Capital University of Economics and Business
Overseas Chinese College
Course Syllabus

Year and Semester	2023 Spring
Course Name	Foundation of Python Programming
Course Code	MIS233
Course Type	☐ General Education (Required) ☐ General Education (Elective) ☑ Professional Course (Required) ☐Professional Course (Elective) ☐ Basic Disciplinary Course
Course Credits	4
Course Hours	64
Prerequisites	MIS223
Instructor	Jingning Li
Contact Information	Office: C217 Email: lijingning@cueb.edu.cn
Office Hour	M:9:55-11:30,13:30-15:05; Th:9:55-11:30
Learning Centre	T:18:00-20:00 (online); Th:13:30-15:05
Grade/Section	2021IT&2021CFA
Course Time/Place	2021IT: T: 13:30-15:05; W: 9:55-11:30 (B208) 2021CFA: W: 8:00-9:35; F: 13:30-15:05 (B211)

Textbook

Eric Matthes, *Python Crash Course: A Hands-On, Project-Based Introduction to Programming , 2nd Edition ,No Starch Press*, ISBN 978-1-593-27928-8.

Self-compiled handout

Reference Book

Mark Lutz , *Programming Python , 4th Edition ,O'Reilly Media ,Inc*, ISBN 978-1-491-97731-6.

Course Description

Python is a very popular big data analysis software, which replaces Java and becomes the number one language in programming field by its useful and easy features .The Description of this course, is guiding students to understand the programming mode of python, and skillfully use Python operators, built-in functions, basic data types such as list, tuple, dictionary and collection, and related list derivation and slicing to solve practical problems ,in order to improve students' professional quality of programming.

Student Learning Outcomes

After learning this course, the students will be able to:

Knowledge:

- explain the object oriented programming
- explain the method to debug Python programs
- master the Properties and methods of various objects

- master Python object oriented programming patterns
- master the skill to read and write text files
- master branch structure, loop structure, function design and class design and use
- analyze with process control of python to solve the enterprise related business issues

Capability

- master the basic usage of python for data processing
- master the usage of python for data visualization
- improve efficiency of work and study by using python
- develop the ability of text processing and office automation
- cultivate the ability to solve complex problems with simple programs

Mindset

- exercise the tenacity character and the spirit of hard study
- gain growth and self-confidence from project experience
- develop logical thinking and rigorous working attitude
- improve the ability to analyze and solve problems

Website Source

1. http://occ.cueb.easthome.com/
2.https://www.bilibili.com/video/BV1ht41187Aa?from=search&seid=2821357085891750127
3.https://www.bilibili.com/video/BV1wD4y1o7AS?from=search&seid=10650633478054591671

Teaching Methods

This course includes skill demonstration, project practice, homework and classroom test. In the last two weeks, each student will be provided with personalized data to test their ability to understand and apply tableau knowledge.

This course adopts the flipped classroom teaching mode, and provides detailed tableau operation handouts in advance. Students are required to complete the preview and homework before class, assess and score in class, finish the project cases independently after class, and obtain the final results by means of speech competitions.

Grade Criterion

Component	Weight	Description
Final Exam	20%	A cumulative final examination will be given based on all of the contents of the class. The exam paper may be composed of computer operation questions and case analysis questions. Students should rely primarily on homework assignments to give them a sense of what they may see for material on exams.
Mid-Term Test	20%	A cumulative midterm test will be given based on all of the contents that have been taught in class. The test paper may be mainly composed of multiple-choice questions and it should be completed in class.
Homework	15%	Most of the assigned homework is taken from the Exercises in the textbook. Assignments will be collected at the clearly stated date. Late assignments will not be accepted. The graded assignments may be kept

		by the tutor for reference and won't be returned to students.
Quizzes	15%	There will be at least 2 quizzes during the semester. Quizzes may or may not be announced in advance. It may also be used as a way to check the attendance. Quizzes will test your knowledge of both concepts and the application of those concepts.
Presentation	10%	The students will be divided into several groups to prepare a presentation. Each student is required to be involved in the presentation. The topics can be selected from the textbook or lectures. Each group need to finish a PPT related to the topic which is given and hand in the related resources to the teacher before the presentation.
Participation	10%	Individuals will be asked to participate individually in a question and answer at least 5 times during the semester. The performances should be counted in their participation.
Attendance	10%	Refer to attendance policy listed below
Total	100%	

