Course Director:
Stephanie Marrus, MA MBA, Director, Entrepreneurship Center and Senior Lecturer, UCSF

Advisory Committee:
Tania Fernandez, PhD, Founder and CEO, Dreamcatcher Ventures
Howard Edelman, CEO, Advanced Resin Therapeutics
Philippe Nore, MSc, MBA, CEO, MiNDERA
Chris Meda, MS, Chief Business Officer, IncellDx
Faz Bashi, MD, Life Science Angels

Location: Genentech Hall, Mission Bay Campus, UCSF, Room N-114

Dates: January 25 to April 12. Thursday evenings 5-7:30pm plus two Mondays

Dropbox for class slides: Will be set up

Office Hours
Weekly Office Hours are mandatory for the first 3 weeks and then by request.

Course Objective
This course is about starting and growing new life science/healthcare (LS/HC) ventures that have the potential to scale to a significant enterprise that can impact human healthcare. Our audience is anyone at UCSF including students, post docs, residents, faculty and staff; graduate students at Berkeley and Stanford; alums from those institutions and the general life science/healthcare business community. We welcome people with diverse backgrounds including MBAs, engineers and computer scientists to augment our scientific/clinical skillset at UCSF. The class is leveled for science/technical/clinical participants with no formal business background.
Startup 101 focuses on the specific characteristics and challenges of a LS/HC venture as distinguished from Tech. We include all types of LS/HC products and services -- therapeutics, medical devices, diagnostics, research tools and digital health.

You will learn how to assess a concept or product in the framework of a business opportunity. This includes assessing whether an idea has market appeal (product/market fit), figuring out a business model, determining the market potential and understanding the key elements of a successful venture. You will learn who your prospective customers are and how to interview them for feedback on your idea. You will understand what is required to access capital and how to source investors who may invest in an early stage company. You will experience the entrepreneurial mindset, solve problems, change plans as you gain more information and develop a network of connections.

Ideas can come from anywhere – from the work you perform, your reading, your knowledge of a field or experience in engaging with the healthcare system as a professional or a patient. You will develop a business plan that includes the key elements required to create a commercial business.

This course will give you the knowledge to create a high-potential, for profit science-based commercial enterprise. Our emphasis is on ventures that are scalable and can solve important healthcare problems. (This is not the right course for you to learn how to establish a pharmacy or a dental practice.) You may use the skillset you learn here to start a company, join a startup team, innovate within a large company or become an investor.

Entrepreneurship research shows that ventures with a team are more successful than solo entrepreneurs. To mirror real life, you will work in a team of 3-5 people on an idea – yours or a classmate’s. If you’re the idea person, you become team lead and must find another 2 people to join you. If you don’t have the idea, you need to find a team lead who invites you. Everyone must be on a team by Week 2.

You will be exposed to entrepreneurs and business professionals. The Advisory Committee, mentors and guest lecturers include serial entrepreneurs, angel investors, venture capitalists, consultants and domain experts who can help you navigate the commercial mindset. LS/HC investors will judge the final presentations.

**Objectives and Teaching Methods**

The course will help you understand the elements of successful LS/HC ventures, what is involved in doing a startup and the entrepreneurial process. You will hear from entrepreneurs and other members of the business community who share their experiences and knowledge. Students are expected to be highly participative and prepared. The course is experiential, not academic, meaning your team will develop a business plan and pitch deck rather than reading research papers.

**The class requires that you complete a minimum of 20 interviews for Customer Discovery – testing your value proposition with the marketplace. This is perhaps the**
**most important learning experience you will have and your business plan will suffer without the input.**

**Guest Speakers**

Startup 101 has many invited guest speakers from the Silicon Valley life science business community including entrepreneurs, investors, attorneys and consultants who provide real world experiences and a network for students. These top professionals in their fields provide invaluable perspectives on developing a viable venture.

