**Startup 101 2020**

**Syllabus**

**Course Director:**

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

**2020 Advisory Committee**:

Tania Fernandez, PhD, Founder/Managing Partner, DreamCatcher Ventures; President/CEO, Midissia Therapeutics

Howard Edelman, CEO, Advanced Resin Therapeutics

Philippe Nore, MBA, MSc, Vice President, Research and Business Development, Adaptive Biotechnologies

Chris Meda, MS, Chief Business Officer, IncellDx

Faz Bashi, MD, Life Science Angels

Unity Stoakes, Cofounder/President/Managing Partner, Startup Health

**Location**:  UCSF Mission Bay Campus, Genentech Hall N-114.  Check schedule, rooms occasionally change.

**Dates:**  January 23 to April 9.  Thursday evenings 5:30 – 8:00 pm plus three Mondays

**Office Hours**

Required weekly in the first 3 weeks and periodically thereafter.

**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 or medicine-based commercial enterprise.  Our emphasis is on ventures that are scalable and can solve important healthcare problems. 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 1.

You will be exposed to entrepreneurs and business professionals.  The Advisory Committee, mentors and guest lecturers include serial entrepreneurs, angel investors, venture capitalists, attorneys, 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.

Our goals are for you to:

1. Understand the entrepreneurial mindset that values creativity, innovation, and leadership.
2. Learn how to differentiate between an idea and a viable opportunity to create and grow a high-impact business
3. Practice the skill of team formation and collaboration.

**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.

**Major 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. There is an opportunity to make a formal pitch for feedback to a group of investors on the final night of class.

Key Dates:

Product market fit hypothesis Feb 6

First 5 interviews Feb 6

Second 5 interviews Feb 27

10+ interviews March 26

Executive summary March 26

Rehearsal pitch deck April 2

Final deck April 8

**Teams**

You need to be on a team of 3 to 5 people before the second class.

* If you form a team around your idea, you are the Team Lead and need to have signed on at least two other people.
* If the Team Lead is not from UCSF, s/he will need to recruit at least one UCSF person.

Some of you are currently working on a venture and have a “real” team outside of class.  These people do not qualify as your class team unless they have applied and been accepted to Startup 101. You can continue to work with your other team in the background.

There is sometimes misunderstanding about the role of a class team after Startup 101 is over. Class team members are not automatically founders if a startup results from class. The only way you can become a founder is to be invited by the Team Lead.

**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 working with the team. Our mentors come from the Silicon Valley business ecosystem, work with, finance 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 specific mentor; they can accept your request or not.

**Time Requirement**

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 other team members.  You must be serious about the commitment and not become a liability to your team. Be ready to make the commitment and fully engage.

Auditing is not permitted.

**Application**

This class is usually oversubscribed, and admittance is by application. Spend time on the application so we understand your motivation.

The form can be found here: <https://forms.gle/dGEQ7f96BbLhdAr3A>

**Marketplace**

Marketplace is the online form where you can search for team members or an idea that interests you to work on. People should look for general motivation and interest, not a specific skill set such as “structural engineering” or “clinical trial design”.

You should input your information on Marketplace even if you have a team assembled. Marketplace Form: <https://forms.gle/6WAYgo8aAAtwzkEx9>

**Attendance**

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, please discuss your situation with Laurel Skurko, Programs, Entrepreneurship Center.

**UCSF Credit**

UCSF students can receive credit by registering for Biochem 241.

**Fees**

Current UCSF/UCB students/post docs/UCSF faculty  0

UCSF/UCB/Stanford staff, researcher, non UCSF faculty    $200

Stanford student                                          $300

Pre-funding startup, credit cards, F&F $475

Funded startup, grants or angel/vc, etc up to $3MM   $800

Company with revenues over $3MM             $1200

**Alumni** of the three institutions are not current and **must pay normal fees**.

**Assigned Book**

Marc H. Meyer and Frederick G. Crane, New Venture Creation:  An Innovator’s Guide to Entrepreneurship, Sage Publications, 2nd Edition.  You can buy or rent this text: <https://www.amazon.com/New-Venture-Creation-Innovator%E2%80%B2s-Entrepreneurship/dp/1452257213>

**Optional Books**

These books cover different aspects of building a venture.

