



**CENTER FOR CLINICAL AND
TRANSLATIONAL SCIENCE**

I-Corps@NCATS Program Mini Course Syllabus Fall 2022

Lead Instructors

Nate Hafer (nathaniel.hafer@umassmed.edu), Denise Dunlap (Denise_Dunlap@uml.edu), and NY hub instructor(s)

NOTE: We have not made a final decision if sessions will be in person or virtual. If virtual, Zoom information will be added to the calendar invites. Please accept the invites and join on-time.

All meetings are mandatory for all teams.

Dates and Times

Orientation Meeting	Thurs Sept 15, 2022 Tues Sept 20, 2022	9:00-9:30am 3:00-3:30pm
Kick-off Workshop	Friday, Sept. 30, 2022	9:00 am – 3:00 pm
Week 2	Week of Oct. 3	Office hours scheduled at your convenience
Week 3	Friday, Oct 14, 2022	1:00 pm – 3:30 pm
Week 4	Week of Oct. 17	Office hours scheduled at your convenience
Final Workshop	Friday, Oct. 28, 2022	9:00 am – 12:00 pm

Office Hours: Mandatory every week. See signup sheet in class Dropbox to schedule time with instructors.

Detailed Program Schedule and Assignments

Week 1: Friday, September 30, 2022

DUE BEFORE CLASS ←

Prepare and upload your team presentation

- 3-minute presentation, 2-minute Q&A
- A pdf of your presentation should be uploaded to the class Dropbox by **9/30/22, 7:00 am EDT** in PDF format. Use this naming convention: *TeamLeadName_Date*, e.g. *Smith_9-22-16*

Slide 1:	Team member names and photos; Company name; Team number; Company business thesis (<i>Who is the customer? What is the product? Why will they buy it?</i>)
Slide 2:	Your Business Model Canvas filled in – focus on Customer Segments and Value Propositions
Slide 3:	Tell us about the first 10 customer interviews you have scheduled. (<i>Why did you choose these people and what do you want to learn from them?</i>)
Slide 4:	Problem to be solved
Slide 5:	Competition

Kickoff workshop: Friday, Sept 30, 2022, 9am – 3pm

TIME	TOPIC
8:45-9:00 AM	Teams check-in
9:00-10:15 AM	I-Corps approach and business model canvas overview
10:15-10:30 AM	Break and set up for presentations
10:30-11:30 AM	Team presentations (5 min each)
11:30-12:00 PM	Lunch on your own / open Q&A session
12:00-12:30 PM	Identifying customer segments and value propositions
12:30-12:45 PM	Breakout sessions and exercises*
12:45-1:15 PM	Workflows and ecosystems in healthcare
1:15-1:30 PM	Breakout sessions and exercises**
1:30-2:00 PM	Critical actions for life science companies
2:00-2:15 PM	Breakout sessions and exercises***
2:15-3:00 PM	Instructors available for office hours / team discussions

Exercises during breakout sessions:

*1: List your initial target customer(s)

*2: List 2-3 Value Propositions to test

*3: Develop an interview guide

**4: Sketch your initial workflow

**5: List people, processes, and steps that your innovation will disrupt

***6: List key resources you'll need

***7: Compare your clinical and economic endpoints

Week 2: Week of October 3, 2022

Customer Discovery Interviews

- Continue to interview 10 customers during the week.
- Log your interviews in the spreadsheet in Dropbox.

Office Hours

- Schedule and attend office hours with at least 1 instructor. Sign up using the Dropbox spreadsheet. Prepare to share an updated version of your presentation with the teaching team. Use the following presentation template:

Slide 1:	Team member names and photos; Company name and logo; Team number; Company business thesis (<i>Who is the customer? What is the product? Why will they buy it?</i>)
Slide 2:	What did you learn about your customer segments and talking to your customers? (<i>What we thought? What we did? What we found? What are we going to do next?</i>)
Slide 3:	Current patient care/work process
Slide 4:	Value chain/ecosystem
Slide 5:	Updated business model canvas – focus on Customer Segments and Value Propositions
Slide 6:	Interviews lined up for next week. (<i>Who are you going to talk to? What are you going to ask them?</i>)

Week 3: Friday October 14, 2022

DUE BEFORE CLASS

Customer Discovery Interviews

- Continue to interview 10 customers during the week.
- Log your interviews in the spreadsheet in Dropbox.

Prepare and upload your team presentation

- 10-minute presentation, 2-minute Q&A
- A pdf of your presentation should be uploaded to the class Dropbox by: **10/14/22, 7:00 am** in PDF format. Use the following presentation template:

Slide 1:	Team member names and photos; Company name and logo; Team number; Company business thesis (<i>Who is the customer? What is the product? Why will they buy it?</i>)
Slide 2:	What did you learn about your customer segments and talking to your customers? (<i>What we thought? What we did? What we found? What are we going to do next?</i>)
Slide 3:	Customer job
Slide 4:	Customer job - outcomes
Slide 5:	Updated business model canvas – focus on Customer Segments and Value Propositions
Slide 6:	Interviews lined up for next week. (<i>Who are you going to talk to? What are you going to ask them?</i>)

In class time – October 14, 2022 Zoom

1:00-2:00 PM	Team presentations (5 min each)
2:00-2:30 PM	Regulatory vs economic adoption
2:30-2:45 PM	Breakout sessions and exercises*
2:45-3:15 PM	Minimum viable product and introduction to US Healthcare Reimbursement
3:15-3:30 PM	Breakout sessions and exercises**

Exercises:

*1: List 2-3 key partners and key activities you'll need to pursue

****2:** Define your MVP

****3:** Define the regulatory and reimbursement strategies for your startup

Week 4: Week of October 17, 2022

Customer Discovery Interviews

- Continue to interview 10 customers during the week.
- Log your interviews in the spreadsheet in Dropbox.

