

Course Syllabus

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Course No: 90-793

Course Name: Policy Innovation Lab: Public Interest Technology workforce development and recruitment

Section: A2

Day: Tuesdays and Thursdays

Time: 1:25 - 2:55 PM

Location: HBH 1007 (Pittsburgh)

Professor

Chris Goranson (cgoranso@andrew.cmu.edu), Hamburg Hall 2105B, Office Hours on Canvas.

Course website

<https://canvas.cmu.edu/courses/>

About this course

The Policy Innovation Lab is a new Public Interest Technology initiative that connects students with real policy challenges and introduces an agile, design-driven framework to rapidly create solutions to those challenges. This course is an experiment in improving public policy by working outside the traditional structures of government. For Fall 2021, the Policy Innovation Lab will be looking at ways to improve Public Interest Tech workforce development and recruitment, with a special lens towards diversity, equity and inclusion.

Students will be working with external partners to investigate real problem spaces and building policy-driven prototypes driven by user research. Students will work to solve pressing challenges by redefining the problem in terms of understanding the affected users of systems, conducting user-centered research, designing solutions, testing those same solutions, and iteratively improving those outcomes. This course is designed to take advantage of recent lessons learned in applied innovation in government entities around the world. The actual outcomes will be heavily dependent on both the needs of the problem sets for each course as well as the skills of the students.

The course will apply some methodologies commonplace in industry like agile, design-thinking, and prototyping to deliver open source products and services that have the potential to live on beyond the course. For public-facing projects, work will be done in a transparent manner where possible in order to

encourage external participation. Students will be expected to embrace a culture that expects and encourages rapid iteration, express a willingness to fail early in order to discover a solution that ultimately works, and a flat structure that provides students with an opportunity to deliver for our government partners.

Prerequisites

This course is designed for graduate-level experience that have at a minimum basic computer proficiency skills. This means you should feel comfortable working with data in spreadsheets, an ability to write clearly and organize materials well, an interest in exploring new programs and present a willingness to learn something outside of your comfort zone.

Learning outcomes

1. Apply agile methodologies and iterative design strategies to understand how to support innovation in a government agency.
2. Use agile and lean methods to make cross-disciplinary teams and government partner interactions functional and valuable.
3. Conduct user research to design better experiences for citizens.
4. Build prototypes quickly, test them, and repeat the process with stakeholder involvement.
5. Develop and document a final Minimum Viable Product and deliver clean handoff to the partner.

Learning Resources

There is one required text you'll need for this course:

Knapp, Jake, John Zeratsky, and Braden Kowitz. *Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days*. 2016.

Other reference materials include:

- Readings and videos provided on Canvas
- Slides used in lectures provided on Canvas
- Dataset provided on Canvas or through external links

Calendar

Week one

First class begins on March 25th, 2021.

Assignments:

- Intro workshop #1: "How might we"
- Setting up Slack, Github, and completing project preferences survey.

- Week one graded discussion

Assigned readings and other reference materials are on Canvas.

Week two

Workshop: Virtual workshop with partner agencies and organizations. Management and project scoping, intro to user-centered design. Project teams finalized.

Assignments:

- Intro workshop #2: "Project management and sprint planning"
- Setting up project management structure, sprint and project documentation

Assigned readings and other reference materials are on Canvas.

Week three

User centered design & user research

Assignments:

- Sprint and project documentation, and creation of your research plan and conducting user interviews.

Assigned readings and other reference materials are on Canvas.

Week four

User research, intro to prototyping.

Assignments:

- Sprint and project documentation. Synthesizing user research into a report, creation and demo of first prototype.

Assigned readings and other reference materials are on Canvas.

Week five

Prototyping & defining the MVP

Assignments:

- Sprint and project documentation. Synthesizing user research into a report, creation and demo of first prototype.

Assigned readings and other reference materials are on Canvas.

Week six

Usability testing, and development / testing of the MVP

Assignments:

- Final workshop #1: "Premortem"
- Sprint and project documentation. MVP, final documentation.

Assigned readings and other reference materials are on Canvas.

Week seven: Final Delivery

- Final delivery (MVP), project handoff
- Final testing of MVP
- Final presentations and course retrospective.

Assignments:

- Final workshop #2: "Retrospective"
- Final sprint and project documentation and related materials.
- Delivery: final demo and handoff of MVP to partner agency.

Assigned readings and other reference materials are on Canvas.

Assessments

The final course grade will be calculated using the following categories:

Assessment	Percentage of Final Grade
Workshop(s)	10%
Week one sprint	10%
Week two sprint	10%
Week three sprint	10%
Week four sprint	10%
Week five sprint	10%
Week six sprint	10%
Final delivery (MVP), project handoff	30%

Workshop(s) - 10%

The introductory workshop(s) will be our opportunity to set the stage for managing projects throughout the duration of the course. During these workshops we'll cover a number of topic areas that will be relevant, including project / product management, user research, sketching and prototyping, and delivery.

