Venture Capital
Course Syllabus (Summer 2018)*

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> *"We cater to two constituencies: the founders and management of private companies who have selected us as partners and the limited partners who have trusted us with their money. We want to do well by both but founders and management come first. We have learned that the only way to develop a fabulous company is one-step at a time. This only happens if the company makes wonderful products or delivers a service that thrills large numbers of customers. If that occurs the founders, management and employees of these companies prosper. It is only then that the investor deserves to be rewarded. It has to happen in that order. There are no short-cuts."*
>
> -Sequoia Capital
> Company Website, 2007

What are the goals of this course?

What do Apple Computers, Federal Express, and Google have in common? All of these companies received financing and advice from a distinct source of capital broadly defined as Venture Capital. The impact of this source of capital is considerably larger than its size. It is frequently cited as one of the main reasons why entrepreneurial activity is much higher in the United States compared to the other parts of the world. European policy makers have frequently cited lack of vibrant venture capital industry as a major drawback in promoting innovations. On the other hand popular press has demonized venture capitalist as "Vulture

* This document was prepared by Professor Sandeep Dahiya and in preparing this syllabus, Professor Dahiya has drawn heavily on similar courses offered in other universities especially the ones offered at Harvard Business School (see Professor Josh Lerner's website), University Chicago Graduate School of Business (see Professor Steven Kaplan's website), and Wharton (see Professor Andrew Metrick's website). Parts of this document are simple verbatim reproductions of material that appears in the syllabuses of above-mentioned professors.

Capitalist” seeking to hoodwink hard working entrepreneurs in giving away their companies for cheap. This course aims to increase students’ understanding of how these organizations are structured and operate, why they take the form they do, and what special challenges and opportunities this industry faces.

Who should take this course: Students seeking any of the three goals below would benefit from taking this course.

1. If you are interested in working for a venture capital organization at some point in your career.
2. If you expect to work alongside venture capitalists either as an entrepreneur or investment bankers.
3. If you expect to work as money manager who would be investing in such funds.

The course focuses on “Venture Capital Cycle” in which a typical fund raises money, invests the raised money and finally harvests the returns by selling its investments. The course consists of three distinct modules that map these distinct phases of a private equity fund. Apart from these three modules, we shall have a final fourth module that would explore Corporate Venture Capital (CVC). These modules are described below:

Module 1 Fundraising: In this module, we will examine how VC funds are raised and structured. These funds often have complex features, and the legal issues involved are frequently arcane. However, the structure of VC funds have a profound effect on the behavior of venture capital investors. Consequently, it is as important for the entrepreneur raising such capital to understand these issues as it is for a partner in a fund. The module will seek not only to understand the features of venture capital funds and the actors in the fund-raising process, but also to analyze them.

Module 2 Investing: The second module of the course considers the interactions between venture capitalists and the entrepreneurs that they finance. These interactions are at the core of what VC investors do. We will approach these interactions through a two-part framework. We first identify the critical factors that make it difficult for the types of firms backed by venture capitalists to meet their financing needs through traditional mechanisms, such as bank loans. We then consider various classes of financial and organizational responses by VCs to these challenges. This module will illustrate these frameworks with examples from a variety of industries and transactions.

Module 3 Exiting: The third module of the course examines the process through which VC investors exit their investments. Successful exits are critical to insuring attractive returns for investors and, in turn, to raising additional capital. But venture capitalists concerns about exiting investments and their behavior during the exiting process itself can some-times lead to severe problems for entrepreneurs.

Module 4 Corporate Venture Capital: In this module, we would examine how large corporations have adopted the Venture Capital model of supporting innovation. This model is usually referred to as Corporate Venture Capital. Many large corporation have tried to emulate the VC model to foster innovations. However, the challenges and rewards of corporate venture capital are very different from those of a traditional VC fund. This module would explore some of these issues.

The primary goal of this course is to **provide you with a good grasp of the venture capital cycle.** We shall investigate the internal management challenges faced by venture capital and private equity organizations, as well as their relationships with pension funds, investment managers and entrepreneurs.

The second major goal of this course is to **develop your critical thinking and problem-solving skills.** The primary tool to achieve this goal is the use of The Case-Method. This method involves assigning cases (real-life situations faced by a decision maker) to you for which you are expected to use your knowledge (from class lectures, assigned readings, etc.) to make decisions. This method is designed to help you relate the subject knowledge you acquire to case problems and to communicate it effectively (e.g. by recognizing how different ideas are related, how to build upon the comments of other students, relate their comment to discussion, etc.). You are expected to come to class prepared to defend your decisions and to discuss your analyses that support your decisions.

