

Online Research Seminar Syllabus

1. Overview

Title	Topics in Entrepreneurial Finance		
Mode	Online lectures and mentor sessions		
Hours	4*2 hours lecture +2*2 hours research workshops+ 1*2 hours final presentation session+ 6*1.5 hours mentor sessions (conducted by mentor)		
Targeted Students	Students who are interested in economics and financial topics, with particular interest in entrepreneurship and new ventures. Basic familiarity with finance concepts.		
Prerequisites	High School Students	Required course/Knowledge	Not recommended for high-school students
		Recommended Materials for preparing for the course	N/A
	College Students	Required course/Knowledge	
		Recommended Materials for preparing for the course	None, course materials will be provided

2. Program Introduction and Objectives

<p style="text-align: center;">Course Description</p> <p>In a paragraph, please specify: What kind of program is it? What field is the program based in? What knowledge/concepts does the program include? What is the final outcome of the program (types of projects/ What did the students do to demonstrate their learning outcome, etc.)</p>	<p>Background</p> <p>Startup companies are responsible for a significant innovation in the economy, but at the same time are facing significant uncertainty and risk. Why investors are willing to provide capital to such risky and uncertain businesses? How entrepreneurs are able to attract capital? How do investors value such companies? How are they protect themselves and mitigate the risks of investing in such businesses?</p> <p>In this class we will focus on the financing of early-stage startups, which is fundamentally different from the financing of mature companies. Why is it the case? What are the different sources of capital available for entrepreneurs? Why would investors be willing to invest in such companies? We will explore various sources of capital that are available for entrepreneurs, and analyze why investors might be willing to allocate capital to such risky companies.</p> <p>Aim</p> <p>The main goal of the course is to expose students to various forms of financing instruments available for early-stage ventures and evaluate, as an investor, why to invest and how to structure the deal. The pedagogy takes a two-pronged approach: First, develop tools and concepts modeling, valuation, control, and investment decisions within an entrepreneurial context. Second, we use cases with firms at different stages along their life cycle to apply these principals in practice.</p> <p>Description</p> <p>The course combines lectures and case studies to provide a deeper understanding of the financial challenges faced by startup companies and their investors. The course will require students to carefully prepare the cases following the pre-class questions, to read and understand all materials, and to participate actively in class discussion. Constructive participation constitutes a significant portion of the grade, as well as the final research project.</p> <p>Theoretical Objectives</p> <ol style="list-style-type: none">1. Identify and explain the challenges that arise from investing in startup companies, and evaluate such opportunities.2. Understand the incentives and goals of different types of players in the ecosystem and how contracts are designed to align incentives.
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	<p>3. Understand how venture capital and other investors are thinking about valuing early-stage ventures, and what kind of securities are used to finance such companies.</p> <p>4. Evaluate the strengths and weaknesses of startup companies and understand how these affect their financing strategies.</p> <p>5. Apply these concepts and frameworks to cases of real companies.</p> <p>Practical Objectives</p> <ol style="list-style-type: none"> 1. Application of theories to practice. 2. Critical thinking 3. Argue your opinions coherently in a classroom setting 4. Prepare students to conduct further research in relation with entrepreneurial finance.
Software/Tools (if any)	N/A

3. Program Schedule

Week	Lecture	Mentor Session (lab/case study, etc.)	Assignment	Reading Materials
1	Topic	General introduction to Entrepreneurial Finance CASE STUDY: Athleta (803-045)	CASE STUDY: Mentor's own cases	Pre-class reading: Some thoughts on Business Plans (897-101)
	Detail	Understanding the link between the financing strategy and business strategy of a startup. How to explore the cash needs of a business?		
2	Topic	Valuations and Contracts in Entrepreneurial Finance CASE STUDY: Webtracker (915-543)	CASE STUDY: Mentor's own cases	Assignment 1 Pre-class reading: The Basic Venture Capital Formula (804-042)
	Detail	Explore how do investors value startup companies and how it affects ownership dilution of the founders? What kind of securities are being offered and what are the key terms in these financial contracts.		
3	Topic	Can startups use debt? Understanding venture debt CASE STUDY: Venture Debt: Western Technology Investment (817-019)	CASE STUDY: Mentor's own cases	Assignment 2 Convertible Notes in Seed Financings (813-017)
	Detail	Explore the key differences between equity and debt financing, and understand how venture debt can be useful and under which circumstances.		
4	Topic	Initial Public Offerings CASE STUDY: Square's IPO (817-054)	CASE STUDY: Mentor's own cases	
	Detail	The goal of many investors in startup companies is the exit event – that is, selling the company with profit. We will revise the initial public offering (IPO) process, in which companies are being sold to the public.		
5	Research workshops	Complete Phase-1 project milestone, present Phase-1 results in class		
6	Research workshops	Complete Phase-2 project milestone, present Phase-2 results in class		
7	<p style="text-align: center;">Final Written Abstract and Oral Presentation</p> Presentation template will be provided in week 3; each student will deliver oral presentation in class for phase-1 (week 5), phase-2 (week 6) and final presentation (week 7)			

4. Problem Sets/Written Assignments/Quizzes

Total Number of Assignments	__2__ times	
Submission Deadline	__1__ Day before next class	
Is Mentor needed to review and grade assignment?	Yes (X)	No ()
Will a standard answer be provided?	Yes (X)	No ()
Other Requirements (if any)		

5. Final Oral and Written Project

Students are encouraged to work in groups of 3. In special circumstances (number of students is not a multiple of 3), students may form a group of 2 or 4. All groups require delineation of team member responsibilities as to ensure substantially equal and fair division of effort in the class.

Project will be assigned in week 3, and students shall make and declare teaming arrangements by week 4 (2 hours before lecture 4). Project assignment will include detailed phase-1 and phase-2 week-long milestones. Project assignment will also include presentation guideline, which will be discussed in week 3. Students will present their phase-1 results in week 5, phase-2 results in week 6, and overall summary of the project in week 7. Presentations in week 5, 6, and 7 will be in accordance to the presentation guideline provided in week 3. Presentations in weeks 5, 6, and 7 will be due 10 hours before the class (to ensure that students have sufficient time to rest). In week 7, teams will also need to submit final written abstract of their project. Additionally, each student will be required to submit a paragraph of key lessons learned in the 7-week study program including the group project.

5.1 Final Project

Final Project Theme: The project will involve analyzing a startup company, using the concepts learned in class. One company will be analyzed from a case, and another will be picked by a student and discussed according to guidelines.

Final Project Format: Students are required to produce a PowerPoint presentation in weeks 5, 6, and 7, to discuss their progress and final report. Presentation template will be provided in week 3, as stated above. Additionally, each student will be required to submit a paragraph of key lessons learned in the 7-week study program including the group project.

5.2 Oral Presentation

Oral Presentation Requirements: Stay within time limits, be clear, answer questions convincingly, and follow the structure of the project presentation. Students will be provided with a presentation template (in week 3) and guidance for delivering effective presentations.

6. Suggested Future Research Fields/Direction/Topics

The class provide a quick peak into the world of entrepreneurship and the implications of raising capital to startups. Whether you are interested in becoming an entrepreneur, an investor, or join an early-stage startup, further understanding of key concepts in finance and economics will help guiding your critical thinking and analyses in this intricate and fascinating world of entrepreneurship.