Detailed Grade Computation

	Before Midterm	After Midterm
Attendance	5%	5%
Participation	5%	5%
Homework	5%	10%
Quizzes	5%	10%
Presentation		10%
Midterm test	20% (5% of critical thinking)	
Final exam		20% (5% of critical thinking)
Total	40%	60%

Grading Policy

A+ 97-100	A 93-96	A- 90–92	B+ 87-89	B 83-86	B- 80–82
C+ 75-79	C 70-74	C- 67–69	D+ 63–66	D 62-60	F 0- 59

Exam Schedule

Midterm Test: April 10th -16th, 2023;

Final Exam: June 5th-9th, 2023

Assessment of Student Performance

☞ ***Self-Study and Reading ability Practice***

Instructor will give out the chapters or the reference books to read and use class hours to have discussion; students should be able to show a proactive attitude and ability for self-study and reading. Knowledge and oral English will be elements of homework or presentation score.

☞ ***Homework***

Students should finish their homework by themselves. Copying from others will be treated as cheating and the homework scores will be lowered. Students should hand in all assignments on time. Late assignments will be accepted at the discretion of the instructor (i.e., when the student was ill or had an

excused absence). Late assignments without reasonable proof will be reduced in score by 50%.

Assignment should be printed out. Anything that cannot be read will be marked wrong. Printing requirements are as followed: single space between lines, double space between paragraphs, font size is 12 (maximum). Grammar error can reduce 20% of your score.

☞ ***Attendance***

Because the course covers a great deal of material, attending every class session is very important for performing well.

- Being late for 15 minutes or more is considered an absence.
- Five hours or above of unexcused absences will result in the lower level of the final grade by one grade band (e.g. from C – to D +). Any excused absence must be discussed directly with the teacher.
- Absence which is more than 1/3 of the total teaching hours will cause an F (a failing grade) directly.

but students are welcome to continue attending classes.

- An incomplete grade (I) will be considered in case of medical or family emergencies.

☞ ***Participation***

- Students should participate in classes actively. Half of participation grade is determined by their presentation in class. They are encouraged to ask questions relevant to the subject and express their own opinions. Every student should respect the ideas, opinions, and questions of their classmates.
- Students should also use office hours to ask questions or talk with the instructor for good communication and effective learning.
- Frequent visiting the instructor and chatting in English during office hours is highly recommended.
- Any misbehavior and non-class related activities in class will result in the lower level of the participation grade, including ringing cell phones.
- All above behaviors will be solely evaluated by the instructor for scoring.

☞ ***Presentation:***

- Students should participate in classes actively. Half of participation grade is determined by their presentation in class. They are encouraged to ask questions relevant to the subject and express their own opinions. Every student should respect the ideas, opinions, and questions of their classmates.
- Students should also use office hours to ask questions or talk with the instructor for good communication and effective learning.
- Frequent visiting the instructor and chatting in English during office hours is highly recommended.
- Any misbehavior and non-class related activities in class will result in the lower level of the participation grade, including ringing cell phones.
- All above behaviors will be solely evaluated by the instructor for scoring.

☞ ***Textbook***

Students must bring the textbook to class.