* Biotechnology Entrepreneurship: Starting, Managing, and Leading Biotech Companies ,Craig Shimasaki, PhD, MBA. Textbook, relevant for all life sciences sectors
* 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
* The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company - Blank and Dorf
* Business Model Generation, Alexander Osterwalder
* Do More Faster, Techstars, Cohen and Feld, [Available free of charge online. http://library.globalchalet.net/Authors/Startup%20Collection/%5BCohen%20and%20Feld,%202011%5D%20Do%20More%20Faster.pdf](file:///C%3A%5CUsers%5Csmarrus%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CINetCache%5CContent.Outlook%5CTOAN6D17%5CAvailable%20free%20of%20charge%20online.%20%20http%3A%5Clibrary.globalchalet.net%5CAuthors%5CStartup%20Collection%5C%5BCohen%20and%20Feld%2C%202011%5D%20Do%20More%20Faster.pdf)
* Biodesign, Zenios, Makower, Yock. The bible for medical devices

**Photo and Video Release**

By participating in this class, you are giving your consent for photography, filming, videotaping and/or audio recording or other means of capturing my image or voice and/or being quoted in the media or printed materials (including social media websites) at UCSF and hereby authorize release.  You are waiving any right to compensation for such uses by reason of the foregoing authorization. Your successors or assigns hereby hold UCSF and its personnel and affiliated programs harmless from any and all liability which may or could arise from activities authorized by this agreement. This authorization expires 12 months after the start of class. Upon expiration of this Authorization, UCSF will not permit further release of any photography or information but will not be able to call back any photography or information already released.

**Class Schedule Overview**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Class | Date | Day | Topics | Guest Lecturers | Associated Activity | Room |
| **1** | 1/23/20 | Thurs | **Course Intro** **Opportunity Assessment & Customer Discovery** | **Stephanie Marrus, MBA, MA, Director, Entrepreneurship Center and Senior Lecturer, UCSF** | **1-minute idea description** **Finalize teams** | **GH-N114** |
| **After class mixer for team networking** |
| **2** | 1/30/20 | Thurs | **Business Models** | **Stephanie Marrus, MBA, MA**  |  | **GH-N114** |
| **Networking for Customer Discovery****Entrepreneur Talk** | **Matt Knopf, MBA, Business Development Consultant****David Seftel, MD, MBA, Co-founder/CEO, Enable Biosciences** |
| **3** | 2/6/20 | Thurs | **Early Stage Funding: SBIR Grants** | **Errol Arkilic, PhD, CEO, M34 Capital; Founding Program Director, NSF I-Corps** | **1-page Product/ Market fit writeup****Mentor Mixer after class** | **GH-N114** |
| **Intellectual Property** | **Todd Esker, JD, MS, Partner, Morgan Lewis****Anthony Francis, Executive Director, Office of Technology Management, UCSF** |
| **Entrepreneur Story** | **Kunwoo Lee, PhD, Founder/CEO, Genedit** |
| 4 | 2/10/20 | Mon | **Sector Specific Group Briefing by Advisory Committee** | **Tania Fernandez,** **PhD, Founder/Managing Partner, DreamCatcher Ventures; President/CEO, Midissia Therapeutics** |  | **GH-N114 (meeting location), BH-209, GHS-202,****GHS-261, GHS-271** |
| **Howard Edelman, CEO, Advanced Resin Therapeutics** |
| **Faz Bashi, MD, Life Science Angels** |
| **Unity Stoakes, President/Cofounder/Managing Partner, StartUp Health** |
| **Philippe Nore, MBA, MSc, Vice President, Research and Business Development, Adaptive Biotechnologies****Chris Meda, MS, Chief Business Officer, IncellDx**  |
| **5** | 2/13/20 | Th | **Clinical/Regulatory** | **Geetha Rao, PhD, MS, CEO, Springborne Life Sciences** |  | **GH-N114** |
| **Corporate Legal** | **Alan Mendelson, JD, Partner, Latham & Watkins** |
| **6** | 2/20/20 | Th | **Insurance and Reimbursement** | **Beth Andersen, MBA, California Plan President, Anthem** **Oron Afek, CEO/Cofounder, Vim** |  | **GH-N114** |
| **Business Development/Partnering** | **Sylvaine Cases, PhD, VP Oncology Scientific Innovation, Janssen/J&J****Yelda Kaya, MD JD MBA, Senior Director Transactions, J&J** |
| **7** | 2/24/20 | Mon | **Pitching & Storytelling** | **Stephanie Marrus, MBA, MA, Director, Entrepreneurship Center; Senior Lecturer, UCSF** |  | **GH-N114** |
| **Entrepreneur Story and Pitch** | **Yug Varma, PhD, Cofounder/CEO, Phi Therapeutics**  |
| **8** | 2/27/20 | Th | **Angel Investing****Venture Capital** | **Winnie Wan, PhD, MBA, Board Director, Life Science Angels** |  | **GH-N114** |
| **David Morris, MD, Managing Director, Novartis Venture Fund** |
| **9** | 3/2/20(no longer 3/9/20) | Mon | **3-minute Pitch Practice****Entrepreneur Story** | **Stephanie Marrus, Mentors invited** **Christy Sheehy, Cofounder/CEO, C.Light Technologies** |  | **GH-N114** |
| **10** | 3/5/20 | Th | **Team Building** | **Teresa Toller, Head of Talent, Arsenal Bio**  |  | **GH-N114** |
| **Establishing Corporate Culture; Entrepreneur Story** | **Sami Inkinen, MBA, Founder/CEO, Virta Health** |
| **11** | 3/12/20 | Th | **Innovation in Hospital Systems****Finance & Budgeting** | **Chris Waugh, Chief Innovation Officer, Sutter Health****Sandeep Shroff, MBA, MS, CEO, myStartupCFO**  | **Build a budget for first 18 months**  | **GH-N114** |
| **12** | 3/19/20 | Th | **Protecting Yourself as the Founder****Accelerators as a Next Step** | **Ryan Howard, Founder/ Chairman/CEO, 100Plus****Arvind Gupta, MS, General Partner, SOSV; Founder, IndieBio** |  | **MH 1400** |
|  | 3/26/19 | **NO CLASS** |
| **13** | 4/2/20 | Th | **Rehearsal and feedback for Pitch Night** | **Investors/advisors** |  | **TBD Byers Auditorium** |
| **14** | 4/9/20 | Th | **Pitch Night** | **Investor judges** |  | **TBD Byers Auditorium** |

