jnu.ac.kr]
- Woo-Kwon Chang, Ph.D.
   [Professor, Knowledge Management, wk1961@jnu.ac.kr]
- Ji-Hyeon Kim, Ph.D.
   [Associate Professor, Information Science, jihkim@jnu.ac.kr
- Ji-sue Lee, Ph.D.
  [Assistant Professor, Information Science,

jislee@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits and demonstrate proficiency of foreign languages and computer skills.

# **■** What Do You Study?

Internship

Introduction to Library and Information Science

Information and Society

Cultural Review of Information

Classification

Information Management

Reading Guidance

Information Center Management

Cataloging

Understanding Information Science Studies in Publication and Media Introduction to Old Books in Korea

Information Service

Introduction to Bibliography

Introduction to Archive Management

Collection Development Reading Guidance Practice

Web Publishing Special Media

Information Retrieval Information Resources

Materials and Methods of LIS

Education of Library and Information

Science

Studies in Archives and Manuscripts

Content Development

Introduction to Database Management Advances in Knowledge Organization Cataloging of Far Eastern Books

Information Policies
Public Libraries

Information Resources of Natural

Sciences and Technology Indexing and Abstracting

School Libraries

Information System Analysis and Design Administration of College and University

Library

Information Resources of Humanities and

Social Science User Studies

Studies in Local Information

Research Methods in Library and Information

Science

Archival Practice

Theory of Information Criticism Studies in Local Information Web Publishing Practice

#### Careers

Recently, certain areas of interest in Library and Information Science have extended into computerbased cataloging. Thus, the need for graduates in Library and Information Science is increasing.

Graduates can find careers in database cataloging or specialize in archive retrieval. Students also have the option to enter graduate school to further their studies and marketability.

# Communication

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URL: http://comm.jnu.ac.kr

### ■ What is communication?

The discipline of communication focuses on how people use messages to generate meanings within and across various contexts, cultures, channels, and media. The discipline promotes the effective and ethical practice of human communication. Communication is a diverse discipline which includes inquiry by social scientists, humanists, and critical and cultural studies scholars. A body of scholarship and theory about all forms of human communication is the basis for an ever-expanding understanding of how we all communicate.

### Department of Communication at Chonnam National University

The Department of Communication aims to prepare its students for careers in a variety of journalism and mass communication fields. It is expected that upon completion of the department's programs, students would be able to write, edit, and produce visuals and design for print and digital media.

The department offers both undergraduate and graduate curricula that mix academics with professional experience to ensure that students are well schooled in writing and editing and in analyzing the issues, conventions, and practices of journalism and mass communication. The departmental requirements give communication majors both guidance and flexibility in their selection of courses. Majors can pursue one of following tracks: journalism, advertising and PR, broadcasting, and cultural studies.

### Professors

- Jong-Won Yoo, Ph.D.
   [Press Philosophy and History, Media Law, Media Ethics jwyoo@chonnam.ac.kr]
- Young-Khee Kim, Ph.D.
   [Critical Communication, International Communication, Political Communication ykkim@chonnam.ac.kr]
- Chung-min Joo, Ph.D.
   [New Media, Broadcasting, Media Policy

- cmjoo@chonnam.ac.kr]
- Oh-Hyeon Lee, Ph.D.
   [Cultural Studies, Media Criticism leohhy@hanmail.net]
- Kyun Soo Kim, Ph.D.
   [Journalism, New Media kimk@jnu.ac.kr]
- Jiyang-Bae, Ph.D.[PR, yang.bae@gmail.com]

# Degree Requirements

Students are required to earn 130 credits, normally over a period of 8 semesters. Students must also demonstrate proficiency with in intensive major and a foreign language.

### ■ What Do You Study?

### First semester of freshman year

Understanding of Mass Media Communication & Society

### Second semester of freshman year

Practice in News writing Understanding Journalism

### First semester of sophomore

Korean Journalism History Introduction to Broadcasting Understanding Advertising Radio Production Human Communication Media Writing and Reporting

### Second semester of sophomore year

Introduction to Public Relation Mass Communication Theories Understanding of Mass Culture Visual Arts Production Digital Media and Society Critical Studies in Mass Communication

### First semester of junior year

World Communication History Media Criticism Mass Communication English Internet Communication Advertising & Public Relations Production Photo Journalism

### Speech Communication

### Second semester of junior year

Media & Cultural Studies

Media Planning

Communication Philosophy

Digital Journalism

Research Methods in Mass Communication

Understanding Local Medal

Newspaper Editing

### First semester of senior year

Communications Law and Ethics Media & Modern Politics Visual Communication Seminar in Mass Media Campaign Seminar

### Second semester of senior year

Media Policy & Industry Seminar in Cultural Planning Seminar in Communication Studies Mobile Communication

### **Required General Courses**

Writing

Career Plan and Self Understanding

### **Teaching Profession Course**

None

### Careers

These job titles are not an exhaustive list, but rather, represent the types of positions most of our graduates enter:

Account Associate/Manager Advertising Manager

Associate Producer Broadcaster

Columnist Professor

Community Relations Program Coordinator
Copy Editor Promotion Manager

Creative Director Public Information Specialist Editor Publishing Assistant/Manager

Event Coordinator Reporter

Film Editor Sales Associate
Foreign Correspondent Scriptwriter

Investigative Reporter Sports Announcer

Journalist Teacher

Marketing PR Specialist Video Journalist
Market Researcher Website Designer

Media Buyer Writer

Media Planner Employment areas are in:

Media Relations CoordinatorAcademiaMedia ResearcherGovernment

NewscasterPrivate CorporationsNewsletter Editor/CreatorNon-Profit OrganizationsNews ReporterPublicly Traded Corporations

Press Secretary

source: http://www.careers.uiowa.edu/majors/kit/printmajor.cfm?mid=3

# Geography

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# ■ What is Geography?

Geography is a discipline that studies human and natural phenomena in related with the world. Geography particularly looks at interaction within and between human- and nature-driven events and changes, and it deals with the "where" and "patterns" with the concepts of space and location. In addition, it helps to figure out alternative plans of diverse spatial problems as they appear in reality. Therefore, geographers study nature, anthropogenic impacts, regions, and new technologies in spatial science.

# ■ Department of Geography

The Department of Geography is divided into various fields of study. It is rapidly changing modern topics and technologies. The Department plays an important role in producing experts in the field.

### Professors

- Young-Jin Ahn, Ph.D.
   [Professor, Social-Economic Geography, yiahn@jnu.ac.kr]
- Taesoo Lee, Ph.D. [Professor, Environmental Geography, taesoo@jnu.ac.kr]
- Hwa-hwan Kim, Ph.D.
   [Professor, Geographic Information Systems, h2kim@jnu.ac.kr]
- Yena Song, Ph.D.
   [Associate Professor, Transportation Geography, Y.Song@jnu.ac.kr]
- Gwan-yong Jeong, Ph.D.
   [Associate Professor, Soil Geography, gyjeong@jnu.ac.kr]
- Myung In Ji, Ph.D.
   [Assistant Professor, Social Geography, myunginji@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, with 39 credits from Department courses.

# ■ What Do You Study?

Understanding Human Geography Geography of Korea Understanding Physical Geography Cartography Climatology Quantitative Geography
Health Geography
Population Geography
Introduction to GIS and Lab
Field Observation and Trip

Geomorphology

Economic Geography Cadastral Science

Urban Geography

Cadastral Survey and Practice I
GIS Adaptation and Practice
Transportation Geography

Geography of Recreation and Tourism

Marketing Geography

Environment and Human Life Cultural and Historical Geography Regional Geography of South America

Cadastral Survey and Practice  $\ensuremath{\mathbb{I}}$ 

History of Geography Urban and Land Financial Geography

Geography of Regional Development

Seminar in Cadastral Science The Nature Of Geography Geography Of America Cadastral computer science Soil Ecological Geography

Geography of Africa Geography of Asia

Introduction of Remote Sensing

Hydrology and Water Quality Modeling

Political and Social Geography

Geographic Fieldwork I
Geographic Fieldwork I
Geographic Fieldwork II

### Careers

Recently, as the area of interest in geography has expanded to Geographic Information Systems (GIS) and environment problems, the need for geography experts is increasing.

Geography major students can obtain various careers such as GIS analysts, travel agents, civic servants, or regional researchers. The market has transformed and there is a strong possibility to become a cartographer, surveyor, or GIS professional.

# Anthropology

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# ■ What is Anthropology?

Anthropology is a discipline which studies the nature of human beings, and is divided into sub-disciplines of cultural anthropology, archaeology, linguistic anthropology, and physical anthropology. Cultural anthropology contributes to understanding cultural diversity and finding ways to solve problems which the contemporary world faces. Archaeology studies the origin and development of cultures, focusing on the material culture of prehistory which lacks written records, and ancient history which has few written documents. Linguistic anthropology is an area of exploring the relationships between language and culture. Physical anthropology studies human evolution and current health issues.

# ■ School of Anthropology at Chonnam National University

Cultural Anthropology and Archaeology, in contrast to other disciplines which tend to become specialized, offers students a broad range of means of understanding human beings and cultures.

Students majoring in anthropology can carry out a wide range of activities in various areas of society after they graduate.

### Professors

- Kyung-Hak Kim, Ph.D.
   [Professor, Cultural Anthropology, khkim@chonnam.ac.kr]
- Sung-Heup Hong, Ph.D.
   [Professor, Cultural Anthropology, sibung@chonnam.ac.kr]
- Ki-Jung Lee, Ph.D.
   [Professor, Visual Anthropology, kjunglee@chonnam.ac.kr]
- Jin-Seon Jo, Ph.D.
   [Professor, Archaeology,

- jojinseon@hanmail.net]
- Minkoo Kim, Ph.D.
   [Professor, Archaeology, minkoo@jnu.ac.kr]
- Jina Heo, Ph.D.
   [Assistant Professor, Archaeology, jinaheo@jnu.ac.kr]
- Go-Woon Noh, Ph.D.
   [Assistant Professor, Cultural Anthropology, gowoonnoh@jnu.ac.kr]

# **■** Degree Requirements

Students are required to complete the following mandatory courses:

Human Being and Culture in Global Era

Human Evolution and Ancient Civilization

Theory and Method in Archaeology History of Anthropological Studies Analysis of Archaeological Artifacts Research Methods and Practice in Anthropology Also Students are required to earn 21 credits from electives

# ■ What Do You Study?

Theory and Method in Archaeology (3) History of Anthropological Studies (3)

Analysis of Archaeological Artifacts (3)

Research Methods and Practice in Anthropology (3)

Understanding Archaeology (3)

Archaeological Investigation on Civilization (3)

Study of Korea Culture (3) Culture and Gender (3)

Understanding Cultural Heritage (3)

Film and culture (3)

Archaeology of East Asia (3)

Culture and Personality (3)

Origins of Human culture (3)

Food and Culture Around the World (3)

Prehistoric Archaeology of Korea (3)

Marriage and Family (3)

Understanding of Rural Cultures (3)

Development of Tools and Technologies (3)

Excavation and Exploration (3) Understanding World Heritage (3)

Visual Anthropology (3)

Historical Archaeology of Korea (3)

The Anthropology Tourism and Festival (3)

Culture and Politics (3)

Anthropology of Religion (3)

Museums and Cultural Heritage (3)

Migration and Cultural Diversity (3)

Understanding Religious Cultural Heritage (3)

Ancient States and Tombs (3)

Ancient Agricultural and Environment (3)

Culture and Economic Behavior (3)

American and European Archaeology (3)

Selected Area Studies (3)

Study of Urban Cultures (3)

Cultural Heritage Storytelling (3)

Studies in Contemporary Society problems (3)

Preservation and Utilization of Cultural Heritage (3)

Special Topics in Anthropology (3)

Globalization and Local Cultures (3)

Human Being and Culture in Global Era (3)

Human Evolution and Ancient Civilization (3)

### Careers

Trained in cross-cultural perspectives, graduates can work as area specialists in various research institutes and international organizations, or play important roles in diplomatic relations and information production industries. They also have good opportunities to work in museums.

Museums look for people trained in anthropology who can systematically conduct surveys, analyses, exhibitions, and education on cultural resources and traditions being destroyed due to rapid industrialization. Anthropology is a discipline which studies the nature of human beings, and is divided into sub-disciplines of cultural anthropology, archaeology, linguistic anthropology, and physical anthropology. Cultural anthropology contributes to understanding cultural diversity and finding ways to solve problems which the contemporary world faces. Archaeology studies the origin and development of cultures, focusing on the material culture of prehistory which lacks written records, and ancient history which has few written documents. Linguistic anthropology is an area of exploring the relationships between language and culture. Physical anthropology studies human evolution and current health issues.

# College of Human Ecology

### \_\_Contact Information

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URL: http://humanecology.jnu.ac.kr

# Departments

- · Department of Family Environment and Welfare
- · Division of Food and Nutrition
- · Department of Clothing and Textiles

# ■ Affiliated Research Centers

- · Research Institute for Human Ecology
- · Fashion-cultural Commodities Design R&D Center
- · Center for Bio-resources and New Materials
- · CNU Social Service Research Application Center

# Family Environment and Welfare

\_Contact Information

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E-mail: A4952@jnu.ac.kr

### ■ What is Family Environment and Welfare?

The goal of the Department of Family Environment and Welfare is to contribute to the development of family welfare and quality of life through the systematic studies of interaction between humans and family environment. To achieve this goal, the Department provides many academic programs about basic theories and practice related to family environment and welfare. Furthermore it also trains professionals who manage special tasks and social problems on family welfare.

# ■ Department of Family Environment and Welfare at Chonnam National University

This Department was established in 1981 and changed its name from Home Management to Family Environment and Welfare in 2002. The Department has 265 students and 7 faculty members.

Major fields consist of child development & counseling, consumer sciences, and family studies & social welfare.

### Professors

- Eun Sil Hong, Ph.D. [Professor, Consumer Sciences, esmail@jnu.ac.kr]
- Jeonghwa Lee, Ph.D.

  [Professor, Welfare for the Elderly, jhlee2@jnu.ac.kr]
- Joo Yeon Lee, Ph.D.
   [Professor, Child Development & Child Care, idscot@jnu.ac.kr]
- Jeong Ha Hwang, Ph.D.
   [Associate Professor, Social Welfare,

jhwang@jnu.ac.kr]

• Ji yeon Son, Ph.D.

[Associate Professor, Financial literacy & wellbeing, Consumer protection policy, jiyeonson@jnu.ac.kr]

• Yuen Mi Cheon, Ph.D.

[Assistant Professor, Child family studies, ycheon@jnu.ac.kr]

• Ji Eun Kim, Ph.D.

[Assistant Professor, Healthcare, Mental Health Social Welfare, Social Welfare Practice, and Convergence Research, junekim@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits with 48 credits from electives.

#### ■ What Do You Study?

#### Electives

Childcare Practicum

Child Day Care Curriculum

Child Welfare

Childcare Teacher Education

Language Education for Young Children

Counseling for Children

Child Observation and Behavioral Research

Development and Assessment on Day Care Program

Infant and Toddler Development

Mental Hygiene

Play and Play therapy

Safety Management for Children

Science Education for Young Children

Teaching Methods for Infants and Young Children

Teaching of Art for Early Children

Theories and Studies on Child Day Care

The Family

Theory of Home Economics Education

Consumer Science

Household Economics

Consumer Decision-Making

Cousumer Psychology

Consumer Counseling & Practice

Consumer Education and Information

Management in Consumer Finance

Consumer Policy

Practice of Consumption Trend Analysis

Analysis of consumer Big Data

Personal Asset Portfolio and Insurance Planning

Investment and Insurances

Consumer Satisfaction Management

Family Life Education

Family Relationships

Family Resources Decision-Making

Family Counseling & Family Therapy

Housing

Human and Welfare

Human Behavior & Social Environment

Institutional Household Management

Introduction to Healthy Families

Introduction to Housing Welfare

Introduction to Social Welfare

Practice in Family Resource Management

Research Methods for Social Welfare

Skills and Techniques for Social Work Practice

Community & Social Welfare

Community Welfare

Social Welfare Administration

Social Welfare Law and Practice

Social Welfare for the Elderly

Social Welfare Policy

Social Work Practice Theories

Social Work Practicum

Social Work with Family

Social Welfare for the Disabled

#### **■** Teaching Profession Courses

A Course on Home Economics Logic and Essay

Writing

Research and Teaching of Home Economics

Materials

Theory of Home Education

#### Minor Courses

- Family Relationships
- Household Economics
- Infant And Toddler Development

For minors, a total 21 credits including these 3

subjects must be completed

#### Careers

Students can obtain national qualifications, such as for becoming nursery school teachers, social workers or other qualifications such as play therapists, or consumer counselors

Also, some students can get middle and high school teaching qualifications in home economics and

can enroll in the Family Environment & Welfare or Home Economics major in the graduate school of education.

Graduates from our department work as professors, researchers in their major fields, instructors, public workers responsible for social welfare, and heads of kindergartens or social welfare organizations.

## Division of Food & Nutrition

\_Contact Information

Tel: +82-62-530-1330,1350

Fax. +82-02-530-1339 E-mail: A0093@jnu.ac.kr URL: http://fn.jnu.ac.kr

#### ■ What is the Division of Food and Nutrition?

Food and Nutrition is the science to understand the roles of nutrients in human physiology and the characteristics of foods. The curriculum of the Division focuses on the basic and applied sciences related to food science, nutrition science, and foodservice management. The ultimate goal is to educate students to become professional leaders who are able to contribute to the promotion of health and welfare of humans and to execute research in the field of food and nutrition. The Division of Food and Nutrition consists of two majors: Food and Bioscience, and Nutrition and Life Science.

#### **■ Food Science Major**

This major emphasizes a comprehensive understanding for the function of food, including chemical, biological and physical properties. The aim of the food science major is to educate students as professionals in this field by providing a wide variety of lectures, experiments and practice courses covering cooking, food processing, food preservation, food materials, food service management, and food hygiene. The major offers field applicable courses, including analysis of nutrients and food components related to bioscience, flavors, pigmentation, exture, fermented foods, and food technology.

#### **■ Nutrition Science Major**

This major focuses on the understanding of nutrient metabolism and the relationship between human nutrition and health. The major's goal is to educate students as nutrition professionals who contribute to the prevention of nutrition- and aging-related diseases. To understand nutrition and life science, basic and advanced classes are provided. Also, the major offers ready-to-work classes (Practice in Personalized Nutrition Therapy, Nutrition Education and Counseling Practice, Diet Therapy Lab and Field Work for Dietitian) and specialized tracks for clinical nutritionists, public health professionals, nutrition teachers in schools, and development of nutraceuticals.

#### Professors

- Tai-Sun Shin, Ph.D.
   [Professor, Food Analysis, shints@jnu.ac.kr, 062-530-1352]
- · Bok-Mi Jung, Ph.D.

[Professor, Food Service, jbm@jnu.ac.kr, 062-530-1353]

Woojin Jun, Ph.D.
 [Professor, Functional Food,

wjjun@chonnam.ac.kr, 062-530-1337]

- Young-Ran Heo, Ph.D.
   [Professor, Nutrition, yrhuh@jnu.ac.kr, 062-530-1338]
- Hyun-Jung Chung, Ph.D.
   [Professor, Food Chemistry, hchung@jnu.ac.kr, 062-530-1333]
- Young-Shick Hong, Ph.D.
   [Professor, Nutritional Metabolomics, chtiger@jnu.ac.kr, 062-530-1331]
- Jung-Mi Yun, Ph.D.
   [Professor, Nutrition Education and Epigenetics,

sosung75@jnu.ac.kr, 062-530-1332]

- Clara Yongjoo Park, Ph.D.
   [Associate Professor, Clinical Nutrition parkcy@jnu.ac.kr, 062-530-1354]
- Ok-Kyung Kim, Ph.D.
   [Associate Professor, Nutritional Biochemistry, 20woskxm@jnu.ac.kr, 062-530-1334]
- Mina Kim, Ph.D.
   [Assistant Professor, Sensory and consumer science, makim@jnu.ac.kr, 062-530-1336]
- Dong-Hyun Jung, Ph.D.
   [Assistant Professor, Food microbiology, dhjung@chonnam.edu, 062-530-1335]

#### **■** Degree Requirements

Students are required to earn 130 credits with 48 credits from major courses. Students must pass a comprehensive exam for a bachelor's degree and demonstrate proficiency in a foreign language.

#### ■ What Do You Study? (Course list)

Basic Nutrition Food Microbiology Lab

Cultural Aspects of Food and Nutrition Food Chemistry
Food Microbiology Food Chemistry Lab

Food Microbiology Food Chemistry L
Food Science Food Catering
Human Physiology Flavor Science

Organic Chemistry Food Patent and Inauguration
Principles of Food Preparation Food Sensory Evaluation and Lab

Food Rheology

■ Food Science Major

Applied Food Science and Practice

Bakery and Confectionary Lab

Food Fermentation and Lab

Food Hygiene Related Laws

HACCP, GMP and Lab

Clinical Nutrition Institutional Food Service Management

Diet Therapy Instrumental Analysis and Lab

Experimental Design and Statistic Laboratory for Analysis of Food Nutrients

Food Nutrient Analysis Management of Food Service

Food Hygiene Management of Food Service

Nutrition Chemistry

Food Hygiene

Nutrition Chemistry

Food Preservation

Nutrition in Life Cycle

Food Marketing & Services

Nutrition Education

Nutritional Assessment

Functional Foods Lab

Nutrition and Biochemistry

Functional Foods Lab

Nutrition and Biochemistry

Field Work for Dietitian

Practice in Quantity Food Production

Food Processing Practice in International Food Preparation
Food Enzymology

Practice in Development of Special Foods

Science of Functional Food Science of Biofood Materials

Study of Food Physiological Activities Understanding of Regional Bio-Industry

#### **■** Nutrition Science Major

Applied Food Science and Practice

Aging and Nutrition Advanced Nutrition Biochemistry

Biochemistry Lab

Childhood Development & Nutrition

Clinical Nutrition
Community Nutrition

Current Topics in Nutrition

Diet Therapy Lab
Diet Therapy
Food Chemistry
Food Hygiene

Food service Management and Marketing Strategy

Food Processing and Preservation

Field Work for Dietitian

Food Patent and Inauguration

Human Resources Management

Issues in International Nutrition and Policy Institutional Food Service Management

Law in Food Hygiene

Management in Quantity Food Production

Molecular Nutrition Nutrition in Life Cycle Nutrition and Biochemistry Nutritional Epidemiology Nutrition and Cell Signaling

Nutritional Assessment & Laboratory

Nutrition Education and Counseling Practice

Nutrition Lab

Nutrition during Pregnancy and Lactation Nutritional Management in Institution

Nutritional Pathophysiology

Public Health

Practice in Personalized Nutrition Therapy Planning and Evaluation of Nutrition Program

Phytonutrient Metabolism

Practice in Development of Special Foods

Statistics for Natural Scientists

Sports Nutrition

#### Careers

Graduates are qualified to apply for license certificate tests as follows

- Dietitian
- Sanitary Technician
- Nutrition Teacher

- Engineer Food Processing
- Professors/Educators

Graduates have a wide variety of employment opportunities as follows:

- Dietietians in hospitals, schools, and industries
- Nutrition teachers at elementary, middle, and high schools
- Nutrition researcher in food industries, government research institutes, healthcare organizations, and academia

### Clothing & Textiles

\_\_Contact Information

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URL: http://clothing.jnu.ac.kr/

#### ■ What is Clothing and Textiles?

Clothing and Textiles is an academic discipline mainly concerned with textile materials, IT fashion, designing fashion products, and investigating consumption behavior. It acquires a broad and comprehensive understanding of textiles and apparel products based on the knowledge of natural science, technology, art and social science.

#### ■ Dept of Clothing & Textiles at Chonnam National University

The Department of Clothing and Textiles prepares students for careers in textiles, fashion design and production, textiles marketing and merchandising, fashion industry and business at national and international levels. The program educates students about the development and use of textile and apparel products. The Department has a textile and apparel laboratory equipped with modern instrumentation for material evaluation a controlled environmental CAD and DTP facilities.

#### Professors

- Soojeong Bae, Ph.D.
   [Professor, Fashion Design, sjbae@jnu.ac.kr]
- Misuk Lee, Ph.D.
   [Professor, Fashion Design, ms1347@jnu.ac.kr]
- Wolhee Do, Ph.D.
   [Professor, Clothing Engineering, whdo@inu.ac.kr]

- Eunjung Kim, Ph.D.
   [Professor, Traditional Costume, kimej@jnu.ac.kr]
- Sookyoung Ahn, Ph.D.
   [Professor, Fashion marketing skahn@jnu.ac.kr]
- Seokho Cho, Ph.D. [Professor,Wearable Electronics jsh818@jnu.ac.kr]

### Degree Requirements

Students are required to earn 130 credits, with 103 credits from Department courses and 27 credits from electives. Students must also demonstrate proficiency in a foreign language.

### ■ What Do You Study?

Core Courses

Basic Fashion Design & Drawing

Fashion Color and Image Making Making Practice Basic for Korean Clothing Practice of Clothing Construction

#### VMD & Communication

#### IT Fashion

#### Electives

Sewing and Trimming

Fashion Marketing and Consumer

Theory of Fashion Design

IT Convergence Programming

History of Western Costume

Smart Clothing Technology

Technical Design

Traditional Costume Design Item

Fashion Illustration

Folk Costume Design Workshop

Introduction to Smart Textile

**Tailoring** 

Fashion Media Production (Capstone Design)

Fashion Branding

Digital Fashion Business

Apparel Dyeing & Printing Lab.

Fashion Design CAD

Analysis of Fashion Information and Design

(Capstone Design)

Draping

Apparel Material Actual Planning Work

Textile CAD

Fashion Design Workshop

Textile-based Wearable Electronic Devices

Fashion Startup (Capstone Design)

Apparel Pattern CAD (Capstone Design)

Understanding of Korean Costume Culture

Global Fashion Business

Up-cycling Fashion Design Start-up (Capstone

Design)

Textile science

Clothing Industry and Advanced Materials

Smart Fashion Design

Washing and Management of Textile

Basic Statistics of Clothing Research

#### Minor Courses

Fashion Color and Image Making Practice of Clothing Construction

#### Careers

After completing the required programs, graduates can seek diverse career opportunities in the textile and apparel business sector as textile designers, textile converters, fashion designers, hanbok designers, fashion illustrators, fashion colorists, accessory designers, fashion merchandisers, fashion retailers, fashion promoters, and models, among others.

# College of Fisheries and Ocean Sciences

\_\_Contact Information

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#### School of Marine Technology

- · Department of Power System Engineering
- · Department of Aqualife Medicine
- · Department of Smart Fisheries Resources Management
- · Department of Aqualife Science
- · Naval Architecture and Ocean Engineering
- · Department of Maritime Police Science
- · Department of Marine Bio Food Science
- · Marine Production Management
- · Department of Ocean Integrated Science
- · Department of Fisheries, Marine Areas, Industry, Tourism & Leisure

## Department of Power System Engineering

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#### ■ What is Power System Engineering?

Power System Engineering is an academic field combining the mechanical engineering and the electrical/electronics engineering. Power System Engineering deals with the design, manufacture, control, and management of power machinery, thermal-fluid machinery, electrical/electronics machinery, etc.

#### **■** Department of Power System Engineering

The Department of Power System Engineering aims for nurturing technical manpower for machinery, electrical, and maritime industries and researching state-of-the-art technology in the field of power system engineering. The Department of Power System Engineering mainly teaches the basic knowledge and technology in the fields of mechanical engineering and electrical/electronics engineering. Students can get 'Third Class Engineer Officier Certificate' and a variety of licenses, such as 'Engineer General Machinery', 'Engineer Machinery Design', 'Engineer Electricity', 'Engineer Mechatronics'.

#### Professors

- Kyong-Uk Yang, Ph.D.
   [Professor, Hydraulic-Pneumatic Control, yangku@jnu.ac.kr]
- Woo-Gyeong Wang, Ph.D.
   [Professor, Internal Combustion Engine, wangwk@jnu.ac.kr]
- Myung-Soo Choi, Ph.D.
   [Professor, Mechanical Vibration, engine@jnu.ac.kr]
- Kyung-Hun Shin, Ph.D.
   [Assistant Professor, Electric Machine. kshin@jnu.ac.kr]

#### **■** Degree Requirements

Major	Liberal	Major Credits			Conoral	Graduation
	Arts	Minimum Recognition	Enhancement	Total	General Electives	Credits
Power System Engineering	30	48	21	69	31	130

Students are required to earn the above credits, as well as demonstrate their foreign language proficiency (e.g., TOEIC score of 550 or higher)

#### ■ What Do You Study?

Thermodynamics & Exercises

Fluid Mechanics & Exercises

Strength of Materials & Exercises

Internal Combustion Engine

Engineering Mathematics

Engineering Mechanics

Engineering Materials

Electrical Engineering

Introduction to Naval Architecture

Workshop Practice

Auxiliary Machinery

Fuel and Combustion Engineering

Electronic Engineering

Programming and Practice

Machine Design And Exercises

Mechanics of Machinery and Experiments

Refrigeration-Air Conditioning & Practice

External Combustion Engines

Fluid Machinery

Automatic Control

Mechanical Engineering Practice

Comprehensive training of marine engineering

Engine English

Internal Combustion Engine Practice

Auxiliary Machinery Practice

Sequence Control Practice

External Combustion Engine Practice

Electric Electronic Practice

Maritime Law & International Entente

Measurement Engineering

Engine Management & Safety

**Embarkation Training** 

Hydraulic Engineering-Pneumatic

Marine Pollution Response Practice

Leadership & Teamwork [ERM]

Analysis of Dynamic System

Noise & Vibration Engineering

Heat Transfer

Electric Machinery

Propulsion Engineering

Computer Aided Mechanical Design Practice

3D CAD & Practice

Introduction to Engineering

Capstone Design 1 & 2

#### Careers

Graduates are able to pursue careers in central and local government organizations (e.g., Ministry of Oceans and Fisheries, Ministry of National Defense, Korea Coast Guard, and Customs), public corporations (e.g., Port Authority, Korea Maritime Transportation Safety Authority, and Korea Electric Power Corporation), and private enterprise (e.g., shipping companies, shipbuilding companies, Korean Register, and automobile companies). Also, some graduates go to graduate school to become experts in the field of power system engineering.

## Department of Aqualife Medicine

\_\_Contact Information
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Fax: +82-61-659-7179 Email: sungju@jnu.ac.kr URL: http://fishpath.inu.ac.k

#### What is Aqualife Medicine?

Aqualife Medicine enable the studies in basic medical sciences, fish medicines, general hygiene management, and the diagnosis, treatment, and prevention of fish disease. On the basis of fundamental studies, the major aims are to cultivate qualified experts in the field of aqualife medicine and public sanitation, and to train fish doctors to contribute fisheries' production by effectively managing fish and shellfish diseases.

#### **■** Department of Aqualife Medicine

The Department of Aqualife Medicine was established in 1995 for the purpose of research and education of disease diagnosis and control of aquatic organisms to produce safe and high quality food for human consumption. Students have many opportunities to conduct lab experiments, to get on-field training, practice interviews, overseas training and master in scientific techniques. Students are encouraged to promote their professional qualifications by pursuing graduate studies.

#### Professors

- Eunheui Kim, Ph.D.
   [Professor, Pathogenic Bacteriology and Genetics, ehkim@jnu.ac.kr]
- Jung Sick Lee, Ph.D.
   [Professor, Fish and Shellfish Anatomy, ljs@jnu.ac.kr]
- Myung-Joo Oh, Ph.D.
   [Professor, Fish Virology and Parasitology, ohmj@jnu.ac.kr]
- Heung-Yun Kim, Ph.D.
   [Professor, Fish Physiology and Toxicophysiology, hykim@jnu.ac.kr]

- Sung-ju Jung, Ph.D.
   [Professor, Fish Pathology and Immunology, sungju@jnu.ac.kr]
- So Young Kang, Ph.D.
   [Professor, Fish Pharmacology and Pharmacognosy sykang1@jnu.ac.kr]
- Toyohiko Nishizawa, Ph.D.
   [Professor, Virology and Cell Biology jjnishi@jnu.ac.kr]
- Wi-Sik Kim, Ph.D.
   [Associate Professor, Clinical diseases, wisky@jnu.ac.kr]

#### **■** Degree Requirements

Major	Liberal	Major Credits			General	Graduation	
	Arts	Minimum Recognition	Enhancement	Total	Electives	Credits	
Aqua	alife Medicine	30			83	27	140

Students are required to earn the above credits, as well as demonstrate proficiency in a foreign language.

#### ■ What Do You Study?

Life Science and Lab

Introduction to Aqualife Medicine

General Chemistry and Lab

Medical Biochemistry and Lab 1

Medical Biochemistry and Lab 2

Principles of Aqualife Medicine

Clinical Lecture of Aqualife Medicine

Water Analysis and Lab.

Management of Fish Hospital and Training

Aquatic Animal and Ecology

Introduction to Aquaculture

Aquatic Environment and Disease

Anatomy of Aquatic Animal and Lab.

Fish Parasitology and Lab.

Fish Immunology and Lab.

Molecular Biology and Lab.

Nutrition and Nutritional Diseases of Aquatic Animal

General Histology and Lab.

Virology & Lab

Histology of Fisheries Animal and Lab.

Aquatic Animal Physiology and Lab.

Bacterial Fish Pathogens and Lab.

Microbiology and Lab.

Hematology and Lab.

Developmental Biology and Lab.(Capstone Design)

Fisheries Pharmacology and Lab. 1

Fisheries Pharmacology and Lab. 2(Capstone

Design)

Pathology of Fisheries Animal and Lab(Capstone

Design)

Pathology of Noninfectious Disease and Lab.

Ecology of Aquatic Disease

Study of Clinical Cases

Field Management of Fish Diseases

Invertebrate Diseases and Lab.

Disease of Seaweeds and Lab.

Aquatic Toxicology and Lab.

Smart fish health care Virus and Viral Disease

Diseases of Ornamental Fishes and Lab.

Aquatic Laws

Bacteriology and Lab

Aquatic Public Health(Capstone Design)

Organic Chemistry and Lab

Principles of Fisheries

#### Careers

Category	Career Fields		
Opening of Business	- Fish Health Center		
Government Organizations	<ul> <li>National Fishery Products Quality Management Service(NFQS) and related organizations</li> <li>Public servants in charge of fishery affairs in the Provincial, Municipal, and County offices</li> <li>National Institute of Fisheries Science - Korea Ocean &amp; Fisheries Institute</li> <li>Research institutes under local governments, corporate research centers, etc.</li> </ul>		

Category	Career Fields
General Corporations	<ul><li>Pharmaceutical companies</li><li>Animal feed manufacturers</li><li>Aquarium</li></ul>
Fishery-related Fields	<ul> <li>National Federation of Fisheries Cooperatives</li> <li>Korea Fisheries Cooperatives</li> <li>Joint fishery product market</li> <li>Fishery industry</li> <li>Fishery product distribution &amp; processing companies</li> <li>Launch of Fish Disease Control Center</li> <li>Launch of office in charge of medicines for aquatic organisms</li> </ul>

## Department of Smart Fisheries Resources Management

\_\_Contact Information

Tel: +82-61-659-7410

URL: https://smartfish.jnu.ac.kr

#### ■ What is the Smart Fisheries Resources Management?

Smart Fishery Resource Management is the use of information and communication technology (ICT) for research, analysis, evaluation, utilization, and conservation of fishery resources.

#### ■ Department of Smart Fisheries Resources Management?

The Department of Smart Fisheries Resource Management is a cutting-edge department newly established at College of Fisheries and Maritime Affairs in Chonnam National University in 2021 to educate fisheries science, oceanography, and information and communication technology (ICT) as a single course for the first time in Korea.

The Department of Smart Fisheries Resources Management teaches how to quickly and conveniently analyze various data on major fishery resources using big data, artificial intelligence(AI), and the Internet of Things(IOT). Undergraduate students of the department are nurtured as experts who can predict and continuously manage fishery resource fluctuations based on the systematic curriculum. The curriculum is structured so that students can utilize the latest ICT in the field based on a basic understanding of fisheries science and oceanography. Graduates will have the specialized knowledge and skills needed for future jobs in the fields of fisheries and oceanography.

#### Professors

- Man-Ki Jeong, Ph.D.
   [Professor, Marine Biodiversity, jmgdeux@jnu.ac.kr]
- In-Yeong Kwon, Ph.D. [Professor, Fish behavior inyeong1201@jnu.ac.kr]

- Hee-Teak Ceong, Ph.D.
   [Professor, Distributed Systems and Multimedia, htceong@jnu.ac.kr]
- Soon-Hee Han, Ph.D.
   [Professor, Compiler and Mobile Systems, shhan@jnu.ac.kr]

#### **■** Degree Requirements

Generally, students must earn 130 credits over a four-year period (average 18 credits per semester).

#### ■ What Do You Study?

Marine Environment and Fishery Resource Management Introduction of Smart Fisheries Science Basic Programming and Practice I Basic Programming and Practice II Introduction of Fisheries Resources Biology Fisheries and Oceanography Population and community ecology Data Mining Understanding and Practice Biodiversity and Image Analysis Practice Introduction to artificial intelligence and fisheries applications Smart Fisheries Resources Business Management Smart Web programming Biostatistics and Practice Understanding of Fisheries Resource Management Policy Introduction to Fishery Resources Understanding of Computer World Marine plankton ecology and practice Understanding of Marine ecosystem models Ocean survey method and practice ICT-based fishery resource research practice International maritime law Aquatic Animal Behavior Understanding of Fisheries Resource Management Law Data Processing for Fishery Resource Fishery resource research methodology and practice Understanding Fishery Resources Management Practice 1 Understanding Fishery Resources Management Practice 2 Introduction of fishery stock assessment model Nekton Biology Understanding of fisheries resource management based on machine learning Aquatic animal behavior pattern analysis(Capstone design) Fishery resource big data analysis and visualization Fisheries Resource Bioinformatics and Practice Artificial Intelligence Design and Practice Maritime International relations theory Marine Animal Ecology and Practice Fishery Resources Stock Analysis and Practice I Fishery Resources Stock Analysis and Practice II Understanding of global fisheries resource management Introduction of Smart aquafarm Marine biotechnology and practice(Capstone design) Marine Ecosystem-Based Fisheries Resource Model Ecosystem data pattern analysis and practice Fisheries Resource Assessment Introduction of Smart aquafarm operations and practice (Capstone design) Marine life resources data analysis(Capstone design)

Marine Application Mobile Program Practice

#### Careers

- 1) Officials in the field of marine and fisheries (Research official of National Fisheries Research & Development Institute(NFRDI) / Korea Hydrographic and Oceanographic Agency(KHOA))
- 2) Researchers at public institutions and local governments (Korea Fisheries Resources Agency(FIRA), Korea Institute of Ocean Science and Technology(KIOST))
- 3) IT companies in the fishery and marine sector (Smart Aquaculture Cluster complex, start-ups)
- 4) Employment-related National License Big Data Analysis Engineer, Data Processing Engineer, Industrial Engineer Office Automation, Industrial Engineer Ocean Survey, Engineer Ocean Environment, Smart Fishery Resource Management License (private license), etc.

## Department of Aqualife Science

\_\_Contact Information

Fax: +82-61-659-7169

URL: http://aqua.jnu.ac.kr

#### ■ What is the Department of Aqualife science?

Aquaculture is mainly concerned with the science and art of marine biology, aquaculture and fisheries. The department aims to have students obtain good technical knowledge on marine fisheries resources and also contribute to the sustainable use and increased production of fish.

The course provides a solid foundation and applied studies in zoologies of vertebrates and invertebrates, Phycology, aquaculture, aquaculture environment ecology, physiology, ecology, genetics, molecular biology, fisheries business management, etc.

The department was established the Yeosu Public Fisheries School in May of 1915 and has produced a multitude of alumni in the field of aquaculture and fisheries over the past 80 years.

Now it has gathered an able and talented research staff in various majors and runs undergraduate and post-graduate courses and additionally graduate schools of industry and education.

After graduation, students may pursue careers in the field of research institutes (National Fisheries Research and Development Institute, Korea Institute of Ocean Science and Technology, research institutes of local governments), administrative agencies (Maritime and fisheries ministry and local governments) and companies feeds, and seafood to name but a few.

#### ■ School of Aqualife science at Chonnam National University

The Department aims to have students acquire good technical knowledge of marine biology and develop their potential capacity to utilize, conserve, and manage marine resources. To this end, it provides specialized subjects regarding fish, shellfish, and seaweed farming along with a basic knowledge of aquaculture.

The Department is composed of eight main laboratories: aquaculture environment ecology, resource organisms, fish culture and nutrition, reproduction organisms, invertebrate culture, algae culture, fisheries business management, and molecular physiology.