**Deliverables: Business Plan Executive Summary and Pitch Deck**

During the course, you will develop a business plan for the idea you are working on. The team will research the commercial potential of an idea, test the value proposition, seek product/ market fit and create other elements of the plan. Deliverables are a 2-3 page Executive Summary plus a Pitch Deck in the format investors require. The best teams will have the opportunity to make a formal pitch to a group of investors for feedback on the final night of class.

**Mentors**

Mentorship is an important element for success of a venture. Each team will be assigned an experienced business mentor who is interested in the idea, has relevant expertise and has committed to spend 1-2 hours a week talking with you. Our mentors come from the Silicon Valley business ecosystem and work with or have led startup ventures, lending their expertise in the “pay it forward” culture we are fortunate to have in the Bay Area. They will guide students through business issues that emerge while exploring the idea, support teams in preparing an investor pitch and cheer the team on at the final pitch presentation. You have the opportunity to request a mentor if you believe someone is an especially good fit.

**Time Requirement: IMPORTANT, PLEASE READ**

This course is intensive and requires considerable time to be devoted to it. In addition to 2.5 hours of class time weekly, you will need to work with your team on various aspects of the business plan, perform interviews and connect with your mentor. Your total weekly time commitment per person is estimated to be 10-20 hours per week. First year grad/medical students probably do not have the time to take this course.

This is a class for people who are motivated to learn by doing. Class is very demanding and requires participation, learning the material and working in a team. By accepting a place in the class, you establish obligations to your team members. You must be serious about the commitment and not become a liability to your team. Do not sign up for this class unless you are ready to make the commitment and fully engage. Auditing is not permitted.
Admission:  APPLICATION DUE DECEMBER 15

Course application forms are available here: https://goo.gl/forms/77AqZIWi8CkI9Ly23. You may apply as an individual or as a team. We have established an online marketplace to facilitate your matching with team leads or members:

Input Form: https://goo.gl/forms/Hl3aocADTnyZ7TmH3

Marketplace: https://docs.google.com/spreadsheets/d/1h48pinAKrU5UW-XRHVt-plyzLIYCPQUn3-zYXeJUUUM/edit?usp=sharing

Acceptances will be limited based on course capacity. You must come to the first course session to be formally admitted and are expected to attend every session. If you anticipate missing more than one class, you must discuss your situation with Leslie Martinez, Program Manager, Entrepreneurship Center.

Fees

This course is open to graduate students, post docs, researchers, residents, faculty, alumni and staff at UCSF; graduate students, post docs, researchers and faculty at UC Berkeley and Stanford; and the general business community.

Fee schedule:

- **Current UCSF/UCB students/post docs**: 0
- **UCSF/UCB/Stanford staff or researcher**: $400
- **Stanford student**: $200
- **Pre-funding startup**: $475
- **Funded startup, revenues 0-$5MM**: $800
- **Corporate, revenues over $5MM**: $1100

Alumni do not qualify for fee reductions.

Assigned Book


Optional Books

For those of you who are eager for more resources, here are some books that you can refer to but are not required:
Technology Ventures: From Idea to Enterprise - Byers, Dorf, Nelson

Venture Deals: Be Smarter Than Your Lawyer and Venture Capitalist - Feld, Mendelson, Costolo