How will we achieve the goals of this course?

The course focuses on the application of financial theory to help make real life decisions in Venture Capital setting. I will employ the traditional approach of classroom lectures, homework assignments and exams to achieve the primary goal of ensuring that you acquire solid understanding of the VC cycle. I will also use business case studies extensively to motivate discussion of how the knowledge of specific techniques (e.g. Pre-money valuation) is useful in making business decisions (e.g. to invest or not invest in a particular company).

The course requires and applies some of the concepts and techniques learned in basic corporate finance (e.g. how to calculate IRR) and competitive strategy to the case situations.

The course assumes knowledge of corporate finance from the start; additionally some cases will require some familiarity with the techniques or concepts of option pricing.

Grade Structure

I have structured the grade structure of this course towards helping you achieve the goals of the course. The evaluation philosophy is to provide you with constant feedback. You will have an opportunity to demonstrate you understanding of key concepts every day through class participation. You will also get opportunity in a Final Exam) to show your problem solving skills. I shall also provide informal feedback if your class participation needs improvement through the module as well as actionable steps that you can take to improve your performance. My hope is that this grading structure is constructive in that it allows you to act on specific areas that can affect your final grade.

Assignment/Cases/Exam	**% of Grade**
Class Participation	30%
Home Work Assignments/In class Quizzes	20%
Final Exam*	50%
TOTAL	100%

*Details to be provided later.

Expectations

<u>Expectations for the case method</u>

The expectations for this course are influenced by the fact that this course relies heavily on the use of case studies for course content and the Harvard Business School case method teaching approach for classroom process. **Note that these expectations may differ sharply from those you have experienced with other courses at UniBasel.** If you are planning to take this course, I expect you to be committed to the "3Ps" of the student involvement in case discussions:

1. Preparation: Preparation for each class is critical, including careful reading of the assigned case and background materials, and rigorous analysis based on the assignment questions. I encourage preparation in study groups as a means for enriching the learning experience. I will assume that every student has prepared the day's assignment prior to class. If for whatever reason you are not prepared for class on a particular day, I expect you to let me know before the start of class. Each student is allowed one such "unprepared" day that will not count against the class participation grade.

2. Presence: In case method pedagogy, class attendance is critical to individual and collective learning. My expectation is that every student attends every class and arrives on time for each session. Since emergencies will arise on occasion, I expect that anyone who cannot attend class for any reason will contact me in advance if possible. Prior notice is critical since I often plan to call on specific students in connection with particular cases/class sessions in the course. Absenteeism and lateness to class count heavily against the class participation grade since they adversely affect the learning of the section as a whole.

3. Participation: Active and thoughtful class participation will be critical to your learning and the learning of your classmates. I typically cold call one student to start each class discussion and may cold call others throughout the discussion. Class participation accounts for a significant portion of the total grade in the course (30%). In evaluating class participation, I will consider both quality and frequency of contributions, with emphasis on the former. In assessing quality, I consider the following types of issues:

- Does the comment simply repeat facts from the case, or does it provide analysis that adds to our understanding of the case and its broader implications?
- Does the comment fit well into the flow of the discussion? Is it linked to the comments of others?
- Is the comment presented in a clear, compelling manner or is it confusing, repetitive or contradictory?

In making my overall assessment of class participation, the overarching criterion is "how significantly does this student's participation contribute to the learning of the section as a whole?"

Expectations for Homework Assignments

Format: All homework assignments must be turned in by the start of the class in which they are due. The homework assignments would usually be either a set of simple problems or conceptual questions related to the case. In most cases, there would be a central decision that needs to be made - You are expected to take a clear stand on the central case problem and provide a recommended solution. Even if you are ambiguous in the end, state unambiguously, why you are ambiguous and what you might do given all the information on hand.

Honor Code

You are encouraged to discuss cases and readings among yourselves as part of class preparation and review. However, all written assignments should reflect work on the part of the individual student. If you have discussed the assignment with other individuals, please indicate this by listing them individually in a footnote on the title page. YOU MUST NOT SHARE YOUR SOLVED WORK WITH OTHER STUDENT. Plagiarism is unacceptable and will be considered a grave breach of academic integrity.

