ISOM 4010

DIGITAL BUSINESS STRATEGY: HARNESSING PLATFORM, CROWD, AND MACHINE

SUMMER 2023

Course Instructor	Dr. Yongsuk ("Yong") KIM
	Dept. of Information Systems, Business Statistics, and Operations Management (ISOM)
Class Times	Jun 21 – Jul 14 (Mon/Wed/Fri) 14:00-17:20
Office Hours	Immediately after class or by appointment
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Teaching Assistant	TBA

Course Overview and Objectives

This course provides students with a broad understanding of the opportunities and challenges presented by the modern digital revolution. The three key elements 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 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 range of examples of digital platforms powered by technology and crowds. We will learn about the fundamental principles at work behind platform innovation and disruption today and tomorrow. Students will learn through lectures, case discussions, 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
  - **Platform Revolution by Parker, Van Alstyne, and Choudary**
  - *Machine, Platform, Crowd* by Erik Brynjolfsson, Andrew McAfee
  - *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%	Mini Presentation	Throughout the semester
35%	Final Group Project • Group Formation…...………................ • Presentation OR Final Report………..	By S3 On S10
45%	Final Exam	On S11

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

I will come to class—on time—and I expect you to do the same. The TA will check your attendance regularly. 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).

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 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. *Things you love to do*
5. *One truth and one lie (or vice versa) about you (don't tell us which is which!)*
6. *Technologies or products/platforms you are interested in*
7. *Anything else to say?*

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 mini-presentations per class. Each presentation will be done by a student or two (to be confirmed, depending on the size of the class). The purpose of the presentations is to expose us to a broad spectrum of digital platform business cases beyond what's covered in class. The presenter will follow up on the topic covered in the previous session and present how the platform of his/her choice deals with the related issue for 4-5 minutes. For instance, in S3, we will learn about the types of subsidy platform companies to employ to overcome the Chicken-and-Egg problem. In S4, presenters will share what they found from their individual research on how specific platforms go about providing subsidies.

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. 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 will be introduced in class.

Your group assignment is to address the following:
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: Any recommendation system?

3. Facilitate: How will you build and maintain trust? (Screening, Reputation, and Guarantees)
4. Monetization: How will you make money?
5. Metrics: How will you measure liquidity, match, and trust? (Using what data?)
6. Competition: How will you combat multi-homing?

Form your group **by** the third class (S3). Your group can choose to (a) present live (no report to submit), (b) pre-record your presentation and submit it (no report to submit), OR (c) submit a report (but no presentation to do). The report should be a double-spaced, 12 pts, up to 15 pages including tables and references. No particular guideline on the report format.

Important criteria:
- Specificity (Be specific! Don't be broad and shallow)
- Reasoning (Be logical. Justify your choices/recommendations)
- Feasibility (Realistic? Implementable?)
- Novelty/Creativity (Can you go beyond the obvious? Any killer idea?)

Final Exam (45%)

In the last session (S11), we will have the final exam. The final exam will be based on the topics and related concepts taught in class.

If you miss the deadline 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 (<mark>subject to change</mark>)

Week	Session	Topic	Mini-Presentations
W1	S1	What is a platform? Network Effects and Platform architecture	
	S2	Pull I: Chicken-and-Egg Problem and Solutions	
	S3	Pull II: Chicken-and-Egg Problem and Solutions	
W2	S4	Match: Data and AI	Subsidy strategy
	S5	Facilitate: Trust and Transaction Facilitation Platform Openness and Metrics	Matching strategy
	S6	Monetization and Pricing	Facilitate strategy
W3	S7	Pull III: Disintermediation Virality	Business Model
	S8	Platform Competition and Winner-take-all Market	Anti-disintermediation /multi-homing strategy
	S9	Web3 and the Future of Platforms	
W4	S10	Presentations	
	S11	Final Exam	