ISOM 1380 TECHNOLOGY AND INNOVATION: SOCIAL AND BUSINESS PERSPECTIVES

WINTER 2020

Course Instructor	Dr. Yongsuk ("Yong") KIM Dept. of Information Systems, Business Statistics, and Operations Management (ISOM)
Class Times	Tue/Thr/Fri 14:00-17:20(50), Jan 2 – 23
Class Mode	100% online (via Zoom)
Office Hours	By appointment
Email	yongskim@ust.hk
Teaching Assistant	Olivia CHAN <imolivia@ust.hk>

Course Overview and Objectives

"Most Innovations fail and companies that don't innovate die." - Chesbrough

Managing technology and innovation is essential to the survival and growth of companies, but it is a tricky business. Even well-established companies often lose their edge, finding their very existence to be threatened by their inability to manage for innovation. Clearly there is no "one best way" to manage innovation.

The course aims to meet three objectives as the following: first, this course stimulates your curiosity and broadens your perspective by posing you puzzling questions that deny some of your long-held assumptions and guiding you to think critically about them. You will understand that there is a critical gap between designing and developing innovative technologies and making them commercially successful (i.e., widely adopted); second, the course exposes you to various concepts and frameworks that will help you understand different aspects of technological innovation from a business strategy perspective; third, you will be able to apply the concepts and theoretical frameworks learned from the course to analyze the innovation of a company of your choice and propose sound and implementable recommendations to the company.

The course will be conducted online. Students are required to attend each class via Zoom (https://hkust.zoom.us/) in real-time according to the class times. Zoom allows the instructor to present his/her contents to the students and students can also do the same (under the instructor's permission) in addition to raising hands, asking questions, and answering questions.

About the Instructor

Dr. Yong Kim is a faculty member in Information Systems at the HKUST Business School. He received his doctoral degree at the McCombs School of Business at the University of Texas at Austin. He also holds a master's degree in Human Computer Interaction (HCI) from the University of Michigan at Ann Arbor. Prior to graduate studies, he worked at IBM Business Consulting Services. In his research, he investigates enterprise social media including online communities from the knowledge management and social network perspective. He also studies IT-enabled open innovation such as user innovation community and crowdfunding.

Course Materials

- We will rely on Canvas (http://canvas.ust.hk) and Zoom (https://hkust.zoom.us/) *heavily*.
- Recommended, but NOT required, textbook
    - Strategic Management of Technological Innovation (4th Ed, McGraw-Hill) by Melissa A. Schilling

Some of the activities we'll do on Canvas include (but are not limited to)

- Checking the most up-to-date course schedule and other class information (the proposed class schedule will be likely to change, depending on how the class goes)
- Accessing class notes and required readings
- Q&A (discussion forum)
- Recruiting team members for the final project

Instructor-Student Communication Policy

Feel free to email me (**please start your email subject line with "[ISOM 1380]"**). I will check and deal with class-related emails for half an hour every day during the week when I find time in the afternoon. So, I may be able to get back to you right away or a day later. Of course, you can always seek help from the TA as well.

I encourage you to use the discussion board on Canvas where you can ask questions and your classmates can provide replies.

Feedback Policy

I value getting your feedbacks on what we do in class and how I can further improve your learning. I encourage you to share your thoughts with me.

Class Policies

- Please "arrive" on time.
- Respect the views and opinions of your colleagues.

Course Requirements and Grading

Grading

Percent	Requirement	Note
1%	Self-introduction	By Jan 7 (S3) on Canvas
7%	Class Attendance	Throughout the semester
2%	Class Participation	Throughout the semester
10%	Individual write-ups (*2)	Assignment 1: By Jan 9 (S4) Assignment 2: By Jan 14 (S6)

40%	Final Group Project • Group Formation…..……..... • Presentation OR Final Report……..	 Prior to S3 (on Canvas) On Jan 21 (S9)
40%	Final Exam	On Jan 23 (S10)

Self-introduction on Canvas (1%)

Once your access to Canvas is permitted, introduce yourself to the class on the discussion board. Look for the discussion thread titled "Please introduce yourself to us!"). Please answer the following questions.