Logistics: Contact Information, Textbooks, Course Calendar etc.

Key Information
You can access the course web site through the Summer School Program website.

Textbook and Course Packet
A Course reader would be available for purchase, which would include all the background reading and cases (details are provided below). I shall post the class notes and supporting excel files on Summer School Program's website for this course. You must also have a Financial Calculator and know how to use it.

The course will use Harvard Business School Publishing (HBSP) extensively. All cases needed for this course are available for purchase from Harvard Business School Publishing (HBSP) from the link provided above. The directions for purchasing the course pack are

1. You need to register on the site to create a user name if you do not already have one.
2. After you register, you MUST return to click on the link provided.

Coursepack link: **https://hbsp.harvard.edu/import/544360**

Reading and Case List

1. That Thing Venture Capitalists Do*
2. ONSET Ventures (HBS Case 9-898-154)
3. Yale University Investments Office: August 2006 (HBS case 9-807-073)
4. Private Equity Performance: Returns, Persistence, and Capital Flows (Academic paper)*
5. Note on Private Equity Partnership Agreements (HBS Case 9-294-084)
6. Accel Partners VII*
7. The Basic Venture Capital Formula (HBS case 9-804-042)
8. A Note on Private Equity Securities (HBS Case 9-200-027)
9. Term Sheet Negotiations for Trendsetter, Inc (HBS Case 9-801-358)
10. Note on Antidilution Provisions: Typology and Numerical Example (HBS case 9-805-024)
11. Metapath Software: September 1997 (HBS Case 9-899-160)
12. SAIF 2004 (HBS Case 9-805091)
13. Note on the IPO process (HBS Case 9-200-018)
14. Corporate Venture Capital Vignettes (Stanford Case E-131 Available from HBS)

*Available for download at the course website.

Course Outline – Tentative

	Date	Topic	Background Reading	Case Assignment
1	Monday, July 2, 2018	Introduction to Venture Capital	That Thing Venture Capitalists Do	ONSET Ventures (HBS Case 9-898-154)
2	Tuesday, July 3, 2018	Who Invests in Venture Capital?	Private Equity Performance: Returns, Persistence, and Capital Flows	Yale University Investments Office: June 2006
3	Wednesday, July 4, 2018	Valuation of Early Stage Firm	Private Equity Performance: Returns, Persistence, and Capital Flows	Accel Partners VII
4	Thursday, July 5, 2018	VC Deals and Terms I	Note on Private Equity Securities (HBS Case 9-200-027)	The Basic Venture Capital Formula (HBS case 9-804-042)
5	Monday, July 9, 2018	VC Deals and Terms II	Note on Antidilution Provisions: Typology and Numerical Example (HBS case 9-805-024)	Term Sheet Negotiations for Trendsetter, Inc. (HBS Case 9-801-358)
6	Tuesday, July 10, 2018	Later Stage Financings	None	Metapath Software: September 1997 (HBS Case 9-899-160)
7	Wed, July 11, 2018	VC Exits	Note on the IPO process (HBS Case 9-200-018)	SAIF 2004 (HBS Case 9-805-091)
8	Thursday, July 12, 2018	VC Exits & Corporate Venture Capital	None	Corporate Venture Capital Vignettes (Stanford Case E-131)

Daily Assignments

I have described each class session in some detail in the following pages. The case or the problem set scheduled for each class is also described. Also mentioned are the background reading that would help you solve the assigned problems/analyze the assigned case.

Class # 1 (Mon Jul 2)
Learning Goal: What is Venture Capital?

READINGS
Case: ONSET Ventures (HBS Case 9-898-154)
Background Reading: That Thing Venture Capitalists Do

STUDY QUESTIONS

1. How would you compare ONSET to a more traditional source of capital such as a Bank? (Would TallyUp care if the money came from a bank instead of a VC?)
2. Where does ONSET its money from? Why is ONSET raising another fund when they still have $22 million left to invest from an earlier fund?
3. What do ONSET's partners do? How do ONSET's partners make a living?
4. What size should the new fund be?

Class # 2 (Tue Jul 3)
Learning Goal: Who Invests in Venture Capital?

