B8128 Healthcare Investment and Entrepreneurship – HCIT, Services, Biotech – Spring 2015 (A-Term); Wed: 2:15 to 5:30pm

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Office Hours: by appointment
TA: TBD
Special contribution: Ezra Mehlman ‘11, Health Enterprise Partners.

Course Overview

This course analyzes the unique characteristics and strategies of investing in the healthcare sector from the perspectives of venture capital firms investing in early-stage healthcare enterprises, entrepreneurs creating and managing such business entities, and private equity firms seeking to build value-creating health care platforms.

The course is focused on innovative business models of early to mid-stage healthcare services companies (payers, providers, HCIT firms) that improve quality of patient care, lower costs, and facilitate access to such services, as well as the opportunities and challenges of early-stage biotechnology companies discovering and developing novel compounds. It considers how investors and entrepreneurs can assess, value and manage the inherent risks to succeed in this large, complex, and dynamic sector. Sectors that are highly fragmented, complex, and inefficient such as healthcare create attractive business and investment opportunities for sophisticated investors and entrepreneurs.

The course will also highlight innovations in the HCIT field, how payers, providers, and manufacturers are applying such technologies, unique environmental, competitive and regulatory issues healthcare entrepreneurs face in this space, and key investment considerations. This course will address these issues through a mixture of lectures, case studies, and guest speakers (investors and entrepreneurs) from the healthcare sector.

Areas to be discussed in this course include:

- Unique challenges in assessing risk, valuing and investing in the healthcare services and biotechnology sectors (government regulation, pricing/third-party reimbursement, utilization trends, cost-effectiveness analyses, provider and consumer adoption of new technology, public policy, etc.)
- Unique issues confronting entrepreneurs in this space including creating a sustainable business model, defining the market and its competitors, scale-up opportunities, constructing the Board & management team, securing funding sources, and exit options.
- Understanding the different markets for HCIT product and services, including consumer engagement, aging-in-place, and care coordination/population health.
- How life science venture investors evaluate novel, and inherently high risk, biopharmaceutical compounds and technologies.
- Assessing winners and losers in this space, with case studies to illustrate examples of both.

**Connection to the Core**

The learning in this course will utilize, build on and extend concepts covered in the following core courses:

<table>
<thead>
<tr>
<th>Core Course</th>
<th>Connection with Core</th>
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<tbody>
<tr>
<td>Corporate Finance</td>
<td>1. Time Value of Money</td>
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<td>2. Risk</td>
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<td>3. Firm Valuation Model</td>
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<tr>
<td>Decision Models</td>
<td>1. Decision Making Under Uncertainty and Risk</td>
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<td>2. Sensitivity Analysis</td>
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<td>3. Modeling Competitive Effects</td>
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<td>4. Modeling in Practice</td>
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<tr>
<td>Managerial Economics</td>
<td>1. Analyzing Complex Decision-making Under Uncertainty</td>
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<td>Managerial Statistics</td>
<td>1. Modeling Uncertainty: Random Variables, Distributions,</td>
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<td>Making Decisions Under Uncertainty</td>
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<tr>
<td>Marketing Strategy</td>
<td>1. Company analysis</td>
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<td>2. Competitive Analysis</td>
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<td>3. Market Penetration and Marketing Strategy</td>
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**Format and Approach**

This course will present a program which is intellectually stimulating and challenging in a short time frame. Class participation will be critical for the students, and we will constantly seek to relate the information and ideas discussed in the classroom to issues currently confronting companies, investors and entrepreneurs in this sector. **Understanding of, or experience in, the healthcare sector will be highly valuable. Students need to attend the first class session to understand material covered later in the course.**

**Materials, Classroom, Ground Rules**

Certain readings will be distributed in class or posted on Canvas. We will try to have lecture notes available in advance of each class (subject to guest speaker preference). It is important that you attend all classes, arrive on time, and give speakers and your fellow classmates your full attention. If you cannot attend a specific class or
have to arrive late let Prof. Cramer know in advance by email. Please refrain from using laptops, iPads, cellphones, etc. in class.

Course Requirements and Evaluation

Class Participation (25%): It is important that students take an active role in classroom activities and discussions and come fully prepared. The class participation grade will reflect class attendance and the quality of the student’s involvement in class activities and discussions.