You will be expected to fully participate in the workshop to develop resources and approaches that you'll apply throughout the duration of the course. Some of the resources you develop may constitute assets you'll later turn in as part of an assignment related to introductory workshops.

The final workshop(s) will be both presentations as well as hands-on work to take what you've developed and apply it as guidance and a methodology that can be used by your partner and others to improve future outcomes.

Timely class participation and attendance for this course is critical, since in many cases you will be working in teams in support of an external partner.

Weekly sprints (weeks one through six) - 60%

Team projects will vary widely depending on the needs identified by our partners and available resources. Team projects will be delivered iteratively each week, meaning that for a seven-week project you will be expected to incrementally deliver each week.

Specific deliverables will vary quite a bit depending on the need, but might include things like:

- A policy recommendation.
- Visualizations of key data or outcome findings.
- An economic analysis.
- A prototype of a product.
- Sketches, wireframes, storyboards or other design artifacts.
- A final deliverable (presentation, interactive work, etc.) that is publicly accessible.
- A final presentation.
- A protocol for user research.

Part of your challenge will be working with the partner to identify how to be most effective within the time you have available. Because every project will be different, some will require more prototyping, while others will require more research and user interviews. These activities are not mutually exclusive however; you'll need to work within your team to address how to handle multiple demands on your time each week, and how to prioritize tasks.

At the conclusion of each sprint you will conduct a retrospective. The retrospective will identify what went well, what could have been improved, and what didn't go very well. This is an opportunity to both

assess your progress alongside input from the external partner as well as apply any lessons learned to the next week.

Final sprint, delivery (MVP) and project handoff - 30%

Your final project - the creation of the Minimum Viable Product (MVP) is where you'll be taking all of your work from the previous weeks and handing off what you've created and learned to your project partner.

Grading Policies

Late-work policy: Late work for this course will not be accepted after the due date unless previously arranged with the professor to do extraordinary circumstances (for example, illness, family emergency, out of town). It is important to stay up-to-date on assignments since much of the work builds on previous assignments and will impact your ability to be effective in providing solutions for projects.

Re-grade policy: If you think there has been a technical error in the grading of your assignment, you should e-mail the grader within one week of receiving the grading assignment, otherwise the assignment will not be regraded. You must provide justification for the re-grade in writing along with your request.

Course Policies

Open Source First

This is an "Open Source First" course - meaning, that unless otherwise specified, artifacts created through this class will be completed and released under a Creative Commons / Open Source license (e.g. Apache License, 2.0). Since the work performed with our partners is intended to serve as examples of Public Interest Technology, this arrangement will allow our partners and other government agencies to learn from, adopt and benefit from the work once complete. This obviously doesn't apply to any information that your partner may share that is sensitive or proprietary in nature, but a key goal for this course is to demonstrate impactful work in a transparent and accessible manner.

Attending an in-person class during the COVID-19 pandemic

In order to attend class in person, you are expected to abide by all behaviors indicated in [A Tartan's Responsibility \(https://www.cmu.edu/coronavirus/students/tartans-responsibility.html\)](https://www.cmu.edu/coronavirus/students/tartans-responsibility.html), including any timely updates based on the current conditions. In terms of specific expectations for in-person students, this includes:

- entering the classroom via the designated ingress route with appropriate physical distancing,
- wearing a facial covering throughout class,
- sitting in the seats with appropriate spacing (and not moving furniture),
- following good social distancing practices at all times,

- using the sanitizing wipes available in the classroom to wipe surfaces (e.g., your desk, tablet arm) upon entry and exit,
- exit the classroom at my direction, proceeding in a row-by-row fashion, following the designated egress route and maintaining proper distancing.

Facial coverings. If you do not wear a facial covering to class, I will ask you to put one on (and if you don't have one with you, I will direct you to a distribution location on campus). If you refuse to wear a facial covering, remove it during class, or otherwise behave in a way that I believe puts others around you at risk, you will be asked to leave. Please remember that you will be subject to student conduct proceedings, up to and including removal from CMU. Accordingly, I will be obliged to take other measures for the safety of the whole class.

Course Recordings for Synchronous Classes

Unless otherwise stated, synchronous classes will be recorded via Zoom so that students in this course (and only students in this course) can watch or re-watch past class sessions. Please note that breakout rooms will not be recorded. I will make the recordings available on Canvas as soon as possible after each class session (usually within 3 hours of the class meeting). Recordings will live in our Canvas website. Please note that you are not allowed to share or repost these recordings. This is to protect your FERPA rights and those of your fellow students.

