

Capital University of Economics and Business

Overseas Chinese College

Course Syllabus

Year and Semester	Fall					
Course Name	AI agent					
Course Code	AI201					
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	1					
Course Hours	Total Class Hours	16	Lecture Hours	16	Experiment (Computer) Hours	0
Applicable object	☐ Freshman ☒ Sophomore ☐ Junior ☐ Senior					
	☐ Business Administration (Accounting)					
	☒ Information Management and Information Systems (Data Governance)					
Prerequisites	Fundamental of Computer Science and Management Knowledge					
Instructor	Jessie Tian					
Contact Information	Office: C217					
	Tele: (010)83951082					
	Email: tianjiangxue@cueb.edu.cn					
Office Hour	M: 15:25-17:00; T: 11:35-12:20; 13:30-14:15; 15:25-17:00;					
Learning Centre	M: 11:35-12:20; W: 14:20-15:05;					
Grade/Section	2025IT1/2025IT2					
Course Time/Place	M: 15:25-17:00/新商科战略财务及业财大数据实验室					
Textbook	Management Information Systems: Managing the Digital Firm, Global Edition (14th Edition)					

Reference Book

Database Systems Concept, Sixth Edition by Abraham Silberschatz, Henry F Korth and S, Sudarshan

Course Description

This course is for students to acquire a basic understanding about information system and the interrelationships between information system and business. In nowadays, information system has become a very decisive instrument for both enterprise and government. A well-developed and well-diffused information system could help organization to achieve a better operation, to promote R&D, and to optimize the decisions therefore to increase the competitive advantages. Basically, this course is a multi-disciplinary module which encloses management, business as well as computer science. Through studying this course, students can understand how to combine computer knowledge with business, apply the knowledge to real life, and have the ability to effectively manage enterprises and better operate companies.

Student Learning Objectives

After completing this course, students will be able to:

Knowledge:

- ♦ explain the basic concept of management information system
- ♦ describe the management information system and the methodology used to collate, record, organize and summarize the information
- ♦ identify the information technologies that can be applied into business processes
- ♦ illustrate how management information system can improve decision making

Capability:

- ♦ use the techniques and tools to design and implement information system
- ♦ analyze the management issues related with information system
- ♦ apply management system to optimize daily work

Mindset:

- ♦ establish the integrity and objectivity in workplace
- ♦ be logical, ethical, methodical, consistent and accurate
- ♦ apply critical thinking in the process of decision making

Website Source

1. <https://www.khanacademy.org>
2. <https://www.geogebra.org>

Teaching Methods

This course contains lectures, case studies, discussions, homework, quizzes, presentation and exams. Exercises and practice questions will be delivered to students as a way to test their understanding of the knowledge. This will require individual or group assignment before, in or after class.

Grade Criterion

Component	Weight	Description
Final Exam	20%	A cumulative final examination will be given based on all of the contents of the class. A minimum of 25% of the exam (5 of the 20%) will consist of questions utilizing the application of critical thinking.
Mid-Term Test	20%	A cumulative midterm examination will be given based on all of the contents of the first half of the class. A minimum of 25% of the exam (5 of the 20%) will consist of questions utilizing the application of critical thinking.
Homework	15%	Homework problems will be assigned throughout the term, including but not limited to: terminologies, research project, and reading assignments.
Quizzes	15%	There will be at least 2 quizzes during the semester. The purpose of the quizzes is to ensure that students keep up with the readings. 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. The percentage is :

		content50%+organization10%+language15%+performance25%
Participation	10%	Individuals will be asked to participate individually in questions during the semester. Students are required to meet with their teachers every week. Their 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%

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: Oct.31-Nov.4

Final Exam: Jan.9-Jan.13

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.

Textbook

Students must bring the textbook to class.

Topical Course Outline

Week	Date	Topics	Homework
9		From Chatbot to Workflow – What is an AI Agent? Chatbot vs Workflow Bot; The value of workflows – using "determinism" to ground "probability"; Coze platform tour; Start & End nodes. Practice: Register Coze; Build first workflow (Start → LLM → End): "One-sentence travel plan generator"; Compare chatbot vs workflow experiences.	A working minimal workflow Bot
10		Prompt Engineering & Bot Design – Structured prompt techniques; System Prompt design; Role-playing; Bot persona & response styling. Practice: Build "Course Review Assistant" Bot (with knowledge base upload); Compare QA quality with/without knowledge base; Prompt attack/defense challenge.	Course QA Bot with knowledge base
11		Workflow Nodes I: LLM + Plugin + Code – Three foundational nodes: LLM (calls model), Plugin (wraps APIs), Code (custom logic); Input-output relationships; Demo: same task implemented with each node type. Practice: Build "Tech News Analyst" workflow: Plugin→LLM→Code; Experience how three node types collaborate. Flow Control: Condition + Intent Recognition – Condition node (branching) – the "decision brain"; Multi-branch with AND/OR logic; Intent Recognition node – principles & usage; Branch order and priority rules. Practice: Build "Smart Customer Service Router": user input → Intent Recognition → Condition branching → different plugins per branch → aggregate output; Test edge cases.	"News Analyst" workflow (3 node types) Customer service workflow with intent routing

12		Batch Processing: Loop + Batch + Variable Aggregation – Loop node (sequential iteration); Batch node (parallel mass processing); Variable Aggregation node (merging multiple outputs); Use cases and performance differences. Practice: Build "Batch Content Generator": input multiple topics → Batch generates copy for each → Variable Aggregation collects outputs → Batch generates images → final package.	Batch content generation workflow
13		Comprehensive Workflow Project – Complex workflow patterns: multi-node composition, data flow, error handling, performance optimization; How to decompose fuzzy requirements into node sequences. Practice: Team project – Build a comprehensive workflow with 5+ node types (recommended: product price comparison / travel planner / e-commerce ticket processor); Instructor on-site coaching.	Comprehensive workflow (5+ node types) + screenshots
14		Final Project Development (I) – How to define a "good" project topic; Workflow architecture design; Project planning and team division. Practice: Teams finalize topic; Draw workflow architecture diagram (annotating all node types); Begin prototype development; Instructor coaching.	Project proposal + architecture diagram + initial prototype
15		Final Project Development (II) + Demo Day – Presentation skills; Workflow evaluation methods (accuracy, stability, efficiency). Practice: Teams finalize projects; 8-minute presentation + live Q&A; Showcase workflow node design and execution results.	Complete project + project documentation
16		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".**

Important Dates

Midterm Test	Week 9
Final Exam	Week 18 or 19 (Refer to the notice of the Academic Affairs Office)

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: _____

Department Head: **Prof. Jingning Li**

