



ISOM 4020: Innovation Management and Technology Entrepreneurship

Fall 2022

Professor Ohchan Kwon

Class Time and Location

- Time: Tuesday & Thursday 01:30PM - 02:50PM
- Venue: Rm 2503, Lift 25-26 (87)
- Canvas: <https://canvas.ust.hk/courses/46407>

Course Overview

Thanks to recent developments in various technologies, we see more entrepreneurial opportunities than ever before. In almost all industries, a large number of entrepreneurs armed with novel technologies are challenging incumbent businesses. Existing firms are monitoring entrepreneurs' market entry closely and adjusting their current business strategies. Investors are also paying close attention to entrepreneurial activities to seize new investment opportunities. It implies that all students need to understand what makes certain technology-based ventures successful and what makes them less successful. Regardless of initial career choice, most students will be asked to engage in different types of technology-based entrepreneurship at some point in their careers.

The course focuses on the critical choices entrepreneurs need to make to take advantage of a new opportunity while facing extreme uncertainty and resource constraint. The cases and assignments offer an opportunity to apply the framework to various industries affected by emerging technologies, such as analytics, artificial intelligence, and digital platforms. After finishing the course, students will be able to identify and evaluate novel opportunities and develop business models and strategies to increase the chance of success.

This course is open to all students interested in technological innovation and entrepreneurship. The class is particularly appropriate for those seeking to:

- Become an innovation-driven entrepreneur, or work in a startup company with influence on strategy development and implementation
- Have a career as an investment professional who has to evaluate startup innovators
- Practice as a management consultant whose practice focuses on innovation-driven firms or high-tech industry segments
- Work in the "entrepreneurial side" of a large company aiming to develop new product lines based on novel technologies

Course Readings

Our overarching framework, which will be covered in Module II, will be based on the following note:

Eisenmann, Business Model Analysis for Entrepreneurs. Harvard Business School
Background Note 802-096

We will supplement this framework with various reading materials and cases. The readings will be available on Canvas after the add/drop period.

Lecture slides and notes will be available on Canvas before each class.

Course Etiquette and Attendance

Please refrain from using your laptops, mobile devices, and tablets during class other than the purpose of making notes. I am easily distracted when I notice some students use their electric devices in other business, and I believe some other students would be distracted as well. A detection of such case could reduce your final grade by up to a letter grade.

Classroom attendance is required. You will lose your opportunity to earn participation scores if you do not attend, which will negatively affect your overall grade.

Requirements, Grading, and Due Dates

Grading will be based upon the following components: 1) two in-class quizzes ($20 \times 2 = 40\%$), 2) class participation (25%), and 3) final project (35%).

1. Quiz ($20 \times 2 = 40\%$)

There will be two short quizzes during the semester, one in early October and another in early November (tentatively).

2. Class Participation (25%)

This course is an interactive, discussion-based one. Participation is a critical element of this course because exposure to diverse perspectives is a critical source of entrepreneurial insights.

I assign 20% of total scores based on your participation in case discussion. Throughout the semester, we will have six case discussion sessions. Most of your participation will be evaluated during the case discussion sessions. In each session with an assigned case, I will assign ✓+ for those who make insightful comments, and ✓ for those who make comments based on adequate understanding and efforts. ✓+ corresponds to four points, and ✓ corresponds to two points. I will not use your lowest case discussion score, so the maximum point is $4 \times 5 = 20\%$. Your participation performance will be shared after each case discussion session.

Additionally, I will assign maximum of five points based on your overall participation throughout the semester.

3. Final Project (35%)

In the team project assignment, you are required to analyze real startups using the theories and frameworks discussed in the course. By the end of the semester, your team needs to produce an about 10-slide pitch deck for a (real) startup of your choice. Most importantly, the final slide should reflect your in-depth analyses throughout the semester, which include, but not limited to, end user profiles, high-level product specification, go-to market strategy, and business model.

To facilitate your preparation, I am currently in conversation with the university's entrepreneurship center so that we can use real startups founded by our students and alumni for the project assignment. This could be a win-win arrangement as we are able to learn from real high-quality startups without worrying about generating new ideas from scratch, and startup founders benefit from our analyses. I will share more details, including timeline for deliverables, in due time.

The score will be determined by team-level performance (30%) and peer-evaluation (5%).

Communication Policy and Office Hours

Please check your emails and/or Canvas at least once a day. I will use these channels if there is any important information to share related to this course, including information on how to prepare case discussion each week.

Please feel free to contact me regarding any issues related to this course, or technology entrepreneurship more broadly. Email is the best way to contact me. Please begin your email subject with [ISOM4020] when sending one, as it helps me reply more quickly. My email address is ohchankw@ust.hk.

Course Outline and Readings – Tentative

(*) denotes required readings.