**Pre-readings**

You are expected to complete the pre-readings before the January 23 class.  These readings will help you explore whether you have an entrepreneurial personality and have advice for startups. (Some of the material is written for tech startups but ignore that, it’s useful for us too)

1. Meyer/Crane text: Chapter 1, Are You Suited for Entrepreneurship?
2. EBD Group, What Every Entrepreneur Needs to Know,<http://events.ebdgroup.com/bpa/core/downloads/2017/BioPharm_America-Startup_Manual.pdf>, 2017
3. Ernst & Young, Nature or Nurture? Decoding the DNA of the Entrepreneur, [https://www.ey.com/Publication/vwLUAssets/ey-nature-or-nurture/$FILE/ey-nature-or-nurture.pdf](https://www.ey.com/Publication/vwLUAssets/ey-nature-or-nurture/%24FILE/ey-nature-or-nurture.pdf), p 14-17 , rest is optional
4. CB Insights, Top 20 Reasons Startups Fail, 2019,  <https://www.cbinsights.com/reports/The-20-Reasons-Startups-Fail.pdf?utm_campaign=Report%20-%20Content%20Emails&utm_medium=email&_hsenc=p2ANqtz-_XeArpcbdmRDwnvl2zowoi8u2W6T8rtXL11yGeP6DYECCMnsHoDlBO-AC-nQWdkdLokcnvaxS7Tf->
5. Kauffman Founders School: Startup CEO, Balancing the Entrepreneurial Life, 2016, <https://www.entrepreneurship.org/learning-paths/startup-ceo/balancing-the-entrepreneurial-life>, video
6. Lighter Capital, On Being a Startup CEO:  Roles, Responsibilities and Priorities, <https://www.lightercapital.com/blog/startup-ceo-roles-responsibilities-and-priorities/>, 4/30/19

**January 23rd**

**Course Intro; Opportunity Assessment and Customer Discovery**

**Stephanie Marrus, MBA, MA Director, Entrepreneurship Center; Senior Lecturer, UCSF**

Review of the syllabus and course expectations. How to assess whether your idea is an opportunity. How do you know if anyone wants the product/service you plan to provide? Testing your value proposition. Getting unbiased customer feedback through interviewing potential customers. Interview technique, questions to ask. Market information expected by investors.

**Deliverable: Be prepared to give a 2-minute description of your idea.**

**After class: Mixer to complete teams and meet classmates.**

Readings:

1. Meyer/Crane Text:
	1. Chapter 1, Developing an Industry Focus, Conducting a Fast, Effective Industry Analysis and Define the Type of Business you Might Want to Start
	2. Chapter 2, Defining the Target Customer- Users and Buyers
	3. Chapter 3, Defining the Needs of Target Customers- Getting into their Hearts and Minds
2. Tren Griffin, Andreessen Horowitz, 12 Things about Product/Market Fit,<https://a16z.com/2017/02/18/12-things-about-product-market-fit/>
3. 3. Steve Blank, Customer Development Process, Part 3,video,
4. [http://www.youtube.com/watch?v=NXR\_O\_Hwuws,](http://www.youtube.com/watch?v=NXR_O_Hwuws,  )
5. Steve Blank, No Business Plan Survives its first contact with a customer,<http://steveblank.com/2010/11/01/no-busines>
6. 5. Wes Stringfellow, Medium, Go to Market: Lean Startup, MVPs and Product-Market Fit,
7. [https://medium.com/west-stringfellow/go-to-market-the-lean-startup-mvps-and-product-market-fit-a0d61574dde9, 8.15.18](https://medium.com/west-stringfellow/go-to-market-the-lean-startup-mvps-and-product-market-fit-a0d61574dde9%2C%208.15.18)

**January 30th**

**Business models**

**Stephanie Marrus, MBA, MA**

Definition of a business model. Business model canvas. Business models that have succeeded and that have failed. Business model options in different sector of life sciences/healthcare. Real life company examples. Enable’s business model pivots.