1. *Name (First Name Last Name)*
2. *Preferred name*
3. *Major(s) and school year (also school/country - if you are an exchange student)*
4. *Where are you from?*
5. *Things you love to do*
6. *One truth and one lie (or vice versa) about you*
7. *Technologies or products you are interested in*
8. *Anything else to say?*

To earn your point, you should finish introducing yourself no later than Jan 7.

Class Attendance (7%) and Participation (2%)

Although the course will be offered online, we will still meet "virtually" in real-time. I will come to class—on time—and I expect you to do the same. The TA will check your attendance regularly (i.e., by checking your log-in records or asking you to type your student ID in the chat window at some point during the class). If you miss one of the attendance checks, that's ok. You will still get a full mark (7/7). But if you miss more than once, every time you are found be absent, it will cost you one-point deduction.

Zoom allows you to actively participate in class—by raising hands to express your opinions, answering questions, and asking questions. I encourage you to be active in class.

Pre-class Preparation: 2 Short write-ups (5% each)

There are 2 short write-up assignments. Each assignment will be **up to** 1 page in length and due at the beginning of class (via Canvas). The question for each assignment can be found on the course schedule table below. In your write-up, please address the questions with your brief but well-thought-out answers. Use bullet points if needed.

Exams (45%)

There is one final exam in the last session. The exam will be inevitably an open-book, take-home exam. It will be based on the topics and related concepts taught during class. It will consist of true/false, multiple choice, and open-ended questions. You are not allowed to communicate with any student in the class during the exam time via a communication tool such as WhatsApp, WeChat, etc.

If you have (or had) to miss an exam due to extraordinary circumstances such as unexpected hospitalization or loss of a family member, please let me know as soon as you can and contact me with a doctor's note and/or verifiable, reliable, and valid evidence. Only under such extraordinary circumstances, a make-up exam will be arranged for you but with an additional *oral* examination. In other cases, there will be no make-up exam if you miss the exam. Time conflicts with job interviews, other tests, travel plans, etc. will not be considered.

Final Group Project (35%)

Group size should be 5 students per group (to be confirmed depending on the size of the class). Appoint one member of your group as your project leader. Project leader should coordinate project activities and make sure that the project goes well according to the plan. All members in the group are expected to work equally on the assignment. If needed, the contribution of individual group members will be assessed via an optional peer evaluation form. Project leader should inform me if the group faces a serious freeriding problem and is unable to solve it.

The group project topic will be introduced in the first week of class. Form your group prior to S3. Your group can choose to present your group in S9 (no report to submit) OR submit a report (but no presentation to do) by S9. The report should be a double-spaced, 12 pts, up to 15 pages including tables and references. No particular guideline on the report format.

Class Schedule (Tentative – Please refer to Canvas for the latest updates)

Each session has a module of its own on Canvas wherein you can find what to learn on that session and access assigned readings and class notes.

Session/Date	Topic
Session 1 *Jan 2*	Course Overview (including introduction to the final project) Dynamics of technological innovation
Session 2 *Jan 3*	Innovation War: The emergence of dominant designs and network effects Innovation Platform Challenge I: The chicken-and-egg problem
Session 3 *Jan 7*	Innovation Platform Challenge II: How to solve the chicken-and-egg problem
Session 4 *Jan 9*	Innovation competition and winner-take-all market Due: Assignment 1 *What should have Michelin done in order to prevent the failure of its PAX tire business?*

Session/Date		Topic
Session 5	*Jan 10*	Innovation Experimentation
Session 6	*Jan 14*	Open Innovation and Crowdsourcing <u>Due: Assignment 2</u> *What's so revolutionary about the way Threadless operates its business that generates such a high margin? Please discuss the major areas where the company saves operation costs significantly by working with its community (use bullet points with short description).*
Session 7	*Jan 16*	Disruptive Innovation I
Session 8	*Jan 17*	Disruptive Innovation II
Session 9	*Jan 21*	Group presentations
Session 10	***Jan 23***	Final Exam (online)