

ISOM 4020

Innovation Management & Technology Entrepreneurship

Fall 2019

(Last update: 2019-09-03)

Class Information

- Time: Wednesday and Friday 3-4:20 p.m.
- Venue: Rm 1001, LSK Bldg

Instructors

Course Instructor: Professor Ohchan Kwon (DBA, Harvard Business School)

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- Office: Rm 4045, LSK Bldg
- Office Hour: Thursday 3-5:00 p.m.

Teaching Assistant: Olivia Chan

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- Office Hour: By appointment

Course Overview

Thanks to recent technological innovations, we are surrounded by more entrepreneurial opportunities than ever before. In almost all industries, a large number of entrepreneurs armed with novel technologies are challenging incumbent business. Existing firms are monitoring entrepreneurs' market entry closely and adjusting their current business strategies. Investors are also paying close attention to entrepreneurial activities in order 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 career.

To help them, this course provides an integrated strategy framework to start and scale technology-based ventures. The course focuses on the key choices that entrepreneurs need to make in order to take advantage of a new opportunity, while also facing extreme uncertainty and resource constraint. The cases and assignments offer an opportunity to apply the

framework to a diverse range of 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 model and strategies to increase the chance of success.

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

- Become an innovation-driven entrepreneur, or work in a start-up company with influence on strategy development and implementation
- Have a career as an investment professional who has to evaluate start-up 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 Materials

- Textbook: This course is based on an upcoming textbook *Entrepreneurial Strategy* by Joshua Gans (Toronto), and Erin Scott and Scott Stern (MIT). Chapters can be accessed through Canvas. Additional readings will be also posted before each class.
- Case Course Pack: The case course pack contains three HBS cases that we are going to discuss in Part 4. You can purchase the pack using the following link (<https://hbsp.harvard.edu/import/660515>). The cost is about 100 HKD.

Requirements, Grading, and Due Dates

Grading will be based upon the following components; 1) class participation, 2) individual case analyses, 3) mid-term exam, and 4) final group project.

Class Participation (20%)

This course is designed to be an interactive, discussion-based one. Participation is a critical element of this course as all of us learn from others' perspectives. I expect every student to come prepared, which involves reading the assigned materials and thinking about the study questions beforehand. During class, students should listen carefully to class discussion and share their ideas. I will use cold call when needed to encourage participation from everyone.

In each class, your participation will be evaluated based on ✓+/✓ basis. ✓+ is given if the comment or question is contributing significantly to the class discussion and classmates' learning. All other participation will receive ✓.

If you are not comfortable participating for any reason, please reach out to me early so we can come up with a plan that helps you. For example, I could coordinate with you on an issue for you to raise in class or a question for you to answer. You can also volunteer to open the class by introducing an interesting start-up example. However, there is no alternative to participating in class discussions.

In addition, I urge students to be respectful to other students' learning in the class. Students should do their best to attend every class and arrive on time. Using phone/send texts/send emails during class is strongly discouraged. Violating such classroom norms will increase your chance of getting cold calls in future sessions.

Individual Case Analysis (20%)

We will have six case discussions throughout the semester. Everyone is required to analyze the first case, Lytro. You are also encouraged to analyze five optional cases throughout the course. Among them, only two highest scores will be used for final grading.

To help you prepare for class discussion, I will send a survey that contains discussion questions and online polls related to the specific cases and topics. Answering the questions will not take much time once you understand the underlying framework during the lecture and finish assigned readings. The survey will be sent out one week before each session. Students should respond to the survey individually by 9 a.m., on the day that the case is discussed. Each assignment will be graded on ✓+/✓/✓- basis and returned to students within one week.

- Required case: Lytro (4%)
- Optional cases, among which you choose two: 1) Getty Images, 2) Zebra Medical Vision, 3) Netflix, 4) Ministry of Supply, 5) Beepi (8%, respectively)

Mid-term Exam (30%)

The mid-term exam is scheduled on November 13. The exam will cover materials between Part 1: Overview and Part 4: Entrepreneurial Strategy Canvas. It consists of questions which are a combination of multiple choices, true/false and essay/case type questions. The exam will be closed book. The details will be announced in mid-October.

