ISOM 3000E

DIGITAL BUSINESS STRATEGY: HARNESSING PLATFORM, CROWD, AND MACHINE

SUMMER 2021

Course Instructor	Dr. Yongsuk ("Yong") KIM Dept. of Information Systems, Business Statistics, and Operations Management (ISOM)
Class Times	July 3 – 27 (Tue/Thr/Sat) 09:00-12:20 (Zoom)
Office Hours	Immediately after class or by appointment (Zoom)
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Teaching Assistant	Ms. Adrienne LEE (imadrienne@ust.hk)

Course Overview and Objectives

This course is designed for students who want a broad understanding of the opportunities and challenges presented by the modern digital revolution undergoing our time. The three keywords that sum up the modern digital revolution are online/digital platforms, AI-driven machines, and crowds. Platforms are transforming technology, banking, logistics, media industries to name a few. A platform brings in distinct groups of ecosystem partners who are to join the platform network under the condition that doing so creates value for them. Information and communication technologies (ICT) and artificial intelligence (AI) enable and drive digital platforms, creating and nurturing networks, and facilitating value-creating matches and interactions. Instead of remaining as passive consumers, crowds actively participate in platforms as providers of contents, products, services, and social currency. The three elements are so intertwined that one can't be comprehended without the others.

Digital platform business entails a set of unique challenges that traditional product business does not face. For example, platforms inevitably run into the so-called "chicken-or-egg" problem –a situation in which no ecosystem partner wants to join the network first in the absence of other partners with whom they want to interact. Platforms often give away content and services for free instead of profiting from them. Platforms create value using resources they don't own or control (the resources are mostly from crowds) and, as a result, they can grow much faster than traditional businesses.

In this course, students will survey a full of examples of digital platforms powered by technology and crowds. We will learn about the fundamental principles at work behind the platform innovation and disruption of today and tomorrow. Students will learn through lectures, case discussion, and a group project.

About the Instructor

Dr. Yongsuk Kim 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 network and online communities from the knowledge management perspective. He also studies IT-enabled open innovation such as user innovation community and crowdfunding.

Course Materials

- Course materials will be available on Canvas
- Recommended books
  - *Machine, Platform, Crowd* by Erik Brynjolfsson, Andrew McAfee
  - *Platform Revolution* by Parker, Van Alstyne, and Choudary
  - *Business of Platforms* by Cusumano, Gawer, and Yoffie
  - *Matchmakers* by Evans and Schmalensee

Course Requirements and Grading

Grading

Percent	Requirement	Note
6%	Class Attendance	Throughout the semester
4%	Class Contribution	Throughout the semester
10%	Quiz	Throughout the semester
10%	Mini Presentation	Throughout the semester
35%	Final Group Project • Group Formation…..……..... • Presentation OR Final Report……..	 By S3 On S10
35%	Final Exam	On S11

Class Attendance (6%) and Contribution (4%)

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). Every time you miss the class, you will lose 1 point AFTER your first absence (i.e., you will not lose a point for

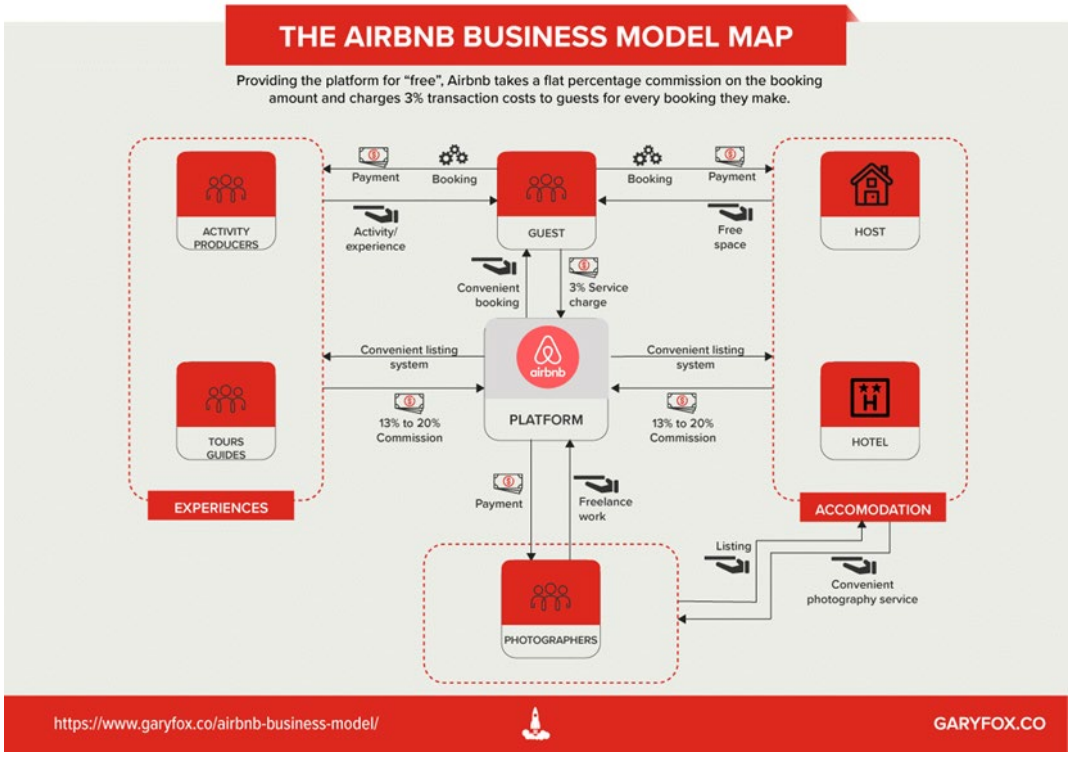
missing the class once). If you are partially present (e.g., attend late or leave early), you will lose 0.5 point.