Office Hours

- Schedule and attend office hours with at least 1 instructor. Sign up using the Dropbox spreadsheet. Prepare to share an updated version of your presentation with the teaching team. Use the following presentation template:

Slide 1:	Team member names and photos; Company name and logo; Team number; Company business thesis (Who is the customer? What is the product? Why will they buy it?)
Slide 2:	What did you learn about your customer segments and talking to your customers? (What we thought? What we did? What we found? What are we going to do next?)
Slide 3:	Customer segments – who are the people
Slide 4:	Customer segments – what is the value proposition
Slide 5:	Updated business model canvas – focus on Customer Segments and Value Propositions
Slide 6:	Interviews lined up for next week. (Who are you going to talk to? What are you going to ask them?)

Week 5: Friday, October 28, 2022

DUE BEFORE CLASS 

Customer Discovery Interviews

- Continue to interview 10 customers during the week.
- Log your interviews in the spreadsheet in Dropbox.

Prepare and upload your team presentation

- 10-minute presentation, 2-minute Q&A
- A pdf of your presentation should be uploaded to the class Dropbox by: **10/28/22, 7:00 am** in PDF format. Use the following presentation template:

Slide 1:	Team member names and photos; Company name and logo; Team number; Company business thesis (Who is the customer? What is the product? Why will they buy it?)
Slide 2:	What did you learn about your customer segments and talking to your customers? (What we thought? What we did? What we found? What are we going to do next?)
Slide 3:	Updated business model canvas – focus on Customer Segments and Value Propositions
Slide 4:	What do you still need to learn? What are you going to do next?

In class time – November 12th

TIME	TOPIC
9:00-9:30 AM	Welcome back and final thoughts
9:30-11:00 AM	Final team presentations
11:00-12:00 PM	Next Steps: National I-Corps programs, SBIR / STTR mechanisms, Institutional resources



Useful Texts (supplemental for this short course)

- *The Startup Owner's Manual* (SOM), Steve Blank and Bob Dorf
- *Business Model Generation* (BMG), Alexander Osterwalder and Yves Pigneur (free preview that includes all the reading required for this short course at <https://strategyzer.com/books/business-model-generation>)
- Giff Constable, *Talking to Humans*, free download available at <http://www.talkingtohumans.com/download>

Software (please check compatibility in advance)

Google Docs
Dropbox
Zoom

Course Description

This short course is a precursor to a selective and intense set of courses run by the NIH and NSF and known as I-Corps. The I-Corps Program@NCATS is designed to give you a feeling if you, your team and your opportunity are ready to apply for the national classes held by NIH and NSF. We have kept the intensity but have limited the time commitment for this short course.

Customer Discovery is an iterative process of interviewing potential customers and stakeholders to understand problems and needs in the market and in society. These interviews lead to real-world learning and insights that validate or invalidate key components of the business model, often leading to pivots or refinements.

I-Corps will provide teams with a hands-on learning experience with customer discovery and successfully transferring knowledge into products and processes that benefit society. The entire team will engage with industry. You and your team will spend your time talking to and learning from customers, partners and competitors, and learning how to deal with the chaos and uncertainty of commercializing innovations and creating ventures.

Why Take This Class?

The **I-Corps@NCATS Program**, a joint Center for Advancing Point of Care Technologies (CAPCaT)/UMass Center for Clinical and Translational Science (UMCCTS) initiative, is designed to support the commercialization of biomedical research by providing training in state-of-the-art methods and strategic guidance to faculty, staff and students during the early phases of technology development. Based on the National Science Foundation's Innovation Corps (I-Corps™) program, the premiere federally-funded innovation and commercialization training in the U.S., the I-Corps@NCATS Short Course is an evidence-based experience that will take you out of your comfort zone to connect with potential customers.

Designed specifically for the biomedical researcher at UMass, it guides interdisciplinary teams through a hands-on process of understanding the market for their technology utilizing a proven customer discovery methodology.

Class Culture

This program was developed by entrepreneurs. We have limited time and we push, challenge, and question you to make maximum use of our limited time together. We will be direct, open, and tough – just like the real world. We hope you can recognize that these comments aren't personal, but part of the process. We also expect you to question us, challenge our point of view if you disagree, and engage in a real dialog with the teaching team.

Course Goals:

1. Provide aspiring entrepreneurs an experiential learning opportunity to help determine the commercial readiness of their technology. For a biomedical product, this often means defining the lead indication.
2. Connect investigators to the tools and resources needed to successfully commercialize their technology.
3. Develop an understanding of the commercialization process, increasing your ability to lead and play an active role in advancing your technology. This information can inform future SBIR/STTR applications or presentations to potential industry/VC/angel investors.

Course Requirements

Time commitment

I-Corps is about “getting out of the building”. It is not about the lectures. You will spend a significant amount of time outside of class (6-10 hours/week) talking to customers and testing your hypotheses about what they want in products and services. We will spend our limited class time on what you learned from talking to customers, not what you already knew coming into the course.

Course format

The course is a blended format with in-class discussion and out-of-class immersion experiences. Classroom time will be focused on active group discussion around core concepts and bi-weekly feedback on each team's business ideas and development. Students will also be expected to conduct customer interviews (at least 10 per week) and participate weekly office hours.

Participation

This is a largely experiential, discussion-style course often lead by student learners. Active participation is expected. Students will work in teams based on shared interests in a selected project.

Attendance

- Attendance and full-participation are expected.
- If an absence is anticipated, please notify the instructor in advance and ensure that other member(s) of your team will be in attendance for that class period.

Assignments

Startup Team Projects – Each team will select a potential startup project idea that will be developed during the course. The team will give a presentation (additional info will be provided, more info also below) at each class meeting.