READINGS
Case: Yale University Investments Office: June 2006 (HBS case 9-807-073)
Background Reading: Private Equity Performance: Returns, Persistence, and Capital Flows, Note on Private Equity Partnership Agreements (HBS Case 9-294-084)

STUDY QUESTIONS
We shall discuss the Yale University case it is important that you read "Private Equity Performance: Returns, Persistence, and Capital Flows" and "Note on Private Equity Partnership Agreements (HBS Case 9-294-084)" before reading the case. Please be ready to discuss the questions listed below.

1. How has the investment office selected, compensated and controlled private equity fund managers? What explains the differences between its strategy in private equity with that in the other asset classes (e.g. real estate)?
2. How has the Investment office decided when to make private equity investments? What explains the differences between the strategy in private equity with that in other asset classes (e.g. real estate)?
3. How has the investment office made international private equity investments? What explains the differences between the performance of its international and domestic private equity investments?
4. How is the private equity industry changing? How could Swensen's private equity strategy go wrong?
5. Should David Swensen shift his private equity strategy?

Class # 3 (Wed Jul 4)
Learning Goal: How are VCs compensated? How do VCs value an early-stage firm?

READINGS
Case: Accel Partners VII (This is homework assignment)
Background Reading: Note on Private Equity Partnership Agreements (HBS Case 9-294-084)

STUDY QUESTIONS

We shall discuss the Accel Partners VII case. It is important that you go back and read the Note on Private Equity Partnerships again before reading the case. Please submit the answers to each of the questions listed below (this is your homework assignment). Please submit a print out of your homework assignment.

1. What is the typical incentive structure in Private Equity Partnerships (PEPs)? (3-4 sentences). Why do you think we see this structure in PEPs? (3-4 sentences).

2. Why is Accel proposing a different fee structure from the standard one? As an institutional investor, would you invest in Accel? (3-4 sentences).

3. What are the implications of the shift from a 20% carried interest and 2.5% annual management fee to a 30% carried interest and a 2.5% annual fee? In particular, what is the present value of Accel's compensation and the IRR and present value to the limited partners under the different fee structures as a function of Accel's gross returns?

4. How much better does Accel have to be than the "typical" VC fund in order to justify the greater carry? In doing this exercise, please assume that (i) the management fees stay at 2.5% for the entire life of the partnership and that (ii) Accel doesn't receive any carried interest until $500 million has been returned to LPs. Please note that these are slightly different from the exact structure described in the case; use the assumptions described below.

    - The fund has a ten-year life, with committed capital (the total amount of funds that the investors have promised to provide) of $500 million.
    - The funds are invested in four equal installments, at the beginning of the first four years of the fund.
    - The management fee is 2.5% of committed capital, payable in advance at the beginning of the year.
    - The fund's invested assets grow at a steady rate each year and the "typical" VC

fund has a growth rate of 25%.

- At the end of each of the fourth through tenth years, 20% of the value of the partnership's assets at that time is returned to the investors. Finally, at the end of the tenth year, the remaining partnership assets are distributed.
- Assume Accel does not receive its carry until the investors have received distributions equal to their committed capital ($500 million).
- Use a 15% discount rate for Accel's compensation.
- Based on your analysis for the question above and your readings in this course would you recommend Julie invests in Accel VII? Please provide a rationale for your recommendation (3-4 sentences).

Class # 4 (Thu Jul 5)
Learning Goal: How do Venture Capitalist Evaluate Investments?

READINGS
Case: The Basic Venture Capital Formula (HBS case 9-804-042)
Background Reading: Note on Private Equity Securities (HBS Case 9-200-027)

STUDY QUESTIONS
We will finish the VC valuation methodology. We shall discuss the different types of securities used by the VC, in particular we shall focus on Preferred (Straight and convertible) and Participating Convertible Preferred Stock. Please read the Note on Private Equity Securities (HBS Case 9-200-027).

1. Why do VCs use preferred stock instead of straight equity?
2. Why do VCs insist on 3-4 years vesting period for founder's stock?

Class # 5 (Mon Jul 9)
Learning Goal: What are term sheets?

