I-Corps Course Syllabus
October - November 2020
New England Regional Innovation Node (NERIN)

TEACHING TEAM

Instructors: Beth Kahn, Steve Kelly, Kerry Bowie

Adjuncts: Katy Miller, Katya Mantrova, Suzanne Graves

Teaching Assistant: Lisa Naquin

DAYS AND TIMES

Kickoff:	October 6-9
5 Online Classes:	Tuesdays, 1-4 PM ET: October 13, 20, 27; November 3, 10
Lessons Learned:	November 19-20

REQUIRED TEXTS

- *The Startup Owner's Manual* Steve Blank and Bob Dorf
- *Business Model Generation* Alexander Osterwalder and Yves Pigneur

RECOMMENDED TEXTS

- *Value Proposition Design* Greg Bernard, Yves Pigneur, Alexander Osterwalder and Alan Smith
- *Talking to Humans* Giff Constable and Frank Rimalovski

This course requires in-depth preparation and significant effort outside of the lab.

COURSE MANAGEMENT SOFTWARE

LaunchPad Central [an account will be provided to you]

REQUIREMENTS FOR ENROLLMENT

- Attend as a NSF-selected Team consisting of a Technical Lead, Entrepreneurial Lead, and Mentor. The I-Corps™ course is open to pre-approved Teams only.

- Each Team member must commit to class time *plus* at least 15 additional hours per week for Customer Discovery.

COURSE OVERVIEW

This course provides I-Corps™ Teams with real-world, hands-on learning experience that improve the odds for successful products and processes that benefit society. The entire Team will engage with industry stakeholders – including customers, partners and competitors. The team will also experience first-hand the chaos and uncertainty of commercializing innovations and creating ventures.

This course will not teach you how to write a research paper, business plan or NSF grant proposal. It is also not an exercise to prove how smart you are in a lab / classroom, how well you use the research library, or if you can publish a paper.

Rather, this course is about *"getting out of the building"*. You will spend a significant amount of time talking to customers and testing your hypotheses. You should not enroll in the I-Corps™ program if you cannot commit the time to talk to customers (assume a minimum of 20 hours per week).

GOALS

1. Provide I-Corps™ Teams an experiential learning opportunity to help determine whether a significant commercial need exists for their technology.
2. Enable the Team to articulate clear decisions regarding the commercial effort.
3. Develop a transition plan (next steps) to move the technology forward to market (if the Team decides to pursue this path).

TEAMS

This is a team-based class. Most importantly, everyone is considered a "founder" and equal on a Team. Together, you will explore the potential market needs that your technology might address. If you find a suitable market need you will then work to turn your research and technology idea into a product, service or process that benefits society.

All three members of the I-Corps™ Team—Technical Lead, Entrepreneurial Lead and Mentor—must participate in the customer discovery interviews. Each week you will test hypotheses (i.e. your best guesses related to business model elements) related to your evolving business model. During this process, you will also learn how to rapidly iterate your offering in order to validate that potential customers will buy and use it.

This course also challenges Teams and you may encounter issues working together. The teaching team will help you navigate some of these issues, but Teams must take the primary responsibility in working out differences. We also encourage Teams to recruit extra help and use all additional resources available to them.

Note: Mentors have additional duties as described in the Mentor Guide, and they should read and review that document in addition to the syllabus.

CLASS CULTURE

The course culture is intentionally oriented to simulate the time- and cash-constrained environments in which startups operate. This “startup culture” is dramatically different than those found inside universities and large organizations. The teaching team has limited time and will push, challenge, and question you. They will be direct, open, and tough. Many of you may be unaccustomed to this style and it may feel brusque and impersonal at times. However, teaching team comments are intended to provide rapid learning for the entire cohort of teams – and should not be taken personally.

Entrepreneurs need to learn and evolve quickly in highly uncertain environments. The class is structured and taught to improve this skill. The teaching team encourages you to question, challenge, and engage throughout the process.

ATTENDANCE AND PARTICIPATION

1. All Team members must attend ALL sessions of the Kickoff, online classes, and Lessons Learned workshop.
2. If any Team member anticipates missing a class during the course, the Team must get NSF approval prior to enrollment. NSF will not approve absences once the course starts (except for unexpected personal or family emergencies).
3. In order to enroll in the course, each Team member must agree to required class time *plus* at least 15 additional hours per week for Customer Discovery. This represents a half-time job (at a minimum). However, as with a real startup, part-time is rarely enough; the most successful Team members often dedicate full-time to the course.

DELIVERABLES SUMMARY

1. Documented entries in the Course Management Software that capture the information, learning, and contact information from your customer discovery. (Training will be provided in how to use the platform).
2. Class presentations that summarize your customer discovery and evolving business model. Your slide decks should not contain any proprietary information.
3. Minimum Viable Product (MVPs): This course will use a “broad definition” of MVP and will include anything you put in front of a customer to test a hypothesis (e.g., diagram, simulation, physical prototype). Instructors will provide guidance on how to use MVPs in your discovery efforts.

COURSE STRUCTURE AND FORMAT

KICKOFF

This initial workshop introduces teams to the I-Corps™ approach, the Teaching Team and your peers. Teams will also meet with customers (out of the building) and will present what they learn to the class. During each presentation, the Teaching Team will offer observations and guidance intended to help all teams in the cohort.

INTERVIEWS

Throughout the course teams will be required to get out of the building and test business model assumptions. Over the full course each team must conduct at least 100 total interviews, which equates to approximately 15 interviews per week. Teams are also required to record interviews in Course Management Software. The Teaching Team may limit presentation time if a team does not meet the required interview number for the class, and teams only receive “credit” for the interviews recorded in the Course Management Software.