#### Professors

- Won Kyo Lee, Ph.D. [Professor, Reproduction organisms, wklee@jnu.ac.kr, +82-61-659-7161]
- Kyoung Ho Kang, Ph.D.
   [Professor, Invertebrate Culture,

- mobidic@jnu.ac.kr, +82-61-659-7165]
- Kyeong Ho Han, Ph.D. [Professor, Ichthyology Ecology and Taxonomy, aqua05@jnu.ac.kr, +82-61-659-7163]
- Kang Hee Kho, Ph.D.

[Professor, Molecular Physiology, kkh@jnu.ac.kr, +82-61-659-7168]

• Sang Duk Choi, Ph.D.

[Professor, Aquaculture Environment Ecology, choisd@jnu.ac.kr, +82-61-659-7166]

#### Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years, with 18 credits earned on average per semester.

#### ■ What Do You Study?

Physiology of Aquatic Organism and Experiments (3)

Aquatic Breeding Science and LAB (3)

Invertebrate Zoology and Lab (3)

Developmental Biology lecture and experiment (3)

Cell Biology lecture and experiment (3)

Fisheries Oceanography and Lab (3)

Ichthyology and experiment (3)

Chemistry lecture and experiment (3)

Phycology and Lab (3)

Introduction and Experiment to Aquaculture (3)

Biological chemistry and Lab (3)

Fish culture and Lab (3)

Phycocultivation Science and Lab (3)

Coastal fisheries biology and Lab (3)

Aquaculture Biology Disease and Lab (3)

Invertebrate culture and Experiment (3)

Skin-Scuba Diving (1)

Readings in Aquaculture texts and Practice (3)

Marine Retoration Ecology and Field Training (3)

Molecular biology and Experiments (3)

Biotechnology and Experiments (3)

Quality control and experimental fisheries (3)

Aquaculture expert learning and training (3)

Zoology and Experiment (3)

Botany and experiment (3)

Fresh-water Fish culture and experiment (3)

Marine-fish Culture and Lab (3)

Fisheries Culture Field Practice (2)

Fresh-water Biology and lab (3)

Principles of Fisheries and law (3)

Experimental Biology and practice (3)

Fisheries Business Management and Practice (3)

Aqua-Environment and Ecology & Lab (3)

Food Organism and Lab (3)

Fresh-water Biology and lab (3)

Aquaculture system and lab (3)

Aquaculture seed production and practice (3)

Fish Nutrition and Lab (3)

Animal Physiology & Lab (3)

Plant Physiology & Lab (3)

Genetics and Lab (3)

Organic Chemistry and Lab (3)

Fisheries Resources Dynamics (3)

Marine Ecology and Lab (3)

#### Careers

Graduates may seek careers with the Ministry of Maritime Affairs and Fisheries, the Korea Ocean Research and Development Institute, and the National Fisheries Research and Development Institute. They may find positions as civil servants, fisheries officers, teachers, professors, and fisheries managers.

## Naval Architecture and Ocean Engineering

\_\_Contact Information

Tel. +82-61-659-7150 Fav: +82-61-659-7159

E-mail: chiohj@jnu.ac.kr

URL: http://oceaneng.jnu.ac.kr/

#### ■ What is the Naval Architecture and Ocean Engineering?

Naval architecture and ocean engineering focuses on research and education in a variety of areas from basic theory to advanced technology on ship and offshore structures. The final goal of the Department lies in the design and production of the reliable and cost-effective transport systems and offshore structures which can carry out missions successfully in harsh ocean environments. The research scopes of naval architecture consist of resistance and propulsion, propulsors, structures and materials, motion and maneuverability, noise and vibration, and welding. Ocean engineering involves various scopes of technical problems that arise during the design, construction, load-out, and operation of various forms of structures developed to meet the needs of offshore petroleum and construction industries. Research on the marine environment itself is also one of the major research fields of the Department. To meet increasingly complex technical demands, the Department extends research fields to cover rigorous analysis of detailed subjects using powerful computers. In particular, it offers on-board training course on university-owned research and training ships.

## ■ Department of Naval Architecture and Ocean Engineering at Chonnam National University

- 1997. 3 Establishment of Department of Ocean Engineering
- 1999. 3 Reorganization of Department of Ocean Engineering and Ocean Environmental System
- 2006. 3 Reorganization of Department of Ocean Engineering, Ocean Environmental System, Aquaculture, Bio-resources Utilization, Marine Production Management and Power System Engineering
- 2007. 9 Renaming of Naval Architecture and Ocean Engineering
- 2020. 3 Abolition Faculty of Marine Technology and Separation Department of Naval Architecture and Ocean Engineering

#### Professors

- Hee-Jong Choi, Ph.D.
   [Professor, Ship Design, chiohj@jnu.ac.kr]
- Jee-Hun Song, Ph.D.
   [Professor, Ship Structural Vibration,

jhs@jnu.ac.kr]

- Jae-Min Lee, Ph.D.
   [Professor, Applied Mechanics, jae27v@jnu.ac.kr]
- Ok-Sam Kim, Ph.D.

[Professor, Manufacturing

Engineering of Ships, kos@jnu.ac.kr]

• Il-Heum Park, Ph.D.

[Professor, Coastal and Ocean

Engineering, parkih@jnu.ac.kr]

• Jong-Kyu Kim, Ph.D.

[Professor, Ocean Informatics,

kimjk@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years, with 18 credits earned on average per semester.

#### ■ What Do You Study?

Engineering Mathematics 1 (3)

Engineering Mathematics 2 (3)

Dynamics of Structures and Exercise (3)

Structure Dynamics (3)

Structural Dynamics (3)

Structural Vibration (3)

Naval Architectural Calculation and Practice (3)

Shipbuilding technology (3)

Ship structural design (3)

Auxiliaries of ship (3)

Manufacturing of Shipbuilding (3)

Ship Acoustic and Noise Engineering (3)

Welding Engineering of Ship and Practice (3)

Ship Motion and Controllability (3)

Ship Equipments (3)

Material Science of Ship (3)

Ship Resistance (3)

Optimum design of ship & Practice(3)

Ship Propeller Design (3)

Ship Structural Designand Exercise(3)

Fluid Mechanics 1 (3)

Fluid Mechanics 2 (3)

Computer aided drawing of ship & Practice (3)

Numerical Methods for Engineers & Practice (3)

Introduction to Naval Architecture (3)

Naval Architecture equipment design (3)

Project of Ship & Ocean Engineering (3)

Ship and Ocean Engineering Laboratory (3)

Professional English for Naval Architecture and

Ocean Engineering (3)

Capstone Design (3)

Computer-Aided Ship Hull-From Design (3)

Design of special ship (3)

Marine Geoinformatics & Practice (3)

Introduction to Ocean Engineering (3)

Coastal and Offshore Structures Design and

Training (3)

Marine Meteorology (3)

Ocean Energy Engineering (3)

Dynamical Oceanography (3)

Marine Information Engineering & Practice (3)

Water Wave Mechanics and Field Observations (3)

Offshore Plant Engineering (3)

Oceanography and Field Training (3)

Marine Environmental Engineering (3)

Marine Environmental Informatics & Practice (3)

Theories of Teaching in Mech. & Metal. Eng. Edu. (3)

Text Research & Teaching Methodology in Mech.

& Metal. Eng. Edu. (3)

Logic and Essay writing in Mech. & Metal. Eng. (3)

#### Careers

Graduates currently play active roles in central and local government organizations (e.g., Ministry of Land, Transport and Maritime Affairs, Ministry of Foreign Affairs and Trade Ministry of Education, Science and Technology), public corporations, and research institutes (e.g., Korea Ocean Research and Development Institute, Korea Marine Equipment Research Institute, Korea Institute of Construction Technology). Also, private companies and corporations dealing with ships, offshore and coastal structures, floating islands and harbors are looking to hire naval and ocean engineers. Some graduates go on to graduate school to further specialize in their discipline in the field of naval architecture and ocean engineering.

## Department of Maritime Police Science

\_Contact Information

Tel: +82-61-659-7180 Fax: +82-61-659-7189

E-mail: hosamms@jnu.ac.kr

URL: http://police.jnu.ac.kr

#### ■ What is Maritime Police Science?

The Department of Maritime Police Science offers highly motivated students basic education of law, social sciences, maritime police science, and maritime safety technology, and professional education comprising of maritime science and technology.

#### **■** Department of Maritime Police Science

Recently, due to the importance of marine environments, there are increasing concerns about the establishment of maritime sovereignty in the sea area. The Department of Maritime Police Science was founded to address this situation. It provides students with lectures and training necessary for maritime police officers.

#### Professors

- Dall-Hyun Park, Ph.D. in Law [Professor, Criminal Law, Criminal Procedure, Criminal Policy dhpark328@jnu.ac.kr]
- Duck-Jong Jang, Ph.D. in Science [Professor, Marine Safety, Navigation, Marine Pollution Response, jdj@jnu.ac.kr]
- Ho-Sam Bang, Ph.D. in Law
   [Professor, International Law of the Sea, Maritime Law, hosamms@jnu.ac.kr]
- Ki-Soo Lee, J.S.D.
   [Professor, Police Science, Maritime Police Science, kslee@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 130 credits, with 30 credits from cultural electives, 15 credits from core courses, 33 credits from electives, and 21 credits from deepening courses. Students must also demonstrate proficiency in a foreign language.

#### ■ What Do You Study?

Introduction to Police Administration Maritime Police Science Police and Human Rights Theory of Police Investigation Introduction to Public Administration Administrative Law Introduction to Law Constitutional Law

General Theory of Criminal Law

Criminal Procedure

Criminology Civil Law International Law

Law of the Sea and International Maritime Conventions

Marine Laws
Marine Traffic Law
Maritime English

Introduction to Navigation

Geo-Navigation

Radio Navigation and Practice

Celestial Navigation

Nautical Instrument and Practice

Seamanship Control

Seamanship

Ship Handling Simulator Training GMDSS Communication Training

Embarkation Training
Ship Boarding Training
Leadership And Teamwork
Maritime Safety Training
Marine Accident Management
Ocean Pollution Control

Marine Pollution Response Practice

Principles of Fisheries

Fishery Management in Loading of Ship Writing for Self-reflection and Communication

Career Plan and Self Understanding English for Global Communication

Earth Science

Science of Chivalry and Practice

Total Credits: 40

#### Careers

Most graduates are expected to work as maritime police officers. They can also advance to positions in maritime administrative organizations, marine companies, national marine accident inquiry offices, and maritime-related organizations.

### Department of Marine Bio Food Science

\_\_Contact Information

Tel: +82-61-659-7210

E-mail: gnahn@jnu.ac.kr

URL: http://marinefs.jnu.ac.kr

#### ■ What is Marine Bio Food Science?

Marine Bio-Food Science is the scientific field of marine-derived foods studying the basic principles of marine food sources, food quality, processing and preservation of food materials, distribution, sanitation, food technology, and methods evaluating food safety.

#### ■ What is the Department of Marine Bio Food Science?

The Marine Bio-Food Science department was established in 1987 and has educated in various techniques and harnessed knowledges about food fields related with marine-derived resources.

Furthermore the department has strived to become a leader in the development or production of functional and high quality food materials that could benefit all humankind.

The students can have many opportunities to train in companies, practice interviews and master scientific techniques. We provide an excellent educational environments with outstanding facilities and scholarships to our students.

#### Professors

- Dong-Soo Kang, Ph.D.
   [Professor, Fisheries Chemistry, dskang@jnu.ac.kr]
- Sun-Jae Kim, Ph.D.
   [Professor, Food Safety, foodkims@jnu.ac.kr]

- Gin-Nae Ahn, Ph.D.
   [Professor, Marine Biotechnology, gnahn@jnu.ac.kr]
- Sun-Hee Cheong, Ph.D.
   [Professor, Functional Foods, sunny3843@jnu.ac.kr]

#### Degree Requirements

Major	Liberal	Major Credits			General	Graduation
	Arts	Minimum Recognition	Enhancement	Total	Electives	Credits
Marine Bio Food Science	30	48	21	69	31	130

Students are required to earn the above credits, as well as demonstrate proficiency with a foreign language.

#### ■ What Do You Study?

Molecular Biology Biochemistry

Analytical Chemistry and Lab. Food Utilization 1 and Experiment Food Utilization 2 and Experiment Food Hazard analysis & Practice

Molecular Nutrition General fisheries Fisheries Law

Fisheries Quality Management IntroductiontoFisheriesScience

Food Bioscience

Sea Food Refrigeration Fisheries Industrial Materials

Bio-food English in Major Field

Food Additives Instrumental Analysis Seaweed Food Processing Food Safety & Practice

Marine food materials and experiments

Food Enzymology

Food Engineering Basic Concepts Seafood manufacturing practice Fishery Products Maintenance Marine Biomaterials & Lab

Utilization of Fisheries By-Products

Marine Bio-Food and Lab.

Marine toxicology

Seafood Design Technology and Experiment

Seminar in bio-food materials Canned Sea Food Technology

Fisheries Marketing

Animal Cell Culture and Lab.

Physiology Food Science

Fermentation metabolism

Field Training of Marine Biotechnology

Microbiology & Practice Organic Chemistry and Lab Seafood Chemistry and Lab. Seafood processing and lab.

Functional Examination of Fisheries Product Quantitative Analysis of Seafood and Lab.

Fermentation Chemistry & Practice Marine Natural Products Chemistry

#### Careers

#### • Employment

Graduates in the Marine Bio-Food Science department may expect to employment in biotechnology companies, national/private research centers, and food-related companies including in food production, processing, and distribution.

#### • Graduate school

Our department has the postgraduate courses offering intensive education leading to opportunities to become major experts in the field of Marine Bio-Food Science.

## Marine Production Management

\_Contact Information

Fax: +82 61 659 7120

URL: http://marine.jnu.ac.kr

#### ■ What is Marine Production Management?

The aim of the Marine Production Management program is to foster high-quality human resources who will lead continuous improvement efforts and efficient management of marine resources. The Department? It provides education related to eco-friendly and efficient marine production systems and shipping service systems for marine transportation and fishery production (Official Education and Training Institution for Marine Officers designated by the Ministry of Oceans and Fisheries). The department also provides students with opportunities to visit other countries through overseas ship boarding practices.

#### ■ School of Marine Technology at Chonnam National University

Marine Technology (MT) is one of seven national agendas with regard to striving to achieve excellence in areas of technology(IT, BT, ET, NT, ST, CT, MT) fixed by the National Science and Technology Council. MT is considered to be the future technology for achieving such goals as increasing competitiveness in the marine industry, intensifying the management of marine territory, and preventing the draining of marine resources and global environmental changes, for which everyone in recent history shares the blame. The aim here is to foster excellent talents who will lead the new marine age of the 21st century by sharing information through international workshops and developing technology through cooperative research.

It provides customized education, on-the-job training opportunities through cooperation with related industries, government agencies, and research institutions. It specializes in the development of marine high-technology, the development and use of ocean resources, and the maintenance of the ocean environment. This school currently consists of 5 majors: Marine Production Management, Aquaculture, Power System Engineering, Environmental Oceanography, and Naval Architecture and Ocean Engineering.

#### Professors

- Doo-Jin Hwang, Ph.D.
   [Professor, Fisheries Acoustics, djhwang@jnu.ac.kr]
- Taeho Kim, Ph.D.
   [Professor, Fisheries
   Engineering, kimth@jnu.ac.kr]

- Hyong-Ho Shin, Ph.D.
   [Professor, Ship Navigation, hhshin@jnu.ac.kr]
- Jihoon Lee, Ph.D.
   [Professor, Fishing System, jihoon.lee@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years, with 18 credits earned on average per semester.

#### ■ What Do You Study?

Boarding Training1 Leadership and Teamwork Training
Boarding Training2 Leisure Fishing Technology and Practice

Boarding Training3 Marine Laws

Celestial Navigation Marine Traffic Law Computer Aided Fishing Gear Design & Practice Maritime English

Deep-sea Fishing Maritime Safety Training
ECDIS Training Meterology Training

Fisheries hydrography Nautical Instrument and Practice
Fisheries Management Numerical Analysis & Practice

Fisheries Resources Dynamics Ocean Fisheries Law

Fishery Biology Ocean Systems Control Theory & Practice

Fishery Management in Loading of Ship
Oceanography and Practice
Fishing Gear Design
Principles of Fisheries
Fishing Gear Engineering
Radar Simulation Training
Fishing Gear Material
Radio Navigation and Practice

Fishing Information Seamanship

Fishing Methodology Seamanship Control

Geo-Navigation Techniques of Fishing Machinery & Lab.

GMDSS Communication Training Techniques of Fishing System

#### Careers

Graduates may find careers as public service employees of local autonomous entities or institutions under the control of the Ministry of Oceans and Fisheries, Korea Coast Guard, custom examiners, researchers of the National Fisheries Research and Development Institute or the Korea Institute of Ocean Science and Technology, personnel of the Korea Marine Environment Management Corporation, the Korea Ship Safety Technology Authority, the National Federation of Fisheries Cooperatives, deep-sea fishery companies, companies related to fisheries, marine transportation business (possible substitution of military service), and educational institutions (after completing the teaching training course).

## Department of Ocean Integrated Science

\_\_Contact Information

Tel: +82-61-659-7140

E-mail: shinhc@jnu.ac.kr

URL: http://ocean89.jnu.ac.ki

#### ■ What is Department of Ocean Integrated Science?

The most striking feature of Earth in the 21st century is the marine environment. Students aim to understand the phenomena of the marine environment, focusing on the global ecosystem, the scientific and technological development for space uses of marine environment, the development of marine energy, the exploration of marine resources, and the management and conservation of the marine ecosystem. More recently, sustainable ecosystem development and management of marine environments has become a crucial branch of study. This program provides the understanding of scientific and technological applications for marine environments. The study of marine phenomena may be divided into four broad caregories as follows: biology, chemistry, physics, and geology, leading to a study of the uses and management of the true marine environment. The program's main purpose is to educate students into experts in developing various and plentiful marine resources. In addition, faculty members and students are involved actively in advance studies and exploration with overseas universities and international partners: Students have opportunities for both research and study abroad

## ■ Major in Department of Ocean Integrated Science at Chonnam National University

As a leading partner in marine science and technology research and development, the Department of Environmental Oceanography has a study program providing the understanding of scientific and technological applications for marine environments.

The program is divided into four main broad categories as follows: biology, chemistry, physics, and geology. The main purpose of this program is to educate about and foster a greater understanding of the essential preservation and development of our diverse and plentiful marine resources.

#### Professors

- Yeon Gyu Lee, Ph.D. [Professor, Marine Geology, lyg6342@jnu.ac.kr]
- Hyun Chool Shin, Ph.D. [Professor, Marine Benthic Ecology, shinhc@jnu.ac.kr]
- Hyeon Seo Cho, Ph.D.
   [Professor, Chemical Oceanography,

hscho@jnu.ac.kr]

- Ihn-Sil Kwak, Ph.D.
   [Professor, Zoology, iskwak@jnu.ac.kr]
- Ho Young Soh, Ph.D
   [Professor, Zooplankton Systematics and Ecology, hysoh@jnu.ac.kr]

yoonjakang@jnu.ac.kr]

Yoonja Kang, Ph.D.
 [Assistant Professor, Phytoplankton Ecology,

#### ■ What Do You Study?

Environmental Oceanography & Lab. 1 Marine Pollution and Lab. Environmental oceanography & Lab. 2 Marine Biodiversity & Lab.

Marine Ecoenvironmentalogy & Lab. 1 Deep sea Biology

Marine Ecoenvironmentalogy & Lab. 2 Zooplanktonlogy & Lab.

Marine Integrative Science and Lab.

Ocean-ecotoxicology & training

Marine Geotectonics and Lab. Estuary Ecology

Marine Geology of korea & Lab. Ocean Animal Behavior & Lab.

Marine Sedimentology and Lab. Ocean environment Genetics & Lab.(Capstone

Marine Micropaleontology Design)

Marine Benthic Ecology and Lab.

Marine Resources and Lab

Intertidal Ecology and Lab. Phytoplankton Ecophysiology and Lab

Biology of Marine Nekton and Lab. Planktonology and Lab.

Marine Chemistry and Lab. Oceanographic Data Analysics And Exercises

Seawater Analysis and Lab.

#### **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 Years, with 18 credits earned on average per semester.

#### Careers

Category	Career Fields		
Opening of Business	- Fish Health Center		
Government Organizations	<ul> <li>National Fishery Products Quality Management Service(NFQS) and related organizations</li> <li>Public servants in charge of fishery affairs in the Provincial, Municipal, and County offices</li> <li>National Institute of Fisheries Science</li> <li>Korea Ocean &amp; Fisheries Institute</li> <li>Research institutes under local governments, corporate research centers, etc.</li> </ul>		
General Corporations	<ul><li>Pharmaceutical companies</li><li>Animal feed manufacturers</li><li>Aquarium</li></ul>		
Fishery-related Fields	<ul> <li>National Federation of Fisheries Cooperatives</li> <li>Korea Fisheries Cooperatives</li> <li>Joint fishery product market</li> <li>Fishery industry</li> <li>Fishery product distribution &amp; processing companies</li> <li>Launch of Fish Disease Control Center</li> <li>Launch of office in charge of medicines for aquatic organisms</li> </ul>		

### Department of Fisheries, Marine Areas, Industry, Tourism & Leisure

\_\_Contact Information

Tel: +82-61-659-7190

E-mail: jnukcg@naver.com

URL: http://police.jnu.ac.kr

## ■ What is the Department Fisheries, Marine areas , Industry, Tourism & Leisure?

The Department of Fisheries, Marine, Industry, Tourism & Leisure is supported by not only CNU but also Jeonnam Province(50% of scholarship) and companies(25% of scholarship) related to the major, so students who are employed at the companies belong to school can be accepted with only 25% tuition and work and study at the same time.

The educational purpose is to know various theories and application ways such as understanding of marine environment, using, develop, utilizing and preserving fishery marine resources including theories and practical education belong to many types of industry for tourism and leisure fields based on these researches about fisheries and marine areas.

Besides, amalgamated and combined major between fisheries&marine industry and tourism&leisure industry is are researched and educated for students who can contribute to public welfare society, nation and human development.

Training talents for amalgamated industry with fishery&marine and tourism&leisure. Educating for capability and actual business in international and informational generation. Reinforcing abilities for the 4<sup>th</sup> indusrial revolution though ICT education.

#### Professors

 Kyeong Ho Han, Ph.D.
 [Professor, Ichthyology Ecology and Taxonomy, aqua05@jnu.ac.kr]

#### **■** Degree Requirements

Students are required to earn 120 credits, normally over a period of 4 years, with 15 credits earned on average per semester.

#### ■ What Do You Study?

Fisheries & Marine Resources (3) Oceanography and Field Training (3) Fisheries & Oceanography and Lab. (3) Fisheries & Marine Education (3) Tourism Resources (3) Marine Tourism Development (3) Travel Business Management (3)

Leisure Sports Tourism (3)

Maritime Safety Training (3)

Marine Pollution and Lab. (3)

Environmental oceanography & Lab. (3)

Coastal ecology and Lab. (3)

Marine Energy Developments & Practice (3)

Principles of Fisheries (3) Marine Traffic law (3)

Marine Meteorology and Practice (3)

Fresh-water Biology and Lab. (3)

Marine Ecology and Lab. (3)

Marine & Fisheries business and economics (3)

Conservation Biology (3)

Marine Geoinformatics & Practice (3)

Resources Management (3)

Tourism Law (3)

Hotel and Tourism Services (3)

Business Management & Practice (3)

Culture & Tourism (3)

Tourism Research & Analysis and Practice (3)

Ecotourism (3)

Cruse Management (3)

Tourism Festival Event Planning & Practice (3)

MICE Industry (3)

Leisure and Sport Management (3)

Marina Practice (3)

Exhibition Convention Center Management (3)

Leisure Practice and Start-up (3)

Hotel Management (3)

## College of Veterinary Medicine

Contact Information

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■ Veterinary Medicine

### Veterinary Medicine

#### \_\_Contact Information

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#### **■** What is Veterinary Medicine?

Veterinary medicine is the branch of science that deals with the application of medical, diagnostic and therapeutic principles pets, and domestic, wild life and livestock animals. Veterinary medicine helps human health through the careful monitoring of livestock, companion animals, and wildlife health. Modern veterinarians serve the needs of the public in a variety of significant ways: prevention of disease in animals and humans, enhancement of animal agriculture and wildlife management, humane health care of animals, research of diseases of animals and provision of wholesome food.

#### **■** College of Veterinary Medicine

The College of Veterinary Medicine exists to better the health and welfare of animals and humans. Since 1952, the Department of Veterinary Medicine has been serving the public through teaching, research and service programs benefiting animal health, public health, and environmental health in Jeonnam province. It became the College of Veterinary Medicine in 1988 when it separated from the College of Agriculture.

The College of Veterinary Medicine set up an accord in 1995 with Murdoch University, located in Australia, Since then, the College has built similar relationships with Universidad Austral de Chile (Chile), and Nippon Veterinary Medicine and Animal Science (Japan), and has had professor and student exchange programs and common research projects with these institutions.

The college trains the next generation of small and large animal veterinarians as it develops leaders in public health, disease control, food safety, environmental protection, biotechnology, higher education, and research.

The faculty and staff of the college are committed to exceptional teaching, research, and patient care. Many changes will shape the future of veterinary medical education and veterinary medicine in the future.

#### Professors

- Sung-Ho Kim, Ph.D.
   [Professor, Vet. Anatomy, shokim@chonnam.ac.kr]
- Sung-Shik Shin, Ph.D.
   [Professor, Vet. Parasitology, sungshik@chonnam.ac.kr]

- Chun-Sik Bae, Ph.D.
   [Professor, Vet. Surgery, csbae210@chonnam.ac.kr]
- Bong-Ju Lee, Ph.D.
   [Professor, Vet. Infectious,
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- Kyoung-Oh Cho, Ph.D.
   [Professor, Avian Diseases, choko@chonnam.ac.kr]
- Tae-Ho Ahn, Ph.D.
   [Professor, Vet. Biochemistry, thahn@chonnam.ac.kr]
- Jong-Choon Kim, Ph.D.
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- Seong-Soo Kang, Ph.D. [Professor, Vet. Surgery, vetkang@chonnam.ac.kr]
- Chang-Jong Moon, Ph.D.
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- Guk-Hyun Suh, Ph.D.
   [Professor, Vet. Medicine, ghsuh@chonnam.ac.kr]
- Tae-Jung Kim, Ph.D.
   [Professor, Vet. Public Health, tjkim@chonnam.ac.kr]
- Sang-Ik Park, Ph.D.
   [Professor, Vet. Pathology, sipark@chonnam.ac.kr]
- Jong-Hwan Park, Ph.D.
   [Professor, Lab. Animal Medicine, jonpark@chonnam.ac.kr]
- In-Sik Shin, Ph.D.
   [Associate Professor, Vet. Pharmacology, dvmshin@chonnam.ac.kr]

- Ha-Jung Kim, Ph.D.
   [Associate Professor, Vet. Medicine, kimhj614@chonnam.ac.kr]
- Dong-Il Kim, Ph.D.
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- Chang-Min Lee, Ph.D.
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- Woon-Sung Na, Ph.D.
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- Joong Sun Kim, Ph.D.
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- Park, Seung Jo, Ph.D.
   [Assistant Professor, Vet. Diagnostic imaging, psc1237@jnu.ac.kr]
- Jun-Gyu Park, Ph.D.
   [Assistant Professor, Vet. Surgery, kingsalt@jnu.ac.kr]
- Son Young-Bum
   [Assistant Professor, Vet. Obstetrics, ybson@jnu.ac.kr]
- Yoo Dae Sung, Ph.D.
   [Assistant Professor, Vet. Public Health, shanuar@jnu.ac.kr]

#### **■ Degree Requirements**

Students are required to complete the 2-year pre-veterinary medical program in addition to the 4-year veterinary medical program.

They are required to earn 160 credits, with 140 credits from department courses and 20 credits from electives.

#### ■ What Do You Study?

■ Core Courses (1st) Veterinary Physiology 1 Veterinary Physiology Lab. 1 Veterinary Biochemistry 1 Veterinary Biochemistry Lab. 1 Veterinary Histology 1 Veterinary Histology Lab. 1 Veterinary Anatomy 1 Veterinary Anatomy Lab. 1 Veterinary Physiology 2 Veterinary Physiology Lab. 2 Veterinary Biochemistry 2 Veterinary Biochemistry Lab. 2 Veterinary Bacteriology Veterinary Bacteriology Lab. Veterinary Histology 2 Veterinary Histology Lab. 2 Veterinary Anatomy 2 Veterinary Anatomy Lab. 2 ■ Core Courses (2nd) Veterinary Parasitology 1 Veterinary Parasitology Lab. 1 Veterinary Toxicology 1 Veterinary Immunology Veterinary Immunology Lab. Veterinary Pathology 1 Veterinary Pathology Lab. 1 Veterinary Pharmacology 1

Veterinary Pharmacology Lab. 1 Veterinary Applied Embryology Environmental Hygiene

Veterinary Parasitology 2 Veterinary Parasitology Lab. 2 Veterinary Toxicology 2

Veterinary Virology

Veterinary Virology Lab. 1

Veterinary Pathology 2

Veterinary Pathology Lab. 2

Veterinary Pharmacology 2

Veterinary Pharmacology Lab. 2

Veterinary Infectious Diseases 1

Food Hygiene

Laboratory Animal Science

#### ■ Core Courses (3rd)

Swine Diseases

Aquatic Animal Diseases Veterinary Radiology Veterinary Radiology Lab. Veterinary Diagnosis

Veterinary Infectious Diseases 2

Wild Animal Diseases

Epidemiology Epidemiology Lab. Avian Diseases

Veterinary Public Health Veterinary Public Health Lab

Veterinary Medicine 1 Veterinary Medicine Lab. 1 Veterinary Obstetrics 1

Veterinary Obstetrics Lab. 1

Veterinary Surgery 1 Veterinary Surgery Lab. 1 Veterinary Clinical Pathology

Veterinary Clinical Pathology Lab.

#### ■ Core Courses (4th)

Veterinary Medicine 2 Veterinary Medicine Lab. 2 Veterinary Jurisprudence Veterinary Obstetrics 2 Veterinary Obstetrics Lab. 2 Veterinary Diagnostic Imaging Veterinary Diagnostic Imaging Lab. Veterinary Surgery 2 Veterinary Surgery Lab. 2

Veterinary Dermatology

#### Electives

Thesis Research Animal Hospital Management Animal Hospital Clinical Practice 1 Animal Hospital Clinical Practice 2 Animal Hospital Clinical Practice 3 Equine Medicine Pathophysiology

Consulting of Industrial Animal

Physiological Biochemistry Wild Animal Management

Current Topics in Biotechnology Fish Morphology Veterinary Biomedical Engineering Veterinary Emergency

Veterinary Drug Therapeutics Pharmacology of Natural Products

Veterinary Epidemiology Field Learning 1 Veterinary Diagnostic Pathology Field Learning 2

#### Careers

The Department provides students with the skills and knowledge necessary to become successful veterinarians. The Department's faculty conducts innovative and ground breaking clinical, paraclinical, and general research in the field of veterinary science.

Students may also become scientists who work at clinics or labs in other scientific fields.

## College of Pharmacy

\_\_Contact Information

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Fax: +82-62-530-2902 E-mail: pharm@jnu.ac.kr URL: http://pharmacy.jnu.ac.kr

#### Department

- · Department of Pharmacy
- Pharmacy major
- Manufacturing Pharmacy major

#### Affiliated Research Centers

- · Research Institute of Pharmaceutical Sciences
- · Institute of Bioequivalence and Bridging Study
- · Research and Development Center for Natural Product Drugs

# College of Pharmacy

## \_\_Contact Information

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## ■ What is Pharmacy?

Pharmacy is the science of development, dispensing, and management of drugs. It is a health profession that links life sciences with chemical, biological and physical sciences. Pharmacy aims to educate and train students to ensure the safe and effective use of pharmaceutical drugs, and development of new therapeutic agents.

## **■** College of Pharmacy at Chonnam National University

The mission of the College of Pharmacy, established in 1981, is to educate and train highly-qualified professional pharmacists, scientists, and other officials in the healthcare field who will care for the health and future of our society. During the last decade, the College has made a strong commitment to intensive education and creative research through programs of education at the undergraduate, professional, and postgraduate levels. The College is well-equipped with research facilities, complete multimedia systems, and computer networks for a thoroughly modern educational experience.

- Yong-Bok Lee, Ph.D.
   [Professor, Pharmaceutics, leeyb@jnu.ac.kr]
- Won-Jea Cho, Ph.D.
   [Professor, Organic Pharmaceutical Chemistry, wjcho@jnu.ac.kr]
- Kyeong-Man Kim, Ph.D.
   [Professor, Pharmacology, kmkim@jnu.ac.kr]
- Kwonseop Kim, Ph.D.
   [Professor, Pathophysiology, koskim@jnu.ac.kr]
- Kwang Youl Lee, Ph.D.
   [Professor, Molecular Biology, kwanglee@jnu.ac.kr]
- Bok Yun Kang, Ph.D.
   [Professor, Immunology, bykang@jnu.ac.kr]

- Young Ran Kim, Ph.D.
   [Professor. Pharmacotherapy. kimyr@jnu.ac.kr]
- Young Jun Im, Ph.D.
   [Professor, Structural Biochemistry, imyoungjun@jnu.ac.kr]
- ChangJu Chun, Ph.D.
   [Professor, Bionano- Pharmaceuticals, cchun1130@jnu.ac.kr]
- Joo Young Huh, Ph.D.
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- Jutaek Nam, Ph.D.
   [Associate Professor. Basic Pharmaceutical Chemistry. namj@jnu.ac.kr]
- Young-Chang Cho Ph.D.
   [Associate Professor, Preventive Pharmacy, yccho@jnu.ac.kr]

· Namki Cho, Ph.D.

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• Jeong Uk Choi, Ph.D.

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• Somy Yoon, Ph.D.

[Assistant Professor, Basic Pharmaceutical Biology,

somyyoon@jnu.ac.kr]

## **■** Degree Requirements

Students are required to earn 225 credits to graduate.

#### **Basic Pharmacy Courses**

Basic Pharmaceutical Biology 1

Basic Pharmaceutical Biology 2

Basic Pharmaceutical Chemistry 1

Basic Pharmaceutical Chemistry 2

Introduction to Pharmacy

Instrumental Analysis

Basic pharmacy physics 1

Basic pharmacy physics 2

Basic Pharmaceutical Experiment

Microbiology 1

Microbiology 2

Cell biology

Pharmaceutical Biochemistry 1

Pharmaceutical Biochemistry 2

Pharmacy Ethics

Pharmaceutical statistics

Pharmaceutical Chemistry 1

Pharmaceutical Chemistry 2

Pharmaceutical Natural Products Chemistry

Anatophysiology 1

Anatophysiology 2

#### **Pharmacy Major**

Inorganic/Radiopharmaceutical Medicinal Chemistry

Physical Pharmacy 1

Physical Pharmacy 2

Physiopathology 1

Physiopathology 2

Healthcare Bigdata Analysis

Molecular Biology

Pharmacognosy 1

Pharmacognosy 2

Pharmacokinetics

Pharmaceutical analysis

Pharmacy Experiment 1
Pharmacy Experiment 2

Pharmacy Experiment 3

Pharmacy Experiment 4

Pharmaceutical Chemistry 3

Pharmaceutical Synthetic Chemistry 1

Systematic Literature Review

Target Structure Analysis and Drug Design

Herbal preparations

Cosmeticology

Chemotherapeutic Agents

Functional Food

Toxicology

Digital therapeutics

Immunology

Current anti-cancer immunotherapy

Drug Discovery and Development

Pharmacogenomics

Drug Delivery System

Pharmacology 1

Pharmacology 2

Pharmacology 3

Pharmaceutics 1

Pharmaceutics 2

Drug Design

Preventive Pharmacy & Public Health 1

Preventive Pharmacy & Public Health 2

Introductory Pharmacy Practice Experience

Microbial natural products experiments Inorganic/Radiopharmaceutical Medicinal Chemistry

Drug synthesis 2 Physical Pharmacy 1
Medicinal Chemistry 1 Physical Pharmacy 2
Medicinal Chemistry 2 Physiopathology 1
Clinical Biochemistry Physiopathology 2

Pharmaceutical Industry Healthcare Bigdata Analysis

Pharmaceutical Design

Veterinary Pharmacology

Immunopharmacology

Social Pharmacy

Molecular Biology

Pharmacognosy 1

Pharmacognosy 2

Pharmacokinetics

Drug Delivery Technology for Biopharmaceuticals Pharmaceutical analysis

Biopharmaceuticals Manufacturing Pharmacy Experiment 1
New Drugs Manufacturing Pharmacy Experiment 2

Objective Structural Clinical Examination 1 Manufacturing Pharmacy Experiment 3
Objective Structural Clinical Examination 2 Manufacturing Pharmacy Experiment 4

Pharmacoeconomics Pharmaceutical Chemistry 3

Drug Interaction Pharmaceutical Synthetic Chemistry 1

Pharmacotherapy 1 Systematic Literature Review

Pharmacotherapy 2 Target Structure Analysis and Drug Design

Pharmacotherapy 3 Herbal preparations
Pharmacotherapy 4 Cosmeticology

Pharmacopoeia and Pharmaceutical Evaluation Chemotherapeutic Agents

Applied Pharmacology Functional Food Pharmaceutical Process Validation Toxicology

Pharmacy Administration Digital therapeutics

Pharmaceutical Design Immunology

Prescription Pharmacy Current anti-cancer immunotherapy
Degenerative diseases Drug Discovery and Development

Personalized Drug Therapy Pharmacogenomics
Industrial Pharmacy Drug Delivery System

Pharmaceutical Jurisprudence Pharmacology 1
Pharmacy Practice Experience 1 Pharmacology 2
Pharmacy Practice Experience 2 Pharmacology 3
Pharmacy Practice Experience 3 Pharmaceutics 1
Pharmacy Practice Experience 4 Pharmaceutics 2
Drugs of Abuse and Addiction Drug Design

Advanced Pharmacy Practice Experience 1 Preventive Pharmacy & Public Health 1
Advanced Pharmacy Practice Experience 2 Preventive Pharmacy & Public Health 2
Advanced Pharmacy Practice Experience 3 Introductory Pharmacy Practice Experience

Pharmacy Research Microbial natural products experiments
Clinical Pharmacokinetics Drug synthesis 2

Clinical Pharmacokinetics

Drug synthesis 2

Natural Medicines

Medicinal Chemistry 1

Medicinal Chemistry 2

Manufacturing Pharmacy Major Clinical Biochemistry

Pharmaceutical Industry Pharmaceutical Design Veterinary Pharmacology Immunopharmacology Social Pharmacy

Drug Delivery Technology for Biopharmaceuticals

Biopharmaceuticals

New Drugs

Objective Structural Clinical Examination 1 Objective Structural Clinical Examination 2

Pharmacoeconomics
Drug Interaction
Pharmacotherapy 1
Pharmacotherapy 2
Pharmacotherapy 3
Pharmacotherapy 4

Pharmacopoeia and Pharmaceutical Evaluation

Applied Pharmacology

Pharmaceutical Process Validation

Pharmacy Administration
Pharmaceutical Design
Prescription Pharmacy
Degenerative diseases
Personalized Drug Therapy

Industrial Pharmacy

Pharmaceutical Jurisprudence
Pharmacy Practice Experience 1
Pharmacy Practice Experience 2
Pharmacy Practice Experience 3
Pharmacy Practice Experience 4
Drugs of Abuse and Addiction

Advanced Pharmacy Practice Experience 1 Advanced Pharmacy Practice Experience 2 Advanced Pharmacy Practice Experience 3

Manufacturing Pharmacy Research

Clinical Pharmacokinetics

Natural Medicines

#### Careers

Pharmacy graduates play a pivotal role in the development of new drugs and scientific technologies in leading research institutes, government agencies, and pharmaceutical industries both in Korea and around the world.

## College of Arts

## \_\_Contact Information

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## Departments

- · Department of Korean Music
  - Vocal Music Major
- Instrumental Music Major
- Theory & Composition Major
- · Department of Design
- · Department of Fine Arts
  - Korean Painting
- Drawing & Painting
- Carving & Modeling
- Visual Communication Design
- Craft Fine Arts
- Theory of Art
- · Department of Music
- Voice/Vocals
- Piano
- String, Wood, Brass, Percussion
- Composition
- · Interdisciplinary Program of Arts & Design Technology
- Major in Digital Arts
- Major in Human Interaction Design

## Affiliated Research Centers

- · Arts Institute of Chonnam National University
- · The Convergence Research Institute of Service Design
- · Research Center for the Culture of Sori in Chonnam National University

## Korean Music

\_\_Contact Information

Phone: +82-62-530-3050

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#### ■ What is Korean Music?

There are two basic types of Korean music: classical music and folk music. Classical music was enjoyed by the upper class from the court to the aristocrats. It is righteous, refined and elegant, with little obvious emotion. Folk music is lively, artistic and full of emotion and enthusiasm. The most prominent characteristic of Korean music is rhythm. Rhythmic cycles, called *jangdan*, which are constantly repeating patterns with an internal code of stresses and accents, underpin virtually all music. The performance techniques with full ornamentation, called *sigimsae*, particularly before or after the main pitch of a tone sound, are also very important in Korean music.