The Founder’s Dilemma, Wasserman

Breakthrough Entrepreneurship, Burgstone and Murphy


Business Model Generation, Alexander Osterwalder

Do More Faster - Cohen and Feld

Biodesign, Zenios, Makower, Yock

Class Schedule Overview

<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Day</th>
<th>Topics</th>
<th>Guest Lecturers</th>
<th>Associated Activity</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/25/17</td>
<td>Thurs</td>
<td>Course Intro Entrepreneur talk</td>
<td></td>
<td>Mixer for Team Formation after class</td>
<td>GH-N114</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Opportunity Recognition; Customer Discovery</td>
<td>Stephanie Marrus, MA MBA, Director, Entrepreneurship Center and Senior Lecturer, UCSF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2/1/17</td>
<td>Thurs</td>
<td>Business Planning; Business Models</td>
<td>David Charron, Lecturer, Haas School of Business, UC Berkeley</td>
<td></td>
<td>GH-N114</td>
</tr>
<tr>
<td>3</td>
<td>2/8/17</td>
<td>Thurs</td>
<td>Structure of an Investor Presentation; What Investors think Is Important</td>
<td>Invited: Cami Samuels, Partner, Venrock</td>
<td>Mentor mixer</td>
<td>GH-N114</td>
</tr>
<tr>
<td>4</td>
<td>2/12/17</td>
<td>Mon</td>
<td>Sector Specific Group Briefing by Advisory Committee</td>
<td>Advisory Committee</td>
<td></td>
<td>TBD</td>
</tr>
<tr>
<td>Week</td>
<td>Date</td>
<td>Day</td>
<td>Topic</td>
<td>Speaker(s)</td>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>------</td>
<td>--------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2/15/17</td>
<td>Thurs</td>
<td>Corporate Legal and Intellectual Property</td>
<td>Alan Mendelson, JD, Partner, Life Sciences, Latham &amp; Watkins, Corporate legal; Todd Esker, Partner, Morgan Lewis, IP Karin Immergluck, PhD, Director, UCSF Office of Technology Management</td>
<td>GH-N114</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2/22/17</td>
<td>Thurs</td>
<td>Clinical/regulatory</td>
<td></td>
<td>GH-N114</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3/1/17</td>
<td>Thurs</td>
<td>Payers and Reimbursement</td>
<td></td>
<td>GH-N114</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3/5/17</td>
<td>Mon</td>
<td>Pitch practice</td>
<td></td>
<td>MH-1401</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>3/8/17</td>
<td>Thurs</td>
<td>Founders; Building the Entrepreneurial team; Business Development</td>
<td>TBD</td>
<td>GH-N114</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>3/15/17</td>
<td>Thurs</td>
<td>Mistakes I Won't Repeat</td>
<td>Invited: Ryan Howard, MBA, Founder, CEO, iBeat; Founder Practice Fusion</td>
<td>GH-N114</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>3/22/17</td>
<td>Thus</td>
<td>Entrepreneurial Finance and Financial Strategy</td>
<td>Pete Garcia, VP/Chief Financial Officer, PDL</td>
<td>GH-N114</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Budgeting</td>
<td>Sandeep Shroff, MS, MBA, CEO, myStartupCFO</td>
<td>GH-N114</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>3/29/17</td>
<td>Thurs</td>
<td>Sources of Capital for Early Stage Ventures: Grants, Angels, Venture, Foundations</td>
<td>TBD</td>
<td>GH-N114</td>
<td></td>
</tr>
</tbody>
</table>
**Prereadings**

You are expected to complete the pre-readings before the first class on January 25th. While some of the readings come from the tech world, they are generally applicable to life science/healthcare and you should focus on the broad learnings.

**Reading List**

- Meyer/Crane text: Page 8-15, Chapter 1, Are You Suited for Entrepreneurship?


- Laurence McCahill, 10 Ways You’ll Probably F**k up your Startup, [https://medium.com/spook-studio/25b830afbd84](https://medium.com/spook-studio/25b830afbd84)

- Knowledge @ Wharton, How Entrepreneurs Identify New Business Opportunities, [http://knowledge.wharton.upenn.edu/article.cfm?articleid=2370](http://knowledge.wharton.upenn.edu/article.cfm?articleid=2370)

**Week by Week Schedule**

Class is held on Thursday evenings and occasional Monday nights.