Midterm Assignment (25%): For a mid-term writing assignment, students will be given a case study or questions for their written analysis and recommendations. This 2-3 page paper (plus exhibits) should summarize your recommendations to a decision-maker involved in the situation and your analysis supporting that recommendation.

Final Paper/Analysis (50%): The course will include a final written analysis on a case study or series of questions pertaining to the course material. The paper will be approximately 3-5 pages, excluding exhibits.

Class Schedule and Topics

The following is the schedule of topics (Note: specific dates, topics and speakers will vary based on availability).

Jan. 28th Course Introduction, Industry Overview, Investor Considerations
- Review course syllabus, class sessions, and course requirements/evaluation.
- Overview of the healthcare delivery system in the U.S., including funds flow, allocation of healthcare spend, and key players and their incentives.
- Identification and review of key sub-sectors within healthcare services and HCIT space.
- Unique challenges of investing in healthcare sector (government regulation, pricing/third-party reimbursement, utilization trends, cost-effectiveness analyses, physician & consumer adoption of new technology, public policy/healthcare reform, etc.)
- Spectrum of healthcare venture capital and private equity investors -- overview of VC/PE firms’ approach and strategies in identifying and evaluating attractive healthcare investment opportunities, and key investment themes.

Investment Case Studies: Healthcare Services and HCIT

Feb. 4th Sourcing, Evaluating and Executing Deals; Case Study (eVariant)
- Views on risk assessment and valuation in the healthcare sector, including pragmatic approach to “thinking like an investor”.
- Evaluative framework for sourcing and assessing deals, including understanding market risk, product/technology risk, and execution risk.
- Valuing healthcare services/HCIT companies.
Case Study: eVariant (Farmington, CT)
- Market/product overview, value proposition, competition, go-to-market strategy, capital formation, scale-up/growth strategy, etc.
- Key opportunities and challenges, and lessons learned (entrepreneur perspective).
- Investment thesis, risk and valuation assessment, exit options (investor perspective)
- Guest speaker: Bill Moschella, Cofounder & CEO, eVariant

Feb. 11th Case Study: Privia Health (Arlington, VA)
- Market/product overview, value proposition, competition, go-to-market strategy, capital formation, scale-up/growth strategy, etc.
- Key opportunities and challenges, and lessons learned (entrepreneur perspective).
- Investment thesis, risk and valuation assessment, exit options (investor perspective)
- Guest speaker: Jeff Butler, Founder, Chairman & CEO, Privia Health

Case Study: TBD
- Market/product overview, value proposition, competition, go-to-market strategy, capital formation, scale-up/growth strategy, etc.
- Key opportunities and challenges, and lessons learned (entrepreneur perspective).
- Investment thesis, risk and valuation assessment, exit options (investor perspective)
- Guest speaker: TBD

Feb. 18th Healthcare Start-Ups – Incubators, Angels, Entrepreneurs
- Role of incubators and angels in supporting healthcare start-ups.
- Business themes in today’s healthcare startups (HCIT, services).
- Perspective of winning strategies and common pitfalls of healthcare start-ups in this space. Case studies/examples.
- Guest speaker(s): Halle Tecco, Cofounder and Managing Director, Rock Health; healthcare entrepreneur TBD

Feb. 25th Private Equity’s (Growth Equity) Investment in Healthcare Sector
- Investment selection, due diligence, risk assessment, capital structuring, valuation and leverage, competition from strategic buyers, relationship building, value-creating strategies, private vs. public, exit options, etc.
• Case study TBD
• Guest speaker: Jonathan Korngold, Managing Director, General Atlantic LLC; adjunct professor, Columbia Business School.

Investment Case Studies: Early-Stage Biopharmaceuticals

Mar. 4th  Investing in, and Managing, Early-Stage Biopharmaceutical Companies

• Current environment for biopharmaceutical product development and commercialization.
• Building a management and scientific team.
• Access to capital/ funding strategies (including working with VCs).
• Partnering strategies to access R&D and commercial infrastructure.
• Assessing risk and valuation methodologies.
• Exit options/strategies.
• Case studies: TBD.

  Guest speaker: Life science VC or biotech executive

Course Wrap-Up; Review Final Assignment