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

ISOM 4020 INNOVATION MANAGEMENT AND TECHNOLOGY ENTREPRENEURSHIP

Section L1, Tuesday and Thursday 3:00 – 4:20PM
Rm 1005, LSK Business Building

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Office Hours: By appointment only

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

Teaching Assistant: Chao IEONG
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TA's Office: LSK Room 4048
TA's Office Hours: By appointment only

Course Description

This course explores how entrepreneurs leverage emerging technologies, including AI, data analytics, and digital platforms, to identify opportunities, design business models, and develop competitive strategies under uncertainty.

Technology-driven entrepreneurship is reshaping industries worldwide by challenging incumbents, creating new markets, and transforming traditional business models. Success requires strategic decisions on customer targeting, technology architecture, organizational design, and competitive positioning, all integrated into scalable business models. The course equips students with analytical frameworks and practical tools to address these dynamics.

The course progresses from foundational concepts to advanced strategic frameworks. Through case studies, experimentation methods, and a group project evaluating real startups, students will explore key entrepreneurial decisions such as value proposition design, business model innovation, disruptive technologies, intellectual property strategy, platform dynamics, value chain positioning, and venture scaling.

By the end of the course, students will be able to identify technology-driven opportunities, design customer-centric business models, apply advanced strategic frameworks, and present investment cases effectively.

This course prepares students for careers as technology entrepreneurs, venture investors, innovation consultants, or corporate venture leaders, equipping them with the strategic thinking and practical skills essential for success in the rapidly evolving landscape of technology entrepreneurship.

Course Materials

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

Textbook:

> *Entrepreneurship: Choice and Strategy (First Edition)*, by Joshua Gans, Erin Scott and Scott Stern, W W Norton & Co Inc.
> https://wwnorton.com/books/9781324072188

Learning Outcomes

By the end of this course, students will be able to:

1. Identify entrepreneurial opportunities arising from technological advancements and assess their potential under uncertainty
2. Design compelling value propositions and customer-focused solutions for technology-driven markets
3. Develop and test business models using experimentation frameworks and design tools
4. Apply entrepreneurial finance principles to evaluate funding strategies and craft investor-ready pitches
5. Analyze disruptive innovation patterns and develop market entry strategies against established competitors
6. Formulate intellectual property strategies that create competitive advantages in technology ventures
7. Design platform and ecosystem strategies leveraging network effects and multi-sided markets
8. Optimize value chain positioning through make/buy decisions and partnership strategies
9. Develop scaling strategies that transition ventures from early traction to sustainable growth
10. Conduct comprehensive venture analysis by integrating multiple strategic frameworks to evaluate real-world technology startups

Evaluations

Class Participation	10%
Individual Assignments	10%
Midterm Exam	25%
Group Project	27%
Final Exam	28%
Total	100%

Class Participation (10%):

- There are two aspects of your class participation. First, students are expected to participate in course activities (e.g., surveys, self-tests, reading assignments) (4%). Second, students are expected to contribute to other students' learning (6%). 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.

- 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.

Individual Assignments (10%)

Individual Assignment #1 (5%)

- Analyze the success factors of a real AI startup and practice investment decision-making
- Select one active AI technology startup that must be operational as of 2026
- Complete a full Business Model Canvas analysis
- Core Analysis Questions (1 paragraph each)
  - Success Factors: What are the company's key strategic decisions that drove its success?
  - Weaknesses/Improvements: What weaknesses or improvement opportunities do you identify in their Business Model Canvas?
  - Investment Decision: As a VC, would you invest in this AI startup? Why or why not? (at least 3 specific reasons)
- Deliverable: 2-page report (single-spaced, 12pt font) and completed business model canvas template (1 page)
- Due: **Mar 26**

Individual Assignment #2 (5%)

- Analyze real entrepreneurial decisions portrayed in media (movies, documentaries, books), evaluating their outcomes and extracting actionable insights.
- List of media will be provided on Canvas
- Choose ONE from the list of books and movies/documentaries.
- Identify specific strategic decisions made by the entrepreneur(s)
- Which strategic choice best explains the entrepreneur's most critical success or failure?
- Using what you've learned, what different strategic choice would you have made?
- As a VC, would you have invested? Why or why not?
- Deliverable: 5-page PPT slides
- Due: **April 21**

Group Project (27%)

- Each group acts as an advisor for a real Hong Kong startup. Analyze the company using course concepts and prepare a VC pitch by identifying growth opportunities and articulating the investment thesis and growth strategy to potential investors.
- Form a group of students to work on a project at the beginning of the semester.
- Founder interviews are strongly recommended for deep insights.
- Group project evaluation criteria includes each team's advisory work based on their ability to identify growth opportunities with potential for exceptional scaling using course concepts, provide clear and actionable strategic recommendations to strengthen the startup's VC pitch, demonstrate comprehensive research depth covering market dynamics, competitors, and company operations, and effectively apply key course concepts including Business Model Canvas analysis, disruptive innovation patterns, platform strategy, value chain positioning, and scaling frameworks.
- Groups will ultimately present a compelling VC pitch on behalf of the startup, articulating the investment thesis and growth strategy to potential investors.
- Deliverable: VC pitch preparation deck
- Details will be provided in class.

Mid-term (25%) and Final (28%):

- There are two exams: one mid-term (25%) and one final exam (28%). 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 4020]"
- 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 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)

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 4020]") 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 × 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. 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 https://registry.hkust.edu.hk/resource-library/academic-integrity.

Class Schedule

Week	Date	Topic
1	Feb 3	Course Overview
	Feb 5	Foundations of Technology Entrepreneurship
2	Feb 10	Sources of Entrepreneurial Opportunities
	Feb 12	Uncertainty in Technology Entrepreneurship
3	Feb 17	No Class (Lunar New Year)
	Feb 19	No Class (Lunar New Year)
4	Feb 24	Designing Value Propositions
	Feb 26	Startup Experimentation
5	Mar 3	Designing Business Model
	Mar 5	Entrepreneurial Finance
6	Mar 10	Midterm Exam
	Mar 12	
7	Mar 17	Disruptive Innovation (I)
	Mar 19	Disruptive Innovation (II)
8	Mar 24	Intellectual Property Strategy (I)
	Mar 26	Intellectual Property Strategy (II)
9	Mar 31	Platform Strategy (I)
	Apr 2	Platform Strategy (II)
10	Apr 7	No Class (Mid-Term Break)
	Apr 9	Group Project Discussion
11	Apr 14	Value Chain Strategy (I)
	Apr 16	Value Chain Strategy (II)
12	Apr 21	Scaling and Growth
	Apr 23	Group Project Presentation (I)
13	Apr 28	Group Project Presentation (II)
	Apr 30	Group Project Presentation (III)
14	May 5	Group Project Presentation (IV)
	May 7	Course Recap & Final Exam Review