## **■** Department of Korean Music

The educational goal of CNU's Department of Korean Music is to preserve, cultivate, and develop Korea's traditions. Many efforts have been conducted to pursue this task, and the Department of Korean music does so by offering lectures to students with performance, practice, theory, and composition of Korean music. Accordingly, Western and Asian music is comprehensively studied.

Students are able to enlarge or develop their view of music. There are three major parts: instrumental music (Gayageum, Geomun-go, Daegeum, Piri, Haegeum, Ajaeng, and percussion), vocal music (Pansori, Gayageum Byeongcheng, Jeongga), composition and theory.

Additionally, there is another optional practice for students develop minor fields in order to broaden their musical competence. The major class instructions are done in face-to-face lessons. There are several performances in a year, including freshmen's performance, annual performance, and performances for each major instrument, to enhance the students' performance ability.

In 1992, the Department launched a pedagogy course which trains students to become school teachers; 10% of students can take teacher preparation courses and acquire the music teachers' certification of secondary schools in their major areas. The Department also offers a master's degree program and a doctoral degree program, established in 1989 and 2008 respectively, to educate more mature performers and scholars.

#### Professors

• In-Sam Jeon

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· Yong-Shik Lee

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· Hee-Bong An

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• Hye-jin Yoon

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· Seung-heon Lee

[Assistant Professor, Piri,

leehong97hgd3050@jnu.ac.kr]

## **■** Degree Requirements

Students are required to earn 130 credits, with 32 credits from core courses, 78 credits from Department courses, and 20 credits from electives.

## **■** What Do You Study?

#### **Vocal Music Major Courses**

#### ■ Core Courses

Major of Korean Vocal Music 1-8

Instruction to Korea Operas 1-8

Chorus in Korean Traditional Music 1-8

Appreciation and Critics of Korean Music 1-8

Vocal and Instrumental Music 1-2 (Folk song)

Vocal and Instrumental Music 3-4 (DanSo)

Instruction to Western Music

Western Music History

Introduction to Korean Traditional Music 1-2

Korean Music History 1-2

Transcription of Korean Traditional Music 1-2

Sight & Ear Training 1-2

Janggu Accompanying 1-2

#### **Instrumental Music Major Courses**

#### Core Courses

Major of Korean Tradition Instrumental Music 1-8

Korean Music Orchestra 1-8

Korean Chamber Music 1 (Chong-Ak)

Korean Chamber Music 2 (Ka-Gok)

Korean Chamber Music 3 (Min-Yo Ensemble)

Korean Chamber Music 4 (San-Jo Ensemble)

Korean Chamber Music 5-6 (Sinawi)

Korean Chamber Music 7-8 (Creation)

Appreciation and Critics of Korean Music 1-8

Vocal and Instrumental Music(Folk song) 1-2

Vocal and Instrumental Music(DanSo) 3-4

Instruction to Western Music

Western Music History

Introduction to Korean Traditional Music 1-2

Korean Music History 1-2

Transcription of Korean Traditional Music 1-2

Sight & Ear Training 1-2

Janggu Accompanying 1-2

## Theory and Composition Major Courses

#### Core Courses

Major of Composition & Theory of Korean Music 1-8

Seminar of Korean Music 1-8

Appreciation and Critics of Korean Music 1-8

Vocal and Instrumental Music 1-2 (Folk song)

Vocal and Instrumental Music 3-4 (DanSo)

Instruction to Western Music

Western Music History

Minor instrument 1-4

Studies in the Music Literature 1-4

Introduction to Korean Traditional Music 1-2

Korean Music History 1-2 Transcription of Korean Traditional Music 1-2 Sight & Ear Training 1-2 Janggu Accompanying 1-2

#### Electives

Folk Music Culture 1-2
Introduction to Court Music 1-2
Pedagogy of Korean Traditional Music
Minor Practice 1-4
Piano Accompanying 1-4
Harmony and Counterpoint 1-2
Developing Teaching&Learning Programs on
Korean Traditional Music
Development and Use of Teaching Materials &

Tools on Korean Traditional Music
Korean Music and Computer
Analysis on Korean Traditional Music 1-2
Introduction to Korean Opera Pansori
Production, and Promotion of Music
Introduction to Sanjo
Introduction to Asian Music
Reading Music 1-2
Field Research in Music Industry
Music Aesthetics and Philosophy
Conducting
Teaching Material and Pedagogy of Music
Teaching Logic and Essay Writing in Music Education
Pedagogy of Music Education
Introduction to Musicology

#### Careers

Graduates from the Department of Korean music work in diverse fields such as performers in music orchestra and ensemble, educators, scholars, experts in music business and industries, and broadcasting.

## Design

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## ■ What is Design?

Humans can express and communicate their experiences in the form of objects with visual language. In particular, visual communication by images (pictures) is more common than by language or numbers. The process of recreating visual language is the beginning of design and enables us to communicate information about things necessary for our daily survival. The teleology and the lyrical expression of our designs enrich our own existence and quality of life. The design of our lives depends on the technological prowess of the era and the shape of the times, and its role and meaning continues to evolve.

## ■ Department of Design at Chonnam National University

The Department of Design is a newly introduced major, formally classified in 2016 through an amalgamation of the Chonnam National University College of Art, The department of Fine Art, and the Department of Visual communication Design.

The department of design is structured with academic courses in theory and practical skills that will manifest students' abilities of planning, analyzing, and evaluating to cultivate competitive designers.

Tracks of subjects are classified into visual design, media art design, fusion service design and through each individual intensive class, we and planning to send out design specialists that the current generation requires by fostering global designers that will meet the demands of future society.

## Professors

- Kim, EelKwon [Professor, Media Art eelkwon@gmail.com]
- Yun, JaeSung
   [Professor, Visual Communication Design, asvi84@naver.com]
- Nam, HoJung
   [Professor, Visual Communication Design, hojungn@jnu.ac.kr]
- · Suh, YoungSang

[Professor, Photo and Media, ysang@jnu,ac.kr]

- Choi, Souk
   [Professor, Visual Communication Design, choiss@jnu.ac.kr]
- Jung, JungHo
   [Associate Professor,
   Marketing Communication Design,
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## **■** Degree Requirements

Students in the Department of Design are required to earn 140 credits, with 30 credits from core courses, 48 credits from electives, 32 credits from general courses, and 30 credits from liberal arts courses.

All students are required to pass English for Global Communication(EGC), participate in a graduate exhibition, and submit a thesis.

## **■** What Do You Study?

## **Department of Design Courses**

2,3 Dimensional Modelling

Digital Art Graphic

UI/UX Design

Visual Contents Design

Commercial Photography

Marketing Communication Design

Package Design Brand Design

Design Portfolio

#### **■** Electives

Design Concept

Basic Graphic Design

Design Color

An introduction to Design Study

Idea and Expression
Digital Graphic Design

Theory of Design

Photography Editing Design

Design Research1 Illustration 1,2 Animated Image Design

**Typography** 

Editorial Design

Motion Graphic Design

Photo graphic Design 1,2

Design Trend

Advertising Design

Video Media Design

Public Design

Web Application Design

Virtual Contents Design

Photography Editing Design

Service Design

Interaction Design

3D Design

Visual Information Design 1,2

Digital Art Design Workshop 1,2

Brand Identity Design 1,2

Image Design 1,2

Package Design Seminar 1,2

Service Marketing Design 1,2

## Careers

Students may obtain positions in/as: Contents Design / Editorial Design / Publication Design / Graphic Design / Digital Design / Media Design / Service Convergence Design / Art Teachers in Middle and High Schools.

## Fine Arts

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#### ■ What is Fine Art?

All art is an abstraction and many fine arts inevitably register figurative associations in the spectator's eye and mind. Fine art is a visual experience, achieving a greater "reality" than the contemporary environment, particularly in its new spiritual, philosophical, or scientific experiences.

What do we mean by Fine Arts? Do we mean the arts of a certain period in time? Are these arts expressing a certain style? Are they the works of certain key individuals? Do we intend to study all the works of a particular period? Perhaps the arts revealing a certain philosophy? Or on the other hand, should we study the arts of a certain period emphasizing certain materials? All of these questions are incorporated into Fine Arts.

## ■ Department of Fine Arts at jeonnam National University

Department of Jeonnam Arts School, as a leading organization of the National Universities in Jeonnam province, has cultivated numerous talented people over 30 years. We strive to foster domestic and international students in Gwangju aiming at the culture center in Asia with practical and creative education. Since 1982, we have provided numerous business ventures such as academic seminars, special lectures of famous artists, publication of academic journals, etc. In addition, we had made an agreement with Yanbian University and have had exchange programs and joint exhibition of works in Gwangju as well as Yanbian. Our department is made up of six parts: Korean Painting, Western Painting, Sculpture, Visual Design, Crafts and Theory. Each department recruits students in their own ways and offers the methodical practice education and theory with the subdivided curriculum to them. Graduates can work in many areas as an artists, sculptors, designers, craftspeople and curators in an administrative agency. Especially, our students who hold high ranks for three semesters can have a qualification for being a middle school teacher after completing a course in teacher education. Our department was established in 1982. The number of our graduates who received Bachelor's degree is presently about 2,433, 208 for Master's and 20 for Ph.Ds. All of them have improved our status while working in various fields internationally and domestically. Moreover, our graduates distinguish themselves in culture and arts fields as a curator, designer in exhibition and museum. The volume of recruitment is 11 in each department in order to improve education and environment quality. Also, we have consistently selected excellent personnel since 2010

#### Professors

- Jin Hur [Professor, Korean Painting,
- hurjin5@naver.com]
- Kum-Hee Jung

[Professor, Western Art

History, khjhjung@hanmail.net]

• Chul-Woo Kim

[Professor, Fine Crafts(Ceramic Art), dogong63@hanmail.net]

• Ku-Yong Lee

[Professor, Korean Painting,

seed290@jnu.ac.kr]

• Kee-Moon Seo

[Professor, Drawing & Painting,

jinzza01@hanmail.net]

• Jei-Min Kim

[Assistant Professor, Drawing & Painting, jeimin@gmail.com]

• Hyun-ju Kim

[Assistant Professor, Fine Crafts(Metal Art), blueart00@jnu.ac.kr]

• Jeong-Yong Park

[Assistant Professor, Sculpture, fromthehand@ hanmail.net]

• Ha-Young Joo

[Assistant Professor, Western Art

juja2@ hanmail.net]

• Hyoung-O Park

[Assistant Professor, Sculpture,

ocho1@ hanmail.net]

## **■** Degree Requirements

Students in the majors of Korean Painting, Oil Painting, Sculpture, Visual Communication Design, Craft and Art Theory are required to earn 140 credits, with 36 credits from core courses, 42 credits from electives, 32 credits from general courses, and 30 credits from liberal arts courses.

All students are required to pass English for Global Communication (EGC) and participate in a graduate exhibition and submit a thesis.

## ■ What Do You Study?

#### Major in Korean Painting Courses

Basic Korean Ink Painting 1, 2

Basic Korean Painting 1, 2

Korean Ink Painting 1, 2, 3, 4

Korean Painting 1, 2, 3, 4

#### Electives

Basic Drawing 1, 2

Calligraphy and Seal Carving 1, 2

Painting of The Four Gracious Plants 1, 2

Computer graphic1, 2

Pedagogy on Arts through Creative Approach

Planning · Producing & Demonstrating

Korean Painting Media & Techniques 1, 2

Figure Drawing 1, 2

Three Dimensional Presentation

Exercise of Photography

Creative Drawing 1, 2

Two Dimensional Presentation

Chromatics

Theory of Asian Arts

Portrait 1, 2

Portfolio & Presentation

Creative Korean Painting 1, 2

Techniques of Korean Painting 1, 2

Conservation 1, 2

Understanding Cultural Policy and Arts & Cultural

Education

Communication Skills

#### Major in Drawing & Painting Courses

Basic Studio Arts 1, 2

Fundamentals of Painting 3, 4

Studio Arts 1,2

Advanced Course in Studio Arts 3, 4

Creative Painting 1, 2, 3, 4

#### Electives

Instructional Theory of Art

Research On Teaching Materials And Methods Of

Arts

A Course on Fine Arts Logic and Essay writing

Figurative Drawing 1, 2

Materials 1, 2

Computer graphic1, 2

Water Color Painting 1, 2

Pedagogy on Arts through Creative Approach

Planning · Producing & Demonstrating

Figure Drawing 1, 2

Three Dimensional Presentation

Exercise of Photography

Creative Drawing 1, 2

Two Dimensional Presentation

Chromatics

Seminar on Arts 1, 2

Portrait 1, 2

Print Making 1, 2

Portfolio & Presentation

Techniques of Portrait 1, 2

Technics of Drawing & Painting 1, 2

Conservation 1, 2

Techniques Of Painting Representation 1, 2

Understanding Cultural Policy and Arts & Cultural

Education

Communication Skills

Understanding Integrated Arts Educational

Programs

#### Major in Carving & Modeling Courses

Human Body Molding 1, 2, 3, 4

Study of Terra-cotta Technique

Study of Metal Sculpture Technique

Study of stone sculpture technique

Study of Wooden Sculpture Technique

Practical Molding Tutorial 1, 2

Study of Creative Design 1, 2

#### **■** Electives

Computer graphic1, 2

Academic plan counselling

Basic Molding 1, 2

Basic Plane Design

Basic Three-dimensional Design

Korean Design and Culture

Pedagogy on Arts through Creative Approach

Planning · Producing & Demonstrating

Figure Drawing 1, 2

Three Dimensional Presentation

Exercise of Photography

Creative Drawing 1, 2

Two Dimensional Presentation

Study of Relieved Sculpture Technique

Three-dimensional Drawing 1, 2

Practical Art Anatomy

Seminar on Art in Field

Basic Introduction of Science of Arts

Chromatics

Portrait 1, 2

Portfolio & Presentation

Study about practical art(ornamental sculptures and

ceramic sculptures))

Contemporary Art Criticism

Computer and Plane Design

Computer and three-dimensional Design

Public art project

Environment Sculpture

Art and Marketing

Study of Complex Media

Interactive Art

Understanding Cultural Policy and Arts & Cultural

Education

Communication Skills

Understanding Integrated Arts Educational

Programs

# Major in Visual Communication Design Courses

Advertising Design 1, 2, 3

Package Design 1, 2

Identity Design

Visual Environmental Design 1, 2 Visual Information Design 1, 2

Brand Package Design 1, 2

#### ■ Electives

Basic Design Studio-3D

Detailed Representation 1, 2

2D Design Studio

Typography

Color moulding

Basic Design Studio-3D

Design Research

computer graphic1, 2

Teaching&Learning Approach to

Design(Infant, Elementary, Middle&High

School, Adult)

Pedagogy on Design through Creative Approach

Planning · Producing & Demonstrating

Figure Drawing 1, 2

Three Dimensional Presentation

Illustration 1, 2

Media Design 1, 2

Commercial Photo

Photography

Exercise of Photography

Creative Drawing 1, 2

Design project

Two Dimensional Presentation

Chromatics

Theory of Design

Portrait 1, 2

Digital Design 1, 2

Portfolio & Presentation

Understanding Cultural Policy and Arts & Cultural

Education

Communication Skills

Understanding Integrated Arts Educational

#### **Programs**

## Major in Craft Fine Arts Courses

Ceramic Art: Basic 1, 2

Wood Lacquer Art: Basic 1, 2

Ceramic Art: Advanced Skill 1, 2, 3, 4

Wood Lacquer Art: Advanced Skill 1, 2, 3, 4

#### ■ Electives

Basic Drawing 1, 2

Detailed Representation 1, 2

Basic Wheel Throwing 1, 2

computer graphic1, 2

Teaching&Learning Approach to

Crafts(Infant, Elementary, Middle & High

School, Adult)

Pedagogy on Arts through Creative Approach

Pedagogy on Crafts through Creative Approach

Developing Teaching & Learning Programs on

Crafts

Planning · Producing & Demonstrating

Figure Drawing 1, 2

Three Dimensional Presentation

Exercise of Photography

Mechanical Drawing 1, 2

Textile Art: Basic 1, 2

Metallic Art: Basic 1, 2

Creative Drawing 1, 2

Two Dimensional Presentation

Chromatics

Theories of Crafts

Portrait 1, 2

Portfolio & Presentation

Metallic Art: Advanced Skill 1, 2, 3, 4

Textile Art: Advanced Skill 1, 2, 3, 4

Interior Design 1, 2

Understanding Cultural Policy and Arts & Cultural

Education

Communication Skills

Understanding Integrated Arts Educational

Programs

## Major in Theory of Art Courses

History of Art 1, 2

History of Aesthetics

History of Korean Painting in Chs?n Dynasty

History of Korean Art The Way to Modern Arts Art Management Theory

The Methodologies of Art

Criticism of Modern art

Modern and Contemporary Korean art theory

Reading in English

Theory of Art Exhibition

**■** Electives

Art and Culture

computer graphic1, 2

Visual Media Comprehension

Topics in Comparative Research of the Arts in East

and West

Art and Sociology

Pedagogy on Arts through Creative Approach

Planning · Producing & Demonstrating

Figure Drawing 1, 2

Three Dimensional Presentation

Exercise of Photography

Creative Drawing 1, 2

Two Dimensional Presentation Theory of art and marketing Contemporary Design Theory

Chromatics

History of Oriental Art

Museology

History of Chltural Assets

Art philosophy

Theory of Installation Art

Animation Art Portrait 1, 2

Portfolio & Presentation Contemporary Aesthetics

Appreciation Of Art Art Psychology

Contemporary Art Discourse

Theory of Art Therapy A Study of the Artist

Understanding Cultural Policy and Arts & Cultural

Education

Communication Skills

Understanding Integrated Arts Educational

**Programs** 

## Careers

#### Students may obtain positions in/as:

- Art Administrators
- Curators in Fine Art Museums
- Restoration and Judgment of Cultural Assets
- Private Art Institutes

- Professional Designers in Companies and as Freelancers
- Art Teachers in Middle and High Schools

## Mental Treatment in Art Students may obtain positions in:

- Broadcasting and Newspaper Company Related Art Departments
- Art Gallery Management, Display and Planning
- Developing Art Products

- Manufacturing Environmental Monument
- Producing Video Image Methods and Advertising Media

## Music

## \_Contact Information

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#### What is Music?

Music may be defined as the art of creating or performing the pattern of notes.

## ■ Department of Music at Chonnam National University

The department of music has educated talents as one of the most leading and comprehensive institutions in the Honam province. With acclaimed faculty members, the department inspires prospective leaders of every musical fields by providing systematic coursework. The department also helps voice, piano, composition, string, and wind major students broaden their musical insight by offering numerous performance opportunities including regular concerts, masterclasses, and guest recitals each year. The Department also comprises of Yehyang Hall, Jieum Hall, 40 individual sound-proof practice rooms, music library, music listening room, computer room, chorus room, and lockers for instruments. There are a wide range of careers available to graduates including further studies at local or national graduate schools, teaching jobs at colleges, teaching jobs at middle and high schools, professorships at national universities and private colleges, instructor positions at private schools, professional performer positions, professional music department jobs at broadcasting companies, or professional composer positions.

- Hyun-Ok Moon, D.M.A. [Professor, Piano, hyun0404@jnu.ac.kr]
- Sukyung Shin, D.M.
   [Professor, Piano, sushin@jnu.ac.kr]
- Hyun-Sue Chung, Ph.D.
   [Professor, Composition, music@jnu.ac.kr]
- Kyung-Jin Han, Ph.D. [Professor, Composition, hankj7@jnu.ac.kr]
- Byung-Kil Yoon, Diplom [Associate Professor, Voice corelliyoon@jnu.ac.kr]

- Eun-Shik Park, D.M.A. [Associate Professor, Piano meunspark@jnu.ac.kr]
- Hyejung Lee, Diplom [Associate Professor, Violin hjlee0608@jnu.ac.kr]
- Byung-Woo Kong, Perfectionnement [Associate Professor, Voice veritaspaul@jnu.ac.kr]
- In-Woock Park, M.A.
   [Associate Professor, Conducting parkinwoock@jnu.ac.kr]
- Yun-Joo Na, D.M.A.
   [Associate Professor, Cello nayunjoocello@jnu.ac.kr

 Hye-Sung Na, Konzertexamen [Assistant Professor, Voice

## Degree Requirements

Music Major Students are required to earn 130 credits, with 50 credits from core courses, 20 credits from electives, 32 credits from general courses, and 30 credits from liberal arts courses.

All students are required to pass English for Global Communication 1 and to complete a degree recital.

## ■ What Do You Study?

#### **Voice Major Courses**

#### Core Courses

Voice Major 1-8

Chorus 1-8

Music Theory - Sight Singing & Ear Training 1-2

Harmony 1-2

Deutch Diction 1-2

Italian Diction 1-2

Computer for Real Life

Music History 1-4

Writing for Self-reflection and communication

Career Plan and Self Understanding

Performance 1-2

#### Electives

Theory & Practice of Computer Music 1-2

Opera Workshop 1-2

Korean Art Songs

Introducing Musicology 1-2

Music Form

Keyboard Harmony 1-2

Counterpoint 1-2

Deutch Art Songs

Italian Art Songs

French Art Songs

English and American Art Songs

Vocal Literature 1-2

Multimedia Music

Vocal Ensemble 1-2

Instruments 1-2

Arts Management

Music Education Theory

Music Software 1-2

Class Piano 1-2

Music Analysis 1-2

Jazz

Piano Pedagogy 1-2

Conducting 1-2

## **Piano Major Courses**

#### Core Courses

Keyboard Harmony 1-2

Instrumental Accompanying

Vocal Accompanying

Computer for Real Life

Writing for Self-reflection and communication

Career Plan and Self Understanding

Music History 1-4

Performance 1-2

Music Theory - Sight Singing & Ear Training 1-2

Piano Major 1-8

Piano Literature (Baroque Period) 1

Piano Literature (Classic Period) 2

Piano Literature (Romantic Period) 3

Piano Literature (Contemporary Period) 4

Harmony 1-2

#### Electives

Chorus 1-8

Piano Ensemble 1-2

Piano Chamber Music 1-2

Piano Pedagogy 1-2

Arrangement 1-2

Class Piano 1-2

Theory & Practice of Computer Music 1-2

Conducting 1-2

Jazz

Music Form

Introduction to Musicology 1-2

Music Therapy 1-2

Music Software 1-2

Music Analysis 1-2

Art Management

Music Education Theory

Instruments 1-2

Counterpoint 1-2

Multimedia Music

#### String, Wood, Brass, Percussion Major Courses

#### Core Courses

Instrument Major 1-8

Orchestra 1-8

Music Theory - Sight Singing & Ear Training 1-2

Harmony 1-2

Music History 1-4

Performance 1-2

Writing for Self-reflection and communication

Computer for Real Life

#### ■ Electives

Wind Ensemble 1-8

String Ensemble 1-8

Chamber Music 1-6

Counterpoint 1-2

Multimedia Music

Instruments 1-2

Vocabulary of Musical Terms

Keyboard Harmony 1-2

Music Software 1-2

Music Analysis 1-2

Introduction to Musicology 1-2

Composition 1-2

Class Piano 1-2

Music Form

Orchestra Literature 1-2

Jazz

Theory & Practice of Computer Music 1-2

Arrangement 1-2

Arts Management

Conducting 1-2

Study on Piano Tuning & Technology 1-2

Excerpt Class 1-6

## **Composition Major Courses**

#### Core Courses

Computer for Real Life

Writing for Self-reflection and communication

Career Plan and Self Understanding

Orchestration 1-2

Counterpoint 1-2

Music History 1-4

Performance 1-2

Music Theory - Sight Singing & Ear Training 1-2

Composition 1-2

Composition Major 1-8

Modern Composition Technique & Analysis 1-2

Harmony 1-2

#### **■** Electives

Class Piano 1-2

Theory & Practice of Computer Music 1-2

Arrangement 1-2

Piano Pedagogy 1-2

Keyboard Harmony 1-2

Multimedia Music

Chorus 1-8

Instruments 1-2

Music Software 1-2

Art Management

Music Education Theory

Music Analysis 1-2

Music Therapy 1-2

Introduction to Musicology 1-2

Conducting 1-2

Music Form

Jazz

## Careers

- Professional performer
- Teacher at middle and high schools
- Professorships at colleges

- Professional composer
- Director at broadcasting and publishing services

## Interdisciplinary Program of Arts & Design Technology

\_Contact Information

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## ■ What is Arts & Design Technology?

Art & design technology refers to the integration of art, design, and engineering technology. It aims to create new art and culture through the convergence of disciplines, and to create shared values for solving social problems by identifying the needs of the rapidly changing contemporary society.

# ■ Interdisciplinary Program of Arts & Design Technology at Chonnam National University

The Interdisciplinary Program of Arts & Design Technology is based on culture and art and combines intelligent technologies (AR/VR, big data, AI, 3D printing, etc.) to focus on various field practices such as new media art, interaction design, art marketing, and digital media management. It educates and researches content planning and production, nurturing design convergence talents to solve industrial and social problems.

Newly established in June 2020, this cooperative course consisting of digital arts and human interaction design majors combines humanities and social sciences technology to preemptively respond to rapidly changing social changes, nurturing intelligent cultural and artistic content convergence talents in regional bases, It aims to discover human care service experts who create shared values to solve social problems.

Through this, by securing creative education and research initiatives of regional base universities and driving high added value in the cultural technology field, which is the main industry in the region, it is possible to revitalize social contribution culture and art content research and create community social value for the region and the country. We are moving forward to nurture "right design convergence talents that benefit human life".

After graduation, You will have the opportunity to advance into various jobs that will become the basis of future industries, such as convergence content curator, technical art director, media technology content producer/planner, media art producer/planner, digital artist, smart healthcare coordinator, data manager, start-up using intellectual property rights and copyrights project managers of internal and external companies.

- Ryu, Jaehan
   [Professor, French Language and Literature, jh2059@jnu.ac.kr]
- Jeong, Geumhui [Professor, Fine Arts, khjhjung@hanmail.net]
- · Choi, Seok

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• Lee, Guyong
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• Ham, Donghan

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· Jeong, Young-Seon

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• Jung, Jungho

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• Ahn, Minjeong

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• Min, Jinyoung

[Professor, French Language and Literature, sahara@jnu.ac.kr]

· Shin, Chunseong

[Assistant Professor, Culture Business, jh2059@jnu.ac.kr]

## **■** Degree Requirements

## The Master's degree program

Applicants for master's dissertation are required to meet all following prerequisite requirements.

- ① Earn 24 credits: Applicants for a master's degree are required to obtain at least 18 credits in the curriculum provided by this interdisciplinary Program, including at least 12 credits in the curriculum of the major.
- ② Successful passing of qualification examination (general test + foreign language test)
- 3 Meet any one of the following prerequisite:
  - At least 1 publication of academic paper in on-campus or off-campus academic journal.
  - For the Digital Arts major, participation in at least 2 international exhibitions.
  - For the Human Interaction Design major, at least 2 presentations at international academic conferences.
- All requirements above must be completed and the dissertation must be successfully passed by the dissertation committee to graduate.

#### The Doctorate program

Applicants for doctorate dissertation are required to meet all following prerequisite requirements.

- ① Earn 36 credits: Applicants for a doctorate degree are required to obtain at least 27 credits in the curriculum provided by this interdisciplinary Program, including at least 18 credits in the curriculum of the major.
- ② Successful passing of qualification examination (general test + foreign language test)
- ③ Two or more academic papers worthy of being considered for publication at KCI (solo or lead author)
- All requirements above must be completed and the dissertation must be successfully passed by
   the dissertation committee to graduate.

## Integrated master's and doctorate program

Applicants for integrated master's and doctorate dissertation proposal are required to meet all

following prerequisite requirements.

- ① Earn 54 credits: Applicants for an integrated master's and doctorate degree are required to obtain at least 42 credits in the curriculum provided by this interdisciplinary Program, including at least 30 credits in the curriculum of the major.
- ② Successful passing of qualification examination (general test + foreign language test)
- 3 Three or more academic papers worthy of being considered for publication at KCI (solo or lead author)
- All requirements above must be completed and the dissertation must be successfully passed by
   the dissertation committee to graduate.

## ■ What Do You Study?

## ■ Major in Digital Arts

Seminar: Visual Design Theory of Fine Arts Arts & Cultural Marketing Visual Design Studio

Theory of Korean Contemporary Art Theory of Contemporary Western Art

Arts And Aesthetics

Contemporary Art Criticism
East and West Comparative Art
Convergence Contents Design

Design Illustration
Theory of Art Creation

Convergence Formation Studio Formative Arts Techniques 1 Formative Arts Techniques 2

Art Technology

Media & Formative Arts
Digital Fine Art Technics
Art Production Management
Culture & City Civilization

Introduction to Humanities & Arts Humanities Culture & Arts Seminar

UNESCO Culture Cities

Development of Local Culture & Urban

Cultural Arts & Technology
Cultural Arts Entrepreneurship
Art Merchandise Planning
Culture & Arts Trends

Semiotics

Formative Psychology

Media Art Studio Sound Design

Theory of Visual Communication Studies of Design & Formation

Art Psychotherapy Arts & Copyright Art Curation

Cultural Archetype & Contents Digital Contents Planning Theory of Video & Film Evolutionary Psychology Visual Programming

Motion Graphic Special Production Techniques

3D Printer Applications Motion Graphic Design Video Animation VFX Studio

Game Production Studio

Seminar for Convergence of Culture and Arts

Arts Management

Virtual Contents Storytelling
Design Policy Studies
Arts Research Guidance 1
Arts Research Guidance 2
Arts Project Research Training 1
Arts Project Research Training 2
Digital drawing coding practice

Digital drawing coding practice Glocal Convergence Studio

#### ■ Major in Human Interaction Design

Bioinfomatics

Research of Digital Communication

Service Engineering Special Theory

Advanced Topics in Service Engineering

Service Convergence Design

Design Management
Marketing Communication
Design Strategy Simulation
Art & Design Business
Design Research Methodology

Public Brand Design Introduction to HCI

Introduction to HC

Special Topic on Cognitive System Engineering

Cognitive Science and Applications
Development of New Service Production

AI & UX Design

Statistical Research Methodology 1 Statistical Research Methodology 2

Design Quality Management Service Management Innovation

Database Design

Introduction to Industrial and Information Engineering

AR/VR

Image Media Contents

Media Technology & Design Art & Computational Thinking Computer Graphics Programming

New Media & Contents Interactive Media

Cultural Technology Theory

Healthcare Service Design

Human Physiology Healthcare IoT

Healthcare BigData Analysis Healthcare Business & Legal Mixed Research Methology Health Education and Promotion

Cognitive Psychology

Design Startup UI/UX Design Interface Design Design Trend

Physiological Computing User Experience Analysis

Development of AR / VR Contents

Design Thinking & Creative Problem Solving

DesignScience Research
Design Convergence Essence
Arts Product Capstone Design
Design Research Guidance 1
Design Research Guidance 2

Design Project Research Training 1 Design Project Research Training 2 Creative Problem Sloving Design Digital Transformation Leadership

Design statistics 1
Design statistics 2

ChatGPT and Design Ethics

## Careers

Students may obtain positions in/as:

#### ■ Major in Digital Arts

Convergence content curator, content fab creator, technical art director, media technology content producer/planner, digital artist, entertainment director, virtual reality exhibition planner, culture and arts research institute content creator, digital arts convergence educator, media facade, visual effects (VFX) and hologram content planning/production, game and 3D animation producer, etc.

## ■ Major in Human Interaction Design

Smart healthcare coordinator, data manager, opening start-ups using intellectual property rights and copyrights, big data curator, medical big data scientist, digital cartographer, technology-based venture start-ups,

public service designer, social media consultant, local contents creator, art & culture product designer, eye-tracking programmer, art trend planner, AI software and related application developer, design consultant, special effects designer, wearable device design and system developer, UI/UX designer, other product convergence interaction designer, etc.

## Medical School

#### Contact Information

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## ■ Pre-medical Science

## Medical Science

- 1) Basic Medical Science
  - Department of Anatomy
  - Department of Physiology
  - Department of Biochemistry
  - Department of Pathology
  - Department of Pharmacology
  - Department of Microbiology and Immunology
  - Department of Preventive Medicine
  - Department of Forensic Medicine
  - Department of Medical Education
  - Department of Biomedical Sciences
  - Department of Parasitology and Tropical Medicine
- 2) Clinical Medical Science
  - Department of Internal Medicine
  - Department of Surgery
  - Department of Obstetrics and Gynecology
  - Department of Pediatrics
  - Department of Psychiatry
  - Department of Neurology
  - Department of Dermatology
  - Department of Orthopedic Surgery

#### Affiliated Research Centers

· Research Institute of Medical Sciences

- Department of Neurosurgery
- Department of Thoracic and Cardiovascular Surgery
- Department of Ophthalmology
- Department of Otolaryngology and Head & Neck Surgery
- Department of Plastic and Reconstructive Surgery
- Department of Urology
- Department of Anesthesiology and Pain Medicine
- Department of Radiology
- Department of Radiation Oncology
- Department of Laboratory Medicine
- Department of Nuclear Medicine
- Department of Emergency Medicine
- Department of Physical & Rehabilitation Medicine
- Department of Occupational and Environmental Medicine

# Dept. of Premedical Course

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The educational goal of premedical education is to provide a desired college-level training in liberal arts as well as sciences, and to provide a basis for future medical studies. Accordingly, the premedical curriculum is an indispensable period for the medical students to prepare themselves before they move on to medical school. In this premedical curriculum, students should learn subjects with regard to the natural sciences and cultural subjects that will form the basis of a medical curriculum in the future.

## Professors

See Medical School Professors

## Degree Requirements

Students are required to earn 74 credits and minimum G.P.A. of 1.75 for all semesters (including summer/winter session)

## ■ What Do You Study?

#### **Required Courses**

#### [Major]

Human Embryology and Morphology (3)

Basics for Medical research (3)

Microbial Pathogen and Immunity (3)

Cellular and Molecular Biology (3)

Gross Anatomy of Human Body (3)

#### [General]

Writing for Self-reflection and Communication (3)

Introduction to Psychology (3)

Career Plan and Self Understanding (2)

Volunteer Social Service (1)

Bioethics (3)

Coaching Leadership for Self-effectiveness (3)

#### **Elective Courses**

#### [Major]

Medical Etymology (3)

Foundation of Medical Science (3)

Microbes & Society (2)

Organic Chemistry 1 (3)

Medical Physics (3)

Brain and Life (2)

## Comparative Anatomy (3)

Genetics (3)

Introduction of Medical Humanities (2)

(\* At least 12 credits should be chosen.)

#### [General]

Introduction to Economics (3)

Intellectual Property Right (3)

Understanding of Social History (3)

Logic (3)

Mathematics 1 (3)

Reading & Discussion in English (3)

General Physics 1 (3) General Biology 1 (3) General Chemistry 1 (3)

Debate and Democratic Intelligence (3)

The Life and Literature of the Korean People (3)

Contemporary Science Studies (3)

Understanding of Modern Society (3)

Environmental Science (3)

Understanding of Architecture (3)

Classical Literature and Korean Culture (3)

The Strategy of Speaking (3) Appreciation of Arts (3)

Democracy and Community (3)

Life and Law (3)

Psychology of Human Sexuality (3)

Mathematics 2 (3)

Food and Nutrition (3)

What is History (3)

Artistic Sensibility and Aesthetics (3)

Appreciation of Music (3) Human and Values (3)

General Physics 2 (3)

General Biology 2 (3) General Chemistry 2 (3)

Understanding Creative Problem-Solving Process (3)

Introduction to Philosophy (3)

Korean History (3)

Modern Society and Human Rights (3)

Introduction to Contemporary Korean Politics (3) Introduction to Statistics and Practice (3)

(\* At least 32 credits should be chosen.)

## **Credits Required**

At least 9 credits from each field: Creativity, Sensibility, Community Values.

#### Careers

Students who complete the premedical program are automatically admitted to the Medical School.

# Dept. of Medical Science

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URL: http://medicine.jnu.ac.kr/english

Based on the CNU educational philosophy of pursuing truth, creativity, and service to the community, our goal is to foster students possessing moral character and human compassion essential in caring for human life, as well as commitment in pursuing the fundamental truths in medicine, for the prevention and treatment of diseases harmful to human beings. In doing so, we aim to cultivate medical personnel who can contribute to the welfare of mankind and lead the advancement of medical science.

- 1. To instill our students with the basic spirit of philanthropy and service
- 2. To train our students to have the ability to grasp and solve local and national health issues
- 3. To train our students to provide primary health care by learning the basic theories of medicine and acquiring clinical training
- 4. To promote the pursuit of professional medical knowledge and continuing education after graduation
- 5. To ensure that our students possess the necessary qualifications for conducting creative research and medical education

Medical School has a distinguished history of producing the nation's finest physicians and researchers. Its reputation continues to grow today as the center for medical education and source of outstanding basic and clinical research with global medical applications.

Our core mission is training the next generation of physicians and scientists who will devote their life to help society and improve the human conditions. Medical School provides today's health sciences students with thoughtful and humanistic mentoring by our distinguished and committed faculty, and clinical experiences provided by state-of-the-art learning facilities. We remain committ to provide doctors and scientists with outstanding education in both the art and science of medicine.

Medical School's mission is to provide the best medical education to students, and quality service to its local and international community. We run two medical campuses in Hakdong and Hwasun, both of which are equipped with cutting-edge facilities. We also have outstanding research programs in cardiology, cancer, neurosciences, and infectious diseases. Many other programs provide a network of opportunities for medical and health sciences students.

#### ■ Medical School

The Medical School is committed to teaching and training students through the most modern and efficient academic programs. The programs are aimed at producing able primary care physicians and creative medical scientists. To meet these institutional objectives, the Medical School offers both undergraduate and graduate courses which lead to advanced degrees including Master's and Doctorates

The undergraduate degree is composed of a 2-year premedical and a consequent 4-year medical course.

#### Professors

271 full-time faculty members (Professors: 173, Associate Professors: 68 and Assistant Professors: 30) and 13 teaching assistants are currently employed. The interests of members and contact profiles are located online: http://medicine.jnu.ac.kr.

## **■** Degree Requirements

Students are required to earn 165 credits (required) and 4 credits (electives). At the end of the fourth year, every student who has fulfilled these requirements will be recommended to the President of Chonnam National University for a Doctor of Medicine Degree (M.D.).

## ■ What Do You Study?

Graduates and graduate candidates are unconditionally recommended to the National Board of Medical Examinations for a license to practice medicine in Korea.

#### [Required Courses]

#### First Year

Lab in Basic Medical Science (2)

Problem-Based Learning 1 (1)

Patient-Doctor-Society 1 (2)

Structure and Function of the Human Body (2)

Cadaver Dissection Course (3)

Basic Medical Science in Digestive System and

Metabolism (4)

Microbiology and Parasitology (4)

Basic Neuroscience (4)

Basic Medical Sicence in Endocrine and

Reproductive Systems (3)

Introduction to Pathology and Pharmacology (3)

Lab in Histology and Pathology (2)

Basic Medical Science in Cardiovascular and

Urinary Systems (4)

Basic Medical Science in Pulmonology and

Hematology (2)

Introduction to Clinical Medicine 1 (2)

Introduction to Clinical Medicine 2 (2)

Preventive Medicine (4)

#### **Second Year**

Growth and Development (3)

Clinical Medicine in Reproductive System (4)

Clinical Medicine in Digestive System (5)

Clinical Medicine in Cardiovascular System (4)

Allergology and Clinical Immunology (2)

Clinical Medicine in Respiratory System (4)

Clinical Medicine in Musculoskeletal System (3)

Infectious Diseases (3)

Clinical Medicine in Endocrinology and Metabolism (3)

Problem-Based Learning 2 (1)

Clinical Medicine in Nervous System (4)

Clinical Medicine in Urinary System (3)

Clinical Hemato-oncology (3)

Patient-Doctor-Society 2 (1)

Anesthesiology and Emergency Medicine (2)

Dermatology, Opthalmology, Otorhinolaryngology (3) Psychiatry (3)

#### Third Year

Clerkship in Infectious Diseases (1)

Clerkship in Endocrinology & Metabolism (1)

Clerkship in Rheumatology (1)

Clerkship in Urology (1)

Clerkship in Obstetrics and Gynecology (4)

Clerkship in Pediatrics (4)

Clerkship in Gastroenterology (2)

Clerkship in Cardiology (2)

Clerkship in Neurology (2)

Clerkship in Neurosurgery (1)

Clerkship in Nephrology (1)

Clerkship in Ophthalmology (1)

Clerkship in Allergy (1)

Clerkship in Surgery (5)

Clerkship in Emergency Medicine (2)

Clerkship in Otorhinolaryngology and Head & Neck

Surgery (1)

Clerkship in Psychiatry (4)

Clerkship in Orthopedic Surgery (1)

Summative Evaluation 1 (1)

Clerkship in Dermatology (1)

Clerkship in Hematology & Onocology (1)

Clerkship in Pulmonology (2)

Clerkship in Thoracic and Cardiovascular Surgery (1)

Transition to Clinical Clerkship (1)

Clinical Reasoning 1 (2)

Patient-Doctor-Society 3 (2)

Clinical Reasoning 2 (2)

#### **Fourth Year**

Clerkship in Anesthesiology and Pain Medicine (1)

Summative Evaluation 2 (1)

Clerkship in Family Medicine (1)

Clerkship in Radiation Oncology (1)

Clerkship in Forensic Medicine (1)

Clerkship in Plastic and Reconstructive Surgery (1)

Clerkship in Radiology (2)

Clinical Reasoning 3 (2)

Clinical Presentation-Based Practice (2)

Clerkship in Rehabilitation Medicine (1)

Clerkship in Community Medicine (1)

Clerkship in Occupational and Environmental

Medicine (1)

Clerkship in Laboratory Medicine (1)

Specialized Clinical Clerkship (2)

Sub-intership (2)

Clerkship in Nuclear Medicine (1)

Patient-Doctor-Society 4 (1)

# Department of Anatomy

\_\_Contact Information
Phone: +82-61-379-2700

#### Mission

The Department of Anatomy provides high quality teaching of anatomical sciences to medical students and graduate students as appropriate. The Department is responsible for teaching several courses including Anatomy, Neuroanatomy, Histology, and Embryology and periodically offers electives and special courses for other groups of students and faculty within the Chonnam community. Four faculty members conduct research in various fields of medical science. The Department also administers Body Donation Program to allow Gwangju and Chonnam residents the opportunity to donate their bodies for research and teaching.