5 ONLINE CLASSES

During the period between the Kickoff and Lessons Learned workshops, teams attend weekly online classes (5 total). Teams present lessons learned from their interviews, receive guidance from the Teaching Team, and participate in a weekly discussion about one of the business model components (noted in the assignments for each class).

LESSONS LEARNED

This final meeting provides teams an opportunity to present summaries of their lessons learned – over the full course – and to share expected “next steps” regarding their projects. Teams will also meet individually with the Teaching Team to discuss their specific project plans.

OFFICE HOURS

The Teaching Team is available for “office hour” meetings throughout the course at various times. These sessions allow for specific and individual responses to your questions and comments. The teaching assistant will provide guidance on how to register for these meetings (typically available through the Course Management Software). Office hours are mandatory for the first two days of the Kickoff workshop and *highly encouraged* for the interim weeks between the Kickoff and Lessons Learned workshops.

October 6, 2020 Orientation Meeting and Technical Check-In

Enter the meeting via the Zoom link provided by the Teaching Assistant. Each participant will be asked to have the camera on, to mute/unmute, and to speak. Please make a habit of checking your headset, connection speed, background noise, lighting, background visuals etc. before every session. If you have hardware or software problems during this session, you will be asked to make appropriate changes to your hardware, software or location.

Time	Session
1:00 pm - 2:00 pm	I-Corps™ Virtual Tools Training (Zoom and LPC)
2:00 pm – 2:15 pm	Introduction and welcome from the NSF
2:15 pm - 4:15 pm	Meet the Teaching Team & Get to know the Cohort
4:15 pm - 5:00 pm	Entrepreneurial Lead Workshop (ELs only)
	Technical Lead Workshop (TLs only)
	Mentor Workshop (IMs only)

PRE-CLASS 1 ASSIGNMENTS

Reading

- *Business Model Generation:* "Definition of a Business Model," pp. 14–51 [loc. 268-842].
- *The Startup Owner's Manual:* "The Customer Development Model," pp. 22–84 [19-83]; "Prepare for Customer Contacts," pp. 195-199 [189-199].
- Giff Constable, "12 Tips for Early Customer Development Interviews," http://giffconstable.com/2012/12/12-tips-for-early-customer-development-interviews-revision-3/

Course Videos

Each team member must access and watch the videos using your Course Management Software account. The course TA will send out directions on how to access these videos.

Lectures 1.5A and 1.5B:	Business Models and Customer Development
Lecture 2:	Value Propositions
Lecture 3:	Customer Segments
Customer Discovery Best Practice (short videos) – ALL	

Introductory Presentation

In addition to the pre-class assignments above, teams must prepare an introduction presentation for the first day. Please see "Class 1 Assignments" below.

