



## ISOM 1380 Technology and Innovation: Social and Business Perspectives

Mondays /Wednesdays 12:00PM - 1:20PM  
Venue: Room 1014, LSK Business Building

### COURSE INSTRUCTOR

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### TA

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**Office Hours:** By appointment

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## COURSE OVERVIEW

The development of new technology and innovation plays an increasingly important role in enhancing the competitiveness of countries, firms and individuals. This course will provide an overview of the process involved in developing and adopting new technology and innovation from both social and business perspectives. Students taking this course will, in addition to learning the fundamentals of technology and innovation strategy and management, obtain related knowledge on how social, cultural, economic, and political factors can impact the development and adoption of new technology and innovation.

As innovation refers to the full process from idea generation to the successful commercial launch of the product, people seeking for successful career development should have good understanding of the technology and innovation management both from the technical perspectives and from the social and business perspectives. In this context, this course is useful for students from every school.

## COURSE GRADING POLICY

“Criterion-referencing”, not “norm-referencing” or “grading on a curve”, will be used to assign grades for this course. The grade for the course will be based on the following weight:

DISTRIBUTION	%
Class Participation	10
Mid-Term Exam	20
Group Project	30
- Presentation (10)	
- Report (20)	
Final Exam	40

*CLASS PARTICIPATION:*

Participation will be judged based on your contribution to class discussions and participation on Canvas (e.g. on the discussion questions). Attendance in class **will not** be used as a criterion for determining class participation. Points would depend on the quality of the comments made and the value added to the discussion.

#### *MID-TERM EXAM:*

The mid-term exam (**Oct 14, TBC**) will be based on the material that has been covered till the date of the mid-term exam. The exam will consist of questions which are a combination of multiple choice, true/false and essay type questions. The exam will be closed book.

#### *GROUP PROJECT:*

Students will work in groups consisting of ~6 students per group. The students will take the role of ‘technology analysts’ who will study the innovation process of a company or competitors. Each individual group is expected to meet with the instructor to get pre-approval for their project. The project will provide an opportunity to apply the concepts learnt in class. Each group is expected to do a presentation of their project and submit a report. More details about the project appear later. Peer evaluation may be done for groups that request it. Students are encouraged to form groups with students from other schools/departments.

#### *FINAL EXAM:*

The exam will be based on the material covered in the course. The exam will consist of questions which are a combination of multiple choice, true/false, essay type questions and short case analysis. The exam will be closed book.

### **COURSE MATERIAL**

- Short cases/handouts etc. to be provided in class.

### **POLICY ON GENERATIVE-AI USAGE**

Generative AI (e.g., ChatGPT) can be used in this course for all the works submitted that count towards the grade except the examinations. But you must properly cite them. If they are detected to be AI generated material and are not cited at all, this is deemed plagiarism and will be subjected to the rules and regulations of HKUST on academic integrity.

### **CLASSROOM POLICIES**

1. Please be settled in class a couple of minutes before the start of each class.
2. Please mute all mobile phones before coming to class.
3. No usage of Notebooks computers/iPads in class for purposes which are not class related

**COURSE SCHEDULE (TENTATIVE):**

#	Date	Topic	Project
1	Sep 2 (M)	1.1 Introduction to Course	
2	Sep 4 (W)	1.2 Innovation Evolution and S-Curves	
3	Sep 9 (M)	1.3 Patterns of Innovation in Different Industries	
4	Sep 11 (W)	2.1 Innovation Adoption	
5	Sep 16 (M)	2.2 Technology Ethics	
6	Sep 23 (M)	2.3 Innovation and the Impact on Labor Market	Form groups
7	Sep 25 (W)	2.4.1 Protecting Innovation: Patents	
8	Sep 30 (M)	2.4.2 Protecting Innovation: Copyrights, Trademarks and Trade-secrets	
9	Oct 2 (W)	2.5 Promoting Innovation: The Role of Public Policy	
10	Oct 7 (M)	3.1 Organizing for Innovation	Get instructor's approval for topics
11	Oct 9 (W)	Review for mid-term examination	
	<b>Oct 14 (M)</b>	<b>MID TERM EXAM (TBC)</b>	
12	Oct 16 (W)	3.2 Disruptive Innovations	
13	Oct 21 (M)	3.3 Analyzing Innovation Capabilities	
14	Oct 23 (W)	3.4 Finding Innovative Ideas	
15	Oct 28 (M)	3.5 Developing Innovations	
16	Oct 30 (W)	3.6 Agile Development -Scrum	
17	Nov 4 (M)	3.7 Lead User Innovation	
18	Nov 6 (W)	3.8 Open Innovation	
19	Nov 11 (M)	3.8 Crowdsourcing	
20	Nov 13 (W)	Project consultation	
21	Nov 18 (M)	PROJECT PRESENTATIONS	
22	Nov 20 (W)	PROJECT PRESENTATIONS	
23	Nov 25 (M)	PROJECT PRESENTATIONS	Project report due
24	Nov 27 (W)	Review for final examination	
	<b>TBA</b>	<b>FINAL EXAM</b>	

## GROUP PROJECT

### Project Key Dates:

Group formation	Sep 23
Topic selection (need to get pre-approval from instructor)	Oct 7
Project consultation	Sep 23 – Nov 25
Project presentation dates	Nov 18, Nov 20, Nov 25
Project report due	Nov 25

Students will work in groups consisting of ~6 students per group. Students are encouraged to form groups with students from other schools/departments. The students will take the role of ‘technology analysts’ who will study the **innovation process of a company**. The choice of the company is left to the groups. Each individual group is expected to meet with the instructor to get pre-approval for their project. The project will provide an opportunity to apply the concepts learnt in class to a real-life project. Each group is expected to submit a report.

Here are some guidelines for the report and presentation:

**Report (20%):** The content of the report should be based on innovative initiatives of the company, and independent analysis. Knowledge obtained in the class should be properly incorporated into the report. In addition, the report can include any other details the groups feel relevant. The approximate length of the report can be around 12-15 pages (12-point font, 1.5 spacing), excluding figures and appendix.

Assessment of the report will be based on

- i) Linkage to course material
- ii) Thoroughness in covering different aspects of innovation at the chosen company
- iii) Usage of concrete examples and explanations to support
- iv) Providing appropriate citations/references

**Presentation (10%):** Each group will do a presentation (exact time allocated for presentation to be announced later) of their project. There will be a Q&A. All students are expected to attend the class even if their groups or they are not presenting.

Assessment of the presentation will be based on

- i) Linkage to course material
- ii) Highlighting the more interesting aspects of how innovation is managed at the chosen company
- iii) Usage of concrete examples and clarity of explanations
- iv) Presentation style

**Peer Evaluation:** A peer evaluation may be conducted at the end of the course to assess the contributions of the team members working in the group

**These are some of suggested issues you can look at for the project:**

- Brief introduction of company & products
- What are the innovation capabilities of the company?
- How does the company foster innovation?
  - E.g. How is the company organized to encourage innovation? What incentives does it provide to its employees to innovate?
- What are the key processes the company follows to develop innovations?
  - E.g. What kind of market research does the company do to develop innovations? What is the product development process? How does the company minimize risks in product development? How does the company protect IP?
- What steps does the company take to get innovative ideas from outside the boundary of the company?
  - E.g. Does the company engage in Lead-user development? Does the company engage in Open Innovation or Crowdsourcing? Does it actively collaborate with other companies?