

ISOM 4040 – Digital Strategy and Transformation

Fall 2026

Instructor Information

Instructor:	Xiaodong Yang xiaodongy@ust.hk
Office Hours:	Office: LSK 4082A By appointment through email
Teaching Assistant	Cetus Wong (imhtwong@ust.hk)
Office Hours:	By appointment through email

Course Materials

Classes will include a mixture of videos, presentations, and lectures. There is **no required textbook** for this course. Additional readings and reference materials can be accessed through Canvas.

There is some pre-reading. Course material(s) will be posted to Canvas before each class.

Course Description

This course is tailored for students aiming to achieve a profound understanding of the principles and practical applications of digital and AI transformation. It will provide students with the essential knowledge and skills necessary to lead successful digital and AI initiatives in a rapidly changing environment. Students will learn how to design and execute effective digital and AI transformation strategies that align with their organization's goals and yield measurable business results.

The course combines lectures, case studies, hands-on labs, and a simulation to explore both the foundational concepts and practical aspects of digital and AI transformation. Key topics include digital strategy principles, digital technologies, organizational capabilities and digital transformation model & roadmap.

Learning Outcomes

Upon successful completion of the course, students will be able to:

1. Comprehend the roles and impacts of digital strategy and AI transformation within organizations.
2. Understand emerging digital technologies and their business applications.
3. Design and implement organizational models and capabilities to facilitate successful digital & AI transformation.
4. Develop a comprehensive roadmap for digital and AI transformation, covering stages from pilot projects to full-scale implementation.

Course Assessment

Participation	20%
Simulation Presentation 1	6%
Simulation Presentation 2	9%
Simulation Presentation 3	15%
Peer Evaluation	10%
Final Exam	40%
Total	100%

Participation (20%): Students are expected to attend the class prepared and to participate in discussions. Students should participate by responding to the Mentimeter questions posed during class. **Attendance in in-class labs (2 labs) and presentations (3 presentations) will automatically earn participation points, and these 5 classes are included within the 20-point maximum.** Students arriving more than 15 minutes late to these 5 classes will not be marked as present for attendance purposes. Students can earn one participation point per class with a maximum of 20 points.

Simulation Presentation 1 (6%): This course includes a three-round business simulation related to AI Transformation powered by Edge AI Agents. During the simulation, student groups collaborate with a dedicated Edge AI Agent (Hermes) to advance the AI transformation plan for a mock company. In the first round, groups should present several initiatives for consideration.

Simulation Presentation 2 (9%): In the second round, student groups should present refined ideas incorporating feedback from both the instructor and their Edge AI Agent.

Simulation Presentation 3 (15%): In the final round, student groups should deliver a complete AI Transformation presentation developed in partnership with their Edge AI Agent, covering areas such as strategy, business model, governance, and other relevant topics. Evaluation criteria include: (a) strategic quality and feasibility, (b) effective integration of AI agent insights, (c) teamwork and role distribution, and (d) presentation clarity and professionalism. Detailed guidelines will be provided.

Peer Evaluation (10%): Students are expected to assess their peers' contributions to the group work related to the business simulation.

Final Exam (40%): This final **paper exam** consists of multiple-choice questions and short questions, covering all materials introduced in this course. A review session will be scheduled to help you prepare, and detailed coverage information will be provided. Students will have 1.5 hours to complete the closed-book, closed-notes exam.

Course AI Policy: You may use generative AI as a learning tool throughout this course. For designated labs involving AI agents (e.g., Working with Hermes Agent, Working with Coze Agent), active use of AI is required and assessed. In the simulation, you will actively work with AI, but you must not submit AI-generated content as your own original work.

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 are 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. Any submission made 5 days past the deadline will be awarded 0 points. 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 following websites:

<https://registry.hkust.edu.hk/resource-library/regulations-student-conduct-and-academic-integrity>

Class Schedule (Tentative)
(Tue & Thu 16:30-17:50, Sep 1– Nov 30), 6555

Week	Session	Topic
1	1-2	Introduction and Strategy
2	3-4	Digital Strategy and Digital Business Model
3	5-6	- Digital/Disruptive Technologies - In-class Lab 1 (Group): Working with Hermes Agent (Group Formed by 11:59 PM of Sep 16)
4	7-8	- Digital Technologies: Blockchain - Introduction of Simulation
5	9 (Sep 29)	Simulation Round 1 Presentation [No class Thu Oct 1 — National Day]
6	10-11	- Digital Technologies: Blockchain (cont.) - Digital Technologies: Cloud Computing
7	12-13	- Digital Technologies: Cloud Computing (cont.) - Digital Technologies: AI
8	14-15	- Digital Technologies: AI (cont.) - In-class Lab 2 (Individual): Working with Coze Agent
9	16-17	Simulation Round 2 Presentation Digital Transformation Model
10	18-19	- Digital Transformation Model (cont.) - Digital Capabilities
11	20-21	- Prep for Round 3 - Digital Transformation Roadmap
12	22-23	- Digital Transformation Roadmap (cont.) - Organizational Support
13	24-25	Simulation Round 3 Presentation and Course Review