**Course Syllabus**

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| **CNU International Summer Session** |

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| **Course Title** | | Computational Thinking for Humanities and Social Sciences (\*Humanities/Social Science students only) | | | | | | | | | | | | | | | | | |
| **Course Type** | |  | | | | | | | | **Credits**  **(hours)** | | | 3 | | | | | | |
| **Department** | | Software engineering | | | | | | | | **Professor** | | | Lim Jina | | | | | | |
| **Classification**  **(year in school)** | | all | | | | | | | | **Course Code** | | |  | | | | | | |
| **Class room** | | Engineering Building 6 –  Room 810 | | | | | | | | **E-mail** | | | sleepy70@hanmail.net | | | | | | |
| **Prerequisite(s)** | | none | | | | | | | | | | | | | | | | | |
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| **Course objectives** | | By comparing human and computer languages, students in the humanities and social sciences can explain what skills are necessary for computer science thinking. | | | | | | | | | | | | | | | | | |
| **Course Summary** | | 1. Students can learn the digital technology necessary to live in the era of the 4th industrial revolution and use it in the field from the perspective of the humanities.  2. Students can creatively solve problems by fusion of their major areas and digital technology. | | | | | | | | | | | | | | | | | |
| **Teaching Methods** | | **Teaching Methods** | | | | | | | | | | | | | | | | | |
| Lecture | Presentation/Discussion | | | | Problem Based Learning | | | | Project Based Learning | Flipped Learning | | | Experiment/ Practices | | | Others  (Describe) | |
| ○ | ○ | | | |  | | | | ○ |  | | | ○ | | |  | |
| < Lecture>  The basic theoretical knowledge students need to know to use the Python program is delivered to the instructor's lecture.  < Presentation / Discussion>  The results obtained through project-based learning will be shared in a group presentation at the 14th week.  < Project Based Learning>  The instructor presents the topic, analyzes the data for each group, and announces the results.  < Experiment/ Practices>  1. Based on Anaconda and Jupyter notebooks, practice the lecture contents using Python, etc.  2. Students practice what they have learned in the theory lectures every week with practical examples. | | | | | | | | | | | | | | | | | |
| **Grading** | | Mid-Term | Final | | Individual Tasks | | | Team Projects | | | Class participation | | | Attendance | | Others  (Describe) | | | **Total** |
|  | **30** | | **30** | | | **15** | | | **15** | | | **10** | |  | | | **100** |
| ※ Pursuant Section 28 of the Guidelines on Class Management, grading methods can be adjusted for the physically impaired.  ※ Under Section 29 of the University Regulations on Academic Affairs, a student automatically fails a course in case of failure to attend more than 3/4 classes. (More than four(4) times absence) | | | | | | | | | | | | | | | | | |
| **Accommodations for Handicapped** | | - Visually impaired: provision of course related materials in audio, note taking helper, permission to record the lecture  - Audibly impaired: provision of course related materials in visual, note taking helper, permission to have e-learning lectures in sign language or shorthand  - Physically or mentally challenged: provision of course related materials, note taking helper, permission to record the lecture   * Any other requests that are considered necessary: provision of assisted   ingress and egress to the classrooms and other supports | | | | | | | | | | | | | | | | | |
| **Textbooks & References** | | | | | | | | | | | | | | | | | | | |
| Category | Title | | | Author | | | | | | | Publisher | | | | | | Year of publication | | |
| Main textbook | Do it! Jump to Python | | | 박응용 | | | | | | | 이지스퍼블리싱 | | | | | | 2016 | | |
| Others | Do it! 파이썬 생활 프로그래밍 | | | 박응용 | | | | | | | 이지스퍼블리싱 | | | | | | 2020 | | |
| Reference |  | | | | | | | | | | | | | | | | | | |

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| **Daily Course Schedule** |
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| **Day**  **(3hurs)** | **Lecture Topic** | **Hours per day** | **Method of Instruction** | **Class Materials & Assignments** |
| 1 | ▪lecture introduction  ▪ Python coding environment | 3 | Lecture & practice | Lecture material |
| 2 | Say hello to Python “Hello, World!”  (numeric) | 3 | Lecture & practice | Lecture material |
| 3 | Say hello to Python “Hello, World!” (string) | 3 | Lecture & practice | Lecture material |
| 4 | What if you can attract souls with Python?  (list, tuple) | 3 | Lecture & practice | Lecture material |
| 5 | If you have money, you watch movies, if you don't, you watch YouTube.  (Program control statement ①:  if statement) | 3 | Lecture & practice | Lecture material |
| 6 | I will cut the rice cake, so you write from 1 to 1000.  (Program control statement ②:  while statement) | 3 | Lecture & practice | Lecture material |
| 7 | How to play multiplication table with Python.  (Program control statement ③:  for statement) | 3 | Lecture & practice | Lecture material |
| 8 | Python programming language review | 3 | Lecture & practice | Lecture material |
| 9 | The highest and lowest temperatures of Seoul | 3 | Lecture & practice | Lecture material |
| 10 | What are the top 100 songs on Melon's popular music charts?  (Text Mining : Web Crawling) | 3 | Lecture & practice | Lecture material |
| 11 | Where are the hot spots in Jeju Island?  (Text Mining : Word Cloud) | 3 | Lecture & practice | Lecture material |
| 12 | Why is there no Starbucks in my town?  (Data Analysis and Visualization) | 3 | Lecture & practice | Lecture material |
| 13 | How much has the number of Chinese tourists decreased since COVID-19?  (Data Analysis and Visualization) |  | Lecture & practice | Lecture material |
| 14 | Group presentation |  | presentation |  |
| 15 | Final exam |  | Final exam |  |

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| **References** |
| Please describe the daily course contents, teaching methods, assignments, and student evaluation methods. |