

Hong Kong University of Science and Technology
School of Business and Management
Spring 2026

ISOM 2010 – INTRODUCTION TO INFORMATION SYSTEMS

Section L1, Tuesday and Thursday 12:00 – 13:20PM

Section L2, Tuesday and Thursday 16:30 – 17:50PM

G012, LSK Business Building

Instructor: Dongwon LEE, Ph.D.

E-mail: dongwon@ust.hk Begin subject: [ISOM2010] ...

Office: LSK Room 4036

Office Hours: By appointment only

Course website: <http://canvas.ust.hk>

Teaching Assistant: Sophie GU

TA's E-mail: imsophie@ust.hk Begin subject: [ISOM2010] ...

TA's Office: LSK Room 4048

TA's Office Hours: By appointment only

Course Description

Across virtually all industries and organizations today, Information technology (IT) and artificial intelligence (AI) are fundamentally reshaping how organizations compete, innovate, and create value. Leaders who lack a deep understanding of information systems (IS) and the strategic potential of AI-enabled data-driven decision-making will face significant competitive disadvantages. IS has evolved far beyond automating back-office functions to become central to business strategy, increasingly integrating AI, machine learning, and advanced analytics into core operations. IS now plays critical roles in competitive positioning, business process design, and the responsible governance of digital and AI technologies in the contemporary business environment.

This course provides broad coverage of technology concepts and trends underlying current and emerging developments in IT and AI, as well as fundamental principles for the effective use of IS in business organizations. There will be a special emphasis on the digital economy, e-commerce, digital platforms, business analytics, AI and big data. In addition to fundamental concepts and propositions in the IS, a number of business applications, cases, and the latest trends in today's technology and AI domain will be discussed, with a focus on how organizations can leverage these technologies for innovation and competitive advantage.

Course Materials

All the materials (e.g., lecture slides, readings, guidance) that you need will be provided through Canvas (<http://canvas.ust.hk>).

Recommended, but NOT required, textbook:

Information Systems: A Manager's Guide to Harnessing Technology (ver. 11.0), by John Gallaugher, FlatWorld, 2025.

<https://students.flatworldknowledge.com/engage/courses/2616817>

Learning Outcomes

The goal of this course is to provide you with an introduction to IT-enabled approaches to information management in business contexts. (T-Taught, P-Practiced, M-Measured)

- Upon completion of the course, students will be able to
 1. Describe how a business organization's choice of strategy and process (what the firm does and how the firm does it) and their resulting effectiveness are closely related to the firm's information management and communications capabilities (T, P).
 2. Develop a foundation to develop quantitative and analytical techniques to solve business problems with innovative perspectives that extends beyond this course (T, P, M).
 3. Analyze the core technological and business issues and identify critical factors for business decision-making (T, P, M).
 4. Evaluate information systems; examine their relations with business strategy, process, and organization (T, P, M).
- This course will also provide students with:
 1. Skills in producing professional quality business documents, delivering professional quality presentations and communicating ideas persuasively (T, P, M).
 2. Ability to lead and work effectively in a team (T, P).
 3. Proficiency in using IT applications in business and management; tools for searching, organizing and processing information using appropriate information technology and systems (T, P, M).
 4. Preparation for future careers in business and social environments that are deeply permeated with and dependent upon IT (T, P).
- We believe that an understanding of the topics covered in this course will pay subtle and unexpected dividends throughout your careers (T, P).

Evaluations

Class Participation	10%
Labs	15%
Midterm Exam	24%
Group Project	25%
Final Exam	26%
Total	100%

Class Participation (10%):

- There are three aspects of your class participation. First, be prepared and to participate in class activities (e.g., surveys, self-tests, reading assignments, online discussions) (5%). All students are expected to contribute at least occasionally. Quality of contribution is much more important than quantity. Second, students are also expected to contribute to other students learning (3%). This will be achieved during the group project presentations, where you can provide your evaluation, feedback, and suggestions to help other groups improve their project. The respective groups and the instructor will assess your inputs. Third, students are also expected to attend the invited speakers' sessions in the "Industry Week" (2%).