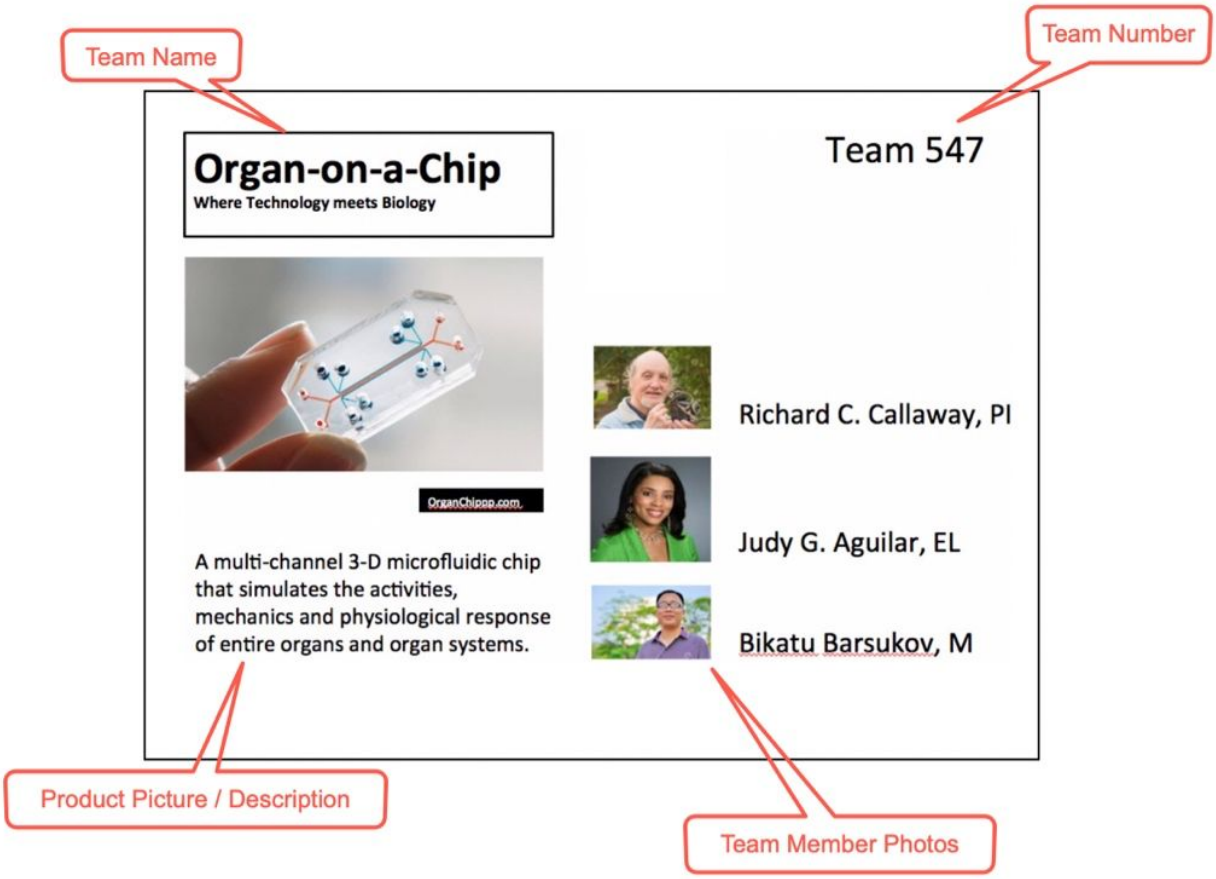
PREPARING FOR CLASS 1: October 7

Assignment

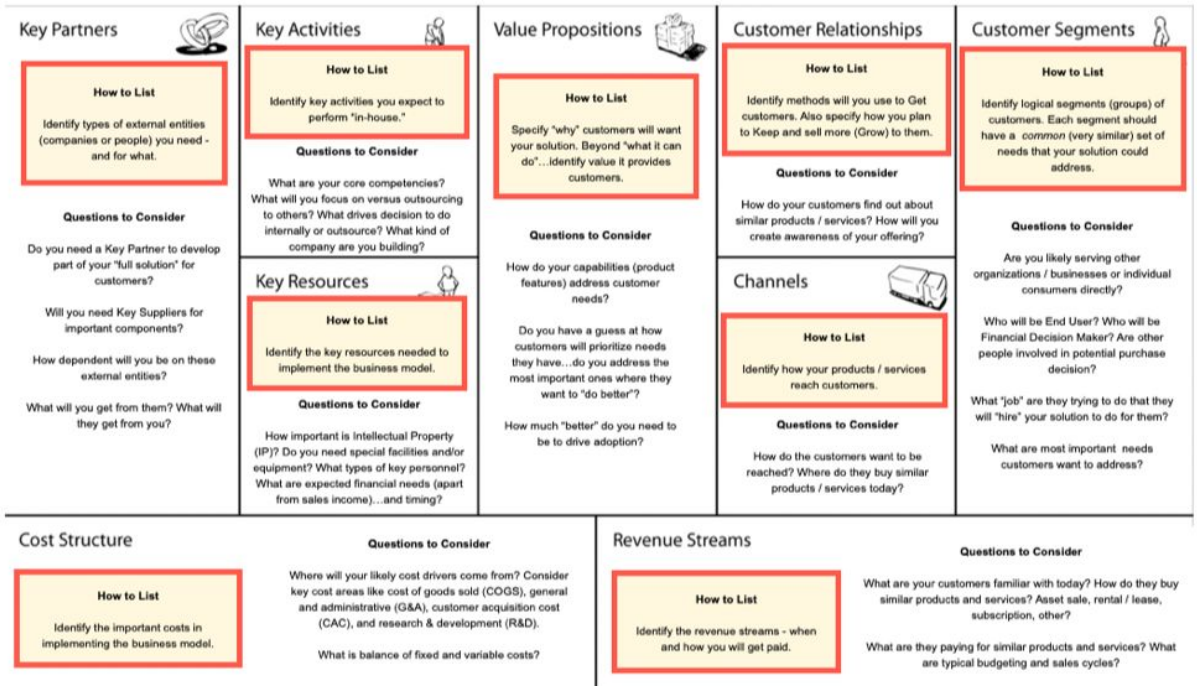
In addition to the pre-class video and reading assignments above, teams must prepare an introduction presentation for the first day. Please follow the format below.

Presentation Format

Slide 1: Team Slide
Team name, team number, photos of team members, and product (or technology) picture and description (see example below).



Slide 2: Completed Initial Business Model Canvas.
Please see example below, along with "Questions to Consider" when completing the canvas.



Slide 3: List of 15 or more customer / stakeholder contacts you plan to meet during the "Get out of the Building" time on Day 1 and Day 2 of the Kickoff.

<u>Notes on Completing Canvas and Preparing Slides</u>

Use the "How to List" guidance to fill out various canvas boxes.
For each box, the "Questions to Consider" will inform how you complete these boxes, but you do not have to literally answer these questions on the canvas.

You will ONLY have 3 minutes to present and may not get through all your full initial presentation. Focus on Customers and Value Propositions.

Upload your presentation (in PPT format) to Dropbox by 7:00 AM ET

Use the naming convention:
TeamNumber_TeamName_Date (e.g., 195_DataComm_05062019)

Class 1 / October 7 Schedule

Time	Session
9:30 am	**All Participants to Room 1:** A/V Check
10:00 am - 10:30 am	**Welcome and Introduction to NSF I-Corps**
10:30 am - 12:00 pm	**Team Presentations** (Teams split into two groups)**:** Each Team is allotted 3 minutes to present slides described in the pre-course assignments. The Teaching Team will provide comments.
12:00 pm - 12:30 pm	**Lunch Break**
12:30 pm - 3:00 pm	**Lecture and Workshops (Room 1):** BMC and Methodology, Customer Discovery and Best Practices for Customer Discovery
3:00 pm – 6:00 pm	**Video Calls with Potential Customers:** Get out of your Comfort Zone!
6:00 pm - Finish	**Office Hour Meetings:** Mandatory for all Teams and Team Members

PREPARING FOR CLASS 2: October 8

Assignment

- Read *Business Model Generation:* "Visual Thinking," pp. 146–150 [2090 – 2131]; "Prototyping," pp. 61–168 [2297-2442] and "Business Model Environment," pp. 200–211 [3096-3410].
- Read *The Startup Owner's Manual*, "Customer Segments," pp. 85–97 [84-97].
- Refine interview questions to test customer and value proposition hypotheses.
- Conduct as many interviews as you can (your total from yesterday and today should be 15 or more) AND enter summaries in the Course Management Software.
- Update your BMC in the Course Management Software.
- Prepare presentation (details below).