#### Research Interests

- 1) Clinical and basic proteomics study on oncologic and metabolic diseases
  - ① Discovery of biomarkers of diagnosis (early detection and relapse), prognosis, treatment response prediction.
  - 2 Deciphering of their molecular mechanisms
- Clinical and imaging anatomy all aspects as applied to medical practice, new developments in clinical anatomy and teaching techniques
- 3) Understanding mechanical functions underlying development of urologic cancers
  - ① Elucidation of molecular mechanism involved in the progression of hormone resistant prostate cancer
  - 2 Development of biomarkers to predict recurrence of cancers of prostate and bladder
- 4) Study on metabolic change in central nervous system (CNS) diseases
  - ① The related molecular mechanisms between metabolic diseases and CNS diseases
  - 2 Discovery of anti-aging mechanisms to cure neurodegenerative diseases

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- Chae Yong Jung
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- Ju Hyun Song
   [Professor, Neuroanatomy, Histology, juhyunsong@jnu.ac.kr]

## Department of Physiology

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## ■ Research Interests

- 1) Development of cell therapy strategies for hearing loss using human mesenchymal stem cells
- 2) Genetic and epigenetic control of mesenchymal stem cell fate during neurogenic differentiation
- 3) Study of stem cell transplantation for degenerative CNS disease including Alzheimer's disease, Parkinson's disease, and stroke
- 4) Neurophysiological mechanisms of vestibularly-evoked responses of the olivocerebellar tract
- 5) Hormonal and neural mechanisms responsible for the pathogenesis of hypertension
- 6) Electrophysiological study on the ion channels of the nervous system

- Jong Seong Park
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- Han-Seong Jeong
   [Professor, Neurophysiology, Stem Cell Bioengineering, hsjeong@jnu.ac.kr]
- Sujeong Jang
   [Associate Professor, Stem cell, Molecular biology, Neurophysiology, sujeongjang@jnu.ac.kr]

# Department of Biochemistry

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#### Research Interests

Biochemistry and molecular biology are essential learning as an academic foundation for medical students to identify the cause of diseases and develop therapies based on the molecular structure and function of biomolecules.

In the department of biochemistry, lectures including the structure and metabolism of proteins, lipids, carbohydrates, and nucleic acids, the regulation of metabolism, hormones, biological membranes, molecular biology, nutrition, cancer, aging, etc. are given to students, thereby widening their understanding of biochemistry.

For first-year medical students, the 'Biochemistry' class is distributed in the various integrated courses and participate mainly in the "Human Physiology and Metabolism", and for the second-year pre-medical students, a 'Cell and Molecular Biology' course is offered (total: 45 hours of lectures; 3 credits). Biochemistry experiments are provided as a "Basic medical experiments" course in conjunction with the departments of microbiology, physiology, and pharmacology (total: 64 hours of practice; 2 credits). There are also lectures, experiments, and seminars for graduate students.

In the department of biochemistry, various experimental devices are equipped to study the fields of biochemistry and molecular biology. The main research topics include among others: studying the role of reactive oxygen species and the development of antioxidants, the elucidation of the aging process, the study of signaling in carcinogenesis and angiogenesis, the study of regulatory mechanisms by miRNA, etc.

- Young Do Jung
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- Kee Oh Chay
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- Seung Rock Lee
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- Kyung A Cho
   [Professor, Cell Signaling in Cellular Senescence and Immunosenescence, kacho@jnu.ac.kr]
- Young Kook Kim[Professor, RNA biology, ykk@jnu.ac.kr]
- Bo Ra Lee
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## Department of Pathology

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The study of pathology is divided into General Pathology and Systemic Pathology. The former is concerned with the basic reactions to abnormal stimuli that underlie all diseases, while the latter examines the abnormal responses of specialized organs and tissues. The four aspects of disease process (etiology, pathogenesis, morphologic changes, clinical significance) are studied by means of lectures, laboratory work, classroom demonstrations, seminars, case studies, as well as through the use of fresh and museum specimens, along with a full collection of slide teaching sets. The first portion of the course is devoted to the subject of cellular injury and cellular death, cellular growth and differentiation, inflammation and repair, hemodynamic disorders, genetic disorders, disease of immunity, infectious diseases, and neoplasia. The rest deals with special systemic pathology, such as cardiology, hematology, pulmonology, gastroenterology, male and female reproductive systems, neuroscience, nephrology, endocrinology, and the musculoskeletal system.

- Chan Choi
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- Jong Hee Nam
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- Jae Hyuk Lee
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# Department of Pharmacology

\_\_Contact Information

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Our research ranges from classical pharmacologic work to gene-based work. The following contains recent research interests of faculty members in our department:

- 1. Study of drug metabolism and pharmacogenomics
- 2. Characterization of transcriptional factors involved in cardiovascular diseases
- 3. Investigation of the effects of altering master gene expression on regulating osteoclast function.
- 4. Characterization of the candidate genes involved in regulation of cell cycles
- 5. Functional analysis of vascular smooth muscles
- 6. Development of animal disease models for research into cancer, cardiovascular diseases, and bone metabolic diseases; and the evaluation of the therapeutic potential of specific gene regulation using animal disease models
- 7. Philosophical reflection on drug therapy and problems of modern medicine
- 8. Research on medical humanities and ethics
- 9. Research on the roles of microglia and neuroinflammations in psychiatric disorders
- 10. Study of the sex-difference in the brain and behavioral patterns

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- Hyun Kook
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- Nack Sung Kim
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- Jung Min Kim
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- Gwang Hyeon Eom
   [Associate Professor, Molecular Pharmacology, eomgh@jnu.ac.kr]
- Park Hyun Sun
   [Assistant Professor, Neuropharmacology, hspark91@jnu.ac.kr]

## Department of Microbiology and Immunology

\_\_Contact Information

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The graduate program in our department offers comprehensive and goal-oriented education, as well as intensive research training, in order to produce qualified and motivated young scientists who will be future leaders in the field of microbiology and immunology. It is our belief that collaborative research among our faculty members will maximize our potential to obtain greater achievements and to reach our goals sooner. Therefore, students in our department are encouraged to become active members of interactive and innovative research groups. Our research interests include cellular microbiology, oral microbiology, immunology, and cancer biology.

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- Young Jin Hong [Professor, Cellular Microbiology, yjhong@jnu.ac.kr]
- Jae Ho Jeong
   [Associate Professor, Infection and Infection control, Bacterial molecular pathogenesis,

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### Department of Preventive Medicine

\_\_Contact Information

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Preventive medicine is an unique specialized field of medical practice composed of distinct disciplines that utilize skills focusing on the health of individuals, communities, and defined populations in order to prevent disease, prolong life and promote health through the organized efforts and informed choices of society, organization, public and private, communities and individuals. It is also called 'public health', which puts stress on the community rather than individuals, or 'social medicine' relating social factors to the disease.

Three special areas of preventive medicine are epidemiology, environmental and occupational health, and health policy and management. Epidemiology program has conducted two large-scale population-based cohort studies (Namwon study and Dong-gu study) to determine the etiologies of and effective preventive measures for cardiovascular disease, cognitive decline, osteoporosis and cancer. Health policy and management program deals with community-based health program development. Environmental and occupational medicine works to assess and reduce risks to individuals and communities from chemical, biological and physical hazards in the home, community, school, and workplace environments.

- Jun-Ho Shin
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- Min-Ho Shin
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- Sun-Seog Kweon
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- Hye-Yeon Kim
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### Department of Forensic Medicine

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Forensic medicine is structured with theoretical education in the third year of medical school and subsequent practical training in the fourth year. Lectures in forensic medicine, 12 hours in the first and second quarters of the third year, provide the basic and translational medicolegal knowledge necessary for application to both criminal and civil law and for medical practice, which consists of the causes of sudden unexpected natural death, pathophysiology of shock, post-mortem inspection, post-mortem changes, injuries, asphyxia, poisoning, several kinds of accidental death, DNA fingerprinting, as well as pertinent medical documents and medico-legal jurisprudence. The forensic medicine practical training conducted in the fourth year of medical school consists of legal autopsies, medico-legal case analysis, case presentation, and a tour of the National Forensic Service.

- Jong Tae Park
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- Hyung Seok Kim [Professor, Forensic Medicine, Traumatic Brain Injury, Neurovascular biology, veritas@jnu.ac.kr]

### Department of Medical Education

\_\_Contact Information
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The Department of Medical Education was established at Chonnam National University Medical School (CNUMS) in 2001. We have focused on nurturing primary doctors, medical scientists, and medical educators compatible with the educational purposes of CNUMS. We participate in a wide range of educational activities. We offer many excellent courses and programs related to health professional education and research. We provide expertise in curriculum development, innovation in teaching and learning methods, support for the faculty program and student learning, and research in medical education.

#### Professors

Eun Kyung Chung
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Eui Ryoung Han
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### Department of Biomedical Sciences

\_\_Contact Information
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#### ■ History

The Department of Biomedical Sciences was established on January 3, 2006.

#### Education

We provide the following courses: Basics for Medical Research (3 credits), Genetics (3), Organic Chemistry (3) and Startups and Entrepreneurship (1).

#### Research Interest

We study Biomedical Sciences via Biophysics, Cell Biology, Developmental Biology, Genetics, Molecular Biology, Molecular Imaging, Nanobiology, Neuroscience and Organic Chemistry.

Below are our faculty members' research interests.

Prof. In-Kyu Park: Delivery of genes and proteins into living organisms
 Studies to increase the efficiency of the delivery of genes and proteins into living organisms, which would help to develop effective therapeutic modalities against human diseases.

2. Prof. Hee-Young Shin: Clinical epidemiology and research ethics

Prof. Hee-Young Shin works in the area of clinical epidemiology and research ethics. Dr. Shin is mainly interested in the scientific and ethical conduct of clinical trials. Clinical epidemiology and biostatistics are the basic elements to implement scientific clinical research. Moreover, ethical considerations are very important in developing innovative medical treatment. The other areas of interest are geriatric diseases (including dementia) and public health.

3. Prof. Seok-Yong Choi: Fate specification of glial cells

The central nervous system (CNS) consists of neurons and glial cells. Knowledge about fate specification of cells in the CNS is essential to develop therapeutic modalities for CNS diseases, especially neurodegenerative diseases. Whereas the fate specification of neurons has been studied extensively, research into glial cells remains unclear. Our research group investigates the fate specification of glial cells, especially ependymal cells, in the zebrafish model using genetic and cell biological approaches.

#### 4. Prof. Jihoon Jo

Research in our lab focuses on a wide range of projects from molecular mechanisms of synaptic plasticity which is a strong model for learning and memory, and Neurodegenerative disease including Alzheimer's disease.

#### 5. Prof. Hoon Hyun: Molecular Imaging

The lab focuses on the development of novel contrast agents for tissue- and organ-specific targeting and diagnosis. Of particular interest is "Structure-Inherent Targeting," where small molecules can be used for targeting, imaging, diagnosis and therapy by specifically visualizing target tissue with high optical properties and by avoiding nonspecific uptake in normal background tissue.

#### 6. Prof. Stan Razvan: Biophysics and Immunology

We are investigating with biophysical, molecular dynamics and immunological techniques the mechanisms underlying the thermal transfer in immune complexes, at physiological and fever temperatures. The lab is also interested in the ex vivo mechanisms underlying molecular memory formation and duration in protein complexes, upon repeated stimulations.

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### Department of Parasitology and Tropical Medicine

\_\_*Contact Information* Phone: +82-61-379-2716

#### Research Interest

The Department of Parasitology and Tropical Medicine was established in 2019 at Chonnam National University Medical School (CNUMS). The visions of our department are i) to control endemic parasitic infections in Korea and finally to improve public health; ii) to educate medical students with a practical and globalized point of view, and iii) to contribute the development of parasitology as a part of basic medicine.

Parasitology is the study of parasites, their hosts, and the relationship between them. A parasite is an organism that live on or within another organism called the host. These include organisms such as: protozoa, nematoda, cestoda, trematoda, and medically important arthropoda. Medical parasitology is the subject which deals with the parasites that infect humans, the diseases caused by them, clinical features and the response generated by humans against them. It is also concerned with the various methods of their diagnosis, treatment and finally their prevention and control. Tropical diseases are endemic diseases in tropical and subtropical areas. There are many kinds of diseases such as malaria, cholera, dengue fever, sleeping sickness, and yellow fever. Tropical medicine is a medicine that deals with the pathophysiology, diagnosis and treatment of Tropical diseases.

The vision of our research is to overcome parasitic diseases and tropical diseases and to contribute to humanity and society as a basic and true medical scientists. The goals of the research are i) to study Parasites for the treatment of tropical diseases, ii) to study the relationship between Parasites and hosts to overcome intractable immune system diseases; and iii) to utilize useful parasites as translational research.

### Department of Internal Medicine

\_\_Contact Information

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The Department of Medicine has 9 subdivisions: gastroenterology, cardiology, pulmonology and critical care medicine, endocrinology and metabolic disease, nephrology, hemato-oncology, infectious disease, allergy, and rheumatology.

Medical students are instructed in case-orientated and problem-solving approaches to diverse medical problems. From their third year, students are grouped into small units for clinical practice and turn subdivisions every week where they learn clinical skills and complete their knowledge under close contact with professors, fellows, residents, and patients. Faculty deliver weekly lectures to residents and students. Also, there are weekly case conferences to show typical or difficult clinical problems and journal reviews.

#### Professors

#### Gastroenterology

- Sung Kyu Choi
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#### Cardiology

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#### **Pulmonology**

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#### **Endocrinology and Metabolism**

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#### Nephrology

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- Hong Sang Choi
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- Sang Heon Suh
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#### Hemato-oncology

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- Ik Joo Chung
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- Je Jung Lee
   [Professor, Hematopoietic Stem Cell Transplant, Lymphoma, Multiple Myeloma, drjejung@cnuh.jnu.ac.kr]
- Sang Hee Cho
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# Department of Surgery

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#### ■ Sophomore course

The lecture course, 147 hours (7 credits) in total, covers general problems and must be taken for three quarters. There is an examination at the end of each quarter.

#### ■ Junior and Senior course

The clerkship is 3 weeks: a week in the outpatient department, a week in gastrointestinal and hepatobiliary surgery, and a week in endocrinologic and pediatric surgery. The workload for clerks includes ward rounds, case assignments, and informal discussions with faculty surgeons as they appear in weekly schedules. All students should be prepared to participate in preoperative conferences and to assist at operations. Students are exposed to diseased patients who can or should be treated by operative intervention. Students participate in outpatient and inpatient care. They are expected to obtain enough experience in wound care and be familiar with important emergency procedures. Every Friday, case presentation is done by students, and an examination is given.

#### Divisions

Gastroenterologic Surgery, Colorectal Surgery, Hepaticobiliary and Pancreatic Surgery, Endocrine Surgery, Pediatric Surgery, Vascular and Transplantation Surgery, Trauma Surgery

#### Professors

#### **Gastroenterologic Surgery**

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#### **Colon and Rectal Surgery**

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#### **Hepaticobiliary and Pancreatic Surgery**

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#### **Endocrine Surgery**

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#### Vascular and Transplantation Surgery

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#### **Traumatic Surgery**

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#### Trauma Surgery

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### Department of Obstetrics and Gynecology

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In the Department of Obstetrics and Gynecology, 80 hours of formal lectures for sophomore medical students are offered through the second quarter. The lectures for sophomores cover reproductive endocrinology, infertility, general gynecology, gynecological oncology, phenomena and management of pregnancy, labor and puerperium, in both normal and abnormal circumstances. Four weeks are devoted to a clerkship in the ward for clinical experiences of juniors. Daily clerkship begins with participation in journal meetings, beginning at 8:00 am. Students are encouraged to participate in answering and questioning. The objective of the clerkship is to acquaint the student with the varied aspects of the medical care for women, with emphasis on acquiring the basic skills of gynecologic and obstetrical history taking and physical examination, participating and assuming responsibility in the evaluation and care of outpatients and inpatients, and acquiring practical experience in the operating and delivery room areas with close supervision by the staff.

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### Department of Pediatrics

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The Department of Pediatrics has been providing a diverse range of services aimed at achieving good health and well-being for all children since 1945. We provide active clinical services with 9 pediatric subspecialties including neurology, neonatology, hemato-oncology, cardiology, endocrinology, allergy and respiratory disease, nephrology, gastroenterology and infection.

We anticipate multidisciplinary, dedicated services with the launching of the new state-of-the-art CNU Children's Hospital in 2017. Being the largest tertiary referral pediatric hospital in the Chonnam Provice and Gwangju, CNU Children's Hospital offer not only the most effective treatment and care, but also research activities to meet the needs of our patients, families and society in general.

#### **Research interests:**

- 1. Basic research and clinical care on the treatment of hematologic malignancies, solid tumors, hematologic diseases, immune deficiencies, and rare diseases.
- 2. Clinical research on hematopoietic stem cell transplantation.
- Preoperative diagnosis and postoperative care for children with congenital heart diseases. Therapeutic catheter interventions.
- 4. Right ventricular dysfunction in overload right ventricular pressure models in animals.
- 5. Biomarkers of diagnosis and genetic changes associated with vasculitis in Kawasaki disease.
- 6. Variable research on care and prognosis of ELBW (extreme low birth weight) infants.
- 7. The epidemiology and pathogenic mechanisms of perinatal infection and care of intrauterine infections.
- 8. Management of patients with childhood epilepsy, headache diseases, and other developmental disorders.
- 9. Molecular genetic studies for underlying abnormalities of variable neurologic disorders in childhood, clinical studies for the progress of epilepsy in early childhood, and developmental disorders associated with genetic or environmental etiologies.
- Neonatal jaundice and liver diseases, pathogenesis and treatment of childhood obesity, steatohepatitis
  in children.
- 11. Diabetes mellitus, thyroid disease, precocious puberty, short stature, obesity, and Vitamin D metabolic diseases.
- 12. Pulmonary diseases including respiratory tract infectious disease and congenital pulmonary abnormalities
- 13. Pediatric allergic diseases including asthma, allergic rhinitis, atopic dermatitis and drug allergies.
- 14. Congenital Anomalies of the Kidney and Urianry Tract (CAKUT), glomerulonephritis, acute kidney injury, and chronic kidney disease in children

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## Department of Psychiatry

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The Department of Psychiatry in Chonnam National University Medical School - one of the oldest and leading faculties of psychiatry in Korea - has devoted more than 60 years to exceptional patient care, innovative research, and teaching. The close collaboration between research and clinics are one of our unique strengths, enabling us to provide patients with the best care available as we work to discover more effective strategies to prevent, control, and treat mental disorders. Researches has been carried out in various areas, particularly in the fields of mood disorders, anxiety disorders, schizophrenia, early intervention, geriatric psychiatry, psychopharmacology, psychiatric epidemiology, sleep medicines, psychosomatic medicines, child/adolescent psychiatry, and psycho-oncology. Our department has published many valuable papers in these areas, and we managed more than 50,000 patients per year in outpatient clinics in two national general hospitals. Also, we have managed several national centers for public mental health, schizophrenia rehabilitation, dementia, and child sexual abuse. Today, we continue our long tradition of established excellence in patient care, teaching, and research.

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# Department of Neurology

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The Department of Neurology provides a total of 33 lecture hours to 2nd year medical students during the 3rd and 4th quarters. Topics of lectures include instruction in neurology, neurologic diagnosis, cerebrovascular disease, dementia, seizure disorder, peripheral nerve disorder, movement disorder, infectious CNS diseases, headaches, and other CNS disorders. The lectures are designed to both satiate and stimulate the student's curiosity for "the secret of the brain." Clinical clerkships in neurology are available to 3rd and 4th year medical students. Students have the opportunity to participate in daily conferences, rounds, neuroimaging seminars, journal club, and group meetings for neurologic examination; assist in diagnostic procedures; and assist the emergency stroke team which is always on call. Operations occur around the clock for both interventional surgery and the early management of patients with potential for strokes.

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Department of Dermatology

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The Department of Dermatology conducts both clinical and basic research by 5 faculty members, 10 residents, 2 fellowship, 2 technicians, and individual research associates.

Faculty member areas of interest in research are:

1) Mycology

The division of mycology is devoted to the investigation of fungal organisms causing skin diseases. Current interest of this division is to identify Dermatophyte species and Malassezia species, a normal flora of human skin, as a causative organism inducing various skin diseases, including atopic dermatitis and seborrheic dermatitis. The method used in this study includes fungal culture, morphology, PCR, and gene sequencing.

2) Biochemistry and Photobiology

This division of biochemistry is devoted to the investigation of basic biochemical processes involved in normal physiology of skin. For example, the distribution and function of peroxiredoxin, an antioxidant, is identified by immunohistochemical stain and western blot analysis.

3) Dermatopharmacology and Clinical Study

Skin pharmacology and toxicology has been studied under clinical efficacy evaluations using bioengineering measurements of physiological properties of skin. Clinical cosmetic research with various products and skin barrier function are performed with objective evaluation methods such as skin color, capacitance, TEWL(transepidermal water loss), elasticity, and neurosensory functions.

4) Dermatopathology

Our department has kept its own dermatopathology laboratory fot over 25 years. Cumulative histopathologic archives are very useful for retrograde clinical studies, as well as immunopathology and tissue prep for Mohs surgery.

5) PDT and LLLT

Photosensitizer and novel porphyrin derivatives are the research interests for treating acne and both benign and malignant skin tumors. Also, low-level laser therapy(LLLT) using light emitting diode LED) are the main research interests for treating rosacea, photorejuvenation, various pigmentation disorders including melasma or Riehl's melanosis, et al. Industry sponsored clinical studies have been conducted for many years.

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#### Professors

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### Department of Orthopedic Surgery

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Orthopedic surgery or orthopedics is the branch of surgery concerned with conditions involving the musculoskeletal system. The musculoskeletal system includes bones, joints, ligaments, tendons, muscles, and nerves. Orthopedic surgeons use both surgical and nonsurgical means to treat musculoskeletal trauma, sports injuries, degenerative diseases, infections, tumors, deformities and congenital disorders of extremities and spinal column.

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### Department of Neurosurgery

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The Department of Neurosurgery, one of the largest clinical services at the Chonnam National University Hospital, provides extensive inpatient and outpatient care opportunities. The mission of the department is the advancement of the specialty of neurosurgery through the interrelated efforts of resident training, patient care, and clinical and laboratory research. In particular, the experiences of the faculties fall into virtually every facet of this diverse specialty area. The department is committed to providing the highest quality of neurosurgical care for patients who have an illness or injury that affects the brain, spine, or peripheral nerves. We offer the full range of modern neurosurgical techniques, including cerebrovascular surgery, brain tumor surgery, skull-base surgery, spinal surgery, spinal instrumentation, transsphenoidal surgery, peripheral nerve surgery, stereotactic surgery for movement disorders, epilepsy surgery, pediatric neurosurgery, craniofacial reconstructive surgery, functional surgery, and neuroendovascular surgery. We also have perfected operations since the Neuronavigator system (Brain Lab) Can this be deleted? The sentence is fine without it; if it is kept, something must be added, such as when it was introduced.was introduced.

Research is integral to the department's clinical and academic goals. The department has a well-equipped basic science laboratory space, as well as facilities for clinical research. Current major research projects include brain tumors and molecular neurobiology, cerebral ischemia and experimental models for cerebral aneurysm joined with pharmacology, epilepsy, degenerative spinal disorders, spine injury, and other neurosurgical topics.

The four-year neurosurgery residency program focuses on providing broad academic, clinical, and research experience. We also offer a fellowship for residents interested in further specialization. Clinical internship programs are given to senior students. During the one-week internship, one week of clerkship, students participate in a daily neurosurgical preoperative and postoperative conference, rounds, other seminars, operations, special studies, and emergency care in the emergency and the neurosurgical intensive care unit. Assigned case studies are presented by students and are discussed with staff. Students are evaluated by written examinations, attendance, and the degree of participation in the clinical clerkship. A total of 57 lecture hours are given to third-year medical students during the first and second quarters. The lecture subjects include instruction in neurosurgery, neurosurgical diagnosis, cerebrovascular disease, brain tumors, spinal disorders, neurotrauma, pediatric neurosurgery, functional neurosurgery, and other CNS diseases.

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# Department of Thoracic and Cardiovascular Surgery

\_\_*Contact Information* 

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The Department of Thoracic and Cardiovascular Surgery in our hospital originated in 1965. Currently, our department is subdivided into thoracic and cardiovascular centers, and has a rich tradition of dedicated surgeons who provide expert surgical services to patients with all types of diseases.

Our cardiovascular center offers a full complement of cardiac services for acquired heart disease (especially valve repair and replacement, coronary artery bypass grafts, treatment of thoracic aneurysm, and dissection) and congenital heart disease (especially neonatal heart surgery, adult congenital heart surgery).

Our thoracic center is treating patients who have pulmonary disease, mediastinal disease, and esophageal disease. Efficient cooperation within the medical staff encourages accurate diagnosis, surgery and other supportive care. Also, our department provides outstanding medical services to surgical patients through thoracoscopy and the Da Vinci Surgical Robot System.

Since our department involves vital organs critical to human life, we continue to strive to be the best.

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## Department of Ophthalmology

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Since its establishment in 1945, the department of ophthalmology at Chonnam National University Medical School has faithfully implemented medical practice, research, and education, aiming to help the public maintain healthy vision. In particular, it is one of the best eye clinics in Korea, and provides professional care by specialists in ocular surfaces, cataracts, glaucoma, retinal and uveal diseases, oculoplasty, strabismus and pediatric ophthalmology, and neuro-ophthalmology using advanced medical equipment.

This department carries out approximately 50,000 procedures in outpatient care, 2,500 operations, and 1,500 specialized laser treatments per annum. In addition, since 1992, it has operated the Chonnam National University Eye Bank and performed about 600 cases of corneal transplantation surgery. In 2007, it carried out the first suture-less corneal endothelial transplantation surgery (DSAEK) in South Korea.

This department actively conducts basic experimental research, as well as much clinical research, by opening a certified animal laboratory for eye diseases. Through this, dozens of research articles, including SCI level international journals, have been published each year and our excellence in research has been recognized domestically and internationally. In addition, since 1996, the department of ophthalmology has hosted a nationwide ophthalmology academic symposium every year.

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### Department of Otolaryngology and Head & Neck Surgery

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Established in 1942, Chonnam National University's Medical School's Department of Otolaryngology-Head and Neck Surgery is one of the oldest otolaryngology departments throughout the country. From the beginning until now, our mission and vision were to devote ourselves to cure patients and overcome diseases in the field. We have a long tradition of enthusiastically taking care of ill patients, especially in the region. Chronic otitis media, dizziness, facial palsy, congenital and acquired hearing loss etc. have been our major targets in the otologic field. Benign and malignant tumors, voice problems and many infectious diseases were cured in the heads and necks of patients. Finally, Allergic rhinitis, sinusitis, and (reconstructive) facial plastic surgery were done in the rhinologic division.

We are committed to training the next generation of leaders in the field, including medical students, residents, fellows, and post-doctors. Since the opening of our department, we have been sending out a constant stream of outstanding doctors and researchers in the field of otolaryngology on a national scale.

We have embarked on a new era in the treatment of otolaryngologic by conducting clinical and basic research. Our department has been and is performing many clinical trials, by ourselves and also for international companies. We have a research center for hearing regeneration, head and neck cancer, and Nasal physiology & rhinitis. We have performed and pioneered innovative developments in the diagnosis and treatment of ear, nose, and throat diseases.

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# Department of Plastic and Reconstructive Surgery

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During the 2nd year curriculum, a total of 10 hours of lectures are given on various topics including reconstructive plastic surgery, congenital anomalies, hand surgery, head and neck surgery, skin tumors, and trauma (including burns). Students are given the opportunity to pursue a one-week clinical clerkship during the 3rd or 4th year of medical school. Student activities include accompanying rounds, receiving case assignments, and informal discussion sessions with staff. Students observe outpatient care in the outpatient clinic and participate in inpatient care under the guidance of residents. Through bedside teaching, students are expected to gain experience in the field of plastic surgery, become familiar with practical patient care, and attend regularly scheduled departmental conferences.

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# Department of Urology

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The Department of Urology was established at Chonnam National University in September 1967. The mission of our department of urology is committed to offering the highest quality urologic care, innovative research programs, an outstanding education for world-class leaders, and the discovery and evolution of new ideas and information about urologic disease, from research to the clinical implementation phases of disease control in the field. The Department of Urology has several subdivisions: Uro-oncology, Voiding Dysfunction, Sexual Medicine, Pediatric Urology, Endourology, Urinary Infection, Prostate Disease, Urinary Trauma and Reconstruction, and Urinary Ultrasonography. Our residency and student program is one of the best in the country.

The Department enjoys the strong support of the Chonnam National University Hospital, which is also affiliated with the Hwasun University Hospital and School of Medicine.

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- Eu Chang Hwang [Professor, Urologic Oncology, Genito-urinary infection, urohwang@gmail.com]
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### Department of Anesthesiology and Pain Medicine

\_\_Contact Information

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The Departement of Anesthesiology and pain medicine was established at Chonnam National University in 1961. Since that time, the Department of Anesthesiology and pain medicine has offered a full range

Our Department has focused on specific aspects of each of these areas in which faculty members have established strength or increased potential for development.

of educational and research opportunities in anesthesia, critical care, and pain management.

The research programs include both basic science and applied clinical sciences. These priority research areas are:

#### A. Cardiovascular Anesthesia Laboratory

Our cardiovascular laboratory focuses on preventing myocardial infarction and its reperfusion injury. The main objective of our laboratory is to search for cardioprotective mechanisms of known or newly manufactured drugs.

In the early 1990's, cardiovascular research focused mostly on hemodynamic effects of study drugs. In that period, Professor Kyung Yeon Yoo, who studied stunned myocardium, performed animal testing using dogs. Nowadays, we are carrying out experiments on rats with an ischemia/reperfusion model. We are also focusing on the Reperfusion Injury Salvage Kinase (RISK) Pathway in ischemia/reperfusion injury.

#### B. Research for Critical Care Medicine

The Division of Critical Care is dedicated to the collaborative research that improves the management and outcome of critically ill patients. Over the past several years, our research activities have focused on four topics related to patient outcome, respiratory critical care, sepsis laboratory, and basic research:

- Interventional studies aimed at decreasing the incidence of complications in critically ill patients, such as 'A Comparative Study on Weaning Time of Mechanical Ventilation as Analgesic Strategy Using Different Opioids'
- 2. Animal studies aimed at finding out the protective effects of new materials or drugs against acute lung injury in animal models
- 3. Molecular and cellular investigations on pathophysiology of inflammation and sepsis

#### C. Pain Medicine

The main research interests of this laboratory include the pathophysiological mechanisms of neuropathic, inflammatory, and cancer-related pain to provide rationale for new therapy. The research emphasis is

focused on various neurotransmitters and their receptors, or channels implicated in the modulation of nociception in the spinal cord. We utilize various rodent models inducing chronic pain, behavioral analysis of nociception, and molecular biologic methods.

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- Seong Wook Jeong
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# Department of Radiology

\_\_Contact Information

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Accurate diagnosis is the starting line of patient care. Our department of radiology at Chonnam National University aims to offer the best patient health care available.

The department operates various state-of-the-art diagnostic modalities such as 3.0T MRI, 128 channel volume CT, ultrasound, fluoroscopy, mammography, and plain radiography.

Our radiologists perform and provide interpretations of radiologic exams, biopsy procedures guided by ultrasound or CT scans, and also various interventional treatments for vascular diseases, biliary or urinary tract diseases as well as oncologic interventions such as transarterial chemoembolization (TACE) and radiofrequency ablation (RFA).

In addition to clinical practices, we continuously pursue excellence in health care through research, education, and active interaction with fellow clinicians through consultations or conferences.

The department of radiology consists of the following specializations:

- · Abdominal radiology
- · Genitourinary radiology
- · Thoracic radiology
- · Cardiovascular radiology
- · Neuroradiology and Head and Neck radiology
- · Musculoskeletal radiology
- · Breast radiology
- · Pediatric radiology
- · Interventional radiology

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# Department of Radiation Oncology

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The mission of Department of Radiation Oncology is to advance the state of knowledge in radiation oncology, to provide the most optimised radiotherapy, to educate medical students, physicians, radiation technologists, physicists, and to develop state-of-the-art research models that can be translated into clinical trials.

Our faculty members are working in close cooperation with colleagues in surgical and medical oncology to facilitate a comprehensive multidisciplinary team approach for the implementation of qualified cancer management.

About three hundred cancer patients are daily visiting on weekdays. Our department is equipped with two CT-simulators, six linear accelerators including Halcyon, VitalBeam, Novalis Tx, and high dose rate remote controlled after-loading system for brachytherapy. We provide a wide range of radiation treatment options including high dose rate 3-D brachytherapy, stereotactic radiotherapy, intensity modulated radiation therapy, total body irradiation, respiratory gated radiotherapy, and image-guided radiotherapy.

Recently, faculty members are actively involved in various prospective clinical trials which are conducted by Korean Radiation Oncology Group and translational research in advanced anticancer treatments including immunotherapy.

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# Department of Laboratory Medicine

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The Department of Laboratory Medicine is devoted to cutting-edge laboratory service, outstanding biomedical research, and comprehensive education in our field. Our department includes six services: diagnostic hematology, clinical chemistry, laboratory immunology, clinical microbiology, transfusion medicine, and cytogenetics & molecular genetics. Our department provides laboratory testing for inpatients and outpatients at Chonnam National University Hospital (CNU) and Chonnam National University Hwasun Hospital (CNUHH). There is a laboratory information system (LIS) that interfaces with the hospital information system.

#### Research interests:

- Diagnostic molecular biology for hematologic malignancy and blood transfusions
- · Pathogenesis of fungal infections and antifungal susceptibility testing
- Development of disease-specific biomarkers (tumor markers)
- · Diagnostic immunology and molecular diagnostics

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- Hyun Jung Choi
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### Department of Nuclear Medicine

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The Department of Nuclear Medicine provides various diagnostic and therapeutic services for the patients in a safe and non-invasive way. The imaging service furnish functional information along with anatomy for early diagnosis, characterization and determination of severity and prognosis, and prediction of therapeutic responses of diseases. Department provides radionuclide-based therapeutic modalities for cancerous diseases as well as nuclear imaging services for a variety of diseases including many types of cancers, heart disease, gastrointestinal, endocrine, neurological disorders and other abnormalities.

In addition to clinical services, department's research has focused on new innovative imaging technologies to decipher the transformation from normal healthy to abnormal diseased state on biochemical and molecular/cellular level. It also develops the simultaneous Imaging-and-Therapeutic (Theranostics) technology based on the diversification of radiotracers and bioactive molecules/microorganisms.

The ultimate mission/goal of Nuclear Medicine Department is to provide a new avenue with pioneering medical science and technologies for the determination of the status of health, identification of early symptoms and signs for the diseases, prediction of disease courses and the demonstration of precise molecular profile of diseases as a part of the new era of the precision medicine.

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## Department of Emergency Medicine

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The goal of the Department of Emergency Medicine is to provide the highest quality of emergency medical care to our patients within the setting of advanced research, training, and education. The main focus of research and clinical activities of the department is on cardiopulmonary resuscitation such as basic life support, advanced cardiovascular life support, and advanced trauma life support. The department is also a pioneer in the development of novel solutions to improve several critical and interesting clinical areas including toxicology, emergency medical service system, environmental medicine, disaster medicine, and critical care medicine. Through these activities the members of the department are proud to be able to provide cutting-edge and state-of-the-art emergency care in the community.

#### Professors

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- Lee Hyoung Youn
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# Department of Physical & Rehabilitation Medicine

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The Department of Physical & Rehabilitation Medicine (PRM) is active in developing clinical rehabilitation medicine and furthering clinically applied basic rehabilitation science research. This PRM Lab (a.k.a. Dynamic Rehabilitation Medicine Science and Technology Institute Lab) has deep interests in Neuro-Rehabilitation, Musculoskeletal rehabilitation, Pain rehabilitation, Cardiac rehabilitation, Pulmonary rehabilitation, Pediatric rehabilitation, and Geriatric rehabilitation. We have not only general rehabilitative therapeutic facilities for Physical therapy, Exercise therapy, Occupational therapy, and ADLs training but also special laboratory facilities for Neurophysiologic exercise including Electromyogram-Biofeedback training systems and RS (rehabilitation system) models of BTE (Baltimore therapeutic equipment) systems, 3D-Motion analysis systems, Electrodiagnostic Lab I (for electromyographic studies and intraoperative monitoring) and Electrodiagnostic Lab II (for evoked potential studies and transcranial magnetic stimulation studies) for the diagnosis and the management of muscle and nerve diseases, and a Digital infrared thermography Lab for the evaluation of neuromusculoskeletal pain and its outcomes. We also have cutting-edge rehabilitation systems for improving neuronal plasticity such as finger-synchronized robot-assisted hand rehabilitation systems, body weight support treadmill training systems, dynamic balance evaluation and training systems, 3-D motion analysis systems, and repetitive transcranial magnetic stimulation (rTMS) with Neuronavigation Systems (Brainsight<sup>TM</sup>) for noninvasive brain stimulation. Several research areas are in active operation, provided with evidence-based rehabilitation services for the best functional outcome.

The Neuro-Rehabilitation Team deals with the evaluation and management of patients with strokes, traumatic brain injuries, spinal cord injuries, and cerebral palsy. Our main interests of research rest on neurological recovery with neural reorganization and plasticity, and functional recovery. We also provide non-invasive brain stimulation for people with motor impairments, cognitive disorders, aphasia, and central neuropathic pains. Neurological functions can be improved by stimulating focal brain areas using transcranial magnetic stimulation or transcranial direct current stimulation.

The Musculoskeletal & Sports Rehabilitation Team deals with the evaluation and management of people with a broad range of muscle and joint problems such as back, shoulder, knee, arm or hand pain, and any other musculoskeletal pain or dysfunction caused by trauma, overuse, maladaptive lifestyles, or sporting activities. Individuals with acute and chronic injuries, muscle imbalance, and overuse (repetitive strain) injuries participate in a comprehensive pain management program aimed at restoring functional capabilities and increasing functional status to return home and to the wider community.

The Pain Rehabilitation Team deals with any pain patients receive due to neuromuscular or musculoskeletal pathology, and cancer. The aim of pain rehabilitation is also to increase the functional status and quality of life through various pain-relieving interventions.

The Cardiac Rehabilitation Team deals with the functional evaluation and management of patients with cardiovascular diseases using various aerobic exercise equipment, such as: treadmills, bicycles with ergometers, and upper extremity ergometers. The aim of cardiac rehabilitation is to maintain, restore, and increase the optimal physical, medical, psychological, emotional, vocational, and socioeconomic status of the patients and to maximize the quality of life of patients.

The Pulmonary Rehabilitation Team deals with the functional evaluation and management of persons with pulmonary diseases such as chronic obstructive pulmonary diseases, restrictive lung diseases, and intrinsic lung diseases with the goal of achieving and maintaining the individual's maximum level of independence and functioning in the community.

The Pediatric Rehabilitation Team deals with the functional evaluation and management of pediatric patients with developmental delays, cerebral palsy, musculoskeletal problems such as flat feet and torticollis, and congenital anomalies such as myelomeningocele. We evaluate the status of the children thoroughly and discuss plans for current and long-term management, home-care, as well as dispensing information about the prognosis and precautions that may be taken.