**Networking for Customer Discovery**

**Matt Knopf, MBA, Business Development Consultant**

Learn the process and tools to secure meetings with potential partners and customers. How to find the right people for customer discovery. Getting in the door. How to access places when you aren’t invited in. Maximizing every contact.

**Entrepreneur Talk**

**David Seftel, MD, MBA, Co-founder/CEO, Enable Biosciences**

Meeting a co-founder in Startup101. Building a company through non-dilutive funding. Pivoting business models.

Readings:

1. Meyer/Crane Text:
	1. Chapter 5, Defining the Business Model for a Venture
	2. Chapter 7, Conduct a Reality Check on the Venture Concept and its Business Model
	3. Chapter 11, Writing the Business Plan
2. Writing a Business Plan, Sequoia Capital, [https: //](https://www.sequoiacap.com/article/writing-a-business-plan/)[www.sequoia](http://www.sequoia) [cap.com/article/writing-a-business-plan/](https://www.sequoiacap.com/article/writing-a-business-plan/)
3. The Transformative Business Model, Harvard Business Review, 10/16,<https://hbr.org/2016/10/the-transformative-business-model>
4. Executive summary: [http://www.garage.com/resources/writingexecsum.shtmlhttp://www.garage.com/resources/writingexecsum.shtml](http://www.garage.com/resources/writingexecsum.shtml)

**February 6th**

**Early Stage Funding: Small Business Innovation Research (SBIR) Grants**

**Errol Arkilic, PhD, CEO, M34 Capital; Founding Program Director, NSF I-Corps**

Description of the SBIR program. Funding available in Phase 1 and Phase 2. Combined Phase 1,2 grants and direct to Phase 2. How to maximize your chances of getting a grant. Grant review process and success rates. Timelines. The importance of customer discovery in Phase 2 applications. NSF I-Corps and Lean Launchpad

Readings:

1. The NIH SBIR process ,<https://sbir.nih.gov/review/selection-process>
2. Sample Phase 1 SBIR proposals,<https://www.niaid.nih.gov/grants-contracts/sample-applications#r43r44>
3. NSF SBIR grants:<https://seedfund.nsf.gov/about/>
4. NSF I-Corps: <https://venturewell.org/i-corps/>

**Intellectual Property**

**Todd Esker, JD, MS, Partner, Morgan Lewis**

**Anthony Francis, Executive Director, Office of Technology Management, UCSF**

What UCSF inventors need to know. How early should you think about IP? Role of the Office of Technology Management. Implications of presenting in scientific meetings, poster sessions, publishing papers. For UCSF inventors, when to disclose to OTM and when to file. Types of intellectual property. The importance of patents. IP strategy. Protecting different types of inventions by sector: therapeutics, diagnostics, software/digital health. The role of provisional patents. Freedom to Operate. Foreign patent filing process.

Readings:

1. UCSF Office of Technology Management FAQs,<https://innovation.ucsf.edu/office-technology-management-faqs>
2. Cooley Law, Protecting Your Intellectual Property, <https://www.cooleygo.com/protecting-your-intellectual-property/>
3. University of California, Intellectual Property for Academic Researchers, <https://techtransfer.universityofcalifornia.edu/IPAwareness/story_html5.html>

**Entrepreneur Story: Kunwoo Lee, PhD, Founder/CEO, Genedit.**

Starting a company post- Startup 101. Step by step. What went well. Hiccups in building a team. Finding investors. Figuring out the business model.