Course Outline

Week	Content	Homework
1	● Syllabus ● Realize Python environment on PC ● Chapter 1 Python Overview - Getting Started -- Learn print()	• Setup Python environment • Write the 1st Python program using Jupyter, PyCharm, Python3
	● Chapter 1 Python Overview - Getting Started -- Introduce Python programming Language o Which technology is hot today? o Why do we learn Python? o Python Scientific Computing Ecosphere o Python History o Python Data Analysis Process -- Differences from C and Java	• How to show up the below results using formula 5/2: 2, 2.0, 2.5 • How to do Math.sqrt(81); using Python? • How to count how many "的" using 3 Python statements?
2	● Chapter 2 Variables and Simple Data Types -- Introduce Variables: o Numeric o String -- Write comments in Python -- How to create .py files?	• Review the new knowledge for next lecture's mini test
	● Chapter 2 Variables and Simple Data Types -- Mini-test (20 questions) -- 2 programming homework	• 2 programming homework
3	● Chapter 3 Introducing Lists -- What is a List? -- Accessing Elements in a List -- Changing, Adding, and Removing Elements	• Improve the last homework using list
	● Chapter 3 Process Control -- Organizing a list	
4	● Chapter 4 Working with Lists -- Looping Through an Entire List -- Avoiding Indentation Errors -- Making Numerical Lists -- Working with Part of a List -- Tuples	• Improve the last week homework using list() • 7 programming homework from the textbook
	● Chapter 4 Working with Lists -- Share the last lecture homework answers -- 2 programming homework	
5	● Chapter 5 if Statements -- A Simple Example	• Write a program for Universal

	-- Conditional Tests -- If Statements -- Using if Statements with Lists	ticket prices (ager, bus, take photos) • Pick up one question to do from the textbook (5-3 to 5-7)
	● Chapter 5 if Statements -- Share the last lecture homework answers -- 2 programming homework	
6	**Qing Ming Festival**	
	● Chapter 6 Dictionaries -- A Simple Dictionary -- Working with Dictionaries -- Looping Through a Dictionary -- Nesting	• Write 3 programs using dictionary
7	**Midterm Test** **Midterm Test – Answer Time**	
	● Chapter 6 Dictionaries -- Share the last lecture homework answers -- 1 programming homework	
8	● Chapter 7 User Input and while loops -- How the input() Function Works -- Introducing while Loops -- Using a while Loop with Lists and Dictionaries	• Start Assignment 1 in groups
	● Chapter 7 User Input and while loops -- Assignment 1 in groups	
9	● Chapter 8 Functions -- Defining a Function -- Passing Arguments -- Return Values -- Passing a List -- Passing an Arbitrary Number of Arguments -- Storing Your Functions in Modules -- Styling Functions	• 2 programming homework
	● Chapter 8 Functions -- Assignment 1 in groups	
10	**Labor Day Holiday** ● Chapter 9 Classes -- Creating and Using a Class -- Working with Classes and Instances -- Inheritance -- Importing Classes	• 1 programming homework
	Labor Day Holiday ● Chapter 9 Classes -- Prepare Presentation - Assignment 1	
11	● Presentation - Assignment 1	
	● Presentation - Assignment 1	

12	● Chapter 10 Files and Exceptions -- Reading from a File -- Writing to a File -- Exceptions	• 2 programming homework
	● Chapter 10 Files and Exceptions -- Share the last lecture homework answers -- 1 programming homework	
13	● Chapter 10 Files and Exceptions -- Reading from an excel File -- Writing to an excel File -- Exceptions	• 2 programming homework
	● Chapter 10 Files and Exceptions -- Share the last lecture homework answers -- 1 programming homework	
14	● Review	
	● Q&A Time	
15	● **Final Exam**	**Submit Presentation**
	● **Final Exam**	**Submit Presentation**

Note: *Some chapters or sections may leave for self-study, this is the students' duty to learn and understand, they may also be included in the quizzes or exams.*

A review in Chinese may be held during L.C. and O.H. in the semester.

Teacher's Office Hour

- The instructor's office hour is shown in the front of the office door.
- Students are suggested to use the instructor's office hour and learning center to ask questions or talk with the instructor once at least per week for good communication and effective learning, which is recorded in the students' participation.
- The time can be scheduled by instructors or students, or both.

Cheating and Plagiarism

Cheating is not tolerated. Any student caught cheating on a quiz; test or exam will be given a mark of zero (0) for the particular work. At the beginning of the semester the definition of plagiarism will be carefully explained, when any thoughts or writings of another person are used, they must be clearly identified (usually one uses quotation marks) and the source notes. If any student is caught cheating on any homework assignment, the highest score the student can earn in that course is a "C".

Instructor's Signature: Jingning Li Department Head's Signature: Jingning Li