Group Project (30%)

A group project is designed for students to apply the framework discussed in the course to real-world strategic issues that entrepreneurs face. To accomplish the goal, teams of 3 or 4 students assume the role of technology-based entrepreneurs who consider commercializing a new idea/technology. Each team uses the toolkits discussed in the course and present an integrated entrepreneurial strategy. It usually contains its value proposition, business model, main challenges and risks associated with the offering, and most critical next steps to deal with the challenges. A sample template for the group project assignment will be provided later. Teams will present their projects in the final session of the course.

Teams can choose any idea or technology to explore. For instance, they can choose an idea and technology behind a successful start-up elsewhere and consider how the team can use a similar idea in Hong Kong or the Greater China market. The goal of the project is not to come up with a novel business plan that promises a substantial economic return based on dubious assumptions. Rather, it should focus on logically analyzing the proposed value proposition through the content learned in class.

Here is a tentative timeline to help your team make progress throughout the semester:

- Team Formation: By September 20
- Value Proposition Proposal (optional; not graded): If submitted to me by October 2, then I will provide some comments by October 6
- Value Proposition Presentation (5%): On October 9, 2019
- Final Presentation Proposal (optional; not graded): If submitted to me by November 1, then I will provide some comments by November 19
- Final Presentation (10%): On November 27 and 29
- Final Project Report (15%): By December 6, 2019 (15%). It should not exceed 10 pages (12-point font, 1.5 spacing).

Other Logistics

Pre-course Survey

I will send a short survey in the first week, asking your background, career goals, and learning expectations from this class. The responses will help me design a course that maximizes your learning throughout the course and increases your chance of achieving career goals in the future.

Team Formation

Students with specific entrepreneurial ideas in mind are strongly encouraged to send me an email during the first week. They will have an opportunity to pitch their ideas during the second week and find other team members. However, it is totally acceptable, and often natural, to form a group first and explore entrepreneurial ideas to investigate.

Students who have not formed a team by September 20 may be assigned to a group based on the instructor's discretion.

Office Hours and Email Policy

I strongly encourage you to contact me regarding any issues or questions related to this course. For simple issues, email is perhaps the fastest and quickest way of communication. I am regularly checking my emails around noon and 9 p.m. every day and usually respond to the email within 24 hours.

For more serious discussion, you can see me during office hours, or before/after class. If you want to reach me outside of class and office hours, you can send me an email, and I will make arrangements for an alternate time.

Course Outline and Readings

Stars indicate assignments () and important dates (***).*

I. COURSE OVERVIEW

CLASS 1. Introduction **September 4 (Wed)**

CLASS 2. Window of Entrepreneurial Opportunity **September 6 (Fri)**

Abernathy, W. J., & Utterback, J. M. (1978). Patterns of Industrial Innovation. *Technology Review*, 80(7), 40-47.

II. VALUE PROPOSITION

CLASS 3. Opportunity Recognition **September 11 (Wed)**

Christensen, C. M., Hall, T., Dillon, K., & Duncan, D. S. (2016). Know Your Customers' Jobs to Be Done. *Harvard Business Review*, 94(9), 54-62.

CLASS 4. Choosing Your Customer **September 13 (Fri)**

Gans, J., Scott, E. L., & Stern, S. (2017). "Choosing Your Customer." Chapter 4, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

Supplementary Reading

Moore, G. (2002). *Crossing the Chasm*. Harper Business. **Chapters 1 & 2 only.**

[Marc Andreessen | The Pmarca Guide to Startups, part 4: The only thing that matters.](#)

***** Add/Drop Period Ends on September 16 *****

CLASS 5. Choosing Your Technology & Identity **September 18 (Wed)**

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

Gans, J., Scott, E. L., & Stern, S. (2017). "Choosing Your Technology" Chapter 5, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

Gans, J., Scott, E. L., & Stern, S. (2017). "Choosing Your Identity" Chapter 6, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

III. EXPERIMENTATION

CLASS 6. Uncertainty, Learning, and Experimentation September 20 (Fri)

Gans, J., Scott, E. L., & Stern, S. (2017). “Test Two, Choose One,” Chapter 13, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

Supplementary Reading

[Eric Ries: "The Lean Startup" | Talks at Google.](#)

Eisenman, T., Ries, E., and S. Dillard. Hypothesis-Driven Entrepreneurship: The Lean Start-Up, HBS Note 9-812-095.