Schedule details to follow in next rev of syllabus.
Course Director

Stephanie Marrus, MA, MBA, Director, Entrepreneurship Center and Senior Lecturer, UCSF

Stephanie is responsible for delivering programs and courses enabling scientists and clinicians to create entrepreneurial ventures based on UCSF technologies. She leverages her participation in the Silicon Valley ecosystem to attract resources and entrepreneurship thought leadership to Campus. During a 25-year plus career, she has been involved as a corporate executive, business consultant and mentor with hundreds of companies in science- and technology-based industries, many with their technological roots at MIT, Harvard, the University of California and Stanford. Her consulting clients have included venture capitalists, CEOs, National Science Foundation grantees and foreign government entities. In addition to her business career, she served as Deputy Secretary of Economic Affairs for a Massachusetts governor where she took the lead on economic development and business policy. She has been President of a medical research foundation and serves on the Advisory Board of a social venture startup accelerator.

She has been a guest lecturer at Stanford University and UC Berkeley. Her academic titles have included Faculty at UC Berkeley Center for Entrepreneurship in Technology, Entrepreneur-in-Residence at the Haas School of Business, UC Berkeley; Adjunct Professor, St. Petersburg State University Graduate School of Management, Russia; and Entrepreneur-in-Residence, King Abdullah University of Science and Technology, Jeddah, Saudi Arabia.

She holds an MBA from the Wharton School, University of Pennsylvania, a MA from Columbia University and an AB from Cornell University.

Advisory Group

Tania Fernandez, PhD, Founder and CEO, DreamCatcher Ventures

Tania has more than 15 years of experience in the fields of oncology and molecular biology. She secured her doctorate at the Cancer Research Institute, India, having been awarded the Indo-U.S. scholarship from the National Institutes of Health (NIH). She won the Young Scientist Award and the most outstanding doctoral thesis award at Bombay University. She previously gained operational experience at Hoechst Pharmaceuticals, Mumbai, India. After completing her doctorate, Dr. Fernandez specialized in the fields of protein chemistry, protein delivery systems, and genetic engineering at the College of Medicine, Texas A&M University. In 1999, she joined the National Cancer Institute at the National Institutes of Health as a post-doctoral associate and was appointed staff scientist in 2000. She is actively involved with sourcing and evaluating United States-India cross-border and pureplay Indian life science investment opportunities in venture capital and merchant banking. Her areas of focus include healthcare and healthcare delivery.
Howard Edelman, CEO, Advanced Resin Therapeutics

As a Senior Operations and Product Development Executive, Howard Edelman has a record of success in generating multimillion dollar outcomes within medical device, medical equipment and orthopedic markets. He is known for his expertise in operations, product development, marketing and sales within startup organizations and global entities, having founded and led several organizations to profitability. Howard’s experience includes multi-market, multi-disciplined technical environments focusing on innovation, product development, market strategy, all phases of execution, operations, global supply chain development and management, manufacturing lifecycle, marketing and sales development. Mr. Edelman has over 25 years of leadership in engineering and operations management, design, and development primarily in medical devices and scientific instrumentation and has brought to market +25 medical and scientific instruments throughout the course of his career generating more than $250M in revenue.

Mr. Edelman currently serves as CEO of Advanced Resin Therapeutics, formerly CEO of WI-MM, Founder and CEO of VitalWear, Inc., and has served in management roles in firms such as Cothera LLC, Johnson & Johnson, Zeiss, CooperVision, and Bio-Rad Laboratories and various startup companies in the Bay Area. Mr. Edelman presently sits on the Research Committee for the Juvenile Diabetes Research Foundation and assists a number of early stage medical device companies. Mr. Edelman graduated from Boston University in 1983 with a B.S. in Biomedical Engineering.

Philippe Nore, MSc, MBA, Co-Founder and CEO, MiDERA Diagnostics

Philippe Nore is an experienced executive specialized in clinical diagnostics, genomics and life science tools. Before founding MiDERA, Philippe Nore was Senior International Business Leader at Roche Diagnostics. He was responsible for the development and commercialization of the Ventana Digital Pathology products (hardware, software, algorithms to score assays) in the cancer diagnostics market, including global P&L responsibility. During his tenure at Roche he has successfully launched several FDA-approved products.