Presentation Format

Slide 1: Team name, team number, photos of team members, and business thesis (who is the customer, what is your product, why will customers buy it). Please include interview count table provided by the TA.

Slide 2 - n: For which customers will your proposed solution deliver value? Can you translate how your features or capabilities might provide "value" from the customer's perspective (i.e., do not simply list product features or capabilities, explain why the customer may want them)?

Questions to Consider: Did customers mention their requirements for any solution that they would consider? Did they identify pain points with existing solutions? Do you think these customers will care about all of your potential value propositions or a subset? Will some be more important to them? Will any be unnecessary? Are there customers that may see little or no value in your solution?

Use this narrative to convey your learning:

Hypotheses: *What We Thought*
Experiments: *What We Did*
Results: *What We Found*
Iterate: *What We Plan to do Next*

Slide 3: Current business model canvas with any changes marked. Use the BMC in Course Management Software and export for your presentation.

Slide 4: Discovery Plan for today - who will you meet? How do you plan to reach 15 total interviews by the end of the week?

Upload your presentation (in PPT format) to Dropbox by 7:00 AM ET

Class 2 / October 8 Schedule

Time	Session
9:30 am	**Zoom Rooms Open:** A/V Checks in Assigned Rooms
10:00 am - 10:10 am	**Introduction**
10:10 am - 12:00 pm	**Team Presentations** (Teams split into 3 groups): Each Team is allotted 10 minutes to present the slide assignment. The Teaching Team will provide comments.
12:00 pm - 12:30 pm	**Break**
12:30 pm - 2:00 pm	**Lecture:** Customers, Users, Payers (Room 1)
2:00 pm - Finish	**Video Calls with Potential Customers:** Get out of your Comfort Zone!
6:00 pm - Finish	**Office Hour Meetings:** Mandatory for all Teams and Team Members

PREPARING FOR CLASS 3: October 9

Assignment

- Read *Business Model Generation*: “Multisided Platforms,” pp. 86–111 [1094-1549]; “Ideation,” pp. 135–145 [1878-2088].
- Read *The Startup Owner’s Manual*: “Intro to Customer Discovery,” pp.53–84 [53-84].
- Read Steve Blank, “What’s a Startup? First Principles,” http://steveblank.com/2010/01/25/whats-a-startup-first-principles
- Read Steve Blank, “Make No Little Plans – Defining the Scalable Startup,” http://steveblank.com/2010/01/04/make-no-little-plans—-defining-the-scalable-startup
- Read Steve Blank, “A Startup is Not a Smaller Version of a Large Company”, http://steveblank.com/2010/01/14/a-startup-is-not-a-smaller-version-of-a-large-company
- Formulate questions to test customer and value proposition hypotheses.
- Conduct a minimum of 5 customer interviews and enter summaries of them in the Course Management Software.
- Create an initial estimate of your market size (your best guess for now).
- Prepare presentation (details below).

Presentation Format

Slide 1: Team name, team number, photos of team members, and business thesis (who is the customer, what is your product, why will customers buy it). Please include interview count table provided by the TA.

Slide 2 - n: What did you learn about customer needs? What do they care about most (in their words)? Are they significantly unsatisfied with other solutions today?

Use this narrative to convey your learning:

Hypotheses: *What We Thought*

Experiments: *What We Did*

Results: *What We Found*

Slide 3: Current business model canvas with any changes marked. Use the BMC in Course Management Software and export for your presentation.

Slide 4: Provide an initial estimate of your market size (use TAM/SAM/Target approach described by the Teaching Team).

Slide 5: Discovery Plan for today – who will you meet? How do you plan to reach 15 total interviews by the end of the week?

Upload your presentation (in PPT format) to Dropbox by 7:00 AM ET

Class 3 / October 9 Schedule

Time	Session
9:30 am	**Zoom Rooms Open:** A/V Checks in Assigned Rooms
10:00 am - 10:10 am	**Introduction**
10:10 am - 12:00 pm	**Team Presentations** (Teams split into 3 groups): Each Team is allotted 10 minutes to present the slide assignment. The Teaching Team will provide comments.
12:00 pm - 12:30 pm	**Break**
12:30 pm - 2:15 pm	**Lecture and Workshop:** Value Propositions (Room 1)
2:30 pm – 6:00 pm	**Video Calls with Potential Customers:** Get out of your Comfort Zone!
6:00 pm - Finish	**Office Hour Meetings:** Mandatory for all Teams and Team Members

PREPARING FOR CLASS 4: October 13

Assignment

- Read *Business Model Generation*, "Customer Insights," pp. 127-133 [1764-1876].
- Read *Startup Owner's Manual:* "Channel Hypothesis," pp. 98-111 [97-111]; "Customer Discovery Phase Two," 189-255 [1189-255]; "Get out of the Building Test, Sell Channel Partners, 406-412 [405-412].
- Watch Lecture 4: Channels in course videos on the Course Management Software.
- Conduct as many interviews as you can AND enter summaries in the Course Management Software – the expectation is 15 new interviews each week.
- Update your BMC in the Course Management Software.
- Prepare presentation (details below).

