

Hong Kong University of Science and Technology
School of Business and Management
Spring 2021

ISOM 2010 – INTRODUCTION TO INFORMATION SYSTEMS

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COURSE DESCRIPTION

In virtually every industry and every firm, information technology is driving change, creating opportunities and challenges. Leaders who fail to understand the operational and strategic importance of information systems (IS) will not be able to keep up with the pace of their competitors. IS have moved beyond the automation of back-office functions into the foreground of business strategy, and play critical roles in competitive positioning and business process design.

This course provides broad coverage of technology concepts and trends underlying current and future developments in information technology (IT), and fundamental principles for the effective use of computer-based information systems. There will be a special emphasis on e-commerce, business integration and IT management. Other topics include: hardware/software, networking, the Internet and World Wide Web (WWW), databases, security, and enterprise applications. In addition to the fundamental conceptual and propositions in the IS area, a number of business applications and cases will be discussed; the newest trend in today's technology domain will also be discussed.

Learning Outcomes

The goal of this course is to provide you with an introduction to IT-enabled approaches to information management in business contexts.

Upon completion of the course, students will be able to

(T-Taught, P-Practiced, M-Measured)

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 (OBE Goals 3, 4. T, P).
2. Form a foundation to develop quantitative and analytical techniques to solve business problems with innovative perspectives that extends beyond this course (Goals 1, 9. T, P, M).
3. Analyze the core technological and business issues and identify critical factors for business decision-making (Goals 1, 4. T, P, M).
4. Evaluate information systems; examine their relations with business strategy, process, and organization (Goal 3. 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 (Goal 2. T, P, M).
2. Ability to lead and work effectively in a team (Goal 5. 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 (Goal 7. T, P, M).

4. Preparation for future careers in business and social environments that are deeply permeated with and dependent upon IT (Goals 3, 9. T, P).

We believe that an understanding of the topics covered in this course will pay subtle and unexpected dividends throughout your career (Goal 9. T, P).

COURSE MATERIALS

Classes will include a mixture of videos, presentations, and lectures. There is **no required textbook** for this course. We will use several cases from **Harvard Business Case Collection** for discussion. Other additional readings and reference materials can be accessed through the course website. Students are expected to join the class prepared and participate in discussions.

EVALUATIONS

| | |
|---------------------|-------------|
| Class Participation | 15% |
| Labs | 15% |
| Group Project | 20% |
| Midterm Exam | 20% |
| Final Exam | 30% |
| Total | 100% |

***Late submissions of graded assignments:**

Within 24 hours after deadline: 20% score deduction

Thereafter: 0 score

Class Participation (15%): There are two aspects of your class participation. First, students are expected to participate in class activities (e.g., surveys, self-tests, reading assignments) and attend the invited speakers' sessions in the "Industry Week" (5%). In-class participation, such as raising and responding to questions, is highly encouraged; not only does it enriches your learning, but it also contributes to a more interactive environment for all. However, because not everyone will have the opportunity to voice out due to the large class size, in-class participation will not count towards your course grade.

Second, students are expected to contribute to other students learning (10%). This will be achieved during the group project discussions, where you can provide your input, evaluation and suggestions to improve the group project. Participation in the group discussion week and peer reviews will determine your score in this category.

Make-up policies: If you miss one of the attendance checks during the industry weeks, there are two possible ways to make it up. 1. Show the class one interesting video or case which relates to the most recent lecture topic and provide brief comments to get the 50% of the missing points back. 2. Volunteer a comedic gig for the last class of the semester and get all 100% of the missing points back.

Labs (15%): The class environment of the lecture (e.g., big class size, no computer access) is not conducive for teaching technical skills. Hence, there will be separate lab sessions of 50 minutes each to cover basic to advanced skills. 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 lectures emphasize managerial and strategic implications of information technology, whereas the lab sessions focus on specific technical knowledge.

Application Development Project (ADP) (20%): This is a group-based course project that is intended to allow you to exercise your insights and analytical abilities in a real-life business/application. **The group member list is due on the Feb-16.** The group is to develop a business idea for new technology (e.g., online platform, system, software, mobile application). The main deliverable is a business plan detailing the technology, the target market

and financial analysis. The groups need to apply what we discuss in class to their business ideas in the business plans. The page limit of the business plan (including cover page (if any), references, tables, and appendices) is **3 pages (A4 paper, 1-inch margin on all sides, double-spaced, 12pt, Times New Roman)**. The final business plan is **due by May 6, 2021 (11:59pm)**.

I look for clarity, level of effort, and quality of content in the business plan when assigning grades.

All members of a group would receive the same initial grade for the group project. The scores will be adjusted according to peer-reviews. Students who do badly in their peer evaluations in the group project would receive lower grades for the second part of class participation.

Mid-term (20%) and Final (30%): These are major checkpoints to ensure that you understand the key concepts that we introduce in this course. The mid-term examination will cover the Digital Economy and E-commerce topics, whereas the final examination will cover materials of the other topics. Review sessions and catch-up days will be scheduled to help you prepare for these examinations. In general, these examinations are non-technical in nature. ***If you miss the midterm exam*** for an extreme emergency, you can have the final exam grade count for both the missed midterm and the final. That one exam will thus constitute a greater portion of your course grade. This extreme emergency must be approved by the instructor before the exam date, and counting one exam twice is not a good idea!

ACADEMIC INTEGRITY

Academic integrity entails absolute honesty in one's intellectual efforts. HKUST places a strong emphasis on academic integrity and has introduced new regulations to back this up.

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 acknowledgment that it is someone else's; (b) paraphrasing another's views, opinions or insights without proper acknowledgment or copying of any source in whole or in part with only minor changes in wording or syntax even with acknowledgment; (c) submitting as one's own work a report, examination, paper, computer file, lab report or other assignments 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 following websites: <http://ugadmin.ust.hk/integrity/student-1.html>

Course Content Access and Appropriate Use Policy

Appropriate access to course materials is given for personal academic study and review purposes only. Unless otherwise stated in writing, this content may not be shared, distributed, modified, transmitted, reused, sold, or otherwise disseminated. These materials may also be protected by additional copyright; any further use of this material may violate Hong Kong copyright law. **Unethical sharing of course material on commercial websites such as CourseHero is a breach of academic conduct.** Violators of this policy will be referred to the University Legal Counsel for disciplinary purposes.

LECTURE OUTLINE

| Topics |
|--------------------------------|
| Course Overview |
| Digital Economy (I) |
| Digital Economy (II) |
| Digital Economy (III) |
| E-Commerce (I) |
| E-Commerce (II) |
| E-Commerce (III) |
| E-Commerce (IV) |
| Midterm Exam (Mar-11th) |
| Online Platforms (I) |
| Online Platforms (II) |
| Business Analytics |
| Big Data Analytics (I) |
| Big Data Analytics (II) |
| Group project |
| Industry Week (I) |
| Industry Week (II) |
| Group Project |
| Group Project |
| Group Project |
| Group Project |
| Emerging Technology: FinTech |
| Final Exam Practice |