**Deliverable: 1-page product market fit writeup. What are your assumptions about how your product fits the market need?**

**Mentor mixer after class. Meet your mentor and other mentors participating in the class.**

**February 10th.**

**Sector Specific Group Briefing by Advisory Committee**

1. **Therapeutics:**
	1. **Tania Fernandez, PhD, Founder/Managing Partner, DreamCatcher Ventures; President/CEO, Midissia Therapeutics**
2. **Digital Health:**
	1. **Faz Bashi, MD, Life Science Angels**
	2. **Unity Stoakes, President/Cofounder/Managing Partner/StartUp Health**
3. **Medical Devices:**
	1. **Howard Edelman, CEO, Advanced Resin Therapeutics and serial entrepreneur; UCSF Innovation Ventures Entrepreneur–in-Residence**
4. **Diagnostics:**
	1. **Philippe Nore, MBA, MSc, Vice President, Research and Business Development, Adaptive Biotechnologies**
	2. **Chris Meda, MS, Chief Business Officer, IncellDx**

Class will break into these four segments and hear a talk by our expert Advisory Board in that sector. They will explain the dynamics of the sector that are different from others, for example, IP, clinical/regulatory, business models, investors.

Readings:

1. Dhealth: Paul Yock, Why do digital health startups keep failing. <https://www.fastcompany.com/90251795/why-do-digital-health-startups-keep-failing>
2. Devices: Jay Caplan, Lean medical device startup product/market fit. <https://jaycaplan.com/2010/09/28/lean-medical-device-startup-product-market-fit/>

**February 13th.**

**Clinical/ Regulatory**

**Geetha Rao, PhD, MS, CEO Springborne Life Sciences**

Navigating the FDA. Clinical trials. What preclinical data you need to get into Man. The phase 1 / 2 clinical pathway. Differences between drugs, devices, diagnostics, digital health. Timelines. Contacting the FDA for advice.

Readings:

1. Early drug discovery and development guidelines: <https://www.ncbi.nlm.nih.gov/books/NBK92015/>
2. FDA clinical research: <https://www.fda.gov/forpatients/approvals/drugs/ucm405622.htm>

**Corporate Legal**

**Alan Mendelson, JD, Partner, Latham & Watkins**

Setting up the legal structure for your venture. When to incorporate. Type of corporation to establish. Founders agreement and how to split equity. Other key agreements: confidentiality, invention ownership**.** Terms in an angel or venture financing round. Legal pitfalls that may make a high valuation deal unattractive.

Readings:

1. Harvard Business School Top 10 Legal Mistakes,<https://hbswk.hbs.edu/item/top-ten-legal-mistakes-made-by-entrepreneurs>
2. National Venture Capital Association model documents,<https://nvca.org/resources/model-legal-documents/>
3. Latham and Watkins legal documents: <https://www.lathamdrive.com/resources>
4. Andreesen Horowitz, How Startup Options (and Ownership) Works<https://a16z.com/2016/08/24/options-ownership/>
5. Y Combinator’s Safe Financing Document,<https://www.ycombinator.com/documents/#safe>

**February 20th**

**Insurance and Reimbursement**

**Beth Andersen, MBA, California Plan President, Anthem**

Payers and providers defined. How reimbursement works. How do payers think about new technology? What are their criteria for reimbursing and what is the process to be considered? [This is fine to write this way, but I think of it as one topic. How important is the patient, the physician, the hospital in the reimbursement decision? How does the formulary decision get made? New Trends: Outcomes based research and how it’s used in making decisions. Comparative effectiveness as a metric. Economics of value-based care vs. fee for service.

**Business Development/Partnering**

**Sylvaine Cases, PhD, VP Oncology Scientific Innovation, Janssen/J&J**

Industry trends for partnering. Partnering with a Pharma, what’s the right time for an early stage company. The right entry point into the organization, key influencers. What the partner needs from a deal. How Pharma assesses the asset, the process to decide to partner and how value is set. Typical deal structure. Pitfalls. When you should consider merger or acquisition instead of partnership. IPOs.

Readings:

1. Genetic Engineering News, New Paradigms to Maximize Partnering Value in biotech,<https://www.genengnews.com/insights/new-paradigms-to-maximize-partnering-value-in-biotech/>
2. James Sabry, Genentech, Tips to Create Effective Biotech Partnerships,<https://www.statnews.com/2018/01/08/tips-create-effective-biotech-partnerships/>
3. BIO, Valuation and Deal Structuring,<https://www.bio.org/sites/default/files/Valuation%20and%20Deals%20Structuring%20Concepts%20and%20Trends_Joe%20Dilion.pdf>
4. Shomit Ghose, The Key to a Good M&A Outcome for your Startup: Getting Started Yesterday,<http://scet.berkeley.edu/key-good-ma-outcome-start-getting-started-yesterday/>

**February 24th.**

**Pitching and Storytelling**

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

The key slides for an effective pitch. Top investor interests, what makes them tune in or out. Slide by slide detail. Who should present on your team? Designing slides for optimal communication. The power of storytelling. How to manage the meeting and timing. What to expect during and after the meeting? The elevator pitch.