Prior to that, he was a Senior Engagement Manager at L.E.K. Consulting where he worked with CEOs of small and midsize biotech and life sciences companies. Earlier, he worked at Life Technologies where he headed Strategic Planning and Business Development for the DNA Sequencing business unit and led the Next-Generation Sequencing taskforce. He also spent 7 years at Bain & Company where he consulted for Fortune 500 companies. Philippe holds a MSc. in chemistry from ESPCI (Paris) and an MBA from the Wharton School where he graduated as a Palmer Scholar.

Chris Meda, MS, Chief Business Officer at IncellDx, IncellDx, Inc.

Currently, Ms. Meda is Chief Business Officer at IncellDx, Inc. in Menlo Park CA, a cellular multiplex, Nyel molecular diagnostic company focused in the areas of infectious disease and oncology with a particular emphasis on companion diagnostics partnerships with
pharmaceutical companies. Chris has 30 years of leadership in the diagnostic and pharmaceutical industries. Her management responsibilities have included the creation of strategic business direction and plans, operations and commercialization of more than 30 products for various disease areas at Hoffman-LaRoche, Bio-Rad Laboratories, Diagnostics Products Corporation (now Siemens), Meridian Diagnostics and Schering AG pharmaceuticals. Chris is also Chair, of Women in BIO- San Francisco Chapter, an organization of professionals committed to promoting careers, leadership, and entrepreneurship of women in the life sciences; and, a Board Director for Claremont BioSolutions, a company providing laboratories with diagnostics and devices for molecular diagnostics and bioscience research. Through June, 2012, Ms. Meda was President of Response Genetics (RGI), a personalized medicine company that has developed PCR-based genetics tests for lung, colon, gastric and melanoma cancers which help medical oncologists with therapeutic treatment decisions for patients with these cancer types. Prior to RGI, she was CEO, President at Araxis Biotechnologies a venture backed start-up with a focus on molecular diagnostic extraction devices and reagents. Araxis was sold to Fluidigm in September, 2010. Prior to Araxis, Chris was at Diamics, Inc a start-up with focus on a cervical cancer medical device. Diamics was sold to Inverness Medical Innovations (now Alere) in July, 2007. Prior to Diamics, Chris was Vice President at Hoffman-LaRoche, Roche Molecular Diagnostics Division for the Global Women’s Health Portfolio and subsequently became Vice President of Business Development. Her leadership role and portfolio duties included strategic planning for the portfolio, oversight of research and development and the commercialization of PCR-based diagnostics for Human Papillomavirus, Chlamydia, Herpes Simplex Virus and Group B Streptococcus. Her business development role was focused on companion diagnostics where she completed agreements between Roche Molecular Diagnostics and four pharmaceutical companies.

Faz Bashi, MD, Chair, Digital Health, Life Science Angels

Faz has a research background in Immunology and Virology from UCSF. He is also Chair of the Angel Capital Association's Life Sciences Syndication group and Chair of the Life Science Angels (LSA) Device Screening Committee, active member of the LSA Biotechnology & Pharmaceuticals Screening Committee. He is a founding member of HealthTech Capital where he served on the Board of Directors for a 2 year term. He is a member of Berkeley Angel Network. He has been active as a mentor with Pacific Community Ventures, which creates jobs and economic opportunity by increasing investment in local businesses. He also volunteers with UCSF’s CTSI external advisory board and Springboard Enterprises. Faz worked at San Mateo Medical Center to develop and implement special clinical projects to help the underserved, including TeleDermatology, Diabetic Retinopathy Screening, and advancements in electronic medical records. He works as a consultant to Patient Visit Redesign as a Deep Dive expert, and he coaches on workflow process improvement for public health clinics, community health centers, and safety net organizations across the US.