Presentation Format

Slide 1: Team name, team number, photos of team members, and business thesis (who is the customer, what is your product, why will customers buy it). Please include interview count table provided by the TA.

Slide 2 - n: What did you learn about your prospective customers and related value propositions? How has your thinking evolved since the beginning of the course? (See prompts from prior presentations related to customers and value propositions).

Questions to Consider: Did you identify separate roles / responsibilities for your customers (end user, decision maker, payer, influencers, other)? Can you describe a customer archetype (prototypical customer)? Did you learn anything about the purchasing decisions customers make? Do you understand the customer ecosystem (key industry players) and how customers are organized if you plan to sell to other organizations (where do you find key stakeholders / roles inside these organizations)?

Use this narrative to convey your learning:

Hypotheses: *What We Thought*
Experiments: *What We Did*
Results: *What We Found*
Iterate: *What We Plan to Do Next*

Slide 3: Current business model canvas with any changes marked. Use the BMC in Course Management Software and export for your presentation.

Slide 4: Discovery Plan for next week. How do you plan to reach 15 new interviews by the next class?

Upload your presentation (in PPT format) to Dropbox by 12:00 AM in YOUR TIME ZONE (midnight prior to your presentation)

Class 4 - 8 Schedule: October 13, 20, 27; November 3, 10

Teams will be assigned to a Time Block (A or B) and Room Number (1, 2, or 3) for each class. Teams may be moved between Time Blocks and Room Numbers week-to-week and may not request specific times or groups. For a given week, a team is ONLY expected to participate during its assigned Time in its assigned Room.

NOTE: All times are Eastern.

Time	Session
12:45 - 1:00 pm	**Test Webinar Connection** (All Participants) All team members should log on to their assigned room during this time to test video, sound, and troubleshoot technical issues – *regardless of your presentation group/time.* Please sign-in every week using the following convention: TeamNumber_Your Name_Role, e.g., 201_John Smith_EL
1:00 - 2:30 pm	**Block A** Each Team should plan for no more than 10 minutes of presentation time for their weekly update. The Teaching Team *may reduce this time* if the Team has not met interview expectations for the week. During each presentation, the Teaching Team will facilitate a discussion and will engage other teams in the group. After the presentations, the Teaching Team will facilitate a discussion around the assignment of the week (one of the business model components).
2:30 - 4:00 pm	**Block B** Each Team should plan for no more than 10 minutes of presentation time for their weekly update. The Teaching Team *may reduce this time* if the Team has not met interview expectations for the week. During each presentation, the Teaching Team will facilitate a discussion and will engage other teams in the group. After the presentations, the Teaching Team will facilitate a discussion around the assignment of the week (one of the business model components).

NOTE: There is a Mentor ONLY Check-in, 4:00-4:30PM ET, immediately following Class 6 on October 27.

PREPARING FOR CLASS 5: October 20

Assignment

- Read *Startup Owner's Manual*: "Customer Discovery Phase Three," pp. 227-256 [227-256]; "Get Ready to Sell," pp. 332-342 [331-342].
- Watch Lecture 5: Customer Relationships in course videos on the Course Management
- Software.
- Conduct as many interviews as you can AND enter summaries in the Course Management Software – the expectation is 15 new interviews each week. In addition to customers, talk to people in your potential channels (e.g., sales people, distributors, OEMs).
- Update your BMC in the Course Management Software.
- Prepare presentation (details below).

Presentation Format

Slide 1: Team name, team number, photos of team members, and business thesis (who is the customer, what is your product, why will customers buy it). Please include interview count table provided by the TA.

Slide 2 - n: What did you learn about your prospective channels? Did you continue to refine your understanding of customers and related value propositions?

Questions to Consider: How do the customers want to be reached? Where do they buy similar products / services today? How integrated are sales, distribution, and support? Does your offering extend or replace existing products sold by the channel? How are sales people compensated? Can you draw a channel diagram that shows your distribution?

Use this narrative to convey your learning:

Hypotheses: *What We Thought*

Experiments: *What We Did*

Results: *What We Found*

Iterate: *What We Plan to Do Next*

Slide 3: Current business model canvas with any changes marked. Use the BMC in Course Management Software and export for your presentation.

Slide 4: Discovery Plan for next week. How do you plan to reach 15 new interviews by the next class?

Upload your presentation (in PPT format) to Dropbox by 12:00 AM in YOUR TIME ZONE (midnight prior to your presentation)

PREPARING FOR CLASS 6: October 27

Assignment

- Read *The Startup Owner's Manual*, "Introduction to Customer Validation," pp. 277-331 [277-331].
- Watch Lecture 6: Revenue Model in course videos on the Course Management Software.
- Conduct as many interviews as you can AND enter summaries in the Course Management Software – the expectation is 15 new interviews each week.
- Update your BMC in the Course Management Software.
- Prepare presentation (details below).

Presentation Format

Slide 1: Team name, team number, photos of team members, and business thesis (who is the customer, what is your product, why will customers buy it). Please include interview count table provided by the TA.

Slide 2 - n: What did you learn about how you will get, keep, and grow customers? Did you continue to refine your understanding of customers and related value propositions?

Questions to Consider: How do your customers find out about similar products / services? How will you create awareness of your offering? Can you estimate a "customer acquisition cost"? How does your Channel selection (prior week) impact this cost? Can you estimate the "lifetime value" of a customer? What can you do to minimize loss of customers (customer "churn")? Do you have a plan for "selling more" to the same customer?