**Entrepreneur Story and Pitch**

**Yug Varma, PhD, Cofounder/CEO, Phi Therapeutics**

Building a company bridging microbiome and consumer products: the challenges of finding investors in a non-traditional space. What it is like for a scientist to become a marketer.

Readings:

1. Canaan Partners pitch outline,<https://www.slideshare.net/canaanpartners/canaan-pitch-workbook>, p 10-26. This is one example, don’t copy it exactly but use it as a model to refer to.
2. Founders Institute, How to Nail the Pitch,
3. YC Seed Pitch Template, <https://docs.google.com/presentation/d/17nFIwCyf2Kz-Ao5HGnmvNZ74L8eSKA2C2Qdaoe-47OM/edit?ts=5aa2fa27#slide=id.g3487a9cbaa_0_27>
4. <https://fi.co/insight/how-to-nail-the-pitch-17-storytelling-tips-for-startups>
5. Pixar 6 Rules of Great Storytelling,
6. [https://medium.com/@Brian\_G\_Peters/6-rules-of-great-storytelling-as-told-by-pixar-fcc6ae225f50](https://medium.com/%40Brian_G_Peters/6-rules-of-great-storytelling-as-told-by-pixar-fcc6ae225f50)
7. Elevator pitch:<https://www.mindtools.com/pages/article/elevator-pitch.htm>

**February 27th**

**Investors**

**Allan May, JD, Founder and Chairman, Life Science Angels**

**David Morris, MD, Managing Director, Novartis Venture Fund**

Presentations by a leading angel investor and a top tier corporate venture capitalist.

What angel investors require and their process to invest. How angels are different than VC’s. Structure of an angel investment. How angels make money. What you need to have to attract angel investment. Angel criteria for investing. Timeframe for exit.

How private venture capital works. Which type of investor is appropriate at what stage. How venture portfolios are constructed and expectations for return. How VC’s access money to make investments from limited partners. Returns needed and timeframe for exit. Valuation. Process for raising a venture round.

Readings:

1. Meyer/Crane Text: Chapter 8, Financial Sources for Startups and Corporate Ventures
2. Difference between angels and VC’s,<https://www.differencebetween.com/difference-between-angel-investors-and-vs-venture-capitalists/>
3. Sequoia Capital, How to Present to Investors,<https://www.sequoiacap.com/article/how-to-resent-to-investors/>
4. Richard Harroch, 20 Things All Entrepreneurs Should Know About Angel Investors, Forbes, February 5, 2015 <https://www.forbes.com/sites/allbusiness/2015/02/05/20-things-all-entrepreneurs-should-know-about-angel-investors/#bb709c5c1aa5>
5. Kamal Hassin, Silicon Valley Bank, 2019, How to Determine your Seed Stage Startup’s Valuation, <https://www.svb.com/blogs/kamal-hassin/determining-seed-startup-valuation>
6. Funders and Founders, How Startup Valuation Works – Measuring a Company’s Potential,<https://blog.adioma.com/how-startup-valuation-works-infographic/>
7. Atrium, How to Raise a Seed Round,<https://www.atrium.co/blog/seed-stage-funding-startups/>
8. The Funded, [www.thefunded.com](http://www.thefunded.com/). A website with inside information about VC’s, fundraising
9. Y Combinator, A Guide to Seed Fundraising,<http://blog.ycombinator.com/how-to-raise-a-seed-round/>

**March 5th.**

**Team Building**

**Teresa Toller, Head of Talent, Arsenal Bio**

How do you find the right team to work with? Who should be founders? How do you divide equity among the founding team? Who should be on the initial team and when do you add people? Why you should strive for balance. How to create a shared vision. Hiring and recruiting. What if someone doesn’t work out? When should you assemble a Board of Directors and an Advisory Board? Who should be on them? Compensation. Leveraging advisors and consultants. When to hire and when to get contract help.

Readings:

1. Meyer/Crane Text: Chapter 10, Organizing the Venture Team
2. Founders Workbench, [http://www.foundersworkbench.com](http://www.foundersworkbench.com/)/. Look around the site for good nuts & bolts information. Specific to team building:<https://www.foundersworkbench.com/founders-finder/#region=global&category=building-a-team>
3. Naval, How to Pick a Cofounder, VentureHacks,<http://venturehacks.com/articles/pick-cofounder>
4. Khosla Ventures, Art, Science Labor of Recruiting<http://www.khoslaventures.com/wp-content/uploads/art-science-labor-of-recruiting.pdf>
5. Entrepreneur, The Science Behind Why Small Teams Work More Productively,<https://www.entrepreneur.com/article/234881>
6. Kauffman Foundation, Surprising Facts from The Founder’s Dilemmas: Anticipating and Avoiding the Pitfalls that can sink a Startup,<https://www.kauffman.org/~/media/kauffman_org/resources/books/founders_dilemmas_surprising_facts>
7. Video: Noam Wasserman, Harvard Business School, Surprising facts from Founder’s Dilemma: Anticipating and Avoiding the Pitfalls that can sink a startup, Stanford ETL Lecture Series,<http://ecorner.stanford.edu/authorMaterialInfo.html?mid=3024>