- To facilitate an interactive class, I may cold call students if no student voluntarily speaks up. It will be a good opportunity to hone your public speaking skill and earn your participation point.
- Absences **ONLY** can be excused with a doctor's note for an illness or a note from a university authority documenting participation in a university-sponsored activity.

Labs (15%)

The lab sessions will be 50 minutes each, and will cover from basic to advanced skills and knowledge of various business analytics applications as well as other interesting topics. In almost every lab session, there is a task that you need to complete during the lab session. You MUST attend the lab session to which you are assigned; lab instructors will ask unregistered students to leave. **You will not get credit for work done during a session for which you are not registered.** Also, content for lectures and lab sessions are non-overlapping – generally, the lecture emphasizes on managerial and strategic implications of information technology, whereas the lab sessions focus on specific technical knowledge. **Contact the TA of your lab section for all lab matters.**

Group Project (25%)

- Form a group of students to work on a project at the beginning of the semester.
- A group-based course project is intended to allow you to exercise your insights and analytical abilities to a real-life business/application.
- The group is to develop a new digital business idea using AI.
- There are three deliverables for the group project: (1) the proposal (2%), (2) the business plan (8%), and (3) the presentation (15%). I look for clarity, level of effort, and quality of content in the proposal, business plan and presentation when assigning grades.
- The groups need to apply what we discuss in class to their business ideas in the business plans.
- **Proposal:** Submit a 2-page proposal of your final project by **Mar 5 (11:59PM)** via Canvas.
- **Business Plan:** Submit an 8-page business plan (including cover page (if any), references, tables, figures, and appendices) by **May 7 (11:59 PM)** via Canvas. Format: A4, 1-inch margin on all sides, double-spaced, 11pt, Times New Roman).
- **Presentation:** At the end of the semester, prepare a business plan presentation to the class.

Typically, all members of a group would receive the same grade for the group project. However, I will moderate individual students' group project grades based on peer evaluations. Students who perform exceedingly well in their peer evaluations could receive higher group project grades than their group mates. Conversely, students who do badly in their peer evaluations would receive lower group project grades.

Mid-term (24%) and Final (26%):

- There are two exams: one mid-term (24%) and one final exam (26%). The exams will be based on the topics and related concepts taught during class.
- The midterm exam will test issues covered in the first half of the course. The final exam will cover the classes in the second half of the course.
- Review sessions will be scheduled to help you prepare for these examinations.
- All examinations will be closed book, closed notes, and no devices.
- **Do not miss the exam: there will be NO make-up for both mid-term and final examinations.**
- If you have to miss the mid-term exam due to extraordinary circumstances such as unexpected hospitalization or loss of a family member, please let me (cc TA) know as soon as you can and see

me with a doctor's note and/or verifiable and valid evidence. Only under such extraordinary circumstances, a make-up exam will be arranged for you but with ***additional essay questions or/and oral examination***. There is **NO make-up** for the final examination.

- In other cases, there will be no make-up exam if you miss the exam and you will automatically receive **0** points for that exam.
- Time conflicts with job interviews, other tests, travel plans, social obligations or any other, domestic, social, financial, religious or geopolitical situation, etc. will **NOT** be considered. There will be **NO** exceptions to this rule.

Instructor-Student Communication Policy

- If you have any course related questions, please seek help from the TA first.
- If any of your course-related questions are not solved with TA, please see me in person in my office **by appointment** (send me an email to make an appointment).
- When you send me an email, always start your email subject line with “[ISOM 2010]”
- I encourage you to use the discussion board on Canvas where you can ask questions and your classmates can provide replies.

Class Policies

- Be on time: better still, be ahead of time by at least 1 minute.
- Be visible: display your name and turn on webcam to improve class interaction
- Be professional: do not do things that you should/would not do in a professional/work setting (e.g., do not eat, do not use mobile phone)
- Any type of cross section activities/participation is not allowed (e.g. attendance, group project, exams, etc.)

