

University of Pennsylvania - The Wharton School

Venture Capital and the Finance of Innovation

FNCE 250-001 (UGRAD), FNCE750-001 and 002 (MBA), TThu 10:30 and 1:30
SHDH 351
Fall 2007

Andrew Metrick, Associate Professor of Finance

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Office Hours: Tuesdays 3:30 – 5:00 or by appointment. Please email suggested times.

Course webcafé at <http://webcafe.wharton.upenn.edu/eRoom/fnce/vcfi>

Teaching Assistants:

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SUMMARY

The course covers the finance of technological innovation, with an emphasis on the quantitative methods useful for venture capital investing. The primary audience for this course is finance majors interested in careers in venture capital or in R&D-intensive companies in health care or information technology. There are five homework assignments, two quizzes, and a final (Thursday, 12/13, 6 – 8PM).

MY GOALS FOR THIS COURSE (in order of importance)

- 1) To help students get a deeper understanding of finance, in all its glory.
- 2) To teach and analyze a rigorous framework for making investment decisions about high-technology projects.
- 3) To provide students with institutional background, specialized vocabulary, and important facts about the venture capital industry.

MATERIALS

The main text is my book *Venture Capital and the Finance of Innovation* (Wiley, 2007), which is available at the bookstore. (New copies are slightly cheaper on Amazon.com.) All other assigned readings will be available on the webCafé. The cost of additional handouts distributed in class will be billed separately at the end of the semester. All spreadsheets and materials handed out in class (except copyright items) will be posted after class on the course webCafé.

FORMAT

Students will form into self-selected two- or three-person teams (“partnerships”) at the beginning of the semester. The homework assignments will be done in these teams, with teams staying constant for the whole semester.

GRADING

There are three components to the grading, for a total of 200 points:

Homeworks (10 points each, 50 points total): Quantitative assignments done by teams. Assignments are due at the *beginning* of class on the dates given in the course schedule. Late assignments will receive no credit.

Quizzes (25 points each, 50 points total): In-class quizzes on 10/11 and 11/13. The morning and afternoon sections will be given different tests.

Final Exam (100 points): Thursday, December 13, 6:00 PM to 8:00 PM.

This closed-book exam will cover material from the whole semester, with an emphasis on material covered after the second quiz. This exam is required. If you absolutely will not be able to take the exam on campus on 12/13, then please drop the class.

Important Note: I am sensitive to the fact that the fall semester is a busy recruiting season. I have tried to design the syllabus to avoid conflict with the most important recruiting times, but it is simply impossible to avoid all recruiting conflicts. I will not grant extensions or permission to miss assignments because of recruiting. I have tried to manage this in the past and it just leads to a big mess. The only acceptable reason to miss assignments or exams is an illness or a family emergency. If this occurs, please contact your Wharton Division office and they will give me an “official” excuse. If this occurs on homework assignments, then I will give an extension. If it occurs for a quiz, then I will add the weight (25 points) to the final (total = 125 points). (You should try to avoid this, because the quizzes will be easy and the final will be hard.) If you miss the final then you will take a makeup exam in January during the first week of the spring semester.

SCHEDULE

Note: Readings from *Venture Capital and the Finance of Innovation* are given as “VCFI, Chapter X”. All other readings are available on the webCafé. On dates with a guest speaker we will NOT have a regular class meeting.

I. Introduction

9/6 – Introduction to VC

Reading: VCFI, Preface and Chapter 1

9/11 – VC Players

Reading: VCFI, Chapter 2

9/13 – VC Returns

Reading: VCFI, Chapter 3

9/18 – The Cost of VC

Reading: VCFI, Chapter 4
SEATING CHART DAY

9/20 – The Best VCs

Due: **Homework #1 (VC Returns)** and Partnership Agreements

Reading: VCFI, Chapter 5
Accel VII (Available on webCafé)

9/25 – VC Around the World

Reading: VCFI, Chapter 6

9/26 (Wednesday) – GUEST SPEAKER: 4:30 pm, Room TBA

Michael DeRosa, Managing Director, DFJ Element

9/27 – The Analysis of VC Investments

Reading: VCFI, Chapter 7

10/2 – Term Sheets

Reading: VCFI, Chapter 8

10/4 – Preferred Stock

Reading: VCFI, Chapter 9

10/9 – The VC Method

Reading: VCFI, Chapter 10

Due: **Homework #2 (Term Sheets)**

10/11 – **QUIZ #1**

10/16 – NO CLASS, Fall Break

10/18 – GUEST SPEAKER: 3:30 PM: **SHDH 350**

Ed Mathias, Managing Director, The Carlyle Group

10/23 – DCF Analysis of Growth Companies

Reading VCFI, Chapter 11

10/25 – Comparables Valuation

Reading: VCFI, Chapter 12

10/30 – Options in VC

Reading VCFI, Chapter 13

Due: **Homework #3 (Total Valuation)**

11/1 – The Valuation of Preferred Stock

Reading: VCFI, Chapter 14

11/6 – GUEST SPEAKER: 3PM: **SHDH 350**

Izhar Armony, Partner, Charles River Ventures

11/8 – Later-Round Investments

Reading: VCFI, Chapter 15

11/13 – **QUIZ #2**

11/15 – R&D Finance

Reading: VCFI, Chapter 19

11/20 – GUEST SPEAKER 4:30 PM: **HH G06**

Brenda Gavin, Partner, Quaker BioVentures

Due: **Homework #4 (Partial Valuation)**

11/22 – NO CLASS, Thanksgiving

11/27 – Real Options

Reading: VCFI Chapter 21

11/29 – Game Theory

Reading: VCFI Chapter 23

12/4 – R&D valuation

Reading: VCFI Chapter 24

12/6 – Lecture: Summary and Review: What have we learned?

Due: **Homework #5 (R&D Valuation)**

12/13 – FINAL EXAM

6PM to 8PM, Rooms TBA

PARTNERSHIP AGREEMENTS

To be handed in with Homework #1

Each student in the class must join one (and only one) partnership. Partnerships must have either two or three members. *There will be no exceptions to these rules, and partnerships will not be allowed to be broken during the semester.* Please hand in one agreement per partnership along with your Homework #1. Students who are not members of complete partnerships must stay after class on 9/20 so we can build some partnerships. It is possible that some two-person partnerships would have to accept a third member from this group.

In this course, partnerships are expected to work as a team, and they may divide up the work any way that they please. **Work may not be shared across partnerships.** Each partnership must do all of their own work, without using any materials from other students. By signing this partnership agreement, you are agreeing to abide by these rules.

Name (Print)

Signature

Partner #1

Partner #2

Partner #3