



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

Monday / Wednesday 9:00 AM - 10:20 AM  
Zoom Meeting ID: 912 2608 5804

### **COURSE INSTRUCTOR**

Dr. Jeevan Jaisingh  
jeevan@ust.hk  
LSK 4038  
+852 2358 7639

### **TA**

Sophie Gu  
imsophie@ust.hk

**Office Hours:** By appointment

**Website:** <http://canvas.ust.hk>  
(Use your ITSC account to login.)

### **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

The grade for the course will be based on the following weight:

DISTRIBUTION	%
Class Participation	15
Mid-Term Exam	30
Group Project - Presentation (15) - Report (25)	40
Individual Term Paper	15

### *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 criteria 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<sup>th</sup>**) will be based on the material that has been covered till the date of the mid-term exam.

### *GROUP PROJECT:*

Students will work in groups consisting of 5 to 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 discuss 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 detail about the project appears later. Peer evaluation may be done for groups that request for it. Students are encouraged to form groups with students from other schools/departments.

### *TERM PAPER:*

Each student will study and report on an innovation through the lens of the course concepts individually.

## COURSE MATERIAL

- Short cases etc. to be provided in class via Canvas.

**COURSE SCHEDULE (TENTATIVE):**

#	Date	Topic	Project related dates
1	Sept. 7	Introduction to course	
2	Sept. 9	Innovation Evolution and S-Curves	
3	Sept. 14	Patterns of innovation in different industries	
4	Sept. 16	Innovation Adoption	
5	Sept. 21	Innovation and the impact on labor market	
6	Sept. 23	Incentives for Innovation: Patents	Group formation
7	Sept. 28	Incentives for Innovation: Copyrights, trademarks and trade-secrets	
8	Sept. 30	Promoting Innovation: The role of public policy	
9	Oct. 5	Organizing for Innovation	
10	Oct. 7	Disruptive Innovations	Topic selection (need to get pre-approval from instructor)
11	Oct. 12	Review for Mid Term Exam	
	<b>Oct. 14</b>	<b>MID TERM EXAM (TBC)</b>	
12	Oct. 19	Analyzing Innovation Capabilities	
13	Oct. 21	Finding Innovative Ideas	
	<b>Oct. 26</b>	<b>The day following the Chung Yeung Festival</b>	
14	Oct. 28	Developing Innovations (I)	
15	Nov. 2	Developing Innovations (II)	
16	Nov. 4	Agile Development -Scrum	
17	Nov. 9	Lead User Innovation	
18	Nov. 11	Open Innovation	
19	Nov. 16	Crowdsourcing	
20	Nov. 18	Project consultation	
21	Nov. 23	PROJECT PRESENTATIONS	
22	Nov. 25	PROJECT PRESENTATIONS	
23	Nov. 30	PROJECT PRESENTATIONS	
24	Dec. 2	Review for Final Exam	Project report due
	<b>Dec. 11</b>	<b>Term Paper Due</b>	

## GROUP PROJECT

### Project Key Dates:

Group formation	Sept. 23 <sup>rd</sup>
Topic selection (need to get pre-approval from instructor)	Oct. 7 <sup>th</sup>
Project consultation	Sept. 23 <sup>rd</sup> – Dec. 2 <sup>nd</sup>
Project presentation dates	Nov. 23 <sup>rd</sup> , Nov. 25 <sup>st</sup> , Nov. 30 <sup>th</sup>
Project report	Dec. 2 <sup>nd</sup>

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 discuss 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 (25%):** 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 detail 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 (15%):** Each group will do a presentation (exact time allocated for presentation to be announced later) of their project. There will be 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 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 Crowd-sourcing? Does it actively collaborate with other companies?

**Term paper  
(15% of Grade; Individual Assignment)**

**Deadline: Dec 11<sup>th</sup>, 2020 11:59 PM (HKT)**

In this term paper each student will study and report on an innovation through the lens of the course concepts. Some questions to be looked at include:

- What is the innovation?
- Why is/was it important/relevant? How will/did it impact society? How did/can society shape the development of this innovation?
- What are the origins of this innovation? How was it developed – by companies or individuals? What other innovations/technologies prior to it did it depend on?
- What is the technology behind it? Any significant IP created?
- What factors (such as technology, market, eco-system, business model) are/were important for the success of the innovation?
- Is it potentially disruptive? If so, to whom?

The term paper should be a maximum of 2,500 words of text (12 pt. single spaced). Additionally, you may attach 1 or 2 exhibits which will not count towards the word limit.

More current innovations are preferable to older ones

Assessment of the term paper will be based on (weightage in brackets):

- i) Linkage to course material (40%)
- ii) Sufficient coverage of the areas mentioned above (30%)
- iii) Clear analysis, writing and arguments (20%)
- iv) Appropriate citations/references (10%)

Please note that we may run the submissions through some plagiarism detection software.