

Capital University of Economics and Business

Overseas Chinese College

Course Syllabus

Year and Semester	2025 Fall					
Course Name	Financial Data Analysis Project Practice					
Course Code	MIS442					
Course Type	☐ General Education (Required) ☐ General Education (Elective) ☐ Basic Disciplinary Course ☐ Professional Course (Required) ☐ Professional Course (Elective) ☐ Professional Course (Expanded) ☒ Professional Course (Advanced)					
Course Credits	4					
Course Hours	Total Class Hours	64	Lecture Hours	4	Experiment (Computer) Hours	60
Applicable object	☐ Freshman ☐ Sophomore ☐ Junior ☒ Senior					
	☐ Business Administration (Accounting)					
	☒ Information Management and Information Systems (Finance)					
Prerequisites	Probability & Statistics and Manage Statistics, Python					
Instructor	Prof. Emma Zhu					
Contact Information	Office: C217					
	Tele: (010)83951082					
	Email: zhuleilei@cueb.edu.cn					
Office Hour						
Learning Centre						
Grade/Section	2022IT					
Course Time/Place	2022 IT; T: 13:30-14:15; TH:8:00-9:35					
Textbook	Handout					

Reference Book

- Rachel Schutt, Cathy O’Neil. *Doing Data Science*. McGraw-Hill, O’Reilly Media, 2020.
- L. Blank. *Statistical procedures for engineering, management, and science*. McGraw Hill, New York, 1980.
- W. Feller. *An introduction to probability theory and its applications. Wiley series in probability and mathematical statistics*. Wiley, New York, third edition, 1967-1968.
- Y. G. Sinay. *Probability theory, an introductory course*. Springer-Verlag, Berlin; New York, 1992.

Course Description

Financial Data Analysis Project Practice is an advanced course for students majored in information system management. The main content is the application of data analysis of financial data with visualization skills

and complex models includes, regression, time series, clustering, classification, principle component analysis and factor analysis. Students will not only develop skills of data analysis and ability of data-driven decision making, but also scientific thinking which are all indispensable for future study and professions..

Student Learning Objectives

After completing this course, students will be able to:

Knowledge	- describe complex data analysis models; - analyze financial data using complex models; - apply R coding in financial data analysis;
Capability	- analyze financial data using proper algorithms; - develop ability of data-driven decision making; - construct the scientific thinking and mindset, include systematic thinking, logic thinking, critical thinking and strategic thinking;
Mindset	- develop the quality and morals of being objective, integrity and dedication; - criticize the world with data-driven philosophical view.

Website Source

- <https://www.cfainstitute.org/en/programs/cfa/charterholder-careers/roles/financial-data-analyst>
- <https://www.investopedia.com/terms/f/financial-analysis.asp>
- <https://www.gartner.com/en/finance/topics/finance-analytics>

Teaching Methods

This course consists of lectures, discussions, group projects, assignments, individual presentations and online activities. Students must be prepared to finish some small questions and small quiz during the class on Xuexitong application.

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 multiple-choice questions, short answer questions, essay questions, problems, preparation of financial statements and a summary of gains from a particular course. 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 within 15 minutes 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 will 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%	
Final exam		20%
Total	40%	60%

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%.

☛ 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.

Topical Course Outline

Week	Content	Platform	Homework
1	✧ Syllabus & Orientation ○ Questionnaire ○ Group discussion ○ Review of data analysis models	Classroom & XueXi tong & R studio	
2	✧ Ch1 Time series ○ Introduction to time series ○ Decomposing a time series into components ○ Develop predictive models ○ Forecast future values ○ R programing with time series ○ Summary and discussion of HW	Classroom & XueXi tong & R studio	XueXitong
3	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong
4	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong

5	✧ National Holiday		
6	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong
7	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong
8	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong
9	✧ Review and Midterm	Classroom & XueXi tong & R studio	XueXitong
10	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	XueXi tong & R studio	XueXitong
11	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong
12	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong
13	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong
14	✧ Case Analysis Practice ✧ Case Presentation ✧ Case evaluation	Classroom & XueXi tong & R studio	XueXitong
15	✧ Presentation tutoring	Classroom	
16	✧ Presentation	Classroom	
17	✧ Presentation	Classroom	

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.

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

Midterm Test	Midterm Test: 8th week
Final Exam	Final Exam: Jan 2th – Jan 16th

***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: Leilei Zhu

Department Head: Jingning Li