Grading

Exams and assignments will be graded by the TA. If you have a question about your grade or you believe that you were graded incorrectly, please first email the TA (within 1 week of receiving the grade). If the problem is not resolved with the TA, contact the professor by writing an email (cc TA and always start your email subject line with “[ISOM 2010]”) and describing the situation and the reasons that justify your request for re-grading. In this case, the professor will re-grade the exam or assignment, and the grade may go up or down. This grade will be final. Students have one week from the date an assignment or test is returned to submit an email request for re-grading. After one week, no changes will be considered.

Late Policy

A 20% penalty will be deducted for each day or part of a day that an assignment is late. For instance, if you are 1-day late in submission, you or your group will be graded on 80% of your points for the submission. If you 2-days late in submission you or your group will be graded on 60% (reduction of $2 \times 20\%$) of your points for the submission. If you are late by 5 days, then you are better off NOT submitting the deliverable. Please prepare in advance so that you will not encounter technical difficulties that will result in your work receiving a late penalty. If you have a conflict with the due date, assignments can always be submitted early.

Academic Integrity

Academic integrity entails absolute honesty in one's intellectual efforts. UST places a strong emphasis on academic integrity and has introduced new regulations to back this up. In addition to the course content related to business ethics related to IS/IT, special attention will be put on academic integrity demonstrated when you take this course. You should be especially aware of the policies on cheating and plagiarism. Cheating is any action that violates University norms or an instructor's guidelines for the preparation and submission of assignments. Such actions may include using or providing unauthorized assistance or materials on course assignments, or possessing unauthorized materials during an examination. Plagiarism involves the representation of another's work as your own, for example: (a) submitting as one's own any material that is copied from published or unpublished sources such as the Internet, print, computer files, audio disks, video programs or musical scores without proper acknowledgement that it is someone else's; (b) paraphrasing another's views, opinions or insights without proper acknowledgement or copying of any source in whole or in part with only minor changes in wording or syntax even with acknowledgement; (c) submitting as one's own work a report, examination, paper, computer file, lab report or other assignment which has been prepared by someone else. If you are unsure about what constitutes unauthorized help on an exam or assignment, or what information requires citation and/or attribution, please ask your professor. **Violations may result in the failure of the assignment, failure of the course, and/or additional disciplinary actions.**

For more information, please visit the website at <https://registry.hkust.edu.hk/resource-library/academic-integrity>.

Class Schedule

Week	Date	Topic
1	Feb 3	Course Overview
	Feb 5	Digital Economy (I)
2	Feb 10	Digital Economy (II)
	Feb 12	Digital Economy (III)
3	Feb 17	No Class (Lunar New Year)
	Feb 19	No Class (Lunar New Year)
4	Feb 24	E-Commerce (I)
	Feb 26	E-Commerce (II)
5	Mar 3	E-Commerce (III)
	Mar 5	E-Commerce (IV)
6	Mar 10	Midterm Exam Review
	Mar 12	Midterm Exam
7	Mar 17	Digital Platforms (I)
	Mar 19	Digital Platforms (II)
8	Mar 24	Digital Platforms (III)
	Mar 26	Business Analytics (I)
9	Mar 31	Business Analytics (II)
	Apr 2	AI & Big Data (I)
10	Apr 7	No Class (Mid-Term Break)
	Apr 9	Group Project Discussion
11	Apr 14	Industry Week
	Apr 16	
12	Apr 21	AI & Big Data (II)
	Apr 23	Emerging Technology – Blockchain and Protocol Economy
13	Apr 28	Group Project Presentation (I)
	Apr 30	Group Project Presentation (II)
14	May 5	Group Project Presentation (III)
	May 7	Course Recap & Final Exam Review

*Note: Please refer to Canvas for the Lab schedule and syllabus. Contact the TA of your lab section for all lab matters.