**Establishing Corporate Culture; Entrepreneur Story**

**Sami Inkinen, MBA, Founder/CEO, Virta Health**

The beliefs and behaviors that determine how a company's employees and management interact. Implied vs. defined culture. Importance of defining a culture from the start. What it was like to start Virta Health and challenges of building the company.

Readings:

1. Forbes, How to Build a Positive Corporate Culture,<https://www.forbes.com/sites/alankohll/2018/08/14/how-to-build-a-positive-company-culture/#3c5d140549b5>
2. Forbes, 11 Telltale Signs of a Toxic Company Culture,<https://www.forbes.com/sites/forbescoachescouncil/2018/09/10/11-telltale-signs-of-a-toxic-company-culture-and-what-you-can-do-to-start-fixing-things/#2c3ad2c25a19>

1. The World Positive Term Sheet – World Positive,<https://worldpositive.com/the-world-positive-term-sheet-3aa5433ec5ef>

**March 9th. Pitch Practice**

**Stephanie Marrus & others**

Present the first three minutes of the pitch – problem, solution, opportunity -- and get feedback from the class, mentors and investors.

Readings:

1. Meyer/Crane Text: Chapter 12, Making the Pitch
2. Garage Ventures, Perfecting the Pitch,<http://www.garage.com/resources/perfectingpitch.shtml>

**March 12th. Finance & Budgeting**

**Sandeep Shroff, MBA, MS, Co-Founder/CEO, myStartupCFO**

Financial metrics the management team needs to focus on. The key financial statements. What data goes into them? The importance of cash. The difference between corporate finance and entrepreneurial finance. How to know if you have enough cash and when you’ll run out. Creating a budget. How to manage to a budget. Breakeven. Entrepreneurial finance. The financial metrics you need to focus on in a startup venture. Translating your business model into financial projections. Understanding cash flow. Projecting revenues and expenses. Estimating startup costs and capital expenditures.

Readings:

Meyer/Crane Text: Chapter 11, Financial Projection

Hadzima, How much does an employee cost? <http://web.mit.edu/e-club/hadzima/how-much-does-an-employee-cost.html>

Richards, How to do a breakeven analysis,

<http://entrepreneurs.about.com/od/businessplan/a/breakeven.htm>

**Innovation in Hospital Systems**

**Chris Waugh, Chief Innovation Officer, Sutter Health**

How to get your product into a hospital system. Who are the influencers, the decision makers? Risk aversion among hospital personnel. Navigating the process; timelines. Criteria for accepting a new product. Pilots vs. full adoption. Integration into existing technology/EHR.

Readings:

1. Arun Penmetsa, Crossing the Abyss: Go to Market Strategy in Digital Health, Storm Ventures, April 26, 2017. <https://blog.stormventures.com/crossing-the-abyss-go-to-market-strategy-in-digital-health-60ab0dddeaa1>
2. Andrew Oddo, Bowery Capital, Ideas for Startups Selling to Hospitals, August 22, 2018, <https://bowerycap.com/blog/insights/startups-selling-to-hospitals/>

**March 19th. Protecting Yourself as the Founder**

**Ryan Howard, Founder/Chairman/CEO, 100Plus**

Mistakes not to make as a founder. Lessons Learned and how to do it right.

Readings:

1. Fortune, Mistakes Startup Founders Make,<http://fortune.com/2016/01/31/mistakes-startup-founders-make/>
2. Mitch Zuklie, CEO, Orrick, 8 Mistakes First-Time Founders Make When Starting a Business, Entrepreneur, May 16, 2019. <https://www.entrepreneur.com/article/333806>

**Next Step: Accelerators**

**Arvind Gupta, MS, General Partner, SOSV; Founder, IndieBio**

Many Startup 101 teams have joined accelerators as the next step to moving their company ahead. Hear from the head of a respected life science/healthcare accelerator about how the programs work, the application/admission process and what will make your venture stand out.

Reading:

1. Alejandro Cremades, Forbes, January 10, 2019, How Startup Accelerators Work, <https://www.forbes.com/sites/alejandrocremades/2019/01/10/how-startup-accelerators-work/#7786de8044cd>

**March 26th. No class**

**April 2nd. Pitch Rehearsal**

This is the chance to test out your pitch and get feedback before Investor Pitch Night. If we have too many teams to present, we will hold a competition for you to secure a slot.