Academic Integrity & Collaboration

This course will follow Heinz College policies on ethics and discipline as stated in student handbooks.

A specific policy of this course is as follows:

Homework assignments: The bulk of this course will involve group-work since you will be working together in teams to complete projects. In the case of individual work, do not copy or modify homework solutions for your homework solutions. You may consult each other on clarification, technical and conceptual issues, but you must do individual problem solving and derive your own solutions, including your own computer work. You are not permitted to be in possession of any assignments from another student or other source either from the current semester or from past semesters whether they are electronic or paper. Possession of or sharing such files constitutes an infraction of the academic integrity policies of this course.







Accommodations for students with disabilities: If you have a disability and require accommodations, please contact Catherine Getchell, Director of Disability Resources, 412-268-6121, getchell@cmu.edu. If you have an accommodations letter from the Disability Resources office, I encourage you to discuss your accommodations and needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate.







Statement on student wellness: As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down,


difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. CMU services are available, and treatment does work. You can learn more about confidential mental health services available on campus at: <http://www.cmu.edu/counseling/> [\(http://www.cmu.edu/counseling/\)](http://www.cmu.edu/counseling/). Support is always available (24/7) from Counseling and Psychological Services: 412-268-2922.

Laptops Mobile Devices: In general this is a course that uses a lot of technology, so it's expected that on most days you'll have your laptop and phone with you. With that said, it's your responsibility to be respectful when using these devices. Keep your phone on silent, don't talk on the phone while in class, don't distract others by viewing content on your laptop not relevant to the course, and no technical devices are allowed for any quizzes or tests administered through this course unless explicitly stated by the professor.

Course Summary:

Date	Details	Due
Tue Oct 19, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309142&include_contexts=course_24442	1:25pm to 2:55pm
	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309143&include_contexts=course_24442	1:25pm to 2:55pm
Thu Oct 21, 2021	 Intro Workshop #1: "How might we" workshop https://canvas.cmu.edu/courses/24442/assignments/386678	due by 11:59pm
	 Week one graded discussion https://canvas.cmu.edu/courses/24442/assignments/386670	due by 11:59pm
Mon Oct 25, 2021	 Assignment: week one project brief https://canvas.cmu.edu/courses/24442/assignments/386673	due by 11:59pm
Tue Oct 26, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309144&include_contexts=course_24442	1:25pm to 2:55pm

Date	Details	Due
Thu Oct 28, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309145&include_contexts=course_24442	1:25pm to 2:55pm
	 Intro Workshop #2: Project management and sprint planning (Includes Mural Links) https://canvas.cmu.edu/courses/24442/assignments/386679	due by 11:59pm
Tue Nov 2, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309146&include_contexts=course_24442	1:25pm to 2:55pm
	 Assignment: week two https://canvas.cmu.edu/courses/24442/assignments/386676	due by 11:59pm
Thu Nov 4, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309147&include_contexts=course_24442	1:25pm to 2:55pm
	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309148&include_contexts=course_24442	1:25pm to 2:55pm
Tue Nov 9, 2021	 Assignment: week three https://canvas.cmu.edu/courses/24442/assignments/386675	due by 11:59pm
	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309149&include_contexts=course_24442	1:25pm to 2:55pm
Thu Nov 11, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309150&include_contexts=course_24442	1:25pm to 2:55pm
	 Assignment: week four https://canvas.cmu.edu/courses/24442/assignments/386672	due by 11:59pm

Date	Details	Due
	 Workshop #3: Pre-mortem exercise https://canvas.cmu.edu/courses/24442/assignments/386681	due by 11:59pm
Thu Nov 18, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309151&include_contexts=course_24442	1:25pm to 2:55pm
Tue Nov 23, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309152&include_contexts=course_24442	1:25pm to 2:55pm
	 Assignment: week five https://canvas.cmu.edu/courses/24442/assignments/386671	due by 11:59pm
Thu Nov 25, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309153&include_contexts=course_24442	1:25pm to 2:55pm
Tue Nov 30, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309154&include_contexts=course_24442	1:25pm to 2:55pm
	 Assignment: week six https://canvas.cmu.edu/courses/24442/assignments/386674	due by 11:59pm
Thu Dec 2, 2021	 Policy Innovation Lab - Fall 2021 - Mini 2 https://canvas.cmu.edu/calendar?event_id=309155&include_contexts=course_24442	1:25pm to 2:55pm
Sun Dec 5, 2021	 Final sprint: MVP delivery https://canvas.cmu.edu/courses/24442/assignments/386677	due by 11:59pm