The Geriatric Rehabilitation Team focuses on the functional evaluation and management of symptoms and functions of aging individuals to prevent or minimize disabilities and functional deterioration in order to create and maintain healthy longevity.

The Cancer Rehabilitation Team deals with the evaluation and management of patients with pain and neurological symptoms associated with cancer, peripheral polyneuropathy, dysphagia, lymphedema, and so on. Our main interests of research rest on improving quality of life and reducing complications for cancer patients.

The Neuromuscular Electrodiagnosis Team provides neurophysiological approaches in determining the cause of muscular problems (weakness, wasting diseases, spasms, fatigue, etc.) or sensory problems (decreased sensations, abnormal sensations, etc.). Using various electrophysiological tests of muscles and nerves, we can determine the location, severity and recovery status of nerve and muscle lesions.

The Orthotics and Prosthetics Team implement Orthotic devices to help to improve the function of weakened muscles and joints, correct changes in joint structure, and protect weakened joints on the basis of 3-D motion analysis. Prosthetic devices are used for individuals who lost limbs due to accidents or illnesses, or those born without limbs, to regain function. We offer a multidisciplinary clinical service for patients who need orthotic or prosthetic devices while offering courses of study and education for functional improvement.

Finally, this PRM Lab researches the biomedical sciences oriented to rehabilitation medicine and aims to devote itself to the health and longevity of humans.

We also contribute to an environment which provides optimal rehabilitation for the disabled who reside in the local communities of Gwangju and the wider Jeonnam province in cooperation with other national and regional rehabilitation centers.

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- Park Hyeng-Kyu
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# Department of Occupational and Environmental Medicine

\_\_Contact Information

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Occupational and Environmental Medicine (OEM) has continued to become more widely recognized as a specialty with unique capabilities for preventing and treating illnesses and injuries related to working and environmental conditions.

Occupational and Environmental Medicine aims to prevent exposure to harmful factors that cause occupational and environmental diseases in advance, and to help with early diagnosis, treatment, rehabilitation and return to work. The mission of Occupational and Environmental Medicine is to: identify agents in the environment and workplace that affect human health, elucidate their mechanisms, develop strategies for confronting their effects, assess and communicate their risks, and share the knowledge obtained. To pursue the mission fully, multidisciplinary practices covering clinical medicine, toxicology, industrial hygiene, epidemiology, law, and other public health sciences are needed.

Occupational and environmental medicine is a medical field that researches to maintain and promote the physical, mental and social health of not only workers but also local people by identifying various harmful factors induced in the workplace and in the general living environment to prevent, treat and manage health disorders no see. The components of research and services include chemical toxicity, heavy metal exposure, solvent toxicity, epigenetics, occupational asthma, occupational lung diseases, occupational skin diseases, occupational neurological disorders, cumulative traumatic disorders, noise-induced hearing loss, comprehensive risk communication, workers' health management, and diseases of healthcare workers among others.

In addition, students have opportunities to get lectures and conduct their practice in the Department of Occupational and Environmental Medicine Clinic.

#### Professors

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## Research Institute of Medical Sciences

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The Research Institute of Medical Sciences came into existence on November 21, 1979, and contributes to the development of medical sciences and the improvement of public health by studying cooperatively pressing issues. The Center is composed of the Director, General Manager, and research departments, focusing on the following activities:

- Developing research tasks in basic and clinical medicine and offering financial support
- Hosting domestic and overseas academic symposia and delivering presentations of research results sponsored by the Institute
- Publishing journals, newsletters, and medical education materials
- Nurturing competent researchers, offering them chances to study abroad, and supporting discussion sessions
- Providing high-tech equipment for various analysis activities

## College of Humanities

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## Departments

- · Department of Korean Language and Literature
- · Department of English Language and Literature
- · Department of German Language and Literature
- · Department of French Language and Literature
- · Department of Chinese Language and Literature
- · Department of Japanese Language and Literature
- · Department of History
- · Department of Philosophy

#### Affiliated Research Centers

- · British/American Studies Institute
- · Center for Philosophical Studies
- · European Studies Institute
- · Interdisciplinary Program of Asian Culture
- · Korean Language and Literature Studies Institute
- · Research Center for History and Culture
- · Research Center for Japanese Culture
- · The Institute of Humanities
- · The Institute of Honam Studies
- · The Institute of Honam Buddhist Culture
- · Eurasian Studies Institute

## Korean Language and Literature

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## ■ What is Korean Language and Literature?

The goal of the Department of Korean Language and Literature is to study the history and structure of spoken and written Korean language scientifically, as well as to appreciate and criticize classical and modern literature. Spoken and written languages are the most basic methods to express the human mind and are a resource to construct mental systems. Therefore, through the study of the nature of language, the use of Korean language and the essence of language art, students are enabled to understand the history, modes, and rules of Korean language and literature.

The Department has developed theories of speech skills, literature appreciation, general and creative writing and have put them to practical use to help students improve their language skills, aesthetic sentiments, and writing skills. General education about Korean language and literature, development of language skills, and cultural aesthetic appreciation are the aims of the Department.

## **■** Korean Language and Literature

The Department of Korean Language and Literature offers three special fields of study: Korean Linguistics, Korean Classical Literature, and Modern Literature. In the field of Korean Linguistics, the department offers a range of linguistic courses, including semantics, phonology, syntax, and dialectology. The field of Classical Literature includes classical poetry, classical prose, Chinese classics, and oral literature. In the field of Modern Literature, the department introduces students to poetry, novels, drama, and criticism. In addition to the major fields of study, students supplement studies through student associations, such as the Classical Literature Society, Poetry Society, the Novel Society, the Drama Society, the Society for Literary Criticism, and the Korean Language Society. These societies have existed for more than 20 years. Most students in the department are members of one of these six societies, which enable them to study actively and gain many social advantages, even when searching for jobs.

## ■ Teacher Training Courses

Only 4 students can complete the courses for the teaching profession. They are selected based on their grades until the first semester of the second grade.

#### ■ Graduation Qualification

Students are required to submit an undergraduate thesis, pass Everyday English 1.

#### Careers

Graduates from the Department of Korean Language and Literature work in diverse fields with good language and literary skills. It is regarded that expressing our thoughts and opinions in a logical and persuasive way is one of the most essential capabilities in all societies. Graduates are active in the public information field as well as in the literary world (poets, novelists, and reviewers).

Graduates have entered the press (as producers, journalists, and drama writers), education (as professors, researchers, and secondary school teachers), broadcasting (as reporters, producers, and editors), government offices, and enterprises.

### Degree Requirements

#### **Graduate Credits**

General Culture	Major (Specialization)	Electives (Minor)	Graduate Credits	
a minimum of 30 credits	a minimum of 42 credits (63 credits)	a minimum of 58 credits (21 credits)	at least 130 credits	

#### **Core Courses**

- Major courses (4 courses)

History of the Korean Language, History of Old Korean Literature, History of Modern Korean Literature, Understanding the Language Provisions of Korean.

- General culture courses (5 courses)
   Literature and Humans, Chinese Characters, Writing, Career Plan and Self Understanding, and Everyday English1.
- Other requirements
  - a) Students must complete at least one course from three options: major specialization course, double (joint) major, and minor programs.
  - b) Students have to take 3 credits each part of Competence Liberal Arts, and at least 3 credits for Expression and communication, 2 credits for Career and Start-up, 3 credits for Nature and Technology of Balance Liberal Arts, and at least 8 credits in the academic field of Liberal Arts for Humanities.

## ■ What Do You Study?

Core Courses Language (3)

Dialectology (3) Introduction to Korean Folklore (3)
Graphemics (3) Introduction to Korean Linguistics (3)

History Of Korean Language (3)

Introduction to Korean Modern Literature (3)

History Of Modern Korean Literature (3)

Introduction to Korean Old Literature (3)

History Of Old Korean Literature (3) Korean Grammar (3)
Introduction to Education of Korean as A Foreign Korean Phonology (3)

Korean Semantics (3)

Language Provisions in Korea (3)

Middle Korean Grammar (3)

Modern Korean Novelists (3)

Modern Korean Poets (3)

Practice of Culture Scenario (3)

Reading in Early Modern Korean (3)

Reading in Korean Modern Drama (3)

Readings in Korean Classical Literature (3)

Readings in Korean Modern Novels (3)

Readings in Korean Modern Poetry (3)

#### Professors

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- Il-Gu Jang, Ph.D.
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Readings in Middle Korean (3) Readings in Old Korean Essays (3)

Readings in Sino-Korean Classical Poetry (3)

Sociolinguistics (3)

Studies in Hyang-Ga & Poetry in Koryo Dynasty (3)

Studies in Literary Criticism (3) Studies in Poetry Chosun (3)

Studies of Korean Oral Literature (3)

Studies of Old Korean Novels (3)

The Methodology and Practice of Korean

Linguistics (3)

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# English Language and Literature

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## ■ What is English Language and Literature?

English Language and Literature was established as a discipline of higher learning in the late 19th century. Having started with a philological inquiry into the English language and canonical literary texts written in English, the field underwent a dynamic transformation over the last century, engaging with other forms of knowledge, such as linguistics, cultural studies, and media studies. Along with such disciplinary innovations, however, English Language and Literature has retained as its central concern of fostering creative and critical abilities through an in-depth study of literary and cultural texts produced in English.

### ■ Department of English Language and Literature

Established in 1952, the Department is one of the oldest departments at Chonnam National University. It has been at the forefront of national higher education, offering a full range of undergraduate and postgraduate study programs.

The Department also houses the Joint Program of Foreign Language that offers students an option for double (joint) majors in combined studies of Business Management and other foreign languages, such as French, German, Chinese, and Japanese. This joint program strives to prepare students for better career opportunities.

The undergraduate program focuses on three main areas: English Language Acquisition, English Linguistics, and English Literary Studies.

- (1) English Language Acquisition: The department offers a range of English conversation and writing courses to enable students to achieve a high level of English proficiency. In these courses, students also develop English skills for use in a range of academic and professional areas, such as academic research, business, translating, media and tourism.
- (2) English Linguistics: The department offers a range of linguistic courses, including the College English Grammar, English Phonology, and English Syntax. These courses introduce students to methods of deeply focused investigations into the English language.
- (3) English Literary Studies: The department introduces students to a wide spectrum of imaginative writing in English, from Anglo- Saxon times to the present day. The subjects include a survey of literary history, studies of literary genres, critical theories, and seminars concerning great authors and specialized literary topics. Because of its imperial past, English has become a common language for many prominent writers around the world. The department teaches not only British and American Literature, but also global

literature in English.

By studying a wide variety of texts produced in different parts of the world, students learn to appreciate cultural differences and understand the profundities of the human experience.

#### Professors

- Tae-Un Min, Ph.D.
   [Professor, Modern British Fiction, taeun@chonnam.ac.kr]
- Seung-Hee Roh, Ph.D.
   [Professor, Shakespeare and Gender Studies, rover@chonnam.ac.kr]
- Mi-Ra Oh, Ph.D.
   [Professor, English Phonology, mroh@chonnam.ac.kr]
- Yoon-Hee Na, Ph.D.
   [Professor, Principles of English Language Teaching, yhna@hanmail.net]
- Seunghyun Baek, Ph.D [Professor, Applied Linguistics, sh3940@jnu.ac.kr
- Keun Young, Shin, Ph.D
   [Professor, Syntax-Semantics, kyshin@jnu.ac.kr]

- Yeonmin, Kim, PhD.
   [Professor, English Poetry, kogmc@jnu.ac.kr]
- Joori Lee, Ph.D.
   [Associate Professor, Contemporary English Literature, joorilee00@gmail.com]
- Seonghoon Kim, Ph.D.
   [Associate Professor, Contemporary American Literature and Culture, priest23@jnu.ac.kr]
- Euihwack Kang, Ph.D.
   [Associate Professor, Culture Studies and Contemporary American Novel, whanew@gmail.com]
- Scott Allan Findlay
   [Invited Professor, TESOL,
   scottfindlay@yahoo.com]

## Degree Requirements

For the B.A. degree in English Language and Literature, students are required to:

- 1. Complete 13 major courses (39 credits) offered by the Department of English Language and Literature, including 2 mandatory courses (Introduction to English Literature and Introduction to English Linguistics).
- 2. Students who do not study double-major or minor must take 7 extra major courses (21 credits).
- Other requirements including elective, general (major courses from other departments) credits or criterion of general categories, etc. vary depending on your admission year.
- 4. Submit an official English proficiency exam report for graduation, 675 points from TOEIC and the corresponding other exams' certificates are also acceptable.

## ■ What Do You Study?

#### **First Year Courses**

Western Culture and Civilization (3) British and American Culture (3) Current Issues and Debate (3) Media English And Composition (3) English Phonetics (3)

English Phonology (3)

English Comprehension 1 (3)

#### **Second Year Courses**

Survey of American Literature (3)

Survey of British Literature 1 and 2 (3)

Introduction to English Literature (3)

Introduction to English Linguistics 1 and 2 (3)

Business English (3)

English Grammar 1 and 2 (3)

Modern Culltures of English-Speaking World (3)

English Comprehension 2 (3)

English Prose (3)

English Language Acquisition (3)

#### **Third Year Courses**

18th and 19th Century British Novel (3)

British Novel 2 (3)

19th Century American Novel (3)

Modern American Novel (3)

Modern British Poetry (3)

Pre-20th Century British Poetry (3)

American Poetry (3)

English Literary Criticism (3)

Ethnic American Literature (3)

Contemporary British and American Drama (3)

English Teaching Methods (3)

Shakespeare (3)

English Syntax (3)

#### **Fourth Year Courses**

Advanced English Translation Practice (3)

Children's Literature (3)

Special Topics in English Literature (3)

English Literature in Films and Video (3)

English-Speaking World Literature (3)

Special Topics in English Linguistics (3)

History of the English Language (3)

English Semantics (3)

# German Language and Literature

\_\_Contact Information Phone: +82-62-530-3170 Fax: +82-62-530-3179

URL: http://german.jnu.ac.kr

### What is German Language and Literature?

Germany's prominence in cultural, geopolitical, and economic aspects accounts for its ever-increasing importance in the world. It comprises the German-speaking heartland, along with Switzerland, Liechtenstein, and Austria. Combined with its geographic centrality in Europe, a reunified Germany has exercised its influence over the international community more than ever before and, thus, created a world-wide interest in its language and culture. Traditionally, Germany has been known for its world-class writers such as Goethe, Heine, and Kafka. The current language Department aims to equip students with skills in communicating in German; understanding German-speaking politics, socioeconomics and cultures, and appreciating German literature.

## **■ German Language and Literature**

On March 1, 1995, the German Language and Literature and German Education departments merged into the Department of German Language and Literature. When students become sophomores, they begin to specialize in either German Language and Literature or German Area Studies in accordance with their future careers.

In order to help students to learn effectively, the Department provides many resources on German Studies and offers Major courses, including Grammar, Composition, Conversation, History of German Literature, Poetry, Drama, Novels, and Introduction to the German Language.

- Ja-Kyung Cho, Ph.D.
   [Associate Professor, German Linguistics, jkcho@jnu.ac.kr]
- Myeong-Soon Jeong, Ph.D.
   [Professor, German Literature, msnjeong@jnu.ac.kr]
- Dong-Min Choi, Ph.D.
   [Professor, German Literature, dmchoi@jnu.ac.kr]

- Jeong-Ae Choi, Ph.D.
   [Professor, German Area Study, ja@jnu.ac.kr]
- Yoojung Jeon, Ph.D.
   [Professor, German Literature, jeonyj@jnu.ac.kr]
- Chirin Eisele
   [Invited Professor, German Linguistics, chirin@jnu.ac.kr]

## **■** Degree Requirements

Students are required to earn 130 credits, normally 17 credits per semester (18 credits in exceptional cases). Students must also submit an undergraduate thesis, and demonstrate proficiency in the German language.

### ■ What Do You Study?

## German Language and Literature Major Courses

Cultures of German-Speaking World (3)

History of German Literature (3)

German Lyric And Music (3)

German Masterpieces in Context (3)

Translation Practice of German Literature 2 (3)

Translation Practice of German Literature 1 (3)

Exercise of German for Beginning (3)

Understanding German Sentences (3)

German Sentences Exercise (3)

Practical German Conversation & Composition (3)

Understanding of German Maerchen (3)

Understanding of European Culture (3)

German Culture in Art (3)

German Conversation (3)

German for major students1 (3)

German for major student2 (3)

German Romanticism (3)

Feminism in German Literature (3)

Understanding Of German Novel (3)

German Children Literature (3)

The German Language Learning Through Novels (3)

Literature and Film (3)

The German Society Through Its Novels (3)

German Classic (3)

German Sturm Und Drang (3)

Practical German Practice (3)

German Realism and Naturalism (3)

Sing and Learn German (3)

German Media Culture (3)

German Performing Arts (3)

German Society Depicted (3)

Mythology and German Literature (3)

German Travel Literature (3)

Understanding German Drama (3)

Understanding German Poetry (3)

Modern German Literature (3)

Contemporary German Literature 1 (3)

#### **German Area Studies Major Courses**

Principles of German Language Teaching (3)

Research in Development of Teaching Materials

& Methods for German (3)

Teaching Logic and Essay Writing for German (2)

Cultures of German-Speaking World (3)

German Grammar (3)

History of German Literature (3)

Appreciation of German Masterpoetry (3)

Exercise of German for Beginning (3)

German Conversation (3)

German Composition (3)

German Reading (3)

Introduction to German Linguistics (3)

Introduction to German-Speaking World Literature (3)

Advanced German Grammar & Reading (3)

Advanced German Conversation & Composition (3)

Practical German Conversation & Composition (3)

Business German Grammar & Reading (3)

Introduction to The Intercultural Communication (3)

Training of The Competence (3)

Understanding of German Texts (3)

Exploring Career Paths of German-speaking areas (3)

Marketing in German Market (3)

Understanding of German Culture Circle (3)

Business German Conversation & Composition (3)

Practical German Practice (3)

Practical German Grammar & Reading (3)

Professional German Grammar & Reading (3)

Professional German Conversation & Composition (3)

Introduction to Germany (3)
Introduction to Life in Germany (3)
German Business Culture (3)
Trade Policy of Germany and EU (3)
German Industries and Market Research (3)
Management Practice in Germany (3)

Practice of International Trade with Germany (3)
Basic German Conversation (3)
Everyday German Conversation (3)
Intermediate German Grammar (3)
Business German (3)
Introduction to German Economy (3)

#### Careers

Graduates can pursue careers in business, the media, the Ministry of Foreign Affairs, international trade, and in academia.

# French Language and Literature

\_\_Contact Information

Fax: +82-62-530-3199

## ■ What is French Language and Literature?

Traditionally, France has played a pivotal role in the world politically, economically, and culturally. Its role has become even more prominent since the expansion of the European Union. The goal of the Department is to seek a knowledge and creative adoption of aspects of French literature and culture. Students who are trained in the Department are able to introduce French culture to Korea and vice-versa.

## ■ School of French Language and Literature at Chonnam National University

The first two years of the undergraduate programs, students are expected to take basic courses designed to help them acquire proficiency in French. For the last two years, they are required to take cognitively demanding courses such as French Linguistics and Literature. When students become sophomores, they begin to specialize in either French Language and Literature or Francophone Culture and Area Studies in accordance with their future careers.

Graduates from previous years have contributed to cultural exchanges between Korea and France, thereby bringing advancement to Korean culture. They have also played an important role in improving Korea's relationships with Europe and Africa.

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- Young-Dong Ha, Ph.D.
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- Tae-Hoon Kim, Ph.D.
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- Soue-Won Rhee, Ph.D.
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   [Assistant Professor, French Literature, moon.sungwook@jnu.ac.kr]
- Lionel BREUGNON
   [Invited Professor, French Conversation, lionel@jnu.ac.kr]

## **■** Degree Requirements

For the B.A. degree in French litterature, students are required to:

- 1. Complete 13 courses (39 credits) offered by the Department of French Language and Literature.
- 2. Submit an undergraduate thesis.
- \* Students are required to earn 130 credits, normally 17 credits per semester(18 credits in exceptional cases).

## ■ What Do You Study?

#### **General Courses**

Readings in French (3)

French Society and History (3)

Introduction to the French Literature (3)

Elementary French Grammar1 (3)

Elementary French Grammar2 (3)

Elementary French Conversation (3)

Introduction to French Pronunciation (3)

Introduction to French Linguistics (3)

Elementary French Composition (3)

## French Language and Literature Major Courses

French conversation in advanced level (3)

French Feminism and Literature (3)

Contemporary French Poetry (3)

French Popular Culture (3)

French composition in advanced level (3)

Special topics in French contemporary fiction (3)

French modern poetry (3)

French Critique (3)

French literature and film (3)

French Literature and Thought (3)

Modern French Drama (3)

Study in French Novel (3)

Understanding French Linguistics (3)

Intermediate French Conversation (3)

Understanding of Lexicography (3)

Intermediate French Grammar (3)

History of French Literature And Art 1 (3)

Introduction to the French Poetry (3)

Introduction to the French Novel (3)

Literature in The Age of Enlightenment (3)

Understanding of French Phrase (3)

Intermediate French Composition (3)

Introduction to French Drama (3)

Contemporary French Novel (3)

History of French Literature And Art 2 (3)

French modern fiction (3)

Advanced level of French grammar (3)

Understanding of French cultural area (3)

Interpretation of French culture (3)

Classic French Drama (3)

French Semantic Structure (3)

## French as a Secondary Language Major Courses

The outline of French language (3)

Understanding French Literature (3)

Crash Course in Regional studies of Francophonie (3)

Language and Culture of Francophonie (3)

French Poetry (3)

Sentence structure of French language (3)

Society and History of Francophone Africa (3)

Understanding of Francophone African Cooperation

and Development (3)

Society and History of Francophone Europe and

North America (3)

Politics and Economics of Francophone Africa (3)

Understanding Regional studies of Francophonie (3)

French Conversation 1 (3)

French Conversation 2 (3)

Readings in French 1 (3)

French Grammar 1 (3)

French Grammar 2 (3)

Readings in French 2 (3)

Practice of French Composition (3)

French Composition 2 (3)

Culture and Arts of Francophonie(3)

Culture and Arts of Francophone Europe and North

America (3)

French Composition 1 (3)

Special Topics in French linguistics (3)

Topics in French Literature (3)

Politics and Economics of Francophone Europe and

North America (3)

Culture and Arts of Francophone Africa (3)

also have taught French at high schools.

French fiction (3)

Seminar of Francophonie (3)

Practical French (3)

France Performing Arts (3)

#### **Teacher Training Courses**

Teaching theory of French language (3)

Study of French language material and teaching methods (3)

Course on logic and essay writing in French Education (2)

#### **Minor Electives**

21 credits must be chosen

#### Careers

Some graduates from the Department have worked as professors, literary critics, and creative writers. Others have worked as either diplomats or journalists including correspondents based in Europe and Africa. Still, others have worked with domestic and international banks and trading companies. Many graduates

# Chinese Language and Literature

*\_\_Contact Information* Phone: +82-62-530-3200

URL: http://china.jnu.ac.kr

## **■** What is Chinese Language and Literature?

Korea and China have historically competed and cooperated with each other in many respects. The future of Sino-Korean relations calls for a more in-depth approach to Chinese language and culture, which is the focus of various courses provided by the Department. Students take courses from the beginner to advanced levels in Chinese conversation and practical Chinese, while deepening their understanding of modern China through a variety of visual and audio materials. Students progressively move to the advanced, comprehensive courses in linguistics such as phonology, literacy, old and modern grammar, cultural linguistics and literary genres like poetry, prose, dramas, essays, novels, literary theories, and literary criticism. The ultimate objective of these various curricula is to help students have an in-depth, comprehensive grasp of politics, economics, and society beyond Chinese language, literature, and culture.

#### Professors

- Hoi-Seok Yang, Ph.D.
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- Man-Jong Oh, Ph.D.
   [Professor, Chinese Literature, oumj6011@jnu.ac.kr]
- Tai-Wan Kim, Ph.D.
   [Professor, Chinese Linguistics, lomloy@jnu.ac.kr]
- Joo-No Lee, Ph.D.
   [Professor, Chinese Literature, zhongljn@jnu.ac.kr]

- Chun-Seok Jang, Ph.D.
   [Professor, Chinese Literature, jangchun@jnu.ac.kr]
- Bao-Yu Xu, Ph.D. [Professor, Chinese Literature, bao123@jnu.ac.kr]
- You-Mi Moon, Ph.D.
   [Assistant professor, Chinese Linguistics, xiammi@jnu.ac.kr]
- Hee-Kyung Lee, Ph.D.
   [Associate Professor, Chinese Literature, xiammi@jnu.ac.kr]

## **■** Degree Requirements

Students are required to earn 130 credits, normally 17 credits per semester (18 credits in exceptional cases). Students must also submit an undergraduate thesis, and demonstrate proficiency in the Chinese language and with computers.

## ■ What Do You Study?

Understanding of Chinese Linguistics(3)

China's religious and folklore(3)

Understanding of Classical Chinese(3)

Elementary Chinese for Majors (3)

History of Chinese Classic Literature(3)

Philosophy of Chinese Classics(3)

Elementary Chinese Conversation 1(3)

Chinese Grammar 1(3)

Chinese Art & Culture(3)

Reading in Classical Chinese(3)

Intermediate Chinese for Majors(3)

Chinese Poetry(3)

Elementary Chinese Conversation 2(3)

Chinese Grammar 2(3)

Chinese history and historical figures(3)

The History of Modern Chinese Literature(3)

Classical Chinese Grammar(3)

Mass Media & Chinese Culture(3)

Chinese Learning through Multimedia(3)

Advanced Chinese for majors(3)

Chinese Phonology(3)

Intermediate Chinese Conversation(3)

Study about China's communities(3)

Chinese Modern Novel(3)

Chinese Classic Novel(3)

Chinese Literature and Film Adaptation(3)

Chinese Prose(3)

Chinese Composition(3)

Introduction to China's science and civilization(3)

Introduction to Understanding of China's politic

and economy(3)

Life and Culture in Contemporary Chinse(3)

Theory of Chinese Classic Literature(3)

Introduction to China's foreign cooperation(3)

Chinese Graphemics(3)

Advanced Chinese Conversation(3)

Lecture on Chinse traditional society(3)

Chinese drama(3)

Practice of Chinese Business(3)

Exercise in Chinese Translation(3)

The History of Chinese Linguistics(3)

Lecture on Chinese modern society(3)

The Comparative Study of Korean & Chinese

Culture(3)

Chinese education theory(3)

Chinese Textbook Research and Teaching

Method(3)

Chinese Reasoning and Essay Education(3)

#### Careers

Depending on individual preferences, various careers are available to graduates. For example, some graduates have engaged in businesses involving China and/or Taiwan. Others have worked as freelance translators. Still, others have earned graduate degrees from universities overseas and/or at home and have worked as professors or experts.

Approximately 20 graduates from the Department have served as professors at Korean universities and many more graduates have taught at tertiary levels. Students who take teacher training courses are on track to teach at high schools.

# Japanese Language and <u>Literature</u>

\_\_Contact Information

Fax: +82-62-530-3219 URL: https://nihon.jnu.ac.kr

## ■ What is Japanese Language and Literature?

Japan has a close relationship with Korea, historically and geographically. This spawns the need for systematic research on Japanese language and literature and other fields of Japanese Studies. While focusing its curricula on meeting such needs, the department aims to produce experts on Japan. In the age of globalization that calls for both a quality education in foreign language and in-depth studies, the department trains students in practical Japanese through basic courses in Japanese language and literature, balanced perspectives of the East and West through Japanese social studies, global vision, and informed citizenship.

The department originally focused on studies in Japanese language and literature. However, in the 21st century, better known as the era of globalization and information, the curricula of the department developed beyond Japanese language and literature, moving toward courses that equip students with a global perspective.

### **■** Japanese Language and Literature

The courses in Japanese language include Literacy, Beginners' Conversation, Intermediate Conversation, Practical Conversation, Beginners' Composition, Intermediate Composition, Colloquial Grammar, Standard Grammar, Practice in Listening, the History of Japanese Language, Introduction to Japanese Language, Practice in Pronunciation, and Practice in Chinese Characters in Japanese. Among the courses in Japanese Literature are Beginners' Level of Literature, Introduction to Literature, Modern Literature, the History of Old Literature, Modern Poetry, the History of Contemporary Literature, Understanding Old Poetry, Understanding Old Prose, Literary Criticism, Theories and Practice in Translation, the History of Japan, Essays, and Novels.

The courses of Japanese Studies include Popular Culture, Current Issues, Local Cultures, Understanding Film Culture, Folk Culture, and Linguistic Culture. Along with these academic courses, a variety of Department-wide programs aimed at enhancing the levels of students' Japanese proficiency and knowledge about Japanese culture prepare students to cultivate leadership in academic, economic, and cultural exchanges between Korea and Japan.

- Jung-Rye Kim, M.A.
   [Professor, Japanese Literature, kjrey@chonnam.ac.kr]
- Yong-Ui Kim, Ph.D.
   [Professor, Japanese Culture,

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- Sung Un Jeong, Ph.D.

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- Seong-Eun Kim, Ph.D.
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- Jiyoung-Lim, Ph.D.
   [Professor, Japanese Linguistics,

jy-lim@jnu.ac.kr]

• Hyeon Il Moon, M.A.

[Guest Professor, Japanese Linguistics, moonhagi@chonnam.ac.kr]

· Iida Saroi M.A.

[Guest Professor, Japanese?Korean Linguistics, saori77@chonnam.ac.kr]

## **■** Degree Requirements

Students are required to earn 130 credits, normally 17 credits per semester (18 credits in exceptional cases). Students must also submit an undergraduate thesis, and demonstrate proficiency in the Japanese language and with computers.

## ■ What Do You Study?

#### **Core Courses**

Japanese Grammar on Spoken language (3)

Japanese Conversation and Composition 1 (3)

Japanese Popular Culture (3)

Japanese for Reading (3)

Japanese conversation and composition 2 (3)

Introduction to Japan Literature (3)

Japanese Living Culture (3)

Japanese Conversation and composition 3 (3)

Japanese Religion and Culture (3)

Practice of Chines Characters In Japan (3)

Introduction to Japanese literature (3)

Japanese Grammar on literary language (3)

Japanese Listening Exercise (3)

Japanese Conversation and Composition 4 (3)

Japanese History Culture (3)

Japanese Cinema Culture (3)

Business Japanese (3)

Introduction to Japanese politics (3)

Japanese Oral Culture (3)

Japanese Literature Appreciation (3)

Introduction to Japanese Linguistics (3)

Japanese Feminism and Literature (3)

History of Japanese contemporary literature (3)

Japanese Geography (3)

History of Japanese Classical Literature (3)

Japanese Folk Culture (3)

Japanese Novel (3)

History of Japanese (3)

Contemporary Japanese Society and Culture (3)

Japanese Contemporary poetry (3)

Thesis Research (3)

Understanding of Japanese Classic Literature (3)

Japanese Meiji Literature (3)

Japanese Sociolinguistics (3)

Practical Business Japanese (3)

Introduction of Translation & Interpretation

between Korean and Japanese (3)

Criticism of Japanese Literature (3)

Japanese economy and our life (3)

Korea - Japan Relations (3)

Japanese Performing Arts (3)

Total Credits: 120

#### **Teacher Training Courses**

Principles of Japanese Language Teaching (2)

Japanese Education Theory (3)

JLF Instructional Materials (3)

Total Credits: (8)

#### **International Internships**

Managerial Field Work of Global Era (5)

Economic Field Work of Global Era (5)

Total Credits: 10

## History

\_Contact Information

Phone: +82-62-530-3240

URL: http://history.jnu.ac.kr

## ■ What is History?

The goal of the Department of History is to achieve understanding of humanity through looking at past events and human society. Lectures and seminars which deal with those topics in the Department of History help students to understand the characteristics of the human condition and society. The discipline is also set to examine transitions in human history and analyze humanity and its society at any specific period. The department offers various courses which comprise the whole realm of human accomplishments, such as politics, society, economy, culture, science, art, and others.

## **■** Department of History

Since it was founded at Chonnam National University in 1952, the Department of History has grown to be one of the most respected departments within the University and in Korea. Within the Honam region of Korea, the department is generally regarded as the most prestigious in the field of history.

The Department has 11 full-time faculty members, 17 part-time instructors, 30 full-time graduate students, and 165 undergraduate students. The department faculty are committed to helping students think critically and independently, and make them understand how cultures have evolved and become what they are today. The undergraduate program focuses on three main areas: Korean history, Asian history, and Western history. The discipline of the faculty, which ranges across the major geographical and chronological fields, covers from ancient Korea history to contemporary U.S. history.

The department enjoys a reputation for excellence in both undergraduate and graduate teaching. It offers undergraduate and graduate degrees.

- Bong-Joong Kim, Ph.D.
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- Hae-Young Choi, Ph.D.
   [Professor, Ancient Greece and Rome, chyoung@chonnam.ac.kr]
- Han-Yong Song, Ph.D.

- [Professor, Modern and Contemporary China, songhy@chonnam.ac.kr]
- Sang-Chul Park, Ph.D.
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- Byoung-In Kim, Ph.D.
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- Chong-Myong Im, Ph.D.
   [Professor, Modern Korea

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- Sung-Won Lee, Ph.D. [Professor, Ancient History of China luxlee68@chonnam.ac.kr]
- · Eun-Young Kang, Ph.D. [Professor, Ancient History of Japan kuare@hanmail.net]
- Pae-Hwan Seol, Ph D. [Associate Professor, History of the Mongol Empire, shah@naver.com]
- · Chang-Su Kim, Ph.D. [Assistant Professor, History of the Joseon Dynasty, hangu147@jnu.ac.kr]

## Degree Requirements

Students are required to earn 12 credits from core courses and 21 credits from electives. Students must also submit an undergraduate thesis.

### ■ What Do You Study?

#### **Core Course**

Introduction to Historiography (3) Introduction to Historical Documents 1 (3) Introduction to Historical Documents 2 (3) Historical Research Practicum (3)

#### First Year Courses

The Understanding of Culture Heritage (3)

#### **Second Year Courses**

Ancient History of Asia (3) Medieval History of Asia (3) Ancient History of Europe (3) Medieval History of Europe (3) History of Chinese Historiography (3) Ancient History of Korea (3) Pre-modern History of Korea (3) Historiography of Korean History (3) Medieval History of Korea (3) Conversation with History (3) Local History of Asia (3)

#### Third Year Courses

Modern History of Asia (3)

Socio-economic History of Asia (3)

Contemporary History of Asia (3)

History and People (3)

Modern History of Europe (3)

History of Western Social Thought (3)

Contemporary History of Europe (3)

History of Russia (3)

Modern History of Korea (3)

Issues on Korean History (3)

Socio-economic History of Korea (3)

Contemporary History of Korea (3)

Historical Resources and Cultural Contents (3)

Research Theory of History(3)

#### **Fourth Year Courses**

Topics in Asian History (3)

History of Eastern Social Thought (3)

History of America (3)

Topics in Western History (3)

History of Everyday Life in the West (3)

History of Japan (3)

Study of Provincial History (3)

Culture-art History of Korea (3)

History of Korean Thought (3)

#### Careers

Our graduates are proud of their education in the department and have gone on to a variety of successful careers, including research, education, public service, and many other areas in society.

## Philosophy

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Fax: +82-62-530-3229 URL: http://philos.jnu.ac.kr/

## **■** What is Philosophy?

Philosophy is a fundamental discipline which provides opportunities for discourses to have functional relationships with one another. It is also the basis for all the humanities and natural sciences, including law, medicine, medical science, economics, and art. Accordingly, philosophy is not only a symbolic sign of culture; thereby, grasping the essence of humans, society, culture, and the world in a holistic manner through critical and creative thinking, but also a discipline that provides an academic foundation for students to grow into real professionals in any field.

## **■** Department of Philosophy

Philosophy greatly helps students improve their ability in critical thinking, logical writing, and reasonable communication, which are emphasized in modern societies, particularly in knowledge-based and pluralistic societies. In knowledge-based societies, in which majors and occupations tangle delicately like a cobweb and in pluralist societies, in which values that are seemingly contradictory with one another might coexist, the ability to communicate plays an important role in acquiring professional knowledge.

Responding to the needs of our time, philosophy provides concrete theories and methods to improve communication ability, to clearly understand others' writing and speaking, to logically and persuasively express one's thoughts and assertions, and further, to accept more reasonable opinions. In this light, professionals from every field actively advise to choose philosophy not only as a major, but also as a double major or minor.

- Kang-Seo Rhee, Ph.D.
   [Professor, Ancient Western Philosophy, gsrhee@chonnam.ac.kr]
- Yang-Hyun Kim, Ph.D.
   [Professor, Kant and Practical Philosophy, yhkim2@chonnam.ac.kr]
- Yoon-Ho Cho, Ph.D.
   [Professor, Chinese Buddhism, choyh@chonnam.ac.kr]
- Ku-Yong Park, Ph.D.

- [Professor, Political Philosophy, parksem@chonnam.ac.kr]
- Sang-Bong Kim, Ph.D.
   [Professor, Kant and Aesthetics Philosophy, oudeis@hanmail.net]
- Mi-Ra Chung, Ph.D.
   [Professor, German Idealism and Social Philosophy, mirachung@hanmail.net]
- Kim Su Rasmussen, Ph.D.

[Professor, History of Ideas and French Philosophy, seokilseung@gmail.com]

 Soon-Ja Yang, Ph.D.
 [Professor, Early Chinese Philosophy, zhaohun@gmail.com]

• Hyoung-Seok Ham, Ph.D.

[Associate Professor,

Indian and Buddhist Philosophy,

hamhs@jnu.ac.kr]

• Won-seok Lee, Ph.D.

[Assistant Professor, Chinese Philosophy\_Neo-Confucianism, ophil91@chonnam.ac.kr]

## **■** Degree Requirements

For the B.A. degree Philosophy, students are required to:

- 1. Complete 13 courses (39 credits) offered by the Department of Philosophy.
- 2. Submit an undergraduate thesis.
- \* Students are required to earn 130 credits, normally 17 credits per semester(18 credits in exceptional cases).

Liberal arts	Major (Specialization)	Electives	Graduate Credits
a minimum of 30 credits	a minimum of 39 credits (60 credits)	a minimum of 40 credits	at least 130 credits

## ■ What Do You Study?

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	-	_	Ju	II 3	_3

Introduction of Oriental Philosophy (3)

History of Ancient and Medieval Western

Philosophy (3)

History of Indian Philosophy (3)

Logic and Critical Thinking (3)

Western Civilization: Renaissance to Enlightenment (3)

Western Civilization: Modernism (3)

Ethics (3)

Indian Buddhist Philosophy (3)

History of Chinese Philosophy (3)

Digital Humanities and Philosophy (3)

Plato and Aristotle (3)

Critical Philosophy (3)

Mahyna Buddhism (3)

Digital Curation of Philosophy (3)

History of Modern Western Philosophy (3)

Western Civilization: Romanticism to

Impressionism (3)

Western Civilization: Postmodernism to the

Contemporary Era (3)

Epistemology (3)

History of Korean Philosophy (3)

Contemporary Philosophy of Law (3)

Confucius and Mencius Philosophy (3)

German Idealism (3)

Contemporary French Philosophy (3)

Metaphysics (3)

Contemporary Korean Thoughts (3)

East Asian Buddhism (3)

Philosophy of Culture (3)

Buddhist Epistemology (3)

Philosophy of Language (3)

Early Chinese Philosophy (3)

Korean Confucianism (3)

Greek Philosophy (3)

Chinese Neo-Confucianism (3)

Philosophical Essays (3)

Korean Buddhism (3)

Phenomenology and Existential Philosophy (3)

The Philosophy of Economics (3)

Lao Tzu and Chang Tzu'S Philosophy (3)

Social Philosophy (3) Philosophy of History (3) British and American Philosophy (3)

#### **Teacher Training Courses**

Principles of Philosophy Teaching (3) Philosophy Instructional Materials (3) Logic and Essay Writing in Philosophy (2)

#### Careers

Diverse career opportunities are open to graduates with an undergraduate degree in philosophy. Their excellence in synthetic judgment and reasonable communication is clearly recognized in the world of education, the press, culture, and various industries. Some graduates have earned graduate degrees from either universities overseas or in Korea and worked as professors or researchers. Others have worked as high school teachers (those who complete teacher training courses), instructors for in-service programs to industries, philosophical management counseling, communication consulting, reading and writing, education contents design, and ethological development.

Some have entered the world of public service (as government officials) broadcasting (as reporters, producers, broadcast writers, journalists), consulting (as consultants), literature (as culture-related writers, critics, game scenario writers), organization (as planners and operators of international conferences), and business (as company managers) among others. The Department of Philosophy will try to help students realize their career goals.

