

Capital University of Economics and Business

Overseas Chinese College

Course Syllabus

<u>Year and Semester</u>	2021 Fall (September 2, 2021 — January 16, 2022)
<u>Course Name</u>	Application Programming Design
<u>Course Code</u>	MIS304
<u>Course Type</u>	<input type="checkbox"/> General Education (Required) <input type="checkbox"/> General Education (Elective) <input type="checkbox"/> Professional Course (Required) <input checked="" type="checkbox"/> Professional Course (Elective) <input type="checkbox"/> Basic Disciplinary Course
<u>Course Credits</u>	3
<u>Course Hours</u>	48
<u>Prerequisites</u>	MIS223
<u>Instructor</u>	Jingning Li
<u>Contact Information</u>	Office: C217 Email: lijingning@cueb.edu.cn
<u>Office Hour</u>	M: 13:30-15:30; T: 10:00-12:00; Th: 10:00-11:00; F: 10:00-11:00
<u>Learning Centre</u>	M: 18:00-20:00; T: 13:30-14:30; Th: 13:30-14:30
<u>Grade/Section</u>	2019IT
<u>Course Time/Place</u>	M: 8:00-9:50 (B309); Th: 11:10-12:00 (B312)

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: November 1-5, 2021;

Final Exam: January 5-14, 2022

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	Date	Content	Homework
1	Sep. 6	<ul style="list-style-type: none"> ● Syllabus ● Setup Python environment on PC ● Chapter 1 Python Overview 	
	Sep. 9	<ul style="list-style-type: none"> ● Chapter 1 Python Overview 	
2	Sep. 13	<ul style="list-style-type: none"> ● Chapter 2 Basic knowledge of python 	
	Sep. 16	<ul style="list-style-type: none"> ● Chapter 2 Basic knowledge of python 	
3	Sep. 20	Mid-Autumn Festival	
	Sep. 23	<ul style="list-style-type: none"> ● Chapter 3 Process Control 	
4	Sep. 27	<ul style="list-style-type: none"> ● Chapter 3 Process Control 	
	Sep. 30	<ul style="list-style-type: none"> ● Chapter 3 Process Control 	
5	Oct. 4	National Day	
	Oct. 7	National Day	
6	Oct. 11	<ul style="list-style-type: none"> ● Chapter 4 str Operators 	
	Oct. 14	<ul style="list-style-type: none"> ● Chapter 4 str Operators 	
7	Oct. 18	<ul style="list-style-type: none"> ● Chapter 5 List and loop 	
	Oct. 21	<ul style="list-style-type: none"> ● Chapter 5 List and loop 	
8	Oct. 25	<ul style="list-style-type: none"> ● Chapter 6 Tuples, dict 	
	Oct. 28	<ul style="list-style-type: none"> ● Chapter 6 Tuples, dict 	
9	Nov. 1	Midterm Test Midterm Test – Answer Time	
	Nov. 4	<ul style="list-style-type: none"> ● Chapter 7 Visualization 	
10	Nov. 8	<ul style="list-style-type: none"> ● Chapter 8 Basic Chart – Part 1 	
	Nov. 11	<ul style="list-style-type: none"> ● Chapter 8 Basic Chart – Part 1 	
11	Nov. 15	<ul style="list-style-type: none"> ● Chapter 9 Basic Chart – Part 2 	
	Nov. 18	<ul style="list-style-type: none"> ● Chapter 9 Basic Chart – Part 2 	

12	Nov. 22	● Chapter 10 Python Crawler	
	Nov. 25	● Chapter 10 Python Crawler	
13	Nov. 29	● Chapter 11 Data Analysis	
	Dec. 2	● Chapter 11 Data Analysis	
14	Dec. 6	● Project – Part 1	
	Dec. 9	● Project – Part 1	
15	Dec. 13	● Project – Part 2	
	Dec. 16	● Project – Part 2	
16	Dec. 20	● Project – Part 3	
	Dec. 23	● Project – Part 3	
17	Dec. 27	Presentation	
	Dec. 30	Presentation	
18	Jan. 3	Review	
	Jan. 6	Final Exam	
19	Jan. 10	Final Exam	
	Jan. 13	Final Exam	

***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".

Important Dates

Fall Semester, 2021	September 2, 2021— January 16, 2022
Sep.5	Registration (Sophomores, Juniors and Seniors)
Sep.6	Classes Begin (Sophomores, Juniors and Seniors)
Sep.1	Last Day to Drop or Add a Course (Sophomores, Juniors and Seniors)
Sep.18	Registration (Freshmen)
Sep.20-24	Entrance Education (Freshmen)
Sep.21	Mid-Autumn Festival
Sep.27	Classes Begin (Freshmen)
Oct.1	National Day
Nov.1-5	Midterm Test (tentative)
Jan.1, 2022	New Year's Day
Jan.1-4	Revision (Sophomores, Juniors and Seniors)
Jan.5-14	Final Exam Period (Sophomores, Juniors and Seniors)
Jan.10-14	Final Exam Period (Freshmen)
Jan.17	Winter Vacation Begins

Note: *This syllabus is tentative and may be changed or modified throughout the semester. All students will be notified and a new syllabus will be given.*

Instructor's Signature: Jingning Li

Department Head's Signature: Jingning Li

