Sungkyunkwan University (SKKU) International Summer Semester (ISS) 2025

[Python for Social Computing]

Prof. Liang Zhao, Wuhan University

SHORT COURSE DESCRIPTION

This course introduces students to the fundamentals of Python programming with a focus on practices in social computing. Students will learn how to use Python to analyze humanities and social science phenomena like emotions, morality, cultural values etc. The course will cover essential Python libraries and tools commonly used in social computing research and projects.

READING MATERIALS

[1] Eric Matthes. *Python Crash Course: A Hands-On, Project-Based Introduction to Programming.* No Starch Press.

COURSE REQUIREMENTS AND GRADING

Attendance (20%): It is important that you attend every lecture. SKKU regulations require students to attend at least 80% of all classes. Bring your laptop for in-class exercises. Please do not use your cellphone in class.

Daily Programming Assignments (30%): Programming assignments will be assigned every day after the class. No late submission will be accepted without a valid excuse in advance. You are welcome to consult each other on assignments, but you should submit your own work.

Projects (50%): In a group of 2-4 people, choose the social computing topic you are interested in, collect data by yourself, and use Python to complete data analysis and draw conclusions. You should present your projects and submit the project reports together with your code and data. Topics include but not be limited in collectivism/individualism analysis, collective moral motivation analysis, gender bias and stereotype analysis, art style clustering, etc.

You will earn a pass if you receive a grade of 60% or above.

COURSE SCHEDULE

– WEEK I –

Monday (30 June): Basic syntax and data types

Tuesday (1 July): Control structures

Wednesday (2 July): Functions

Thursday (3 July): Classes

– WEEK II –

Monday (7 July): Lists and tuples

Tuesday (8 July): Dictionaries

Wednesday (9 July): String manipulation

Thursday (10 July): File I/O operations

– WEEK III –

Monday (14 July): Web scraping with *requests* and *BeautifulSoup*

Tuesday (15 July): Data analysis with *Numpy*

Wednesday (16 July): Data analysis with *Pandas*

Thursday (17 July): Data visualization with *Matplotlib*

– WEEK IV–

Monday (21 July): Analyzing sociopsychological values with Python

Tuesday (22 July): Topic modeling

Wednesday (23 July): Final project presentation and discussion