## College of Natural Sciences

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## Departments

- · Department of Mathematics
- · Department of Statistics
- · Department of Physics
- · Department of Chemistry
- · Department of Biological Sciences
- · Faculty of Earth Systems and Environmental Sciences
  - Geological Sciences major
  - Oceanography major
- · School of Biological Sciences and Technology

#### Affiliated Research Centers

- · Institute for Condensed Matter Theory
- · Institute of Statistics

## Mathematics

\_\_Contact Information
Phone: +82-62-530-3330

URL: http://math.jnu.ac.kr

#### What is Mathematics?

Mathematics may be defined as the study of quantity, structure, space, relation, change, and various topics of pattern, form, and entity. Moreover, mathematics enables one to explain the essence of nature itself and extrapolate by utilizing rigorous mathematical logic. Mathematics can be divided into several departments of study: algebra, which is based on the operations of numbers; analysis, which studies the properties of functions; topology, which is the study of the properties of spaces; and applied math, which is concerned with the application of mathematical knowledge to other fields. Today, mathematics is used as an essential tool in many fields, including natural science, engineering, medicine, and social sciences, such as economics and psychology.

### ■ Department of Mathematics at CNU

The major in Mathematics was established in 1952 with the founding of Chonnam National University. The principal goal of the major in Mathematics is to conduct high quality instruction and research in pure and applied mathematics.

The Department offers undergraduate and graduate studies leading to Bachelor's, Master's, and Doctoral degrees.

The research fields of the Department include algebra, analysis, geometry, topology, applied mathematics, and mathematics education. In addition, the Department sponsors various groups of regular seminars for undergraduate students and colloquia for faculty members and graduate students.

- Dong-Soo Kim, Ph.D.
   [Professor, Geometry, dosokim@jnu.ac.kr]
   (Submanifold Theory, Conformal
   Vector Fields, Einstein Spaces)
- Bok-Hee Im, Ph.D.

  [Professor, Algebra, bim@jnu.ac.kr]

  (Group Theory and their

  Generalizations, Non-associative

  Rings and Algebras Geometry, Cryptology)
- Hyeong-Kwan Ju, Ph.D.

- [Professor, Combinatorial Mathematics, hkju@jnu.ac.kr] (Dynamical Systems)
- Jeong-Ook Kim, Ph.D.
   [Professor, Applied Mathematics, jkim@jnu.ac.kr]
   (Systems Theory, Operator Theory)
- Min-Kyu Kwak, Ph.D.
   [Professor, Analysis, mkkwak@jnu.ac.kr]
   (Partial Differential Equations,

Ordinary Differential Equations, Dynamical Systems)

- Young-Bok Chung, Ph.D.
   [Professor, Analysis, ybchung@jnu.ac.kr]
   (One or Several Variable Complex Analysis)
- Jong-Taek Cho, Ph.D.
   [Professor, Geometry, jtcho@jnu.ac.kr]
   (Riemannian Geometry related with Contact Structures or Complex Structures, Pseudo-Hermitian Geometry, CR-Geometry)
- Byeong-Chun Shin, Ph.D.
   [Professor, Applied Mathematics, bcshin@jnu.ac.kr] (Numerical Analysis)
- Young-Joo Lee, Ph.D.
   [Professor, Analysis, leeyj@jnu.ac.kr]
   (Several Variable Complex Analysis)
- Dae-Heui Park, Ph.D.
   [Professor, Topology, dhpark3331@jnu.ac.kr]
   (Algebraic Topology,

Semi-Algebraic Topology)

- Do-Yong Kwon, Ph.D.
   [Professor, Number Theory, doyong@jnu.ac.kr]
- Hong-Sung Jin, Ph.D.
   [Professor, Applied Mathematics, hjin@jnu.ac.kr]
   (Uniform Superconvergence Wavelets)
- Sang-Wook Kim, Ph.D.
   [Associate Professor, Algebra, swkim.math@jnu.ac.kr]
- Hyun-Cheul Lim, Ph.D.
   [Assistant Professor, Financial Mathematics, limhc@jnu.ac.kr]
- Ji-Hoon Lee, Ph.D.
   [Assistant Professor, Analysis, jihoon@jnu.ac.kr]
   (Partial Differential Equations and Dynamical Systems)

## **■** Degree Requirements

Students are required to earn 130 credits, with 24 credits from general courses, 21 credits from core courses, and 21 credits from electives. Students are also required to demonstrate proficiency with computers and in a foreign language (English).

## ■ What Do You Study?

#### **Core Courses**

Linear Algebra and Laboratory (3)
Analysis 1 and Laboratory (3)
Set and Logic (3)
Topology 1 and Laboratory (3)
Differential Geometry 1 and Laboratory (3)
Abstract Algebra 1 and Laboratory (3)
Complex Variables 1 and Laboratory (3)

#### **Electives**

Algebra and Geometry (3) Mathematical Programming and Laboratory(3) Introduction to Geometry (3) Differential Equations 1 and Laboratory (3)
Mathematical Statistics 1 (3)
Theory of Numbers (3)
Computer Aided Mathematics (3)
Analysis 2 (3)

Differential Equations 2 (3) Actuarial Mathematics (3) Advanced Linear Algebra (3)

Theory Of Mathematical Education (3)
Combinatorics and Graph Theory (3)
Basic Probability Theory (3)
Big data programming (3)

Teaching for Secondary School Mathematics (3)

A Course on Mathematics Logic and Essay writing (2)

Vector Analysis (3)

Complex Variables 2 (3)

Numerical Analysis and Laboratory (3)

Topology 2 (3)

Matrix Theory and its Applications (3)

Abstract Algebra 2 (3)

Computational Finance and Practice

(CapstonDesign) (3)

Basic of Real Analysis (3)

Differential Geometry 2 (3)

Teaching Skill in Mathematics (3)

Applied Algebra (3)

Introduction to Mathematical Finance (3)

Topics in Mathematical (3)

Topics in Actuarial Mathematics (3)

History of Mathematics (3)

Introduction to Cryptography (3)

Topics in Combinatoric Graph Theory (3)

Neural Network Learning (3)

#### Careers

Graduates often continue their study of mathematics in graduate school at CNU or other respected universities, both domestic and overseas and pursue academic careers afterwards. Other students pursue careers in quantitative analysis, as middle and high school teachers, researchers, computer programmers, actuaries, derivative specialists, and information security specialists.

## Statistics

\_\_Contact Information

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URL: http://stat.jnu@gmail.com

#### **■** What is Statistics?

Statistics is a broad mathematical discipline which studies ways to collect, summarize, and draw conclusions from data. It is applicable to a wide variety of academic disciplines, from physical and social sciences to the humanities, as well as to business, government, and industry.

Once data is collected, either through a formal sampling procedure or by recording responses to treatments in an experimental setting (experimental design), or by repeatedly observing a process over time (time series), graphical and numerical summaries may be obtained using descriptive statistics.

Patterns in the data are modeled to draw inferences about the larger population, using inferential statistics accounting for randomness, and uncertainty in the observations. These inferences may take the form of decision making (hypothesis testing), estimates of numerical characteristics (estimation), prediction of future observations, descriptions of association (correlation), or modeling of relationships (regression).

## ■ Major in Statistics

The major in Statistics was founded in 1990 and has made great developments. The Department currently has 10 professors, about 17 graduate students, and 230 undergraduate students. Balanced programs for students have been established so that they learn statistical theory, as well as practice analyzing data with various statistical computer packages. In order to support independent study, the Department provides three rooms exclusively for a Statistics Library and Computing Lab.

The Statistics Library is filled with numerous statistics and computer science books and relevant outstanding papers. The Computing Lab has computers with programs such as SAS, SPSS, Minitab, Python and R. The Department has active research programs in statistical genetics, bio-informatics, Bayesian statistics, statistical computing, pattern recognition and other topics.

- Young-Sook Son, Ph.D.
   [Professor, ysson@jnu.ac.kr]
   (Time Series Analysis, Data Mining, Bayesian Statistical Inference)
- Jeong-Soo Park, Ph.D.
   [Professor, jspark@jnu.ac.kr]

- (Design and Analysis of Computer Experiments (Simulation), Meteorological Statistics, Educational Statistics, Statistical Computing)
- Jang-Sun Baek, Ph.D.
   [Professor, jbaek@jnu.ac.kr]
   (Nonparametric Function Estimation,

Multivariate Analysis, Bioinformatics, Pattern Recognition)

- Il-Su Choi, Ph.D.

  [Professor, ichoi@jnu.ac.kr]

  (Bayesian Statistics (MCMC),

  Mathematical Biology,

  Environmental Ecology Statistics)
- Myung-Wan Na, Ph.D.
   [Professor, nmh@jnu.ac.kr]
   (Reliability Theory, Statistical Quality Control,
   Probabilistic Finite Element Method,
   Probabilistic Safety Assessment)
- Eun-Sik Park, Ph.D.
   [Professor, espark02@jnu.ac.kr]
   (Longitudinal/Categorical Data Analysis,
   Statistical Methods in Medical Research,

- Clinical Trials, Bioinformatics)
- Min-Soo Kim, Ph.D.
   [Professor, kimms@jnu.ac.kr]
   (Multivariate Analysis, Image
   Partition or Searching, Financial Statistics)
- Jae-sik Jeong, Ph.D.
   [Associate Professor, jjs3098@jnu.ac.kr]
   (Bioinformatics (Metabolomics, Genomics),
   Biostatistics (clinical trials), Bayesian analysis)
- Bong-Gyun Ko, Ph.D.
   [Assistant Professor, bonggyun.ko@jnu.ac.kr]
   interpretative public intelligence
- Jeong-Gyu Huh, Ph.D.
   [Assistant Professor, huhjeonggyu@jnu.ac.kr]
   Machine-learning-based financial engineering

## **■** Degree Requirements

Students are required to earn 130 credits, with 15 credits from core courses, 33 credits from electives, 9 credits from core general education courses, and 16 credits from general electives.

Students are also required to write a graduation thesis or get a certificate of qualification.

## ■ What Do You Study?

#### **■** General Education Core Courses

Writing

English for Global Communication 2 Introduction to Statistics and Practice Scientific Investigation of Big Data Career design and self-understanding

#### Year 1 Courses

#### **■** Electives

Statistical Mathematics 1 Statistical Mathematics 2 Population and official statistics Statistics package and Practice

#### Year 2 Courses

#### ■ Core Courses

Mathematical Statistics 1 Mathematical Statistics 2

#### ■ Electives

Financial statistics and Practice
Big Data programming and practice
Sampling Survey Method Theory
Financial derivatives Modeling
Big Data Process and Practice
Design of Experiments
Statistical Computation and Practice

#### Year 3 Courses

#### ■ Core Courses

Regression Analysis and Lab Multiplicate Statistical Analysis Statistical Learning and Practice

#### **■** Electives

Categorical Data Analysis

Bayesian Statistics and Practice
Market risk management
Credit risk management
Statistical Quality Control and Lab(capstone design)
Data Mining and Lab
Big Data analysis and Practice

#### **Year 4 Courses**

#### **■** Electives

Time Series Analysis and Lab Spatial Data analysis and Practice Big data Capstone design Theory of Financial Instruments Theory of Biomedical Statistics Statistical Data analysis and Practice Probability and Stochastic Process

#### **Minor Courses**

Mathematical Statistics 1 Mathematical Statistics 2 Regression Analysis and Lab

#### Careers

Students may seek employment in a number of companies, including major conglomerates, statistical package development firms, life insurance companies, banks, research firms, and the civil service.

## Physics

\_\_Contact Information

Fax: +82-62-530-3369

URL: http://physics.jnu.ac.kr/

## **■** What is Physics?

Physics may be seen as the most basic science in seeking the fundamental laws in nature. It involves the study of all natural phenomena to discover the laws of nature. The field also considers wide applications to other natural sciences, engineering, medical sciences, agricultural sciences, and even to social sciences, and serves as a source of high technologies.

## ■ Department of Physics at Chonnam National University

The Department educates students to become professionals. Some key aspects of the Department include:

- · 18 experienced faculty members
- · Balanced theory and experiment courses
- · Intern program with industry
- · Support for language program

#### The Department's advanced resources:

- · Up-to-date educational facilities
  - Computer Lab, Audio/Video Classrooms
- · Labs for fundamental and applied physics
  - Major Equipment: High Power Laser, Ion Implanter, Low Temperature Cryostat, High Energy Physics
- · In-University research facilities
  - NMR, TEM, SEM, Raman, FT-IR, X-ray
  - RIE, Deposition, Lithography, RTA, PECVD

#### The Department supports international students through the following initiatives:

- · Tuition fee exemptions
- · Free dormitory support
- · TA and RA positions available
- · Additional support by supervising professors

#### Professors

Chang Sub Kim, Ph.D.
 [Professor, Condensed Matter Theory,

cskim@jnu.ac.kr]

• Sun Hyun Youn, Ph.D.

[Professor, Quantum Optics and Nonlinear Optics Experiments, sunyoun@jnu.ac.kr]

- En Jin Cho, Ph.D.
   [Professor, Condensed Matter Experiments, ejcho@jnu.ac.kr]
- Heung Ryoul Noh, Ph.D. [Professor, Atom Optics, hrnoh@inu.ac.kr]
- Ki Cheon Kang, Ph.D.
   [Professor, Mesoscopic Physics, kckang@jnu.ac.kr]
- Sang Wan Ryu, Ph.D.
   [Professor, Nano-Photonics, sangwan@jnu.ac.kr]
- In Kag Hwang, Ph.D. [Professor, Nano Optics, ikhwang@jnu.ac.kr]
- Han Jin Noh, Ph.D.
   [Professor, Condensed Matter Experiments, ffnhj@jnu.ac.kr]
- Kyung Kwang Joo, Ph.D.
   [Professor, High Energy
   Experiments, kkjoo@jnu.ac.kr]
- Jae Sik Lee, Ph.D.

[Professor, Elementary Particle Physics Theory, jslee@jnu.ac.kr]

- Ha Sul Kim, Ph.D.
   [Professor, Optical Science & III-V Semiconductor, hydenkim@jnu.ac.kr]
- Joong Wook Lee, Ph.D.
   [Professor, Terahertz Photonics & Plasmonics, leejujc@jnu.ac.kr]
- Dong ho Moon, Ph.D.
   [Associate Professor, High Energy Experiments, dhmoon@jnu.ac.kr]
- Geol Moon, Ph.D.
   [Associate Professor, Atom Optics Experiments, cnuapi@jnu.ac.kr]
- SoongGeun Je, Ph.D.
   [Assistant Professor, Condensed Matter Experiments, gje@jnu.ac.kr]
- Ara Go, Ph.D.
   [Assistant Professor, Condensed
   Matter Theory/ Computational Physics, arago@jnu.ac.kr]
- Chan Beom Park, Ph.D.
   [Assistant Professor, Condensed Particle Physics Theory cbpark@jnu.ac.kr]

## **■** Degree Requirements

Students are required to earn 130 credits, with 48 credits from core courses and 14 credits from general courses. Students must also submit a thesis and demonstrate proficiency with computers and in a foreign language (namely English).

## ■ What Do You Study?

#### **Core Courses**

Physics Laboratory 1 (2) Mechanics (3) Physics Laboratory 2 (2) Electromagnetism 1 (3) Basic Optics Experiments (2) Quantum Mechanics 1 (3) Electromagnetism 2 (3) Thermal and Statistical Physics 1 (3) Quantum Mechanics 2 (3)

#### For a Minor Courses

Mechanics (3)
Electromagnetism 1 (3)
Quantum Mechanics 1 (3)

#### **Electives**

Photonics Field Practice 1 (2)

Photonics Field Practice 2 (2)

Field Practice 1 (2)

Mathematical Physics 1 (3)

Seminar in Mathematical Physics 1 (1)

Seminar in Mechanics (1)

Mathematical Physics 2 (3)

Electronic Instrumental Physics (3)

Seminar in Mathematical Physics 2 (1)

Modern Physics 1 (3)

Seminar in Electromagnetism 1 (1)

Seminar in Advanced Mechanics (1)

Advanced Mathematical Physics (3)

Modern Physics 2 (3)

Advanced Mechanics (3)

Seminar in Quantum Mechanics 1 (1)

Seminar in Electromagnetism 2 (1)

Physics with Computers (3)

Seminar in Quantum Mechanics 2 (1)

Seminar in Thermal and Statistical Physics 1 (1)

Optics (3)

Theory of Relativity (3)

Physics Laboratory 4 (2)

Thermal and Statistical Physics 2 (3)

Solid State Physics (3)

Advanced Physics Experiment 1 (2)

Seminar in Special Topics 1 (1)

Colloquium in Physics 1 (1)

Advanced Electro-Optics Laboratory (2)

Applied Optics (3)

Particle Physics (3)

Nuclear Physics (3)

Advanced Physics Experiment 2 (2)

Seminar In Special Topics 2 (1)

Colloquium In Physics 2 (1)

Fundamentals of Optoelectronics (3)

#### **General Courses**

General Physics 1 (3)

General Physics 2 (3)

General Physics Laboratory 1 (1)

General Physics Laboratory 2 (1)

#### **Teaching Profession Courses**

Physics Education (2)

Research of Physics Teaching Materials and

Teaching Methods (2)

A course on Physics Logic and Essay Writing (2)

#### Careers

Graduates often continue their study of physics in graduate school, both domestically and at foreign universities, and pursue careers as researchers at institutes or in academia. Other positions they may qualify for including government officers, science teachers, and employees in photonics-related industries, semiconductor firms, Korea Electric Power, nuclear power plants, and the Center of Aviation and Space Technology.

# Chemistry

# \_Contact Information

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URL: http://chem.jnu.ac.kr/

# What is Chemistry?

Chemistry is an experiment-based science. Thousands of scientists have made millions of experimental observations over several hundred years. From these observations, fundamental principles have been deduced regarding the properties and reactivity of matter. Skills and methods used by chemists are applicable to other facets of life, and can help to solve practical problems.

# ■ School of Chemistry at Chonnam National University

The Department of Chemistry consists of a prominent group of scientists, both faculty and students, who engage in a broad range of chemical, educational, and research activities. The faculty is dedicated to chemical education and prides itself on its graduate and undergraduate programs, which are designed to prepare students for active careers in industry and academia. Knowledge of chemistry is developed through intensive coursework, laboratory experiments, literature, and individual research efforts. This increases the chances for students to demonstrate their abilities for creative and innovative studies in various industries and research institutes after graduation. The Department is open to everyone who has a passion for chemistry.

#### Professors

- Hyoung-Ryun Park, Ph.D.
   [Professor, Inorganic Chemistry, hrpark@jnu.ac.kr]
- Jae-Nyoung Kim, Ph.D. [Professor, Organic Chemistry, kimjn@jnu.ac.kr]
- Jong-Hoon Oh, Ph.D.
   [Professor, Organic Chemistry, jnoh@jnu.ac.kr]
- Che-Hun Jung, Ph.D.
   [Professor, Biochemistry, jungch@jnu.ac.kr]
- Sun-Woo Lee, Ph.D. [Professor, Organic Chemistry, sunwoo@jnu.ac.kr]
- Jeong-Sun Kim, Ph.D.
   [Professor, Biochemistry,

- jsunkim@jnu.ac.kr]
- Hyun-Dam Jeong, Ph.D.
   [Professor, Physical Chemistry, hdjeong@jnu.ac.kr]
- Hyun-Chul Choi, Ph.D. [Professor, Analytical Chemistry, chc12@jnu.ac.kr]
- Jun-seong Lee, Ph.D.
   [Professor, Inorganic Chemistry, leespy@jnu.ac.kr]
- Cheol-Won Lee, Ph.D.
   [Professor, Biochemistry, cwlee@jnu.ac.kr]
- Sung Cho, Ph.D.
   [Professor, Physical Chemistry, scho@jnu.ac.kr]
- Jimin Kim, Ph.D.

[Associate Professor, Organic Chemistry, jiminkim@jnu.ac.kr]

• Kyungsu Na, Ph.D.

[Professor, Physical Chemistry,

kyungsu na@jnu.ac.kr]

· Jeongsuk Seo, Ph.D.

[Associate Professor, Analytical Chemistry,

j seo@jnu.ac.kr]

• Changwoo Kim, Ph.D.

[Assistant Professor, Physical Chemistry,

cwkim66@jnu.ac.kr]

· Jacopo Tessarolo, Ph.D.

[Assistant Professor, Inorganic Chemistry,

jacopo@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, with 36 credits from core courses, and 19 credits from general courses. Students must also demonstrate proficiency with computers and in a foreign language (English).

## ■ What Do You Study?

#### **Core Courses**

Physical Chemistry 1 (3)

Analytical Chemistry 1 (3)

Analytical Chemistry Lab 1 (1)

Physical Chemistry Lab 1 (1)

Organic Chemistry 1 (3)

Analytical Chemistry Lab 2 (1)

Physical Chemistry Lab 2 (1)

Biochemistry 1 (3)

Inorganic Chemistry 1 (3)

Inorganic Chemistry Lab 1 (1)

Biochemistry Lab 1 (1)

Organic Chemistry Lab 1 (1)

Organic Chemistry Lab 2 (1)

Inorganic Chemistry Lab 2 (1)

General Chemistry 1 (3)

Organic Chemistry 3 (3)

Quantum Chemistry 1 (3)

Synthesis of Organic Materials for Semiconductor (3)

Biochemistry 2 (3)

Biochemistry Lab 2 (1)

Coordination Chemistry (3)

Inorganic Chemistry 2 (3)

Quantum Chemistry 2 (3)

Instrumental Analysis Lab (2)

Advanced Physical Chemistry 1 (3)

Inorganic semiconductor Materials Chemistry (3)

Organic Spectroscopy (3)

Advanced Biochemistry (3)

Instrumental Analytical Methods (3)

Enzymology (3)

General Biology 1 (3)

Chemistry Laboratory 1 (1)

Biology Laboratory 1 (1)

General Chemistry 2 (3)

General Biology 2 (3)

Chemistry Laboratory 2 (1)

Biology Laboratory 2 (1)

#### **Electives**

Physical Chemistry 2 (3)

Analytical Chemistry 2 (3)

History of Science (2)

Organic Chemistry 2 (3)

Advanced Physical Chemistry 2 (3)

Organic Synthesis (3)

Environmental Analytical Chemistry (3)

#### **Minor Courses**

Physical Chemistry 1 (3)

Organic Chemistry 1 (3)

Inorganic Chemistry 1 (3)

Teaching Profession Courses

Chemistry Education (2)

Research of Chemical Teaching Materials and

Teaching Methods (2)

#### Careers

Most chemistry majors go on to jobs in precision chemistry, semiconductor chemistry, heavy industries, the petrochemical industry, and pharmaceutics.

All major chemical companies send requests for the Department's students throughout the year. Many smaller companies and academic institutions also contact individual faculty members when positions become available.

Such openings are made known to all students, and every effort is made to find suitable jobs for graduates. Strong ties exist between the Department and the chemical industry. Graduates hold industrial or academic positions, or they are employed by the government or research institutes.

# Biological Sciences

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## ■ What is Biological Sciences?

Biological Sciences (Biology) is the science studying the fundamental phenomena of life. Biology encompasses diverse fields, including botany, zoology, ecology, evolution, genetics, molecular biology, cell biology, physiology, and bioinformatics. The Department of Biological Sciences is committed to advancing our understanding of biological function, and developing new technologies to address current and emerging problems facing all living organisms. In addition to the standard biology program, our faculty provide academically-motivated undergraduate students the opportunity to participate cutting-edge research projects. The department focuses on the integration of research and teaching expertise to create opportunities in the training of future leaders in the filed of biological sciences. Students who successfully complete our excellent curriculum will have knowledge in biology for a graduate or professional career in applied biological sciences, such as biomedical sciences and agriculture. Biology is certainly the leading science in the 21st century.

# ■ Department of Biological Sciences

The Department of Biological Sciences offers competitive training programs for undergraduate and graduate students in biological sciences. The department's faculty members (12 professors, 2 adjunct professors, and teaching faculty) are responsible for over 60 courses in modern biology and play leading roles in teaching and research. Faculty interests include: Biochemistry, Biotechnology, Mycology, Molecular Immunology, Cell and Molecular Biology, Plant Physiology, Taxonomy, Biomimetics, Ecology, Restoration Ecology, Economic Botany and Ecotoxicology.

Twelve research laboratories are fully equipped for the pursuit of developing practical knowledge of these fields.

A key goal of the Department of Biological Sciences is to promote the practical experience required for a career in the biological sciences by applying these research tools with our students.

#### Professors

• Hwang Hee Lee, Ph.D.

[Professor, Molecular Cell Physiology, blaise@jnu.ac.kr]

• Hak Young Lee, Ph.D.

[Professor, Phycology, haklee@jnu.ac.kr]

Eungseok Kim, Ph.D.
 [Professor, Molecular Metabolism,

ekim@jnu.ac.kr]

 Geun-Joong Kim, Ph.D.
 [Professor, Molecular Microbiology, gjkim@jnu.ac.kr]

Il-Chul Kim, Ph.D.
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Ha-Cheol Sung, Ph.D.[Professor, Animal Ecology,

 Dong-Ha Nam, Ph.D.
 [Professor, Ecobiochemistry, dongha@jnu.ac.kr]

Dong-Hyun Lee, Ph.D.
 [Professor, Genomic Stability,

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 Eung-Sam Kim, Ph.D.
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 Dong-Hun Lee, Ph.D.
 [Assistant Professor, Animal Physiology, DHUN@jnu.ac.kr]

 Hee-Jin Park, Ph.D.
 [Assistant Professor, Molecular and Cellular Plant Physiology, hjpark\_bio@jnu.ac.kr]

 Ji-Hoon Lee, Ph.D.
 [Associate Professor, Biochemistry and Cell Biology, microljh@jnu.ac.kr]

# Degree Requirements

Students are required to earn 130 credits, with 11 credits from general courses, 15 credits from core courses, and 33 credits from electives. Students are also required to write a graduation thesis.

# **■** What Do You Study?

#### **Core Courses**

Cell Biology (3)

General Microbiology (3) Introduction to Ecology (3)

Bioinformatics & Experiment (3)

Molecular Biology (3)

#### **Electives**

Biodiversity and evolution (3)

Introduction to Systems Biology (3)

Aquatic Biology (3) Toxicobiology (3)

Wildlife Conservation and Management and Exp. (3)

Ecological modeling and Exp. (3)

Ecological census methods and Exp. (3)

Phycology (3)

Animal Taxonomy (3) Plant Morphology (3)

Plant Taxonomy (3)

Entomology (3)

Microbial Physiology (3)

Molecular Physiology (3)

Plant Physiology (3)

Animal Physiology (3)

Immunology (3)

Molecular Genetics Lab. (2)

Experimental Biology 1 (3)

Experimental Biology 2 (3)

Molecular Biotechnology (3)

Developmental Biology (3)

Fungal biology (3)

Restoration Ecology and Exp. (3)

Food Microbiology and Practice (3)

Nanobiology and Design of Nanobiosystems (3)

Phylogenetic Systematics and Practice (3)

Environmental Biology (3)

Resource Biology (Capstone Design) (3)

Comparative Genomics (3)

Methods in Biostatistics and Exp. (3)

Biomimetics (3)

Organic Chemistry (3)

Biological Chemistry 1 (3)

Biological Chemistry 2 (3)

Genetics (3)

Biology Education (3)

A Research Of Biology Teaching Materials &

Teaching Method (3)

A Course on Biology Logic and Essay Writing (2)

# **General Courses**

General Chemistry 1 (3)

Biology Laboratory 1 (1)

Biology Laboratory 2 (1)

General Biology 1 (3)

General Biology 2 (3)

#### **Minor Courses**

Cell Biology (3)

#### **Minor Electives**

21 credits must be chosen

#### Careers

Graduates may pursue careers in bioindustries, education, biotechnology firms, natural history museums, and research institutes.

# Geological Sciences

*\_\_Contact Information* Phone: +82-62-530-3450

Fax: +82-62-530-3459 URL: http://geology.jnu.ac.ki

# **■** What is Geology?

Geology is the scientific study that aims to understand the origin, structure, physical, biological and chemical processes, and history of the Earth and its surface features using diverse scientific and engineering methods. The sustainable use of natural resources and the preservation of the Earth's environment require a sound knowledge of geology and geological processes. In order to solve these problems, geologists study a broad range of issues such as the origin and genesis of rocks constituting the Earth, the structural process and evolutional history of the Earth, the exploration of Earth's resources, and the mitigation of natural hazards. The studies of modern geology are not restricted to traditional topics because the origin, migration, and quality of ground-water, and soil contamination and remediation are also topics in geology. Therefore, geology is more of an applied science than a simple one, which requires basic knowledge of physics, chemistry, biology, and mathematics.

Throughout history, geology has provided practical information for bettering our lives and is believed to play a key role in the development of a sustainable society that is in harmony with the Earth.

# **■** Department of Geology

The Department of Geology provides an outstanding environment for studies of the Earth and planetary processes, as revealed by their composition, structure, and history. The department seeks to understand the fundamental processes defining the origin, evolution, and current state of Earth systems and to use this understanding to predict future states to solve environmental problems. The department is composed of the following three major research areas:

- 1) Pure/Basic Geology: conducting broad investigations on Solid Earth: rocks, minerals, and fossils of past and present geological environments and predicting the future.
- 2) Applied Geology: geological and seismological studies of practical issues related with the geological stability of a critical structure, such as a nuclear power plant or nuclear waste disposal.
- 3) Environmental Geology: practical application of the principles of geology in solving environmental problems, such as soil and ground water contaminations and their remediation.

Specific research encompasses igneous/metamorphic petrology, economic mineral deposits, paleontology, sedimentary environments, environmental hydrogeology, biogeochemistry, geophysics computational geodynamics and Earth materials science including classical mineralogy. The department's programs include

interdisciplinary research and teaching that bring the unique perspective of geology to scientific problems at diverse spatial and temporal scales. The department currently has 8 faculty members.

Currently, the department has 24 graduate students; 162 undergraduate students are majoring in geology. The department's programs offer courses leading to Bachelor's, Master's, and Doctoral degrees in geology. The department's faculty members, graduate students, and undergraduate students are involved in field, laboratory, experimental, and modeling studies to solve geological and environmental problems.

#### Professors

- Min Huh, Ph.D.
   [Professor, Paleontology, minhuh@jnu.ac.kr]
- In-Wook Yeo, Ph.D.
   [Professor, Environmental Hydrogeology, iwyeo@jnu.ac.kr]
- Yul Roh, Ph.D.
  [Professor, Environmental Soil Science & Geomicrobiology, rohy@jnu.ac.kr]
- Dong-Hoon Sheen, Ph.D.
   [Professor, Seismology & Geophysics, dhsheen@jnu.ac.kr]

- Donghoon Seoung, Ph.D.
   [Associate Professor, Earth Materials Science, dseoung@jnu.ac.kr]
- Tae Soo Chang, Ph.D. [Professor, Coastal Geology/Sedimentology, taesoo20@jnu.ac.kr]
- Yi-rang Jang, Ph.D.
   [Assistant Professor, Structural Geology/ Tectonics, yirang@jnu.ac.kr]
- Byung-choon Lee, Ph.D.
  [Assistant Professor, Petrology, leebc@jnu.ac.kr]

# **■ Degree Requirements**

Students are required to earn 130 credits, with 21 credits from core courses. Students must also submit a thesis and demonstrate proficiency with computers and in a foreign language (English).

# ■ What Do You Study?

#### **General Courses**

General Chemistry 1 (3) Mathematics 1 (3) General Physics 1 (3) General Biology 1 (3)

#### **Core Courses**

Introduction to Geology and Lab. (3)
Optical Crystallography and Lab (3)
Structural Geology and Lab. (3)
Seismology and Lab. (3)
Geological Survey and Lab. (3)
Sedimentology and Stratigraphy and Lab. (3)

Data Analysis in Geology and Practice (3) Soil Environmentology and Lab (3)

Applied Mathematics for Geologists (3)

Earth History and Lab (3)

Element of Geology and Lab (3)

Environmental Geology and Lab (3)

Geophysics and Lab (3) Paleontology and Lab (3) Marine Geology and Lab (3)

Field Geology and Lab (3)

Optical Crystallography and Lab (3)

Seismology and Lab (3)

Micropaleontology and Lab (3)

Hydrogeology and Lab (3)

#### **Elective Courses**

Structural Geology and Lab (3)

Environmental Geochemistry and Lab (3)

Economic Geology and Lab (3)

Engineering Geology and Lab (3)

Coastal Geology and Lab (3)

Geometric Techniques of Structural Geology and

Exercise (3)

Meteorology and Lab (3)

Contaminant Hydrogeology and Lab (3)

Geology of Korea and Exercises (3)

Geochemistry and Lab (3)

Exploration Geophysics and Lab (3)

Geochemical Prospecting and Lab (3)

Quaternary Paleoclimatology & Paleoceanography

and Lab (3)

Meteorological Observation and Lab (3)

Applied Mechanics in Geology and Lab (3)

Paleoenvironmentology and Lab (3)

Micrometeorology and Lab (3)

Cultural Heritage Geology (3)

Geomicrobiology and Lab (3)

Resource Geology and Lab (3)

Earth Data Processing and Lab (3)

#### **Teaching Profession Courses**

Earth Science Education (2)

Material Evaluation and Teaching Method

in Earth Science (2)

#### Careers

Graduates may seek careers with the Korea Institute of Geoscience and Mineral Resources, Korea Ocean Research and Development Institute, Korea Agricultural and Rural Infrastructure Corporation, Korea Water Resources Corporation, Natural Science Museum, Korea National Oil Corporation, Korea Resources Corporation, and Korea Meteorological Administration. Graduates may find positions as curators, educators, and researchers.

# Oceanography

\_\_Contact Information

Phone: +82-62-530-3460

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URL: http://oceanography.jnu.ac.kr/

# ■ What is a Major in Oceanography?

The Department of Oceanography has 9 full-time faculty members and several part-time lecturers engaged in teaching and research at both postgraduate and undergraduate levels. The Department conducts interdisciplinary research in coastal marine environments, maintains advanced laboratories, seeks public and private research funds, and recruits and retains qualified faculty, staff, and students. It provides an effective learning environment for students who are interested in careers in marine science or related fields, and also for students who are interested in science-based management of contaminated and coastal environments impacted by human development. Faculty research interests range from the ecology of phytoplankton, macro-alga zooplankton and nekton to the biogeochemical cycle of elements and numerical modeling of coastal processes. Graduates from the Department of Oceanography hold many faculty positions in universities and colleges, as well as research positions in industry, private research institutions, national laboratories, and regulatory agencies.

#### Professors

- Kwang Young Kim, Ph.D.
   [Professor, Marine Ecology, kykim@jnu.ac.kr]
- Byeong-Gweon Lee, Ph.D.
   [Professor, Chemical Oceanography, blee@jnu.ac.kr]
- Myung Gil Park, Ph.D.
   [Professor, Biological Oceanography, mpark@jnu.ac.kr]
- Byoung-Ju Choi, Ph.D.
   [Professor, Physical Oceanography, bchoi@jnu.ac.kr]

- Jee-Hoon Jeong, Ph.D.
   [Associate Professor, Atmospheric Science, jjeehoon@jnu.ac.kr]
- Yoo-Geun Ham, Ph.D.
   [Associate Professor, Atmospheric Science, ygham@jnu.ac.kr]
- Tae-Hoon Kim, Ph.D.

  [Associate Professor, Chemical Oceanography, thkim80@jnu.ac.kr]
- Se Hyeon Jang, Ph.D.
   [Assistant Professor, Biological Oceanography, shjang@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, with 24 credits from general courses, and 36 credits from core courses. Students must also take the following courses:

• Biological Oceanography & lab 1

- Physical Oceanography & lab 1
- Chemical Oceanography & lab 1
- Marine Ecology & lab
- Geological Oceanography & Lab 1
- To graduate, students must submit a thesis or a certificate.

## ■ What Do You Study?

#### **General Courses**

Mathematics 1

General Chemistry 1

General Physics 1

General Biology 1

#### **Core Courses**

Biological Oceanography & lab 1 (3)

Physical Oceanography & lab 1 (3)

Chemical Oceanography & lab 1 (3)

Marine Ecology & lab (3)

Geological Oceanography & Lab 1 (3)

#### **Electives**

Differential Equation (3)

Physical Oceanography and Lab 1 (3)

Biological Oceanography and Lab 1 (3)

Geological Oceanography and Lab 1 (3)

Chemical Oceanography and Lab 1 (3)

Physical Oceanography and Lab 2 (3)

Thysical Occanography and Lab 2 (3)

Biological Oceanography and Lab 2 (3)

Geological Oceanography and Lab 2 (3)

Chemical Oceanography and Lab 2 (3)

Marine Analytical Chemistry and Lab (3)

Oceanological Data Process & Lab (3)

Sedimentology and Lab (3)

Marine Ecology and Lab (3)

Marine Zoology & Lab. (3)

Marine Sedimentology and Lab. (3)

Ecology of Marine Fishes and Lab. (3)

Regional Oceanography (3)

Seawater Analysis and Lab. (3)

Marine Phycology and Lab. (3)

Population Ecology and Lab. (3)

Benthos Ecology and Lab. (3)

Marine Pollution and Lab (3)

Deep-Sea Geology and Lab. (3)

Tide and Waves (3)

Marine Microbiology and Lab. (3)

Fundamentals of Ecotoxicology (3)

Coastal Oceanography (3)

Marine Planktology & Lab 1 (3)

Marine Planktology & Lab 2 (3)

Shipboard training on ocean observations (3)

Marine Molecular Biology & Lab (3)

Atmosphere-Ocean Dynamics and Lab. (3)

Atmosphere-Ocean Numerical Forecasting and Lab. (3)

Climate Dynamics & Climate Change modeling (3)

Coastal Conservation Ecology and Lab (3)

Methods and techniques in ocean observations (3)

Marine Phygical Data Analysis & Practice (3)

Advanced Ocean Science (3)

Marine Biotechnology & Lab (3)

Marine Biogeochemistry & lab. (3)

Atmospheric Physics Lab (3)

Oceangraophic Meteorology and Climate Dynamics

& Lab (3)

Marine Ecosystem Modeling and Lab (3)

Climate Big Data Programing & Practice (3)

Satellite Oceanography (3)

Earth system data analysis using AI algorithm (3)

#### Careers

Graduates from the Department of Oceanography hold research positions in industry, private research institutions, and laboratories connected to marine sciences.

# School of Biological Sciences and Technology

\_\_Contact Information

Tel: +82-62-530-1035

URL: http://sbst.jnu.ac.kr

# ■ What is Biological Sciences and Technology?

Biological Sciences and Technology is the field of study which explores the principles of life phenomena and applies the results of scientific research to high-tech industries. It is a cutting-edge technology field which strives to promote the health and welfare of humankind, focusing on such diverse fields as medicine, health, pharmaceuticals, food, environment, agriculture, and energy. As a future-oriented industrial field, it promises to create numerous high-value-added industries in the knowledge-based society of the 21st century.

# ■ School of Biological Sciences and Technology

Key aspects of the School include:

- Cutting-edge research facilities to support its students' studies and research
- Varied programs to provide BT-related specialization and the possibility to conduct advanced experimentation
- · Scholarship programs and a generous system of incentives
- · Scholarships made available through the New University Regional Innovation project
- Excellent education delivered by distinguished faculty members, as well as an industry/academia/research collaboration system
- · A renowned graduate school
- It is Korea's first independent faculty combining biological science, a basic science, as well as biological engineering, an applied science.

#### Professors

# Major of Biological Science/Major of Systems Biology

- Jaemog Soh, Ph.D. [Professor, Genetics, jaemsoh@gmail.com]
- Chul-Ho Yun, Ph.D.
   [Professor, Functional Proteomics, chyun@jnu.ac.kr]
- Hueng-Sik Choi, Ph.D.
   [Professor, Molecular Endocrinology,

hsc@jnu.ac.kr]

- YoungChul Lee, Ph.D.
   [Professor, Microbial Genetics, yclee@jnu.ac.kr]
- ChangSoo Kim, Ph.D.
   [Professor, Molecular Neurogenetics, changgk@jnu.ac.kr]
- Hee-Sae Park, Ph.D.
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- · Hyung Sik Kang, Ph.D. [Professor, Immunology, kanghs@jnu.ac.kr]
- · YoungHee Joung, Ph.D. [Professor, Plant Molecular Biology, yhjoung@jnu.ac.kr]
- · Won-Seok Choi, Ph.D. [Professor, Neurobiology, choiw@jnu.ac.kr]
- · Chungoo Park, Ph.D. [Professor, Bioinformatics, chungoo@jnu.ac.kr]

- · Geupil Jang, Ph.D. [Associate Professor, Plant Developmental and Molecular Physiology, yk3@jnu.ac.kr]
- · Soo-Jin Yeom, Ph.D [Associate Professor, Synthetic Biology, soojin258@jnu.ac.kr]
- · Jae Sung Shim, Ph.D. [Assistant Professor, Plant Molecular Genetics, jsshim@jnu.ac.kr]
- Hyung Chul Lee, Ph.D. [Assistant Professor, Developmental Biology, hyungchul@jnu.ac.kr]

# Degree Requirements

Students in the major of Biological Science or major of Systems Biology are required to earn 130 credits, with 32 credits from general courses and 48 credits from core courses.