Use this narrative to convey your learning:

Hypotheses: *What We Thought*

Experiments: *What We Did*

Results: *What We Found*

Iterate: *What We Plan to Do Next*

Slide 3: Current business model canvas with any changes marked. Use the BMC in Course Management Software and export for your presentation.

Slide 4: Discovery Plan for next week. How do you plan to reach 15 new interviews by the next class?

Upload your presentation (in PPT format) to Dropbox by 12:00 AM in YOUR TIME ZONE (midnight prior to your presentation)

PREPARING FOR CLASS 7: November 3

Assignment

- Read *The Startup Owner's Manual*, "Customer Discovery Phase Four," pp. 257–270 [257-269]; "Customer Validation Phase Four," pp. 429–459 [428-459]
- Read Business Model Generation, Evaluating, Business Models, pages 212–225 [3412-3515]
- Watch *Lecture 7: Partners* in course videos on the Course Management Software
- Watch the David Riemer series of videos on using storytelling http://venturewell.org/i-corps/llpvideos/david-riemer
- Watch sample videos from previous cohorts http://venturewell.org/i-corps/team-materials
- Conduct as many interviews as you can AND enter summaries in the Course Management Software – *the expectation is 15 new interviews each week.*
- Update your BMC in the Course Management Software
- Prepare presentation (details below)

Presentation Format

Slide 1: Team name, team number, photos of team members, and business thesis (who is the customer, what is your product, why will customers buy it). Please include interview count table provided by the TA.

Slide 2 - n: What did you learn about how your customers buy products and services today? Did you continue to refine your understanding of customers and related value propositions?

Questions to Consider: What revenue models are your customers familiar with today? How do they buy similar products and services? What are they paying for similar products and services? What are their typical budgeting and sales cycles? What are the expected "payment flows" (timing and amount) between you and the customer?

Use this narrative to convey your learning:

Hypotheses: *What We Thought*
Experiments: *What We Did*
Results: *What We Found*
Iterate*: What We Plan to Do Next*

Slide 3: Current business model canvas with any changes marked. Use the BMC in Course Management Software and export for your presentation.

Slide 4: Discovery Plan for next week. How do you plan to reach 15 new interviews by the next class?

Upload your presentation (in PPT format) to Dropbox by 12:00 AM in YOUR TIME ZONE (midnight prior to your presentation)

PREPARING FOR CLASS 8: November 10

Assignment

- Read *Business Model Generation*, "Business Model Environment," pp. 200–211 [3096-3140].
- Read *The Startup Owner's Manual*, "Get Out of the Building Test, Sell," pp. 406–412 [405-412].
- Watch *Lecture 8: Resources, Activities, and Costs* in course videos on the Course Management Software
- Prepare and submit a draft of your 2-minute Lessons Learned video (see instructions at back of syllabus). The video file should be < 50 MB (editing software can compress file size) and submit according to the TA's instructions.
- Conduct as many interviews (including with potential partners and suppliers) as you can AND enter summaries in the Course Management Software – *the expectation is 15 new interviews each week*
- Update your BMC in the Course Management Software
- Prepare presentation (details below)

Presentation Format

Slide 1: Team name, team number, photos of team members, and business thesis (who is the customer, what is your product, why will customers buy it). Please include interview count table provided by the TA.

Slide 2 - n: What did you learn about potential partners and suppliers? What are they looking for in a typical relationship? Did you continue to refine your understanding of customers and related value propositions?

Questions to Consider: Do you need a Key Partner to develop part of your "full solution" for customers? What will you do versus asking others to do? Will you need Key Suppliers for important components? How dependent will you be on these external entities? What will you get from them? What will they get from you? What are the risks for you *and* the partner?

Use this narrative to convey your learning:

Hypotheses: *What We Thought*
Experiments: *What We Did*
Results: *What We Found*
Iterate*: What We Plan to Do Next*

Slide 3: Current business model canvas with any changes marked. Use the BMC in Course Management Software and export for your presentation.

Slide 4: Discovery Plan for next week. How do you plan to reach 15 new interviews by the next class?

Upload your presentation (in PPT format) to Dropbox by 12:00 AM in YOUR TIME ZONE (midnight prior to your presentation).

PREPARING FOR CLASS 9: November 19

Assignment

- Read *The Startup Owner's Manual* Key, "Resources Hypothesis," pp. 169–175 [168-179].
- Conduct as many interviews as you can AND enter summaries in the Course Management Software – *the expectation is that ALL TEAMS will reach 100 by the start of the Lessons Learned Workshop*
- Update your BMC in the Course Management Software
- Revise your 2-minute Lessons Learned video based on feedback from the Teaching Team
- Prepare a draft of your Lessons Learned presentation (see presentation format at back of syllabus)

CLOSING WORKSHOP - Penultimate Day Schedule – CLASS 9 / November 19

Time	Session
11:30 am - 12:00 pm	**A/V Check-in** (Room 1)
12:00 pm - 12:15 pm	**Welcome Back**
12:15 pm - 1:00 pm	**Lecture –** Communicating your I-Corps Learning
1:00 pm - 4:30 pm	**Individual Team Meetings with Teaching Team (Room 1):** Each Team meets one-on-one with one or more instructors to discuss key learnings, “Path Forward” decision, and next steps.
	Developing Effective Presentations Meetings (Room 2): Instructors will have individual Team meetings to provide presentation feedback and coaching.
4:30 pm - 5:15 pm	**SBIR 101 Presentation**
5:15 pm - 6:00 pm	**What’s Next Presentation**

PREPARING FOR CLASS 10: November 20

Assignment

- Prepare and upload final versions of Lessons Learned Video and Presentation
- Practice presentations to perfect message and keep within 10-minute limit

Final presentations and videos must be uploaded by 7:00 AM ET.