Zoom allows you to actively participate in and contribute to class—by "raising" hands to express your opinions, or answering questions and asking questions in a Zoom Chat window. I encourage you to be active in class. Alternatively, you can use Canvas>Discussions to ask/answer questions and share relevant news and contents to be deemed participatory. I will, at times, ask you to do a quick research and submit your finding to Discussions. Your participation will be regarded as making contribution.

As a start, 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 finish introducing yourself as soon as possible by S2 (see the course outline below on the last page).

Mini Presentation (10%)

Throughout the semester (starting from **S2**), we will have 2-3 mini-presentations per class. Each presentation will be done by a student group (**2 students**). The purpose of the presentations is to expose us to a broad spectrum of digital platform businesses beyond what's covered in class. I encourage you to present a "novel" and "interesting" platform case to the class for **5-6 minutes**. Show us the business model including participants, value units, and interactions (including the flows of data, money, and products/services/contents) in a graphical format. Below is an example.



Quiz (10%)

At the end of a lecture, I will occasionally give you a quiz (two questions per session) on Canvas. One question carries 1 point. If you provide an incorrect answer, you will earn 0.5 point, instead. If you miss the quiz, you will earn none. If you miss the quiz, you can take the quiz ON THE SAME DAY for make-up, but you will earn 0.5 point for your correct answer (and none for an incorrect answer). There will be **5 quizzes** in total.

Final Group Project (35%)

Group size should be **4 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. The contribution of individual group members will be assessed via peer evaluation. Project leader should inform me if the group faces a serious freeriding problem and is unable to solve it.

The topic of the project is to run a successful online healthcare information and appointment platform in HK. There are two existing platforms, and neither is doing that well.

FindDoc (https://www.finddoc.com/en) is Hong Kong's first online healthcare information and appointment platform founded in 2012. Designed to help its users (existing patients and potential patients) find a doctor, FindDoc offers real-time appointment booking service and access to professional medical information.

FindDoc contains a database with information on over 6,000 registered doctors in Hong Kong. Information includes the doctor's specialty, qualifications, consultation fee, hospital affiliations, availability, and location – although some doctors' profiles have missing/outdated information with respect to qualifications, consultation fee, and availability.

A number of doctors do not accept online booking from FindDoc, indicating that their basic information is available on the platform, but they are not affiliated with the platform (yet).

FindDoc has a competitor called TopDoc (https://topdoc.hk/en/), which also offers a medical appointment service. TopDoc was founded in 2014 (2 years later) and it has a database of 3,000+ healthcare professionals. TopDoc only lists the detailed information of doctors who agree to take bookings from TopDoc.

In this project, your group aims to design an online healthcare information and appointment platform called HKDoc in Hong Kong. Designed to help its users (existing patients and potential patients) find a doctor in Hong Kong, HKDoc offers real-time

appointment booking service and access to professional medical information. At its core, the platform serves two sides –patients and doctors. Please add, at least, TWO MORE sides to your platform.

The final project is to design the HKDoc platform on the following four dimensions:

1) Pull:
    a. Whom to pull in which order and why?
    b. How will you overcome the chicken-or-egg problem?
    c. What's your plan to combat disintermediation?
2) Match: What data will you collect for optimal matching?
3) Facilitate:
    a. What are the services and tools designed to make interactions as smooth as possible?
    b. What rules do you impose to encourage desirable interactions and discourage undesirable ones?
    c. How does the platform control the quality of users/interactions?
4) Monetization: How will you make money?

Evaluation: Your group work will be evaluated based on the quality, depth, feasibility, and novelty of your answers. Demonstration of focused, in-depth (as opposed to broad but shallow) thoughts / analysis / recommendations is at a great advantage.

Submission date: By the beginning of S10 (July 24).

Project deliverable: Form your group **by** the third class (S3). Prepare for an up-to 20 min. long presentation. Everyone in your group must participate as a presenter (each member's presentation time can vary, though). No final report is required. Presentation slides will do. Your group can choose to (a) present live via Zoom, or (b) pre-record your presentation and submit it.

Final Exam (35%)

In the last session (S11), we will have an online exam. **You are not allowed to communicate with any student in the class while working on the exam via a communication tool such as WhatsApp, WeChat, etc.** Details on how the exam will be proctored online will be provided later.

If you miss the 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, an *oral* examination will be arranged for you. In other cases, there will be no make-up. **Time conflicts with job interviews, other tests, travel plans, etc. will not be considered.**

Course Outline

Please refer to Canvas Modules.