## ■ What Do You Study?

## School of Biological Sciences and **Technology**

#### **General Studies**

General Chemistry 1 (3) General Chemistry 2 (3) Chemistry Laboratory 1 (1) Biology Laboratory 1 (1) Biology Laboratory 2 (1) General Biology 1 (3) General Biology 2 (3) Total Credits 15

#### **Major Electives**

Introduction to Biological Science and Technology (3)

English for Biological Sciences and

Technology (3)

#### Major of Biological Science

Molecular Biology 1 (3) Plant Physiology (3) Molecular Biology 2 (3)

Virology (3)

Animal Physiology (3)

Developmental Biology (3)

Cell Biology 1 (3)

Life Science Fundamental Experiments 1 (2)

Cell Biology 2 (3)

General Microbiology 1 (3)

Life Science Fundamental Experiments 2 (2)

Genetics (3)

General Microbiology 2 (3)

Biological Sciences Research 1 (3)

Biological Sciences Research 2 (3)

Cancer Biology (3) Bioinformatics (3)

Endocrinology (3)

Metabolic Engineering (3)

Cellular Signal Transduction (3)

Introduction to Biomedical Science (3)

Neurobiology (3)

Plant Molecular Biology (3) Introduction to Brain disease (3)

Bioethics (3)

Methods in Cell Biology (3)

Introduction to History of Biological Sciences (3)

Independent Research 1 (3)

Independent Research 2 (3) Stem Cell Biology (3)

Biotechnology and Biological Sciences Capstone

Design 1 (3)

Biotechnology and Biological Sciences Capstone

Design 2 (3) Immunology1 (3) Immunology2 (3) Plant metabolism (3) Biochemistry 1 (3) Organic Chemistry (3) Biochemistry 2 (3)

Methods in Biochemistry and Molecular

Biology (3)

Human Physiology (3)

Molecular Genetics (3)

**Major of Systems Biology** 

Molecular Biology 1 (3) Molecular Biology 2 (3) Cell Biology 1 (3) Cell Biology 2 (3)

General Microbiology 1 (3)

Genetics (3)

General Microbiology 2 (3)

Biological Sciences Research 1 (3)

Biological Sciences Research 2 (3)

Biology of Sexuality (3)

Bioinformatics (3)

Genomics (3)

Introduction to Systems Biology (3)

Systems Cell Biology (3)

Protein and Enzyme Engineering (3)

Bioethics (3)

NeuroBiochemistry (3)

Introduction to History of Biological Sciences (3)

Independent Research 1 (3) Independent Research 2 (3) Stem Cell Biology (3)

Biotechnology and Biological Sciences Capstone

Design 1 (3)

Biotechnology and Biological Sciences Capstone

Design 2 (3)

Cell Differentiation (3) Immunology 1 (3)

Immunology 2 (3)

Introduction to synthetic biology (3)

Introduction to bioenergy (3) Bio-energy colloquium (3)

Biomedical data analysis and practics (3)

Understanding genetic variation and disease (3)

Biochemistry 1 (3)
Biochemistry 2 (3)
Organic Chemistry (3)
Molecular Genetics (3)

Plant Genetic Engineering (3)

Life Science Fundamental Experiments 1 (2) Life Science Fundamental Experiments 2 (2)

#### Careers

- graduate school (overseas and domestic)
- · medical or dental school
- · college of pharmacy
- research institutes: Korea Research Institute of Bioscience and Biotechnology (KRIBB), and Institute for Basic Sciences, etc.
- biotech industry: Samsung Bioepis, Samsung BioLogics, LG Life Sciences Ltd., CJ Bio & Pharma, and Mogam Biotechnology Research Institute, etc.
- bioventures
- · pharmaceuticals, cosmetics or food industry
- · civil service: medical, pharmaceutical or environmental fields

# College of AI Convergence

#### \_\_Contact Information

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- School of Artificial Intelligence
  - · Artificial Intelligence Major

· Software Major

- Dept. of Big Data Convergence
- Dept. of Intelligent Mobility
- Major in Robotics Engineering Convergence
- Major in Future Energy Engineering Convergence
- Major in Big Data Financial Engineering Convergence
- Major in IoT Artificial Intelligence Convergence
- Intelligent Mobility Convergence Engineering
- Majof of Intelligent & Immersive Media Convergence

# School of Artificial Intelligence

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URL: http://aisw.jnu.ac.kr

## ■ What is School of Artificial Intelligence?

We aim to train intelligent software experts who can lead the future information society. Our students can development various intelligent applications with the knowledge of software engineering. Based on basic mathematical knowledge, the ability to develop intelligent software such as machine learning and deep learning is cultivated. The curriculum includes AI technologies which can be used in various application fields such as image processing and natural language processing. The goal is to nurture professional talents for software, artificial intelligence, and information security required throughout the industry.

#### Professors

- Hyeong-seok Lim, Ph.D.
   [Professor, hslim@jnu.ac.kr]
   (Algorithm)
- Deok-jai Choi, Ph.D.
   [Professor, dchoi@jnu.ac.kr]
   (Computer Network)
- Soo-hyung Kim, Ph.D.
   [Professor, shkim@jnu.ac.kr]
   (Artificial intelligence)
- Hyuk-ro Park, Ph.D.
   [Professor, Information Retrieval, hyukro@jnu.ac.kr]
- Hyung-jeong Yang, Ph.D.
   [Professor, hjyang@jnu.ac.kr]
   (Application software)
- Kyung-baek Kim, Ph.D.
   [Professor, kyungbaekkim@jnu.ac.kr]
   (Distributed Network System)

- Kwang-hoon Choi, Ph.D.
   [Professor, kwanghoon.choi@jnu.ac.kr]
   (Programing Languages & Software Security)
- Hie-yong Jeong, Ph.D.
   [Associate Professor, h.jeong@jnu.ac.kr
   (Intelligence Robotics & Signal Processing)
- Seok-bong, Yoo, Ph.D.
   [Associate Professor, sbyoo@jnu.ac.kr]
   (Visual intelligence,Image and Video Processing)
- Yeong-Jun Cho, Ph.D.
   [Assistant Professor, yj.cho@jnu.ac.kr]
   (computer vision)
- Seung-Won Kim, Ph.D.
   [Assistant Professor, Seungwon.Kim@jnu.ac.kr]
   (AR/VR)
- Tae-June Park, Ph.D.
   [Assistant Professor, taejune.park@jnu.ac.kr]
   (Information Security/Network)

# **■** Degree Requirements

Students are required to earn 140 credits, normally over a period of 4 years (8 semesters).

# ■ What Do You Study?

# **Artificial Intelligence Major**

Core Courses

Introduction to Economics

Computational Thinking for Engineering

Writing in the Natural Sciences and Engineering

Mathematics 1

Technology and Entrepreneurship

Basic Statistics

Electives

Introduction to Engineering Design

Engineering Mathematics 1

Logic Circuits

Discrete Mathematics

C Programming and Practice

Data Communication

Linear Algebra

Web Programing and Practice

Computer System Architecture

Probability and Statistics

Introduction to Data Science

Software System Design

System Programming

Opensource Software

Computer Networks

Linux System

Mobile Application Software

Operating System

AI-System IoT System

Data Base Systems

Parallel Programming

Compilers

Introduction to Data Mining

Deep Learning

Industry-University Cooperation Project (Capstone

Design)

Image Understanding

Knowledge Representation and Reasoning

Robot Operating System

Signals and System

Natural Language Processing

Computer vision

Reinforcement learning

Introduction to Information Retrieval Systems

Speech Recognition

Service Robot

Introduction to Probabilistic Graphical Model

Minor Courses

JAVA Programing and Practice

Algorithms

Artificial Intelligence

Data Structures

Artificial Intelligence Capstone Design

**Software Major** 

Core Courses

Introduction to Economics

Computational Thinking for Engineering

Writing in the Natural Sciences and Engineering

Mathematics 1

Technology and Entrepreneurship

Basic Statistics

■ Electives

Introduction to Engineering Design

Discrete Mathematics

Logic Circuits

Engineering Mathematics 1

C Programming and Practice

Probability and Statistics

Computer System Architecture

Web Programing and Practice

Linear Algebra

Data Communication

Computer Networks

Artificial Intelligence
Opensource Software
System Programming
Software System Design
Introduction to Data Science

Theory of Programming Languages

Embedded Software
Operating System
Software Engineering

Mobile Application Software

Linux System Computer Graphics

Compilers

Parallel Programming
Data Base Systems

C++ Programing and Practicce

Industry-University Cooperation Project (Capstone

Design)

Software Reverse Engneering

Intelligence Human Computer Interface

Cloud Computing Information Security Distributed Systems Advanced Algorithms Game Software

Introduction to Computer Simulation

Image Processing
Software Verification
Blockchain Applications
Theory of Computation
Virtual Reality

#### Minor Courses

JAVA Programing and Practice

Algorithms
Data Structures
Artificial Intelligence
Software Capstone Design

# Department of Big Data Convergence

\_\_Contact Information

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# ■ What is Dept. of Big Data Convergence?

Students learn breadth of knowledge that data scientists should have: (1) learn how to handle and how to analyse big data in various fields (2) learn to understand complex problem in the context of Big Data (3) learn to predict statistical model beforehand and to provide appropriate solution.

#### Professors

- Jaesik Jeong, Ph.D.
   [Associate Professor, Bioinformatics (Metabolomics, Genomics), Biostatistics (clinical trials), Bayesian analysis, jjs3098@jnu.ac.kr]
- IlSu Choi, Ph.D.
   [Professor, Bayesian Statistics (MCMC),
   Mathematical Biology, Environmental Ecology Statistics,
   ichoi@jnu.ac.kr]
- Min-Kyu Kwak, Ph.D.
   [Professor, Analysis, mkkwak@jnu.ac.kr]
   Partial Differential Equations,
   Ordinary Differential Equations,
   Dynamical Systems
- Byeong-Chun Shin, Ph.D.
   [Professor, Applied Mathematics, bcshin@jnu.ac.kr]
   Numerical Analysis
- Hong-Sung Jin, Ph.D.
   [Professor, Applied Mathematics,

- hjin@jnu.ac.kr] Uniform Superconvergence Wavelets
- MinSoo Kim, Ph.D.
   [Professor, Multivariate Analysis, Image Partition or Searching, Financial Statistics. kimms@jnu.ac.kr]
- Hyun-Cheul Lim, Ph.D.
   [Associate Professor, limhc@jnu.ac.kr]
   Financial Mathematics
- BongGyun Ko, Ph.D.
   [Associate Professor, interpretative public intelligence, bonggyun.ko@jnu.ac.kr]
- Jeong-Gyu Huh, Ph.D.
   [Assistant Professor, huhjeonggyu@jnu.ac.kr]
   Machine-learning-based financial engineering
- Kwangmin Lee, Ph.D.
   [Assistant Professor, Baysian Statistics, klee564@jnu.ac.kr]

# ■ Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

# **■** What Do You Study?

■ General Education Core Courses Introduction to Statistics Scientific exploration of Big Data

Career design and self-understanding Big data based Investment

#### Year 1 Courses

#### Core Courses

Introduction to Programming

#### **■** Electives

Mathematics for big data 1 Mathematics for big data 2 Big data programming Statistical package and practice

#### **Year 2 Courses**

#### Core Courses

Machine Learning
Mathematical Statistics 1
Mathematical Statistics 2

#### **■** Electives

Exploratory Data Analysis
Big data Computing
Survey Sampling
Statistical deep learning
Statistical Computation and Simulation
Financial Statistics
Experimental Design

#### **Year 3 Courses**

#### Core Courses

Applied Deep Learning Big data Analysis and Practice

#### Electives

Regression Analysis and Lab.
Bayesian statistics and Practice
Big data Algorithm
Survival Analysis
Statistical Network
Multivariate Data Analysis and Practice
Data Mining and Practice
Categorical Data Analysis
Financial Statistics and Practice
Database System
Statistical Optimization

#### Year 4 Courses

#### **■** Electives

Time Series Data Analysis and Lab Numerical Analysis of Big data Big data Capstone design Stochastic Process Statistical Data Analysis and Practice Biomedical Big Data Modeling Big data Treatment and Practice

#### **Minor Courses**

Mathematical Statistics 1 Mathematical Statistics 2 Regression Analysis and Lab

# Dept. of Intelligent Mobility

\_Contact Information

Phone: +82-62-530-4205 Fax: +82-62-530-4208

URL: http://imob.jnu.ac.kr

# ■ What is Dept. of Intelligent Mobility ?

Intelligent mobility, the core of the 4th industrial revolution, refers to futuristic vehicles and transportation means, which incorporates multidisciplinary subjects from mechanical, electrical, computer science, and material engineering. Eco-friendly vehicles, autonomous driving, smart communication and security, sensors and control are the main core of this interdisciplinary department, as well as fundamental vehicle and mobility dynamics.

The goal of this program is to educate students for future vehicles and mobility by strengthening basic core theories and comprehensive design subjects. The program is aiming to increase students' R&D and design capabilities and the field adaptability by implementing advanced curriculum and operating field-tailored experiments.

In addition, this department is participating in the Gwangju BitGreen Industry-university joint research program which provides the unique, creative, and industry-oriented education and research opportunities for students to be prepared for the related fields.

#### Professors

- Daeyong Kim, Ph.D.
   [Professor, Structures Design, Manufacturing, Mechanics of Materials, daeyong.kim@jnu.ac.kr]
- Gyuhae Park, Ph.D.
   [Professor, Smart Material/sensor/actuator, gpark@jnu.ac.kr]
- Chunhwan Lee, Ph.D.
   [Professor, Powertrain Control, chunhwan@jnu.ac.kr]
- Chansoo Kim, Ph.D.
   [Assistant Professor, Autonomous driving, chansoo.kim@jnu.ac.kr]
- Yong Min, You, Ph.D.
   [Associate professor, [Electric vehicles, Electric machines, ym.you@jnu.ac.kr]
- Wonoh Lee, Ph.D.

  [Professor, Composite Materials / Mechanics of

- Inelastic Materials, wonohlee@jnu.ac.kr]
- Woohyun kim, Ph.D.
   [Associate Professor, Modeling, analysis and control of thermal systems,
- Moon, Chang-bae, Ph.D.
   [Associate Professor, Mobile Robot / Autonomous Vehicle, cbmoon@jnu.ac.kr]
- Byung-Chul Choi, Ph.D.
   [Professor, Combustion Engineering, Technology for Engine After-treatment, bcchoi @jnu.ac.kr]
- Hyun Wook Kang, Ph.D.
   [Professor, Micro Fluidics, Nano Technology and System kanghw@jnu.ac.kr]
- Jinsoo Park, Ph.D.
   [Assistant Professor, Microfluidics /

Flow Visualization, jinsoopark@jnu.ac.kr]

- Jaehyung Park, Ph.D.[Professor, Network Technology,
- Myoungjin Lee, Ph.D.
   [Professor, Semiconductor device & Circuit design, mjlee@jnu.ac.kr]
- Sungjune Baek, Ph.D.
   [Professor, Digital Signal Processing,
- Lee, Joon-Woong, Ph.D.
   [Professor, Computer Vision & Software Development for Autonomous Vehicles, joonlee@jnu.ac.kr]
- Kyeong-Hwan Lee, Ph.D.
   [Professor, Sensors and Intelligent Biosystems, khlee@jnu.ac.kr]
- Seol, Seoung-Yun, Ph.D.
   [Professor, Thermal fluid system, syseol@jnu.ac.kr]

- Kang, Bo-Seon, Ph.D.
   [Professor, Fluid dynamics, bskang@jnu.ac.kr]
- Yang, Young-Soo, Ph.D.
   [Professor, Laser material processing, ysyang@jnu.ac.kr]
- Hong, Soonwook, Ph.D.
   [Assistant Professor, Laser physics, ysyang@jnu.ac.kr]
- Han, Seunghwoi, Ph.D.
   [Assistant Professor, Laser physics,, ysyang@jnu.ac.kr]
- Jin-Sul Kim, Ph.D.
   [Professor, Multimedia QoS/QoE,
   Edge Computing, Intelligence Virtual Platform,
   IT Convergence Technologies, Deep Learning,
   jsworld@jnu.ac.kr]

## Degree Requirements

The undergraduate programs are designed to help students develop the capability needed to meet the challenges of the modern technological society in Dept. of Intelligent Mobility Students are required to complete at least 140 credit hours which normally takes four years of full-time study. Students are also able to enrolled in double majors or minors as a means of broadening the scope of their studies.

# **■** What Do You Study?

#### Core Courses

Mathematics 1
Mathematics 2
General Physics 1
General Physics 2

Basic Physics Experiments 1 Basic Physics Experiments 2

#### Required Courses

Solid Mechanics
Dynamics
Autonomous Driving for Mobility 1
Electromagnetic Fields and Energy Conversion
Mobility Seminar 1

Mobility Experiments 1 Mobility Experiments 2

#### Electives

Introduction to Automotive Engineering
Statics
Basics of Computer Programming
Object-Oriented Programming
Engineering Mathematics 1
Mechanical Drawing
Electric Circuit
Engineering Mathematics 2
Computing System

Data Structures and Algorithms

Electronic Circuit

Mechanical Design

Microprocessor

Numerical Analysis

Artificial Intelligence Power Electronics

Vehicle NVH

Perception System for Mobility

Electronic System for Mobility

Network System for Mobility

Finite Element Method

Control Engineering

Automotive Sensors and Measruement Engineering

Creative Engineering Design

CAD/CAM with Practice

Mobility Seminar 2

Operating System for Mobility

Power Conversion System for Mobility

Mobility Capstone Design1

Navigation System for Mobility

Vehicle Electronics System and Control

Vehicle Dynamics

Automotive Manufacturing Processes

Mobility Service

Mobility and Energy

Autonomous Driving for Mobility 2

Mobility Capstone Design2

Embeded System

Introduction to Automotive Design

Vehicle Powertrain System

# Major in Robotics Engineering Convergence

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# ■ What is Major in Robotics Engineering Convergence?

The Major in Robotics Engineering Convergence aims for fostering talent to apply robotics, the leading technology of the 4th industrial revolution, to future industries and life where a new paradigm is required and to answer various engineering problems.

The Major in Robotics Engineering Convergence offers students a multidisciplinary education, allowing them to develop convergent systems by learning the fundamentals of robotics such as mechanical, electrical, electronic, and computer systems, and non-engineering disciplines such as design, marketing, and cultural contents.

#### Professors

- Doyeon Bang, Ph.D.
   [Associate Professor, Soft Robotics, 4D Printing,
- Seong-Yong Ko, Ph.D.
   [Professor, Medical Robotics, Service Robotics, sko@jnu.ac.kr]
- Chang-Sei Kim, Ph.D.
   [Associate Professor, Dynamics and Control, Biomedical System, ckim@jnu.ac.kr]
- Moon, Chang-bae, Ph.D.
   [Associate Professor, Mobile Robot
   / Autonomous Vehicle, cbmoon@jnu.ac.kr]
- Byungjeon Kang, ph.D
   [Assistant Professor, Microrobot and Micromanipulation for biomedical applications,

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- Eunpyo Choi, Ph.D.
   [Associate Professor, Medical micro/nano robotics, eunpyochoi@jnu.ac.kr]
- Lee, Jae Yeol, Ph.D.
   [Professor, HCI Design, jaeyeol@jnu.ac.kr]
- Hyoung Il Son, Ph.D.
   [Professor, Human-Centered Robotics and Automation, hison@jnu.ac.kr]
- Ayoung Hong, Ph.D.
   [Assistant Professor, Autonomous Intelligent Robotics, ahong@inu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

# ■ What Do You Study?

#### Core Courses

Basic Statistics
English for Global Communication 1
Artificial Intelligence Basics

General Physics 1

#### Electives

Engineering Mathematics 1

Mechanical drawing

Kinematics of Mechanisms

Logic Circuits

Introduction of Electricity and Electronics

Object-Oriented Programming

Engineering Mathematics 2

Mechatronics

Measurement Engineering

Machine Learning

Biosystems Modeling and Practice

System Dynamics and Signal Processing

Knowledge Engineering

Computer Graphics

Biosystems Robotics

Control Engineering

Intelligent Vehicle

Human Interface Engineering

Robot Operating System

Microrobot

Biosystem Measurements

Mechanical Vibrations

Applied Robotic Systems

Advanced Microrobotics

Intelligent Soft Robots

Introduction to MEMS (MicroElectroMechanical

Systems)

#### Minor Courses

Applied Calculus

Dynamics

C Programming & Practice

Robot Engineering

Robotics Practice 1

Robotics Practice 2

# Major in Future Energy Engineering Convergence

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# ■ What is Major in Future Energy Engineering Convergence?

As directly linked to the survival of humankind, future energy is one of the most important issues in the 21st century. Since the future energy industry evolves from the facility-centered to the knowledge-based industry, the Major in Future Energy Engineering Convergence fosters talent to lead industrial sites where the convergence between disciplines rapidly proceeds.

The Major in Future Energy Engineering Convergence aims for answering field problems beyond basic studies, broadening its horizons into practical energy and in-depth technology studies, and exploring global energy technologies encompassing different disciplines and regions.

#### Professors

- Sung-Yong Cho, Ph.D.
   [Professor, Eco-Energy and Air Pollution Engineering, syc@jnu.ac.kr]
- Ho-Young Jung, Ph.D.
   [Professor, Environmental Energy Materials, jungho@jnu.ac.kr]
- Sung-June Cho, Ph.D.
   [Professor, Production and Storage of Methane and Hydrogen, sjcho@jnu.ac.kr]
- Chang-Hyun Ko, Ph.D.
   [Professor, Synthesis and Catalytic, Application of Inorganic Materials, chko@jnu.ac.kr]
- Young-Si Jun, Ph.D.
   [Associate Professor, Photocatalysis,

- Polymer semiconductors
- Seung-Hoon Han, Ph.D.
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- Sang-Yun Yun, Ph.D. [Professor, Power System, drk9034@jnu.ac.kr]
- Dong-Hee Kim, Ph.D.
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- In-Ho Park, LL.M.
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- Eun-Hee Kim, Ph.D
   [Professor, Technology
   Management, eheekim@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

# ■ What Do You Study?

#### Core Courses

Understanding of Science History English for Global Communication 1 General Physics 1 General Chemistry 1

#### Electives

Crystal Structures and Defects Renewable Energy Energy Science and Technology Organic Chemistry 1 Materials Science

Chemical Process Calculation 2

Physical Chemistry 2

MATLAB Programing

Energy and Intellectual Property

Organic Chemistry 2

Environmental Reaction and Design Engineering Introduction to IT Convergence Engineering

Solid State Chemistry

Coping Engineering with Air Pollution and Climate

Change

Design of Combustion Facilities

Electrochemistry

Chemistry of Interface

Inorganic Materials

Energy Storage System Engineering

Convergence Materials Testing

Electrical Energy Storage Systems

Management of Technology and Innovation

Capstone for new energy industry and IP convergence

Constant for future energy on

Capstone for future energy and SW convergence

Environmental Electrochemistry

Technology Management

Capstone for future energy and ICT convergence

Power Distribution System Engineering

Recent technical trends in Smart Grid

Energy Materials

Materials Electrochemistry

Power System Operation Practice

#### Minor Courses

Chemical Process Calculation 1

Physical Chemistry 1

The next-generation electricity system engineering 1

The next-generation electricity system engineering 2

Smart Power System Engineering1

Environmental Energy Engineering and Practice

# Major in Bigdata Financial Engineering Convergence

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## ■ What is Major in Bigdata Financial Engineering Convergence?

Students learn breadth of knowledge that data scientists should have: (1) learn how to handle and how to analyse financial bigdata (2) learn to understand complex financial problem in the context of financial engineering (3) learn how to solve the complex problem (4) learn to predict contemporary financial risk beforehand and to provide corresponding solution.

#### Professors

- JangSun Baek, Ph.D.
   [Professor, Nonparametric Function Estimation, Multivariate Analysis, Bioinformatics, jbaek@jnu.ac.kr]
- IlSu Choi, Ph.D.
   [Professor, Bayesian Statistics (MCMC),
   Mathematical Biology, Environmental Ecology Statistics,
   ichoi@jnu.ac.kr]
- MinSoo Kim, Ph.D.
   [Professor, Multivariate Analysis, Image Partition or Searching, Financial Statistics.

kimms@jnu.ac.kr]

- Jaesik Jeong, Ph.D.
   [Associate Professor, Bioinformatics (Metabolomics, Genomics), Biostatistics (clinical trials), Bayesian analysis, jjs3098@jnu.ac.kr]
- BongGyun Ko, Ph.D.
   [Associate Professor, interpretative public intelligence, bonggyun.ko@jnu.ac.kr]
- Jeong-Gyu Huh, Ph.D.
   [Assistant Professor, Machine-learning-based financial engineering, huhjeonggyu@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

# ■ What Do You Study?

#### Core Courses

Scientific thinking with big data Understanding of Practical Finance Introduction to Statistics and Practice

#### Electives

Management Information and Big Data Financial Statistics and Practice Financial Mathematics for beginner Bigdata programming and practice
Exploratory Data Analysis
C Programming & Practice
JAVA Programing and Lab.
Econometrics
Quantitative Analysis for beginning
Big Data Process and Lab
Money and Banking

C++ Programing and Lab.

Finance and Banking Economics

Financial Derivatives Modeling

Data Base Systems

Bigdata Financial Modeling 1

Regression Analysis and Lab.

International Finance

International Finance Management

Financial Market Analysis

Machine Learning Introduction

Multiplicate Statistical Analysis and Lab.

Data Mining and Lab.

Digital Economics

Economics of Insurance

Insurance

Bigdata Financial Modeling 2

Big Data Analysis and Lab

Big Data Statistical Analysis

Web Programing and Lab.

Advanced Artificial Intelligence

Financial Institution Management

Financial practice

Finance Programming

Deep Learning Principles and Exercises

Big data Capstone design

Time Series Analysis and Lab.

Market risk management

Artificial Intelligence

Exploratory Bigdata Analysis

Financial Practice Capstone Design

Credit risk management

Stock Market Statistical Analysis

Options, Futures, And Other Derivatives

#### Minor Courses

Macroeconomic Theory

Microeconomic Theory

Mathematical Statistics 1

Mathematical Statistics 2

Financial Management

Investment Theory

Investment Theory

# Major in IoT Artificial Intelligence Convergence

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# ■ What is Major in IoT Artificial Intelligence Convergence?

For the purpose of training students as AI convergence talents, this major provides the fundamentals of Artificial Intelligence(AI) in the era of the fourth industrial revolution such as Deep learning and the applied AI technologies specialized for various industries including Internet of Things (IoT).

#### Professors

- Soohyung Kim, Ph.D.
   [Professor, shkim@jnu.ac.kr]
   (Artificial intelligence)
- Hyungjeong Yang, Ph.D.
   [Professor, hjyang@jnu.ac.kr]
   (Application software)
- Kyungbaek Kim, Ph.D.
   [Professor, kyungbaekkim@jnu.ac.kr]
   (Distributed Network System)
- DongHan Ham, Ph.D.
   [Professor, dhham@jnu.ac.kr]
   (Knowledge Service Engineering & Human Computer Interaction)
- Kwanghoon Choi, Ph.D.
   [Professor, kwanghoon.choi@jnu.ac.kr]
   (Programing Language & compiler)
- Hieyong Jeong, Ph.D.
   [Associate Professor, h.jeong@jnu.ac.kr
   (Intelligence Robotics & Signal Processing)
- SunYong Yoo, Ph.D.
   [Assistant Professor, intelligence information system, syyoo@jnu.ac.kr]

- HyunDuck Choi, Ph.D.
   [Assistant Professor, ducky.choi@jnu.ac.kr]
   (Next Generation Intelligent Control)
- Seokbong, Yoo, Ph.D.
   [Associate Professor, sbyoo@jnu.ac.kr]
   (Visual intelligence, Image and Video Processing)
- YeongJun Cho, Ph.D.
   [Assistant Professor, yj.cho@jnu.ac.kr]
   (computer vision)
- MyungHwan Na, Ph.D.
   [Professor, nmh@chonnam.ac.kr]
   (Artificial Intelligence Bigdata Analysis)
- SeulGi Joung, Ph.D.
   [Assistant professor, sgjoung@jnu.ac.kr]
   (Optimization under uncertainty & Applications of OR)
- SeungWon Kim, Ph.D.
   [Assistant Professor, Seungwon.Kim@jnu.ac.kr]
   (AR/VR)
- TaeJune Park, Ph.D.
   [Assistant Professor, taejune.park@jnu.ac.kr]
   (Information Security/Network)

# ■ Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

# **■** What Do You Study?

#### Core Courses

Computational Thinking for Engineering Intellectual Property Right Introduction to Statistics and Practice

#### Electives

Linux System

Discrete Mathematics

Artificial Intelligence based projects

Artificial Intelligence Mathematics 1

JAVA Programing and Lab.

Seminar1

Artificial Intelligence design project

Artificial Intelligence Mathematics 2

Information Systems Analysis and Design

C++ Programing and Lab.

Data Base Systems

Design Engineering

Problem Solving Project

Seminar2

Operating System

Network Programming

Big Data Statistical Analysis

Algorithms

Web Programing and Lab.

Cognitive science and system

IoT Stream Data Analysis

Advanced Artificial Intelligence

Digital Image Processing

Deep Learning Principles and Exercises

Computer & Networks Security

IoT Case Study

Mobile Application Software

Smart Grid

Pattern Recognition

Field Practice

#### Minor Courses

C Programming & Practice

Open Source SW Development Theory

Data Structures

Theory of Software Engineering

Machine Learning Introduction

Artificial Intelligence Convergence Project(Capstone

Design)

# Intelligent Mobility Convergence Engineering

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# ■ What is Major in Intelligent Mobility Convergence Engineering?

Intelligent mobility, the core of the 4th industrial revolution, refers to automobiles and transportation means incorporating artificial intelligence. Eco-friendly vehicles are developing into high-efficiency and smart automobiles. For this purpose, eco-friendly powertrain and functional composite materials, electronic, Exploring not only the core of computer and electrical engineering, but also convergence disciplines widely related to engineering

#### Professors

- Chunhwan Lee, Ph.D.
   [Professor, Control
   Powertrain System Control& Vehicle
   Dynamic Modeling & chunhwan@jnu.ac.kr]
- Gyuhae Park, Ph.D.
   [Professor, Smart Material/sensor/actuator, gpark@jnu.ac.kr]
- Lee, Wonoh, Ph.D.
   [Associate Professor, Composite Materials / Mechanics of Inelastic Materials]
- Chansoo Kim, Ph.D.
   [Assistant Professor, Autonomous driving, chansoo.kim@jnu.ac.kr]
- Woohyun kim, Ph.D.
   [Assistant Professor, Modeling, analysis and control of thermal systems]
- Moon, Chang-bae, Ph.D.
   [Assistant Professor, Mobile Robot
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- Hyun Wook Kang, Ph.D.
   [Professor, Micro Fluidics, Nano
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- Jinsoo Park, Ph.D.
   [Assistant Professor, Microfluidics / Flow Visualization, jinsoopark@jnu.ac.kr]
- Jaehyung Park, Ph.D.[Professor, Network Technology]
- Myoungjin Lee, Ph.D.
   [Professor, Semiconductor device & Circuit design, mjlee@jnu.ac.kr]
- Sungjune Baek, Ph.D.
   [Professor, Digital Signal Processing]
- Lee, Joon-Woong, Ph.D.
   [Professor, Computer Vision & Software Development for Autonomous Vehicles, joonlee@jnu.ac.kr]
- Kyeong-Hwan Lee, Ph.D.
   [Professor, Sensors and Intelligent Biosystems, khlee@jnu.ac.kr]

# ■ Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

# ■ What Do You Study?

#### Core Courses

General Physics 1 C Programming

#### **■** Electives

Thermodynamics Circuit Theory 1

Engineering Mathematics 1

Basics of computer programming

Renewable Energy Solid Mechanics Fluid Mechanics

Signals and System Engineering

Electronic Circuit 1

Application of C Programming

Dynamics

Numerical Analysis

Precision Agricultural Engineering

Control Engineering
Computing Algorithm
Measurement Engineering
Fuel and Combustion Engineering

Heat Transfer

System Dynamics and Signal Processing

Smart Automobile & IoT Mechanical Vibrations

Advanced Computer Programming & Practice

Digital Image Processing

Mobile Communication System

Artificial intelligence and applications

Internal Combustion Engine

Intelligent Vehicle

Agricultural Mobility System

Embeded System

Automotive Multimedia System Air Conditioning and Refrigeration Environment-Friendly Vehicles Vehicle Dynamics and Control Intelligence Vehicle Networks

Smart Vehicle System

Product development engineering

Hydraulic Engineering Fuel Cell Vehicles

Automotive and Environmental Engineering

#### Minor Courses

Introduction of electricity and electronics Introduction to Automotive Engineering

Introduction To Automobile

Artificial Intelligence

Project Lab 1 Project Lab 2

# Major of Intelligent & Immersive Media Convergence

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# ■ What does Majoring in Intelligent Mobility Convergence Engineering entail?

The convergence of intelligence and immersive media content is focused on the development of cultural technology to create novel media content. The primary goal is to gain proficiency in cutting-edge technologies such as AR, VR, XR, artificial intelligence, and big data, thus enabling the creation and production of engaging media content for human development and for the betterment of our society. To achieve this objective, this field of study encompasses diverse curricula including engineering, humanities, society, and education.

#### Professors

- Chung Min Joo, Ph.D.
   [Professor, Broadcasting, new media, media content, truejoo77@jnu.ac.kr]
- Chil-Woo Lee, Ph.D.
   [Professor, Computer vision, human interface, leecw@jnu.ac.kr]
- JinSul Kim, Ph.D.
   [Professor, Multimedia, future computing, intelligent platform, jsworld@jnu.ac.kr]
- JaeYeol Lee, Ph.D.
   [Professor, HCI&Design, AR/VR, Smart factory jayeol@jnu.ac.kr]
- Jeeheon Ryu, Ph.D.
   Professor, Education engineering, multimedia design, jeeheon@jnu.ac.kr]
- ByoungIn Kim Ph.D. [Professor, historiography, Honam studie, history and cultural planning, kimbi36@jnu.ac.kr]
- Khoung-Soo Kim, Ph.D.

  [Professor, Multimedia design, media content, ks@jnu.ac.kr]

- Hieyoung Jeong, Ph.D.
   [Associate Professor, Biomechanics, robotics, h.jeong@jnu.ac.kr
- Choonsung Shin, Ph.D.
   [Associate Professor, HCI, Cultural content & technology, AR/VR, cshin@jnu.ac.kr]
- Trina Hyunjin Byun, Ph.D.
   [Associate Professor, Media art, digital art, aawoo@jnu.ac.kr]
- Yeong-Jun Cho, Ph.D.
   [Assistant Professor, Computer vision, pattern recognition, yj.cho@jnu.a.kr]
- JungHo Jeong, Ph.D.
   [Associate Professor, Design convergence, service design, vava@jnu.ac.kr]
- JiSue Lee, Ph.D.
   [Assistant Professor, Information behavior, recording administration, jislee@jnu.ac.kr]
- Seungwon Kim Ph.D.
   [Assistant Professor, Augmented & virtual reality, Seungwon.Kim@jnu.ac.kr]

# **■** Degree Requirements

Students are required to earn 130 credits, normally over a period of 4 years (8 semesters).

# ■ What Do You Study?

#### Core Courses

Computational thinking for engineering

Basic Statistics

Immersive Media Convergence

C Programming & Practice

Virtual reality and augmented reality

Artificial Intelligence

XR Metaverse Capstone

#### **■** Electives

Media Convergence Content Design

Linear Algebra

Data Structures

JAVA Programing and Practice

Digitalmedia and Society

Understanding historical and cultural resources

Opensource Software

Advanced python programming

Metaverse & Virtual World

Media Storytelling

Planning historical and cultural resources

Computer Graphics

IoT System

XR Programming

Game Programming

Digital Information Service and Immersive Media

Deep Learning

Interaction Programming

Human Interface Engineering

xyz MetaDesign

Game Software

Spatial computing

Extended Reality Media Project

Curation of historical and cultural resources

Visual Communication

3D Animation

Mobile Application Software

Immsersive media and education

Convergence media planning and production

Audio Processing

AI-XR convergence project

# Faculty of Interdisciplinary Studies

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## Faculty of Interdisciplinary Studies

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## ■ What is the Faculty of Interdisciplinary Studies?

FIS(Faculty of Interdisciplinary Studies) was founded to educate talented people to be logical and critical as well as help them to learn creative problem-solving skills in this knowledge based area with the following aims:

- To specialize in interdisciplinary educational programs
- To focus on educating the future's global leaders
- To create a challenging, creative and cooperative college culture

#### ▶ Educational Goals

- · To cultivate students with critical thinking and rational communication skills
- · To educate students to use interdisciplinary studying skills
- · To train future leaders who can cooperate and create new social values

## ■ School of Faculty of Interdisciplinary Studies at Chonnam National University

FIS has two course tracks: the Self-designed Studies Track and General Studies Track. Students who choose the Self-designed Studies Track will remain in FIS until they graduate. Those who choose the General Studies Track will have to choose a major after their first year of curriculum.

#### Professors

- Sung-Keen Kim Ph.D.
   [Faculty of Interdisciplinary Studies (History of science), skk313@jnu.ac.kr]
- Sung-mo Kang Ph.D. [Mathematics Education (Geometry and Topology), skang4450@jnu.ac.kr]
- Su-Jin Lee Ph.D.
   [business administration (Organizational

- Behavior and Leadership), soojinlee@jnu.ac.kr]
- Won-seok Lee Ph.D.
   [Philosophy (Chinese Philosophy\_Neo-Confucianism), ophil91@jnu.ac.kr]
- Tea-il Jeon Ph.D.
   [Animal Science (Animal Metabolomics),
   tjeon@jnu.ac.kr]

## **■** Degree Requirements

Students who choose the Self-designed Studies Track in the major of FIS are required to earn 130 credits to graduate. A self-design major (major required 10, major selection 27) and at least one multiple major must be completed.

## ■ Self-designed Studies Track

Students will double major in various major tracks, along with their self-designed majors. For these majors, they can choose one of several fields of study or create a self-designed major(Science and Life, Public Interest and Society, Culture and Arts, Future Society and Lifelong Learning, Leadership in International Affairs, Health and Welfare, Fusion Engineering, Economy and Society, Social science, Convergence of Humanities).

## ■ What Do You Study? (Self-designed Studies Track)

#### **■** liberal arts Required

Career Plan and Self Understanding (2)
Writing for Self-reflection and communication (3)
English for Global communication 2 (3)

#### ■ major Required

Selected Topics Seminar 1 (3) Selected Topics Seminar 2 (3) Individual Course Design (1) Advanced Topics Seminar (3)

#### **■** Electives

Independent Research (3)
Creative Convergence Project (3)
Capstone Design (3)

#### Careers

Graduates of the Department take a variety of career paths. Our graduates are proud of their education in the department and have gone on to a variety of successful careers, including research, education, public service, and many other areas in society.

# Faculty of Creative Convergence

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## Faculty of Creative Convergence

#### \_\_\_Contact Information

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## ■ What is the Faculty of Creative Convergence?

The FCC(Faculty of Creative Convergence) was founded to educate talented people to be logical and critical while also helping them to learn creative problem-solving skills in this knowledge based area with the following aims:

- To specialize in interdisciplinary educational programs
- To focus on educating the future's global leaders
- To create a challenging, creative, and cooperative college culture

#### **Educational Goals**

- To cultivate students with critical thinking and rational communication skills
- To educate students to use interdisciplinary studying skills
- To train future leaders who can cooperate and create new social values

#### Professors

- Won-il Cho, Ph.D.
   [Professor, Department of Chinese Studies, mengzi@chonnam.ac.kr]
- Dowon Kim
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- Kyong-Uk Yang, Ph.D.

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- Jae-Min Lee, Ph.D.

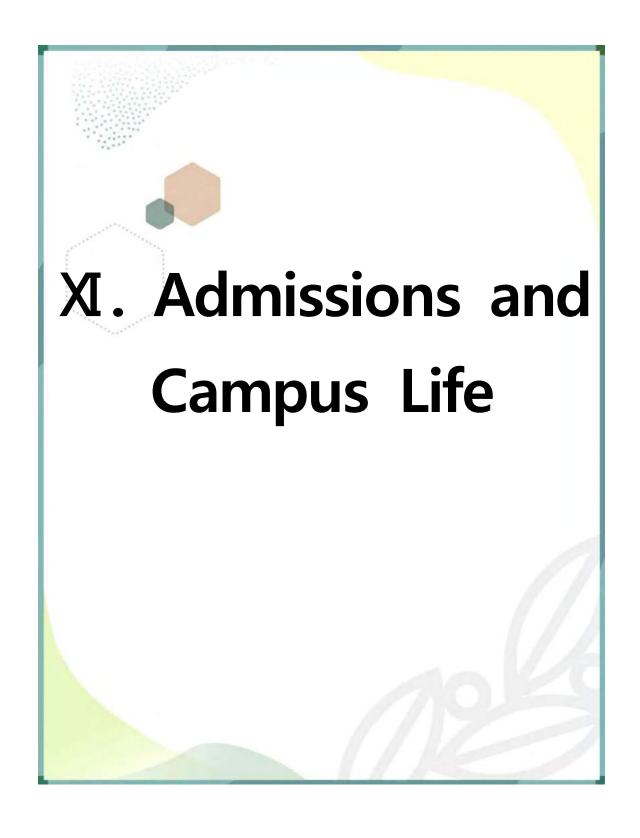
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   [Professor, High Performance Design Lab, swl.gonsw@jnu..ac.kr]

## ■ What Do You Study?

Humanities in the digital age (3) The Future of Marine and Fisheries (3) Creative Convergence Seminar (3)

#### Careers

Graduates of the Department take a variety of career paths. Our graduates are proud of their education in the department and have gone on to a variety of successful careers including in research, education, public services, and many other fields in society.