CLOSING WORKSHOP - Final Day – Class 10/November 20

Time	Session
9:30 am	**Zoom Rooms Open:** A/V Check-in to Assigned Rooms
10:00 am - 10:10 am	**Introduction**
10:10 am - 2:00 pm	**Final Team Presentations (Teams are split into two groups):** Each Team is allotted 15 minutes total. The 2-minute Lessons Learned Video will be shown first, followed by the 10-minute Lessons Learned Presentation, and then 3 minutes of Teaching Team comments. Breaks will be included at regular intervals.
2:00 pm - 2:30 pm	**Closing Ceremony** (Room 1)

Final Lessons Learned Presentation

The objective of the Final Lessons Learned Presentation is to ***tell the story of your journey*** through the entire Customer Discovery process of the course – *in no more than 10 minutes!*

This presentation should:

- Tell a story of what you did and what you learned
- Focus on aggregate insights rather than singular data points
- Highlight your "a-ha!" moment(s)
- Include images and graphics that support your story
- Use brief and legible text (i.e., large enough to be read when projected on-screen)

The presentation slide deck must also include the following **NSF-required** content:

- Introduction at the beginning (Team name and number, member names and roles, total interviews completed, and total interviews).
- Multiple iterations of the Business Model Canvas (including first, last, and points of critical pivots) and diagrams (legible and easily understood).
- "Product > Market Fit" decision, "Path Forward" decision (optional) (see definitions in the back of the syllabus) and links to your videos (Lessons Learned and Technical) on YouTube.
- Next steps after the cohort on the *last slide*.

Once again, the presentation should be a dynamic and engaging delivery of your Team's story; it should not be a simple narration of slides or findings.

Sample slides for this presentation:

Slide 1: Team Name and Number, total number of interviews, total number of interviews, brief summary of the initial idea and the estimated size of the opportunity

Slide 2: Team members – name, background, expertise and role for the Team

Slide 3: "What we thought…" show the Business Model Canvas, Version 1. (make sure the image is legible and verbally address, "Our original idea was...")

Slide 4: "What we did…" (explain how you got out of the building, who you met, logos and photos of customers, map of the territory covered, etc.)

Slide 5: "What we found…" (reality); Include illustration of customer archetype or market size diagram to show what was learned from this new information

Slide 6: Business Model Canvas, Version 2+, illustrating key iteration or pivots that explain what you found. **Must use the BMC in the Course Management Software and export from the Course Management Software to your presentation.**

Slide 7: What we did next (explain how this learning affected your customer discovery)

Slide 8: What we found (how did your understanding evolve)

Slide 9: Include appropriate diagrams, photos, or customer quotes that illustrate key learning (such slides can be used throughout the deck)

Slide 10: Business Model Canvas, Final (current) Version. Where you ended in the course…

Slide 11: "Product > Market Fit" decision, "Path Forward" decision (optional), and links to your videos on YouTube.

Final Slide: "Next steps" - plans going forward after completing I-Corps™.

Lessons Learned Video

This two-minute video should tell a story about your journey through I-Corps™. The video is not a demonstration of scientific knowledge or a marketing video. We want to hear how NSF I-Corps™ impacted your thinking about the potential business opportunity. The more personal and specific you make the story, the better. Use the brief outline below to frame your narrative:

- *Introduce the Team (your names and team name). Pan the camera around your office or lab to show where you work.*
- *What scientific discipline are you working in?*
- *When you started the class, what was the most important thing you thought you would have to do to successfully launch a scalable startup? How do you feel about that now?*
- *Thinking back over the class, who was the most interesting customer you met? Where did you meet them? What happened and what did you learn?*
- *Now that the class is over, what was the most surprising thing you learned in the class?*

Please do not spend any time thanking the Teaching Team or the NSF. This video is about you and your company. The time limit is 2 minutes, so be concise. Teams are not expected to become video production experts; however, please refer to the Basic Video Production Tips section of the syllabus for specific recommended best practices.

Watch the David Riemer series of videos on using storytelling to communicate your I-Corps™ learning journey http://venturewell.org/i-corps/llpvideos/david-riemer

Sample videos from previous cohorts are available for your reference: http://venturewell.org/i-corps/team-materials

Sharing Instructions

1. Final videos should be < 50 MB each (video editing software can compress files).
2. As a backup, please also A) upload your videos to YouTube and include links in your final presentation, and B) e-mail links to your TA.

All final presentations and videos must be uploaded by 7:00 AM ET on the final day of the course.

Basic Video Production Tips

You do not need professional video production skills, fancy recording equipment, or expensive editing software to produce high quality I-Corps™ video. The following recommendations and best practices will help you improve the quality of your videos – using freely available tools.

Video

- Smart phone cameras are good enough – a dedicated video camera is nice to have, but not required.
- Use a tripod or stable platform to ensure steady and properly framed video footage.
- Built-in computer cameras ("web-cams") may also work in some instances but can be more difficult to control – if using one, try to frame the scene and avoid sitting too close to the camera (i.e., avoid "talking head" effect).
- Generally speaking, use animations selectively to enhance your message.

Audio

- Find a quiet space or reduce competing noise before recording (listen for ventilation systems, machinery humming, wind, background activity, etc.).
- Get the microphone as close to your subject as possible.
- Have subjects speak toward the camera as much as possible.
- Use music selectively – if at all – and ensure that it complements the message. Your narration (voice-over) should be the primary video sound-track. Music may provide a nice transition or background, but it can also distract - particularly if too loud.
- Please do *not* use the "silent movie" approach – we want to hear your voices!