**April 9th. Pitch Night**

Investors, Silicon Valley businesspeople and UCSF management will convene in Mission Bay to hear the results of Startup 101 teams.

**Course Leadership Biographies**:

**Course Director:**

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

Ms. Marrus 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. She serves the NIH as an SBIR reviewer.

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 and has consulted to the White House on entrepreneurship policy. She has been President of a medical research foundation and served on the Advisory Board of a social venture startup accelerator.

She has taught on five continents and is part of the US State Department International Speaker Program. Locally, 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 (SCET), 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 Committee:**

**Tania Fernandez, PhD, Founder and Managing Partner, DreamCatcher Ventures; President/CEO, Midissia Therapeutics**

With over 2 decades of in-depth experience in the life sciences and over 10 years of venture investing, Dr. Fernandez’s expertise encompasses scientific and medical research, venture capital, finance and entrepreneurship. She is President & CEO of Midissia Therapeutics, a clinical stage immunotherapy start-up whose mission is to develop therapeutic personalized cancer vaccines to significantly impact the overarching problems of toxicity, drug resistance and recurrence that plague current modalities of cancer treatment. Midissia is the recent recipient of the Immunomics Cancer Discovery Incubator Award.

She is also the Founder of DreamCatcher Ventures, a strategic advisory services firm that specializes in working with entrepreneurs to create, build and scale businesses effectively through a scientific and commercial analysis of technologies/products, refining of business models, competitive analysis, corporate strategy, and market intelligence. She serves as a Principal Advisor to Larta on the NIH Commercialization Assistance Program.

Dr. Fernandez is currently on the Boards of Midissia, Modularix and on the Editorial Board of the Interdisciplinary Journal of Applied and Biomedical Sciences. Dr. Fernandez secured her doctorate at the Cancer Research Institute, India, having been awarded the Indo-US scholarship from the National Institutes of Health (NIH), USA. Her research work won her the Young Scientist Award She was also awarded the most outstanding doctoral thesis award at Bombay University. Her postdoctoral work at the National Cancer Institute, NIH resulted in two awards for excellence in biomedical research. She completed her post-doctoral training in protein chemistry and genetic engineering at the College of Medicine, Texas A&M University. She previously gained operational experience at Hoechst Pharma. Dr. Fernandez works extensively with entrepreneurs and has been/is an instructor/ mentor/investor coach/judge to UCSF, UC Davis, Harvard University and Berkeley.

**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, MBA, MSc, Vice President, Research and Business Development, Adaptive Biotechnologies**

Philippe Nore is an experienced executive specialized in clinical diagnostics, genomics and life science tools. He has extensive US and international experience and a demonstrated track record of developing and launching new businesses. Prior to joining Adaptive, he founded a MedTech diagnostics company MiNDERA and was Senior International Business Leader at Roche Diagnostics. He was responsible for the development and commercialization of the products in the cancer diagnostics market, including global P&L responsibility.

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. 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 seven years at Bain & Company where he consulted for Fortune 500 companies. Mr. Nore 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, IncellDx**

Ms. Meda is an experienced biotech CEO, President, CBO, and COO within private and public pharmaceutical and medical diagnostics companies, as well as an experienced board member. She is Chief Business Officer at IncellDx, a molecular diagnostics company dedicated to revolutionizing healthcare one cell at a time. Ms. Meda 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. She is 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. She was President of Response Genetics, 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 Arcxis Biotechnologies, a venture backed start-up with a focus on molecular diagnostic extraction devices and reagents. She 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. Her business development role was focused on companion diagnostics where she completed agreements between Roche Molecular Diagnostics and four pharmaceutical companies.

**Faz Bashi, MD, Life Science Angels**

Faz has a research background in Immunology and Virology from UCSF. He has been 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.

**Unity Stoakes, President/Cofounder/Managing Partner, StartUp Health**

Unity is a digital health expert investing in a global army of entrepreneurs called Health Transformers, to embark on the crusade to achieve health moonshots each of which can improve the lives of at least one billion people. StartUp Health’s digital health global portfolio has 300 companies spanning six continents and 24 countries. Unity has been a tech entrepreneur since the mid-nineties, previously co-founding OrganizedWisdom and helping build The Privacy Council, Middleberg Interactive, and Webstakes.com/Promotions.com, which he helped take public on NASDAQ. Unity has appeared on Bloomberg TV, CNBC, CNN, NPR, and USA Today, speaking to entrepreneurs, world leaders, and CEOs around the world about the future of health. He is the publisher of StartUp Health Magazine and co-host of StartUp Health NOW, a weekly web series about Health Transformers.