## 1. Admissions

## **Application Period**

Stages	Undergraduate	Graduate
First semester(Spring semester)	September to October	September to October
Second semester(Fall semester)	April to May	April to May

## **Eligibility**

#### Undergraduate

Classification	Language Proficiency	Nationality	Educational Qualifications
Freshman	■ more than Level 3 on Test of Proficiency in Korean		Those who completed or are expected to complete elementary and secondary education
Transfer (Sophomore, Junior)	or  550 on TOEFL PBT 210 on TOEFL CBT 80 on TOEFL iBT 700 on TOEIC 550 on TEPS 5.5 on IELTS	Applicant and the applicant's parents are foreign nationals	secondary education and have completed 2 years at a 4-year university or to graduate from a 2 or 3-year junior college

<sup>\*</sup> Those who completed Korean Language Course level 3,4,5 and 6 at CNU Language Education Center are regarded as the equivalent of achieving level 3-6 on TOPIK.

#### Graduate

Program	Language Proficiency	Nationality	Educational Qualifications
Master's Degrees	■ Satisfy at least one of	■ The nationality of the	■ Those who have, or are expected
Master's & Doctoral Degrees integrated	following standards below 1) TOPIK Level 3 or higher 2) Chonnam National	applicant and the applicant's parents must be non-Korean	to complete a Bachelor's degree or its equivalent as stipulated by regulations.
Ph. D.	University Language Education Center's Course Completion Certificate Level 3 or higher	<ul> <li>Overseas Korean nationals are eligible if they have completed elementary, secondary and post-secondary</li> </ul>	■ Those who have or are expected to complete a Master's degree or its equivalent as stipulated by regulations.

Program	Language Proficiency	Nationality	Educational Qualifications
	3) TOEFL 530(CBT 197, IBT 71), IELTS 5.5, CEFR B2, TEPS 600(NEW TEPS 326), TOEIC 700 or higher 4) Confirmation of Academic Capability ■ Certain departments require separate language test scores related to Korean or English	education overseas, that is equivalent to that of Korea's 12-year educational system	S I

- ※ Applicants with no nationality or with a dual Korean citizenship are not eligible and cannot be admitted through this admission process. If it is found, the acceptance would be cancelled even after students entered into Chonnam National University.
- Academic degrees from officially authorized educational institution by the ministry of education
   in applicant's own country are only recognized.

## Admissions Website: http://international.jnu.ac.kr

\_\_Contact Information

Phone: +82-62-530-1268(Undergraduate), 5952(Graduate)

Fax: +82-62-530-1269

E-mail: underia@jnu.ac.kr (Undergraduate)

internia@jnu.ac.kr (Graduate) URL: http://international.jnu.ac.kr

## 2. International Affairs

#### **International Exchanges & Education**

As of August 2023, CNU promotes academic and cultural exchanges with 344 overseas partner universities and institutions from 59 countries around the world.

More than 600 CNU students each year go abroad as international exchange students. CNU also promotes and operates faculty exchanges and joint research projects with overseas partner universities.

#### 1.1 Study Abroad Programs

To enhance international competitiveness and to nurture a global mindset in students, CNU offers a wide variety of short and long-term study abroad programs as follows:

- 1) Student Exchange Programs
- 2) Double Degree Programs
- 3) Global Internship Programs
- 4) Foreign Language Learning Programs

#### 1.2 On-Campus Programs

The Office of International Affairs provides students with well-organized international programs on the campus of CNU. By participating in these programs, students can improve foreign language skills and build lifelong friendships with international students.

#### **Programs**

- International Summer Session: Professors from partner universities conduct classes in English.
  There are various cultural excursions available for both Korean and international students
  throughout this program.
- 2) Buddy Program: This program is designed to help international students better adapt to local culture and campus life by pairing them with CNU students.

#### **International Student Recruitment**

The Office of International Affairs annually participates in international education fairs held in various countries. In order to recruit excellent students, the international office endeavors to build strong cooperation with overseas partner universities. The international admission process is conducted every April-May for the Fall semester and September-October for the Spring semester. Applications are accepted on-line.

## Office of International Affairs

Phone: +82-62-530-1268(Undergraduate Admission Inquiry)

+82-62-530-5952(Graduate Admission Inquiry)

Fax: +82-62-530-1269

E-mail: internia@jnu.ac.kr(Graduate), underia@jnu.ac.kr(Undergraduate)

URL: http://international.jnu.ac.kr

## 3. International Student Support Program

#### **Scholarships**

Scholarships may be granted to international students according to CNU scholarship regulations as follows:

#### - Graduate School / Post-graduate studies

- Academic Excellence Scholarships are granted to those who have achieved a high academic status.
   Partial waiving of tuition is offered to selected students.
- Global Scholarships are granted to new graduate students who meet the criteria set by the college to which they belong. Selected recipients receive a tuition waiver for their first semester.
- 3. SRS(Strategic Researchers Scholarship) Scholarships are granted to new graduate students who are selected as research assistants by their prospective academic advisors in CNU. In order to be considered as a candidate for this scholarship, students must be recommended by their prospective academic advisors in CNU. Selected recipients receive a tuition waiver for their first semester.
- 4. TOPIK(Test Of Proficiency in Korea) Scholarships are granted to new graduate students who have a TOPIK Level 6 Certificate. Selected recipients receive a tuition waiver for their first semester.

#### - Undergraduate Studies

- Academic Excellence Scholarships are granted to those who have achieved a high academic status.
   Partial waiving of tuitions fees is offered to selected students.
- TOPIK Scholarships are granted to new undergraduate students who have a TOPIK Level 4~6 Certificate.
   Selected recipients receive a full or partial tuition waiver for their first semester.
- 3. CNU-BRIDGE Scholarship are granted to new undergraduate students who have registered at least two regular Korean courses at language education center of CNU. Selected recipients receive a partial tuition waiver for their first semester.
- 4. Need-Based Scholarships are awarded after fully taking into account the financial situation and the academic status of the students. Full or partial waiving of tuition fees is offered to selected students.

#### Free Korean Language Courses

Special sessions of Korean language classes are provided for exchange, and graduate students for free of charge. Classes range from seven to ten weeks in length. International students may take the chance to learn basic expressions for daily conversations and broaden their understanding of Korean culture by participating in such classes.

#### **Buddy Program**

The CNU buddy program aims to promote academic achievement and adaptation to university life for new incoming overseas students (exchange, undergraduate students only) who can overcome difficulties by being matched with a CNU student partner.

#### **Medical Support**

CNU has its own medicare center in student union building and international students may receive general medical treatment there. The medicare center is equipped with a general diagnosis room, oral health room, medicine dispensing room, clinical lab/inspection room, X-ray facilities, a dental unit, and other medical equipment e.g. automatic analysis system; diagnoses available every day from full-time qualified doctors and medical professionals.

※ Inquiries: Medicare Center ☎ 062-530-3606(Gwangju) ☎ 061-659-6235(Yeosu)

#### **Visa Information**

After an international student is admitted to CNU, the Office of International Affairs will provide all documents necessary for visa issuance, such as a certificate of admission and other certificates required. In addition, international students will be notified about their visa matters (e.g. alien registration, extension of sojourn period, change of status of sojourn etc.) during the study period.

## 4. Academic Affairs

#### Registration

Each student of a degree program must enroll as follows within the designated period of time each semester. The due date will be announced on campus bulletin boards, and an information e-mail will be sent to the student. The enrollment fee is stipulated at the end of each school year; the average amount is approximately US \$2,500.

- Tuition for spring semester: due in mid-February
- Tuition for fall semester: due in mid-August

#### **Class Registration**

#### ■ How to register for classes

Students should check their class schedule and syllabus of each course under the guidance of their advisor professors and sign up for the classes online during the designated period.

#### ■ Credits for Each Semester

- Departments (divisions) that require 120 credits for graduation: 16 credits
- Departments (divisions) that require 130 credits for graduation: 17 credits
- Departments (divisions) that require 140 credits for graduation: 18 credits
- Departments (divisions) that require 150 credits for graduation: 20 credits
- Departments (divisions) that require 160 credits for graduation: 24 credits (Note that students majoring in architecture need 18 credits.)
- Pre-veterinary, pre-med, pre-dentistry students: 21 credits
- Department of Medicine (yearly): 51 credits
- \* When necessary, students can be allowed to take one extra credit

#### General Curriculum

#### ■ School days

Every school year is composed of 30 weeks (15 weeks in each semester)

#### ■ School year and semester

- The School year is from March 1st to February 28th of the following year.
- There are two semesters a year: Spring and Fall semesters. Classes may start 2 weeks before the

Fall semester begins.

- Spring semester: from March 1st to the end of August
- Fall semester: from September 1st to February of the following year
- Each semester has classes for at least 15 weeks
- Summer and winter session: 4 weeks

#### **Evaluation**

#### **■** Examination

All tests are administered at the instructor's discretion.

#### **■** Evaluation

All courses are evaluated based on criteria set by the instructor. Students whose attendance rate is below 75% will get an F.

#### ■ Grades

Grades range from an F (0) to an A+ (4.5).

#### ■ Warning for poor GPA

A warning is given to a student whose average point for each semester is below 1.75 or who failed to register for a new semester. A student is dismissed from school if he or she is warned three times due to a poor average. (For students at the Yeosu campus, the rule has been applied from 2006.)

#### ■ Academic Failure (Holdover)

Each department may apply its own rules on academic failure when its student fails to meet academic criteria the department sets as below:

#### Department of Medicine

- When the student's average point score is below C(2.0).
- When the student gets a grade of F in any subject.
- Students subjected to holdover must retake the subject in which they got C+ or below in the corresponding school year.

#### Department of Veterinary Medicine

- When the student's average point of the corresponding school year is below 1.75.
- When the student receives two or more F grades in a major subject (mandatory/elective) during one school year.
- When the student fails to take mandatory classes designated for the school year.
- Students who are subjected to holdover must retake all courses in which they got C+ or below in the corresponding school year.

#### Law School

- When the student's GPA is below 2.25.

- If a student gets probation, his or her credit gained in the corresponding school year (2 semesters) of which grade is recorded under Bo or below is not subjected to recognition.

Master's program in Graduate School of Dentistry

- When the student's GPA is below 70.
- When the student gets score below 60 in any courses.
- Students who get academic probation are supposed to repeat all the courses provided in the corresponding school year.

Master's program in Graduate School of Medicine

- When the student's GPA is below C(2.0).
- When the student gets an F grade in any courses.
- Students who get probation must retake all courses in which they got C+ or below in the corresponding school year.

#### Graduation

Degrees are conferred to students who complete the required courses and obtain credits for graduation according to the rules of academic affairs within a given period of school years.

#### ■ Requirements for graduation

- Completion of school years (Statute 20)
- Completion within a term (Statute 21)
- Acquisition of required credits (120-160 credits)
- Completion of mandatory courses/optional courses based on the school year schedule
- Minimum G.P.A. of 1.75 for all semesters (including summer/ winter session)
- Passing grade in mandatory courses (major, foreign language, computing) (This doesn't apply to students who were admitted before the class of 1999)

#### ■ Early graduation

Students who obtain required credits within the 6th or 7th semester with a minimum G.P.A. of 4.0 (except students who transferred from other institutions) can graduate early. However, students who violate a school regulation or give up on early graduation are not subjected to graduate early.

#### **Scholarships**

#### ■ On-campus Scholarships

- Tuition Fees Aid/Financial Assistance
  - · Merit-based Scholarships: Scholarship for students of outstanding record in admission procedure

or during coursework.

· Assistant Scholarships: Teaching Assistant (graduate program)

#### ■ Life support scholarships

- Challenge Scholarships
  - · Undergraduate students who have a challenging, enterprising spirit and sincerely strive for their future are selected

#### **Liberal Arts Education**

#### ■ CNU Liberal Arts Education curriculum

- Purpose of liberal arts education
  - To educate students as convergence talents who can coexist with the community based on creativity and imagination
- Goals of liberal arts education by field
  - Competence Liberal Arts: Students learn core competencies required by future society through Competence liberal arts classes. Students participate in classes through activities such as presentations, discussions, and team projects.
  - Basic Liberal Arts: Students learn knowledge and thinking that are the basis of their studies through Basic liberal arts classes.
  - Balanced Liberal Arts: Students learn knowledge of various academic areas and topics in a balanced manner through Balanced liberal arts classes.
- Organization of liberal arts curriculum

Field1	Competence Liberal Arts	Basic Liberal Arts	Balanced Liberal Arts
	Creativity	Fundamental Science	Humanity and Society
	Sensibility	Basic Tool Subjects	Nature and Technology
Field2	Community	Basic Software	Life and Art
			Expression and communication
			Career and Start-up

#### ■ Credits for liberal arts

- Freshmen after 2023: 30 to 45 credits
- Each major department designates a liberal arts course that must be completed. Contact your major department for details.

#### **Distance Education**

Distance or remote-learning education refers to classes in which teaching-learning activities are conducted remotely using various media applications.

Students can take up to 9 credits in each regular semester (no limit in the final semester) and up to 6 credits in seasonal semesters, and graduate students can take distance classes up to 4 credits in each regular semester.

#### ■ e-Class(CNU Learning management system)

- Website: https://sel.jnu.ac.kr
- Main Functions
  - · (Instructor) Content upload, task and discussion management, attendance management
  - · (Student) Viewing contents, lecture material download, and assignments submisson
  - · (Interaction) Supporting notifications, text messages, emails, and video lectures, etc.

#### ■ K-MOOC(Korean Massive Open Online Courses)

- Website: https://www.kmooc.kr
- MOOC stands for Massive Open Online Course, which is an open online learning process. Courses previously available only for students in the classroom were transformed into auditable online video lectures. The courses are composed of interactive learning processes such as Q&A discussions, quizzes, and assignment submission
- Students access prior learning materials before coming to class and deepen knowledge through supplements

## 5. Learning Support

#### **Learning Support Program**

The Office of Education Innovation develops and operates various learning support programs as follows.

#### **■** Learning Community

- 1. Introduction: A community program between professors and students or solely between students
- 2. Programs: 이뭣고-교학상장(for freshman), 감성공감(culture and art activities), 시민역량 제작소 (community for improving civic competencies), 배움공동체(community for improving creativity·sensibility·community competencies), etc.

#### ■ Coaching and Counseling

- Introduction: Coaching on learning strategies related to goal setting and time management and counseling on writing
- 2. Programs: 학습코칭(learning coaching), 표현과 소통 상담실(writing counselling service), etc.

#### ■ Special Lectures and Workshops

- 1. Introduction: Special lectures and workshops on various topics
- 2. Programs: 창감공 특강(special lecture for creativity sensibility community competencies), 글쓰기 상담가 양성과정(Writing counselor training course), etc.

#### **■** Competitions and Contests

- 1. Introduction: A program that holds contests on various topics or recruits works
- 2. Programs: 창감공 공모전(contest of creativity·sensibility·community competencies), 실패 공모전 (failure contest), 전대愛서 52 에세이 공모전(essay contest), etc.

#### ■ Online Course

- 1. Introduction: Online lectures on various topics
- 2. Programs: 창감공 온라인 클래스(online class), K-MOOC, etc.

#### ■ Training Talented Individuals

- 1. Introduction: Future talent training program through various education programs and activities
- 2. Programs: 교양 학생평가기획단(student planner & evaluator), 총장명예학생(president honor students), 온라인 글쓰기 상담가(online writing counselor), etc.

#### ■ Prevention & Management of College Dropout

- 1. Introduction: Support program to prevent college dropout due to academic probation
- 2. Programs: 도담도담(support program for students on academic probation), 런투런(run to learn: learning counselling), 학습꿈터(tutoring for low achievers), etc.

#### ■ Feedback System for Performance Management

- 1. Introduction: Managing and sharing the performance of learning support programs
- 2. Programs: Student Mileage, Performance Sharing Festival, etc.

#### **■** Contact Information

- Institution: Office of Education Innovation

- Location: 1st and 2nd floors of the university headquarters

- Phone: 062)530-0929

- Website: https://ile.jnu.ac.kr

## 6. Career and Employment

## the Self-Development Activity Record Book

#### ■ What is the Self-Development Activity Record Book?

It is a program, where during university life, various activities and experiences both on and off-campus are recorded and managed, and the school officially certifies them.

#### ■ Application and Processing of the Self-Development Activity Record

#### (1) Application Method

Log in to the Chonnam National University portal  $\rightarrow$  Access the Career & Job System (http://capd.jnu.ac.kr)  $\rightarrow$  Self-Development Activity Record  $\rightarrow$  Apply and Check  $\rightarrow$  New Application  $\rightarrow$  Write Activity Details and Attach Supporting Documents  $\rightarrow$  Save.

#### (2) Processing Procedure:

- Individual Activities: Student applies → Each college's career support office verifies and processes → Recorded in the Self-Development Activity Record.
- Activities Organized by University Departments: The respective department requests inclusion of activity details through official documentation → The Self-Development Activity Record Management personnel in the Career Support Office processes the requests collectively.

#### **■** Fields of Application

Selection of university scholarship recipients, participants for on-campus programs, and recommendations for employment, etc.

#### ■ Record Items and Points by Categories

Categories	Criteria for Recognition	Activity Contents by Category	Points by Category
Grades	<ul> <li>- 4.0 or above: 150 points</li> <li>- 3.5 ~ 3.99: 120 points</li> <li>- 3.0 ~ 3.49: 100 points</li> <li>- 2.5 ~ 2.99: 70 points</li> <li>- 2.0 ~ 2.49: 40 points</li> <li>- 1.75 ~ 1.99: 20 points</li> </ul>	- Reflected average grade up to the previous semester	150
Foreign Languages	<based on="" scores="" toeic=""> - 900 or above: 160 points - 850 ~ 899: 140 points</based>	- For other languages such as English, Japanese, German, French, and Chinese, refer to the foreign	200

Categories	Criteria for Recognition	Activity Contents by Category	Points by Category
	- 800 ~ 849: 120 points - 750 ~ 799: 100 points - 700 ~ 749: 80 points - 600 ~ 699: 60 points - 500 ~ 599: 40 points - 400 ~ 499: 20 points - Below 399: 8 points	language score conversion table.  - When submitting certified scores for official foreign language examinations, basic points will be awarded.  - Obtain a maximum of 160 points for one language and an additional 40 points for each additional certified language (except for the same foreign language).  - Foreign Language Area Score = Highest score in foreign languages + 1/4 of the second highest score in foreign languages.	
	<ul> <li>&lt; University-based/ExternalCareer</li> <li>Development Programs&gt;</li> <li>- More than 4 hours but less than 8 hours: 5 points</li> <li>- More than 8 hours but less than 1 month 10 points</li> <li>- 1 to 3 months: 15 points</li> <li>- 3 to 6 months: 20 points</li> <li>- More than 6 months: 30 points</li> </ul>	<ul> <li>University-based career development programs</li> <li>※ However, for self-sponsored programs organized by each college, up to 80 points can be recognized.</li> <li>External career development programs</li> </ul>	
Career and Self- Development Activity	<major-related and="" participation="" projects="" research="" thesis=""> - Less than 3 months: 5 points - 3 to less than 6 months: 10 points - 6 to less than 9 months: 20 points - 9 months to 1 year: 30 points  <paper presentation=""> - 30 points for the first author of papers published in SCI(E) journals, 20 points for other authors Paper presentations at academic conferences - 20 points for international conference presentations as the first author, 10 points for others - 15 points for domestic conference presentations as the first author, 10 points for others - 15 points for domestic conference presentations as the first author, 10 points for others - 15 points for others - 16 points for others - 17 points for others - 18 points for others - 19 points for others</paper></major-related>	<ul> <li>Major-Related Research Projects and Thesis Participation</li> <li>Only projects and thesis records registered in CRAMS will be recognized, however, participation in projects will be recognized based on the duration of participation.</li> </ul>	200
	<vocational aptitude="" career="" tests=""> - Up to 2 tests will be recognized, each with 5 points.</vocational>		

Categories	Criteria for Recognition	Activity Contents by Category	Points by Category
	<ul><li> The same content will be recognized up to 2 times.</li><li> Books Written&gt;</li><li> 20 points for books with ISBN certification.</li></ul>	Books published with ISBN certification	
Awards and Competitions / Entreprene urship	- 10 points for winners in on-campus programs - 50 points for winners in domestic programs - 100 points for winners in overseas programs <patents> - 50 points for domestic patents - 100 points for international patents  <entrepreneurship>: 100 points</entrepreneurship></patents>	<ul> <li>For on-campus awards and competitions, the organizer must be at the level of a department head or higher.</li> <li>For patents, only inventors will be recognized, and recognition will be given when the patent is registered.</li> <li>For entrepreneurship, attach the business registration certificate.</li> </ul>	100
Internship / On-site Training	- 15 points for over 1 week but less than 4 weeks - 25 points for over 4 weeks but less than 8 weeks - 50 points for over 8 weeks but less than 12 weeks - 70 points for 12 weeks or more	<ul> <li>Domestic/International internships/on-site training</li> <li>Overseas exchange programs (excluding individual language training)</li> <li>International student exchange (Recognized only for participants with a GPA of 1.75 or above)</li> </ul>	100
Volunteer Activities	- 1 point per hour - 5 points per blood donation, with no limitation on the number of donations recognized	<ul> <li>Overseas volunteer activities</li> <li>On-campus/off-campus volunteer activities, blood donation activities</li> </ul>	100
Certifications	<ul> <li>Certificate for skilled workers: 10points (e.g., Computer Proficiency)</li> <li>Certificate for technicians and industrial technicians: 30 points</li> <li>Professional certifications: 50 points (e.g., Certified Public Accountant, Lawyer, Patent Attorney)</li> <li>Monly the highest-level certification will be recognized for identical certifications.</li> </ul>		70
Career Counseling	<ul> <li>5 points for each session</li> <li>X Counseling with all professors, teaching assistants, consultants, and mentoring with university staff</li> </ul>		80
Total			1,000

<sup>\*</sup> The above content denotes criteria based on domestic students, the criteria, conditions, or prerequisites may vary for international students.

## 7. Facilities & Services

#### Library

The Chonnam National University Library (CNUL) was established in 1953 with the aim of building comprehensive collections in all research areas. Having established the digital library system in 1991, the Library provides support to university members and local residents.

Today, the CNUL comprises the main library, the Jeongbo-Maru library, the annex library, the Yeosu campus library, and three branch libraries(Legal, Dental, medical). The entire combined floor space of the library facilities totals an area of 41,242 m². It currently holds more than 6,100 seats, 2,000,000 books, 800 journals and periodicals and 65 electronic resources(Web DB etc.). CNUL also provides access to other organizations' resources for its users.

As a world-class university, CNUL is now making strides towards becoming a global research-oriented university library.

#### ■ Services

- Book Loan / Return / Renewal / Reservation
- Inquiry Ill-DDS: As a service to users, CNUL will provide upon request materials not currently in possession, from domestic or overseas other university libraries or institutions.
- Book requests
- \* Please refer to the library website for further details.

#### ■ Opening Hours

- Jeongbo-Maru library Weekdays: 09:00~20:00 Saturdays: 09:00~13:00
- Main library/Yeosu campus library/branch libraries: 09:00~18:00 on weekdays

#### **■** Websites

- http://lib.jnu.ac.kr/ (Gwangju campus library)
- http://yosulib.jnu.ac.kr/ (Yeosu campus library)

#### **■** Contact Information

- (062)  $530-3571 \sim 2/3551 \sim 2$  (Gwangju campus library)
- (061) 659-6601 (Yeosu campus library)

#### **Student Residence Halls**

#### ■ Gwangju Campus

Residence halls on the Gwangju campus have been established and are operated to accommodate approximately 4,000 people.

The halls are divided by gender, with each unit equipped with a shower room, bed, desk, chair, bookshelves, wardrobe, shoe rack, shelf, and refrigerator, alongside a central heating and cooling system. International students can apply for residence halls two months before the move-in day of each semester, benefiting from the opportunity to be selected as residents.

#### Contact Information

- Phone: +82-62-530-3733, 3734

- E-mail: dormitory@jnu.ac.kr

- Website(ENG): https://dormitory.jnu.ac.kr/Eng/Main.aspx

#### ■ Yeosu Campus

Three student residence halls —Pureun, Yeolin, and Mirae hall— at CNU Yeosu campus can accommodate up to 966 individuals in single and double occupancy cells (534 males and 432 females). Housing is assigned at the start of each semester, including summer and winter session. Housing is assigned at the start of each semester, including summer and winter school sessions. Inexpensive meals are provided for residence hall students. The dormitory rooms are equipped with desks, chairs, bookshelves, beds, wardrobes, and shower rooms. The halls feature communal facilities such as laundry rooms with washing and drying machines, reading rooms, convenience stores, lounges with cable TVs, vending machines, hot & cold water purifiers, PCs and printing rooms, refrigerators, heating systems, meeting rooms, kitchens, halal food kitchens, and fitness rooms/gyms. International students and freshmen will be given priority for housing over other students in the CNU Yeosu campus dormitories.

#### **O Contact Information**

Phone: +82-61-659-6813, 6814Website: https://house.jnu.ac.kr/

#### ■ Hwasun Campus

The student residence hall located at Hwa-sun is specifically for medical students at CNU. The residence hall can accommodate up to 350 people in either single or double rooms. Housing assignments are made at the beginning of the medical school's academic semester for a period of one year, including summer and winter vacations.

Housing units in the dormitory are equipped with desks, chairs, bookshelves, beds, wardrobes, shower rooms, and refrigerators. The hall also provide amenities such as laundry rooms, study rooms, communal kitchens, lounges (with cable TVs and hot-cold water purifiers), stores, and gyms.

#### **O Contact Information**

Phone: +82-61-379-6601, 6602Website: https://hsdorm.jnu.ac.kr/

#### **Language Education Center**

The Language Education Center (the LEC) of Chonnam National University is one of the leading institutions in the field of language education and research in Korea. For over fifty years, the LEC has worked towards developing the foreign language abilities of university students, as well as the general public, by providing a broad range of language courses and conducting comprehensive research in the field of second language acquisition.

The LEC provides practical English and Korean language courses and programs, offers English and Korean language teacher training programs, and administers a variety of language proficiency examinations for a number of major languages.

#### **■** Contact Information

- Phone: +82-62-530-3631, 3633

- Fax: +82-62-530-3629

- E-mail: language@jnu.ac.kr

- URL: http://lec.jnu.ac.kr

#### Oh! Yes Center (Transcripts)

#### ■ Services: Certificate and ID issuance

- For students: Official Certificates of Graduation (Expected), Certificates of Studentship(enrollment), Transcripts, Proof of Tuition Payments, Copies of College Register, Self-development Activity Record, Issuance of other certifications
- For faculty: Certificates of Employment, Certificates of Career Report, Proof of Earned Income Tax Payment, Various certificates for Part-time instructors
- Other administrative services: Student ID, Faculty ID, International Student ID
- Administrative Q&A regarding school affairs and issues
- These services are offered through mail, fax, or in-person requests

#### ■ Office hours

- Weekdays: 9 AM to 6 PM (Mon. Fri.)
- Automatic Issuance Machine in the Headquarters Building: 7 AM to 10 PM (available throughout the year)

#### Office of Information Technology & Services

The Office of Information Technology & Services aims to provide intelligent educational and administrative services based on core information technology in the era of digital transformation.

#### ■ CNU Portal Service

- 1) Target of the service: CNU students, staff, graduates, and the general public
- 2) Contents of the service: information services
- 3) How to use
- Users need to register through the portal system to access information services, etc.
- Different services are provided in accordance with ID and access permission.
- Registration: Join the portal system (https://portal.jnu.ac.kr)

#### ■ CNU Store Mobile Service (CNU Store)

- 1) Target of the service: CNU students and staff
- 2) Contents of the service: mobile information services CNU offers (academic calendar, meal plan, mobile ID card, etc.)
- 3) How to use
- Install "CNU Store" from official download centers (Google Play and Appstore).
- Open the application using the account created in the CNU Portal.

#### ■ Student Email Service

- Enrolled students who have registered as members of the portal system can use the services provided by Microsoft after separately applying for membership through the "Student Email" menu.
- Student e-mail service is provided through Microsoft's cloud-based Office 365, and enrolled students
  use their portal system ID issued through an e-mail account (id@jnu.ac.kr).
- 3) Main services provided: E-mail, Microsoft Teams, and One Drive

#### ■ Network Connection Service (IP Address Application)

- To use the school computer network, students can apply for an IP through the IP Application System and go through the administrator's approval process.
- PC, MAC (APPLE), and routers are automatically approved upon IP application while servers, printers, NAS, and other terminals are manually approved after confirmation by the administrator.
- 2) How to apply for an IP address
- Connect the LAN cable to the PC and run the Internet. Check the network blocking page and access the IP application system (https://ip.jnu.ac.kr:40443). Enter the portal ID and PW and apply for the IP.

#### 3) How to set up the IP

- Users receive IP application details through the CNU Store, text, or e-mail. • After checking the IP application details list and assigned IP, refer to the IP application system (https://ip.jnu.ac.kr:40443) for the IP address setting method.

#### ■ Wireless Internet Service

1) Target of the service: CNU members on campus

#### 2) How to use

- Access the wireless LAN page of the Chonnam National University website and download and install the terminal automatic configuration program(https://global.jnu.ac.kr/Life/ITServices/WirelessLAN).
- Enter the portal system ID and PASSWORD using the downloaded terminal automatic configuration program and use it.

#### ■ Computer Labs

1) Target of the service: CNU members on campus

#### 2) Location and working hours

Location	Working Hours	Note
Room No. 105, 106 of 1st Floor		Closed on public holidays (including Saturdays and Sundays)
Room No. 109 of 1st Floor	00.00 19.00	Service is not available during classes or IT training sessions.

#### ■ PC Clinic

#### 1) Service provision

- (IT consultation) Chatbot and phone consultation, remote support, mobile app settings, laptop/ mobile phone wi-fi settings, and problem reporting
- (PC maintenance) On-site repair of PC and peripheral devices, public S/W installation, virus treatment, Internet connection, etc.

#### 2) Operation guidelines

- IT-related remote consultation and PC remote support are available.
- Professional operating personnel in PC Clinic on each campus provides support for rapid on-site maintenance
- Application and processing results provided at CNU Portal Service Desk Service Counseling IT-Related Failure Report and Civil Complaint Application
- Results of satisfaction survey are conducted for service improvement
- For inquiries regarding PC Clinic operation, please contact +82-62-530-3681~2.

#### **■** Contact Information

- Phone: 82-62-530-3681~3682 (Help Desk), PC Clinic (82-62-530-3673, 82-61-659-6703 for Yeo-su Campus)
- E-mail: help@jnu.ac.kr; sangdam@jnu.ac.kr
- Homepage: https://ucc.jnu.ac.kr | Portal Service Desk: https://portal.jnu.ac.kr

## 8. Other Support

#### Center for Students with Disabilities

#### ■ Purpose

To provide comprehensive support for the guaranteed learning rights of students with disabilities, including the establishment of a university learning support system and the expansion of facilities for the convenience of people with disabilities.

#### ■ Major Support Areas

- 1. Learning Support
- Advanced course registration system: Support for planning course schedules before the start of the semester
- Educational support personnel and assistive devices provided for students with disabilities for learning activities and campus mobility
- Request for cooperation from professors regarding guidance and assistance for students with disabilities and course-related matters
- 2. Operation of Reading Rooms and Lounges for Students with Disabilities
- Operation of reading rooms with learning materials and improved welfare services for different types of disabilities
- Provision of a pleasant environment with lounges for students with disabilities, promoting the activation of student clubs for those who have disabilities
- 3. Welfare Scholarships: Full tuition for tuition fee type 2 for students with severe disabilities who are registered with the Center for Students with Disabilities and have completed 12 or more credits in the previous semester with an average GPA of 1.75 (or 70 points or above out of 100)
- 4. Special Treatment for Students with Disabilities
- Credit registration system: For students with severe disabilities, the minimum credits to be taken can be adjusted according to their learning ability.
- Exemption from the limit on enrollment and leave of absence periods
- Students with disabilities are exempted from the foreign language test and computer-related area requirements for degree completion.

#### **Human Rights Center**

Established in 2016, the Human Rights Center of Chonnam National University has continued to work for promoting and protecting the human rights of members of CNU.

The legal basis for its establishment is Article 19 (3) of the Higher Education Act and the Regulations of the Human Rights Center of Chonnam National University, and its main tasks are as follows:

- 1. Consultation, receipt of reporting, investigation and recommendations on human rights violations, dealing with cases of sexual harassment and sexual violence
- 2. Human rights education for members of CNU
- 3. Other matters necessary to promote and protect the human rights of members of CNU

#### **■** Contact Information

- Phone: +82-62-530-5911~12, 5921, 5925 (Gwangju) / +82-659-6236 (Yeosu)

- Email: lovelyj@jnu.ac.kr- URL: http://hrc.jnu.ac.kr

#### **Safety Services**

#### ■ Campus Safety Services

- For strengthening the management of vulnerable areas and establishing a system for accident prevention and management
- Dispatch of security personnel in case of emergency to prevent damage or accidents

#### 1. Safe Return Service

- Escort service for female students returning late at night, with security personnel available upon request
- Escort to the campus boundary: campus entrances and taxi stands
- Emergency contact: +82-62-530-0119 on Gwangju Campus and +82-61-659-6119 on Yeosu Campus

#### 2. Emergency Response

- a. SOS Emergency Call
- SOS 119 app is available at CNU Store ⇒ Installation and usage instructions for the SOS119 app can be found on the CNU website.
- b. Indoor Emergency Bells
- Emergency bells are installed at designated locations on campus (e.g., women's restroom located on 1st floor, women's lounge, etc.).
- In case of emergency, security personnel can be immediately dispatched.
- c. On-Campus Emergency Bells
- Installed in vulnerable areas on campus (33 locations on Gwangju Campus, 10 locations on Yeosu Campus), the emergency bell activates siren and flashing light when pressed along with video and audio communication before security personnel are dispatched to the scene.

[Gwangju Campus On-Campus Emergency Bell Locations]



	Locations			
1. Arboretum	12. College of Humanities 2	23. College of Engineering 5		
2. The front of the College of Veterinary Medicine 1	13. College of Humanities 3	24. College of Natural Sciences 4		
3. The front of the Institute for Agricultural Practice Education	14. Yongbong Building	25. Convention Hall		
4. The side door of the Residence Hal	15. The back road of the College of Arts 1	26. Yongji Hall		
5. The back road of the College of Agriculture and life Sciences	16. College of Arts 3	27. The right side of the College of Pharmacy 2		
6. College of Agriculture and life Sciences 3	17. The right side of the college of Arts 2	28. The left side of the College of Pharmacy 2		
7. Jinri Building	18. Industry-Academic Cooperation Center 3	29. The left side of the College of Education 5		
8. The road between the College of Agriculture and life Sciences-Jinri Building	19. University Computing Center	30. The right side of the College of Education 5		
9. Law School 2	20. College of Education 4	31. Daycare Center		
10. College of Social Sciences	21. Industry-Academic Cooperation Center 1	32. School of Dentistry 2		
11. College of Administration 2	22. The side door of the College of Engineering 3	33. Sports Ground 1		

#### [yeosu Campus On-Campus Emergency Bell Locations]



Locations			
The front of the Culture     Education Center	2. The front of the Student Building	3. The side road of the Fisheries and Ocean Sciences Building	
4. The front of the University-Industry Research Center	5. The downhill entrance of the Residence Hall(열린학사)	6. The central forest trail of the Residence Hall(열린학사)	
7. The front of the Physical Science Center	8. The front of the 2nd Engineering Building	9. The side road of the 3rd Engineering Building	
10. The front of the Engineering Training Center			

#### 3. Automated External Defibrillators (AED) Information

- a. Locations with AEDs:
- Yongbong Campus: Security Office (2), University Headquarters Lobby (1), 2nd-floor entrance to Student Health Center in the Student Union 1 Building (1), Dormitory Administration Building (1), Dormitory 8 (1), Dormitory 9 (1), Sports Center (2), and 1st-floor entrance to the College of Social Sciences main building (1)
- Hakdong Campus: 2nd floor of the College of Nursing (1)
- Yeosu Campus: Student Union Building entrance to the Health Center (1), 1st-floor lobby of the Yeosu Campus Library (1)
- b. AEDs are installed at key locations on campus to allow rapid emergency response and first aid relevant to the type of incident for on-campus emergencies.

#### 4. Campus Patrol

- Integrated security personnel Campus Patrol: Integrated security personnel conduct patrols in vulnerable areas and inside buildings to prevent safety incidents. They coordinate with the integrated security situation room to ensure a safe campus environment for all members of the university.

#### 5. Campus CCTV Surveillance

- Approximately 2,500 CCTV cameras are installed and operated on campus to monitor key facilities and vulnerable areas, preventing theft and safety incidents.

#### ■ Student Safety Emergency Services

1. Emergency Contacts in Case of Urgent Situations

Catego	ry	Contact Information	ontact Information Category Contact Information	
	Gwangju Security	062-530-0119	Student Affairs Office	062-530-1074
SOS Emergency Call	Office	062-530-0140	Duty Office	062-530-1167
	Yeosu Security Office	061-659-6119	Student Council	062-530-0580
Gwangju Poli Yongbong		062-528-2112	CNU Human Rights Center	062-530-5912 / https://hrc.jnu.ac.kr/

#### 2. Tips for Student Safety

- Avoid traveling to vulnerable areas late at night and, if necessary, travel with two or more people.
- Utilize nighttime safety protection measures (emergency bells, safe return service, and SOS emergency calls).
- Refuse request for surveys, interviews, or meetings conducted by unknown organizations or religious groups and report them.
- Save emergency contact numbers as shortcuts on your phone.

#### 3. Student Safety Protection Measures

- Installation of emergency bells for nighttime (outside and inside 1st-floor women's restrooms and women's lounges)
- Operation of safe return services during nighttime
- Strengthened nighttime patrols in vulnerable areas \* Integrated Security Office (security service agent) is in charge of night watch.
- Operation of SOS emergency call service

#### The ODA Network

#### ■ History of the Gwangju IDCC

- 2021. 07. 27. Korea International Cooperation Agency (KOICA) Chonnam National University -Gwangju Metropolitan City signed a business cooperation agreement (MOU) to establish an international development cooperation center
- 2021. 11. 01. Gwangju International Development Cooperation Center newly opened and Mr. Kim Jae-gi inaugurated as the first Center Director
- 2022. 11. 01. Mr. Kim Young-ryull inaugurated as the 2nd Center Director

#### ■ Purpose

Gwangju IDCC is purposed on the promoting of the understanding about international development cooperation in the Gwangju-Jeonnam region, expanding its base, and encouraging participation in international development cooperation affairs.

#### ■ Main Activities

- Activities to improve understanding of international development cooperation and ODA projects in the region through international development cooperation understanding education, briefing sessions, meetings, etc.
- 2. Activities to discover international development cooperation partners such as local universities, companies, public institutions (public enterprises), and civil society and to promote their participation.
- International development cooperation, ODA-related project discovery and advisory activities in the region
- 4. Activities to nurture future talents who will enter into global fields such as international development projects through education and promotional events for local youth.

#### ■ Information for usage: Programs that university (graduate) students can participate in

- ODA understanding improvement training
- ODA regular education: Introduction, Advanced 1, Advanced 2, Project Management, Sector Advanced Course, etc.
- Special lectures on international development cooperation
- · Attending ODA briefing session
- Overseas volunteers group recruitment briefing session
- · Participating in ODA promotional events
- ODA Forum
- ODA Photo Exhibition
- ODA Contest
- University student's ODA supporters and ODA clubs
- · Community cooperation projects

- 'Short-term volunteering program in developing countries' for university students in Gwangju-Jeonnam areas
- Center's specialized projects
- 'Site visit to international development cooperation projects program in developing countries' for university students in Gwangju-Jeonnam area

#### ■ Contact Information

- location: room 415, 4th floor, G&R hub bldg.
- Tel: 062) 530–5420~3
- Web site: https://gjidcc.modoo.at, 🜃 🧿 idcc\_gwangju