Module I. Identifying Entrepreneurial Opportunities

Class 1 **Course Overview & Logistics** **September 1 Th**

Class 2 **Who/What/When/Where/Why of Entrepreneurship** **September 6 Tu**

Class 3 **Sources of Innovative Ideas** **September 8 Th**

(*) Graham, Paul (2011), “Organic startup ideas.” www.paulgraham.com/organic.html

Agarwal, R., S. K. Shah. 2014. Knowledge sources of entrepreneurship: Firm formation by academic, user and employee innovators. *Research Policy* **43**(7) 1109–1133.

Class 4 **Dealing with Entrepreneurial Uncertainty** **September 15 Th**

*** Case: Lytro, mimeo, MIT Sloan School.**

***** September 15 – Add/Drop Period Ends *****

Module II. Entrepreneurs’ Toolkits

Class 5 **Customer Value Proposition** **September 20 Tu**

(*) Christensen, C.M., Hall, T., Dillon, K. and Duncan, D.S., 2016. Know your customers’ jobs to be done. *Harvard Business Review*, *94*(9), pp.54-62.

Hale, Kevin. “How to Evaluate Startup Ideas.” <https://www.ycombinator.com/library/6e-how-to-evaluate-startup-ideas>

Fitzpatrick, R., 2013. The Mom Test: How to talk to customers & learn if your business is a good idea when everyone is lying to you. Robfitz Ltd.

Class 6 Testing Uncertain Ideas September 22 Th

*** Case Analysis: Rent the Runway, HBS Case.**

Class 7 Profit Formula September 27 Tu

Class 8 Minimum Resources and Capabilities September 29 Th

Porter, M.E., 1985. *Competitive Advantage*. New York: Free Press. Chapter 2: The Value Chain and Competitive Advantage.

Class 9 Pitch & Module II Summary October 6 Th

(*) Carteron, Nicolas (2020). “Pitch Deck Teardown: Airbnb.” <https://medium.com/pitchdecks/pitch-deck-teardown-airbnb-df213beab2ce>

CB Insights (2021). “The Early Pitch Decks Of 25 Startups Before They Became Billion-Dollar Companies.” <https://www.cbinsights.com/research/billion-dollar-startup-pitch-decks/>

Hale, Kevin. “How to Design a Better Pitch Deck.” <https://www.ycombinator.com/library/6q-how-to-pitch-your-startup>

Hale, Kevin. “How to Pitch Your Startup.” <https://www.ycombinator.com/library/4T-how-to-design-a-better-pitch-deck>

(*) Sequoia Capital, “Writing a Business Plan.” <https://www.sequoiacap.com/article/writing-a-business-plan/>

Osterwalder, A. and Pigneur, Y., 2010. *Business model generation: a handbook for visionaries, game changers, and challengers* (Vol. 1). John Wiley & Sons.

Class 10 Quiz I & Module III Preview October 11 Tu

(*) Gans, J., Scott, E. L., & Stern, S. (2018). Strategy for startups. *Harvard Business Review*, 96(3), 44-51.

Module III. Entrepreneurial Strategy Compass

Class 11 Disruption Strategy October 13 Th

(*) Christensen, Clayton, and Michael Raynor. *The innovator's solution: Creating and sustaining successful growth*. Harvard Business Review Press, 2013. Chapter 2: How Can We Beat Our Most Powerful Competitors.

Class 12 Case Discussion: Netflix October 18 Tu

*** Netflix, HBS Case 607138-PDF-ENG.**

Class 13 Value Chain Strategy October 20 Th

*** Zebra Medical Vision, HBS Case 607138-PDF-ENG.**

Class 14 IP Strategy & Case Discussion: Getty Images October 25 Tu

*** Getty Images, HBS Case 713515-PDF-ENG.**

Levin, Peter, and Jeniffer Li. "Open Source: From Community to Commercialization."
<https://a16z.com/2019/10/04/commercializing-open-source/>

Pisano, Gary P., and David J. Teece. "How to capture value from innovation: Shaping intellectual property and industry architecture." *California Management Review* 50.1 (2007): 278-296.

Class 15 Platform Strategy October 27 Th

Edelman, Benjamin. "How to Launch Your Digital Platform: A Playbook for Strategists."
Harvard Business Review 93, no. 4 (2015): 90–97.

Class 16 Case Discussion: Beepi November 1 Tu

*** Beepi, mimeo, MIT Sloan School.**

Class 17 Module III Summary November 3 Th

Class 18 Quiz II November 8 Tu

Module IV. Acquiring Resources for Growth

Class 19	Developing Product Specs & Business Models	November 10 Th
Class 20	Venture Competitions	November 15 Tu
	<u>Guest speaker</u> – To Be Confirmed.	
Class 21	Fundraising	November 17 Th
Class 22	Scale-up & Competing against Imitators	November 22 Tu
	REF – Moore, G. (2002). <i>Crossing the Chasm</i> . Harper Business. <u>Chapters 1 & 2</u> . Masters, B. and Thiel, P., 2014. <i>Zero to one: notes on start-ups, or how to build the future</i> . Random House.	
Class 23	Final Presentations	November 24 Th
Class 24	Final Presentations (cont'd) & Course Wrap-up	November 29 Fri

(Last update: 2022-08-31)