CLASS 7. Choosing an Entrepreneurial Strategy September 25 (Wed)

Gans, J., Scott, E. L., & Stern, S. (2017). “Choosing Your Competition,” Chapter 7, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

Gans, J., Scott, E. L., & Stern, S. (2017). “These Choices Matter Together,” Chapter 8, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

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

IV. ENTREPRENEURIAL STRATEGY COMPASS

CLASS 8. Intellectual Property Strategy September 27 (Fri)

Gans, J., Scott, E. L., & Stern, S. (2017). Intellectual Property Strategy,” Chapter 9, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

Supplementary Reading

Davis, Lee (2008). “Licensing Strategies of the New Intellectual Property Vendors,” *California Management Review*.

***** October 2 (Wed): No Class; Optional Value Proposition Proposal Due *****

CLASS 9. Putting Intellectual Property Strategy to Work October 4 (Fri)

*** Optional Case Analysis: Getty Images, HBS Case 713515-PDF-ENG.**

CLASS 10. Interim Presentation: Value Proposition **October 9 (Wed)**

CLASS 11. Value Chain Strategy **October 11 (Fri)**

Gans, J., Scott, E. L., & Stern, S. (2017). “Value Chain Strategy,” Chapter 7, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

Supplementary Reading

[Ben T. Smith IV | Managing the Startup-Big Company Relationships.](#)

[Marc Andreessen | The Pmarca Guide to Startups, part 5: The Moby Dick theory of big companies.](#)

CLASS 12. Putting Value Chain Strategy to Work **October 16 (Wed)**

* **Optional Case Analysis: Zebra Medical Vision, HBS Case 619014-PDF-ENG.**

CLASS 13. Disruptive Strategy **October 18 (Fri)**

Gans, J., Scott, E. L., & Stern, S. (2017). “Disruptive Strategy,” Chapter 10, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

Supplementary Reading

<https://www.cbinsights.com/research/direct-to-consumer-retail-strategies/>

CLASS 14. Putting Disruptive Strategy to the Test **October 23 (Wed)**

* **Optional Case Analysis: Netflix, HBS Case 607138-PDF-ENG.**

CLASS 15. Putting Disruptive Strategy to Work **October 25 (Fri)**

* **Optional Case Analysis: Ministry of Supply, mimeo, MIT Sloan School.**

CLASS 16. Architectural Strategy **October 30 (Wed)**

Gans, J., Scott, E. L., & Stern, S. (2017). “Architectural Strategy,” Chapter 12, *Entrepreneurial Strategy*, mimeo, MIT Sloan School.

CLASS 17. Putting Architectural Strategy to Work **November 1 (Fri)**

*** Optional Case Analysis: Beepi, mimeo, MIT Sloan School.**

***** Optional Final Project Deliverables Due *****

CLASS 18. Pitch Deck & Business Plan November 6 (Wed)

CLASS 19. (Optional) Review for Mid-term Exam November 8 (Fri)

CLASS 20. * Mid-term Exam *** November 13 (Wed)**

V. ENTREPRENEURIAL STRATEGY AT WORK

CLASS 21. Funding & Entrepreneurial Ecosystem November 15 (Fri)

CLASS 22. Start-up to Scale-up November 20 (Wed)

CLASS 23. Being the Entrepreneur of Your Life November 22 (Fri)

[Clayton Christensen | How Will You Measure Your Life? | LinkedIn Speaker Series](#)

CLASS 24. * Final Project Presentations *** November 27 (Wed)**

CLASS 25. * Final Project Presentations *** November 29 (Fri)**

***** December 6 (Fri): Max. 10 Page Project Report Due *****