Lighting

- Adequately light the scenes prior to recording. (If in doubt, go brighter).
- When interviewing people, balance the lighting (equal on both sides) when possible to avoid dark shadows / high contrast.
- When recording outdoors, avoid direct sunlight in the camera or interview subject's eyes (i.e., no squinting required!).

Presentation

- Smile and show your enthusiasm for your subject (when recording your team).
- Before you start talking, take a deep breath, pause and smile – this will prepare you for recording and will provide a natural spot to trim excess video during editing.
- Speak slowly and clearly.
- Use hand gestures slowly and deliberately - if at all (avoid erratic motions).

Editing

- Consider recording segments multiple times and pick ”the best one” during the editing process. You might even change the perspective (up close, farther back) between recordings so that you can splice together a more interesting scene with a variety of perspectives.
- Consider adding “transition effects” throughout the video to soften the transitions between various elements (video, photos, animations, etc.).
- Learn and experiment with the “basic” editing and file saving features of your video editing software (online tutorials are typically available).

Editing Software

- Basic (and free) – iMovie for Mac and Camtasia (30-day trial) for PC www.camtasiasoftware.com.
- Advanced (paid – through some universities / employers provide) – Abode Premiere (Mac and PC).
- Smartphone / Tablet Apps – wide range, varying capabilities, prices, and quality. *Not recommended* over desktop applications.

Path Forward

The decision of the team's next steps is always a challenging discussion. We recognize that this is an interim assessment; even at the completion of the I-Corps™ program, you likely require additional customer discovery to adequately assess your prospective venture. You likely have not had the time to explore every potential application or market for your technology. This is true of even the most promising opportunities. The key at this point is to make an "evidenced based decision" driven by the evidence from your current customer discovery process.

Your team must be ready to discuss whether you identified a validate "Product > Market Fit". If the answer is Yes or No, then you will be asked to provide evidence to support your decision. If the answer is Not Yet, then you will be asked to indicate the specific areas of need in your business model canvas to achieve a decision. All answers are equally acceptable – as long as they are evidence based. The team should include this decision in their final presentation, but not in their Lessons Learned video.

Your team will also be asked to discuss a single choice as a Path Forward for the team based on customer discovery data and the team's personal choice. As with the discussion of the "Product > Market Fit", all answers for the path forward are equally acceptable – as long as they are evidence based. The team does not need to declare their Path Forward in their final presentation and should not include this information in their Lessons Learned video.

Path Forward 1. Launch startup (Hard money) – The team plans to raise equity capital (angels, VC, etc., including SAFEs and convertible notes), intends to build a business and will hire full-time employees within 12 months.

Path Forward 2. Launch startup (Soft money)– The team will raise "professional" non-equity capital; e.g., SBIR, but not including competitions/contests/awards, intends to build a business, and will have employees (part-time or full-time) within 12 months as further work is done to validate the business model and reduce technical risk.

Path Forward 3. Conduct additional Customer Discovery and/or Technical Research – The team may launch a fundable company after 12 months, though more work is needed to make that decision. Continuing customer discovery or further technical research could be used to reveal a solid, commercially-meaningful business model canvas.

Path Forward 4. Pursue alternative commercialization pathways (other than a startup) which could include options such as:

a. Licensing – The team will not build a business but intend to actively seek a licensee for the technology. This may include attracting research funding by existing corporations.
b. The team plans to seek other opportunities and bring this customer discovery and/or research knowledge into the commercial sector.

Glossary

Business Model Canvas:	Template for developing and documenting new business models, made up of 9 key building blocks
Customer archetype:	Fictional character created to represent the different user types within a targeted demographic, attitude and/or behavior set that might use a site, brand or product in a similar way.
Customer discovery:	Process of asking questions to understand needs and pain points of potential customers
EL:	Entrepreneurial Lead; often a grad student or post-doc
IM:	Industry Mentor; generally referred to as the Mentor
Innovation Corps or I-Corps™:	pronounced I-CORE, the *ps* is silent
IP:	Intellectual Property such as discoveries and inventions, often protected by patents and trademarks
Course Management Software:	Online platform for tracking your progress through the I-Corps™ program
MVP:	Minimum Viable Product; the basic product (or service) you can take to market
NCIIA:	See VentureWell below
NDA:	Non-Disclosure Agreement; confidentiality agreement
Node:	Nodes support regional needs for innovation education, infrastructure and research and work cooperatively to build, utilize and sustain a national innovation ecosystem.
NSF:	National Science Foundation
OEM:	Original Equipment Manufacturer
Peer Review Document:	An online document for comments and suggestions
PI:	Principal Investigator
SAM:	Served Available Market
TA:	Teaching Assistant

TAM:	Total Available Market
Teaching Team:	The class instructors; usually serial entrepreneurs, entrepreneurial educators and technologists
TL:	Technical Lead; a faculty member, senior research scientist or postdoctoral scholar with deep and direct technical expertise in the actual core technology about which the I-Corps™ team is exploring commercial potential. Typically, the Technical Lead will also serve as the proposal Principal Investigator (PI).
Value Proposition:	What value do we deliver to the customer? What customer needs are we satisfying?
VC:	Venture Capitalist; a person (or organization) who provides capital to startup ventures
VentureWell:	A higher education network that cultivates revolutionary ideas and promising inventions. NSF's I-Corps™ partner with curriculum development and logistics.