READINGS
Case: Term Sheet Negotiations for Trendsetter, Inc (HBS Case 9-801-358)
Background Reading: Note on Antidilution Provisions: Typology and Numerical Example (HBS case 9-805-024); A Note on Private Equity Securities (HBS Case 9-200-027)

STUDY QUESTIONS
We shall discuss the Note on Antidilution Provisions: Typology and Numerical Example (HBS case 9-805-024). In particular we will focus on Term sheets (Trendsetter case) and study questions for Term Sheet Negotiations for Trendsetter (Assume you are one of the founders of Trendsetter.com)

1. Why do VCs use anti-dilution provisions?
2. If you were approached to invest in a later round how would you treat the anti-dilution provisions of an earlier round?
3. What are the main differences and similarities between two term sheets?
4. If you could not negotiate with either VC which term sheet, which would you prefer, why?
5. If you could negotiate which term would you like renegotiate fist?
6. Does it make difference to you if you expect trendsetter.com to grow fast or grow slowly?
7. Does it make a difference to your wealth if you if Trendsetter.com does an IPO or is acquired?

Class # 6 (Tue Jul 10)
Learning Goal: How do Venture Capitalist Evaluate Investments?

READINGS
Case: Metapath Software: September 1997 (HBS Case 9-899-160)
Background Reading:A Note on Private Equity Securities (HBS Case 9-200-027)
Supporting Excel Spreadsheet: Black-Scholes Option Value Calculator

STUDY QUESTIONS
We shall discuss the Metapath case. NOTE: There are several seeming discrepancies in this case. (1) Use $11.75m as the investment amount, not $10.75m (see p.2 of the case) (2) Use $76m as the pre-money valuation, not $75m. The case is inconsistent about this figure, as in p.1 it uses $76m, and in p. 7 it uses $75m. Since we use the $76m pre-money valuation, ignore the number of pre-existing shares (12,497,928) as appears in "Price per Share" section of Exhibit 2. (Apparently, this number excludes some pre-authorized options and is incorrect.) Instead, use $76m/$6 as the number of shares outstanding (on a fully-diluted basis) prior to this round.

Note that this pre-money valuation is the "industry-standard" pre-money valuation, i.e. it is simply the pre-money number of common shares outstanding times the per share purchase price in this round. Since we know that per share proposed purchase price is $6, and the implied pre-money is $76m, it follows that there are $76m/$6 shares outstanding prior to this round.

1. Analyze Metapath's capital structure, in particular the various forms and prices of preferred stock from the multiple previous rounds of financing. How has this capital structure affected the offer from Robertson & Stephens (RSC)? How would RSC's participating preferred interact with the other tranches of preferred stock?
2. (This question requires knowledge of option Pricing using Black-Scholes Formula - Try to think through the issues even if you can not do the calculations). The term sheet (Exhibit 2) gives the Series E investors participating preferred stock at $6 per share. Hansen tried to negotiate the partcipation feature away by offering "normal" convertible preferred at $5.50 a share, but RSC declined. Should Hansen offer an even lower price? At what price should RSC accept instead of taking the participation option? To answer these questions, start with the simplifying assumption that Metapath will definitely liquidate through a private sale and not an IPO. You can assume that the volatility of Metapath's value is 30% per year, the maximal time before liquidation is 10 years, the proposed valuation of $87.75 million is "fair", and the ten-year interest rate is 6.21%.
3. Given the competing offers from RSC (Exhibit 2) and CellTech (Exhibit 3), what should Hansen (and the Series A-D investors) do?

Class # 7 (Wed Jul 11)

Learning Goal: How do Venture Capitalist Exit Investments?

READINGS
Case: SAIF 2004 (HBS Case 9-805091)
Background Reading: Note on the IPO process (HBS Case 9-200-018)

STUDY QUESTIONS

We shall discuss the SAIF 2004 Case. Please read the “Note on IPO process” and “Corporate Venture Capital Vignettes” as it would help you greatly in analyzing the case.

1. How does VC in China differ from, say, Silicon Valley? What aspects of the Shanda transaction and due diligence feel unique to China?
2. Given Shanda’s performance, was the company well priced? If usage had peaked at 500,000 peak concurrent users, would you still think so (refer to Exhibit 9)?
3. Why has the investment banker demanded that the offering price be cut? How far would you be willing to cut the offering price to complete the offering (refer to Ex.11 and 12)?

Class # 8 (Thu Jul 12)
Learning Goal: Introduction to Corporate Venture Capital

READINGS
Case: Corporate Venture Capital Vignettes (Stanford Case E-131)
Background Reading: Corporate Venture Capital Vignettes (Stanford Case E-131)

STUDY QUESTIONS
We shall discuss the "Corporate Venture Capital Vignettes"
Prepare the Study questions provided on the last page of the case "Corporate Venture Capital Vignettes"