

DPI-663: Tech & Innovation in Government

Spring 2018 | Fridays 9am – noon | Harvard Innovation Lab

ABOUT THE COURSE

Instructor:

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Course Assistants:

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Limited Enrollment & Applications:

DPI-663 is a field course with limited enrollment. Students must apply and be accepted by the instructor before their petition to enroll will be accepted. See page 2 for details or [apply here](#).

Course Description:

In the last five years digital services units have emerged as key players in government reform in the U.S. and abroad. The scope and ambition of these efforts vary, but they all leverage methodologies already common to private sector entrepreneurship -- an intense focus on understanding user needs, rapid prototyping and iteration, and the use of modern technologies.

Drawing on approaches pioneered by these units, this course seeks to equip students with a methodology and a mindset for driving change in 21st century government. Students will use lean startup principles and user-centered design methods to solve real problems for local and federal government clients.

These methods are best learned through practice. As such, this field class offers lectures on core concepts concurrently with client work. Students will be paired in teams of five and assigned a government client. Each team will scope their project/problem; conduct user research in the field; rapidly design, build and test lightweight prototypes; and, if relevant, create a plan to scale their product. Teams may also offer policy, operations, and strategy recommendations.

Students will learn user-centered design, prototyping, user-testing, and most importantly, how to “hack” bureaucracies with empathy to get stuff done.

For more information on the course, including the spring 2016 and 2017 presentations and blog posts from student teams, please see <http://www.innovategovernment.org/>.

APPLYING TO THE COURSE

Application Deadline:

Applications are **due by midnight** on **Friday, January 19th**. Accepted students will be notified by email and instructed to submit a Petition to Enroll. Students who are waitlisted will also receive an email with further instructions.

Application Form:

Interested students should apply via this Google Form:

<https://goo.gl/forms/yvRY1eVOnxifHbKF3>

About the Application:

Permission of the instructor is required. To apply, students are required to submit a resume, a brief statement of interest, and links to an online presence (eg. Github, LinkedIn, Twitter, Medium). The instructor will then choose students based on demonstrated interest and preparation. Applications will also be used to form students teams that emphasize a diversity of skills, and to assign clients. *All students are encouraged to apply.*

Recommended Prerequisites :

While there are no required prerequisites, students who have taken one or more of the following courses tend to excel in this course:

- HKS DPI 662 Digital Government (Professor David Eaves)
- HBS 1345. Design Thinking and Innovation (Professor Srikant Datar)
- Harvard College CS 50 Intro to Computer Science
- Harvard College CS 109 Data Science
- Harvard College CS 171 Visualization

CLIENTS

Clients change from year to year. **2018 Clients will be announced in early January** prior to the beginning of the course.

Clients consist of local, state, or federal government agencies in the U.S. Each client provides:

- A concrete problem related to the agency's core mission.
- Open access to information and employees at multiple levels, from the bottom to the top of the organization.
- Staff time, including a point person for the student group. This person will attend class in Cambridge, MA for client introductions (Friday, Feb 2) and "Demo Day" (Friday April 27).

Client travel: Students with local clients will be expected to travel to their offices as needed.

Spring 2016 clients were the City of Boston, New York City, the U.S. Department of Veteran Affairs; and the U.S. Department of Commerce (Census Bureau). Spring 2017 clients were the City of Boston, the Commonwealth of Massachusetts, the U.S. Department of Veteran Affairs; and the U.S. Department of Treasury.

CLASS POLICIES

Outside Commitments: Students are expected to devote a significant amount of time to their projects (12-15 hours a week). **Students are expected to attend every class session, minimize outside class commitments, and make this class a top priority.** Taking this class while overloading, taking multiple client-based courses, or with an overly demanding schedule is not recommended. Do not apply to this class if you are also starting a company or non-profit this semester, or have other substantial commitments.

Laptops and Cellphones: Expect to bring a laptop to class for co-working sessions. However, during lectures we ask that you refrain from using laptops and focus on the lecture. Cell phones are not permitted in class.

Absences: When you are absent, your team can't benefit from your participation and you lose out on co-working and lecture for that day. While **we expect students to be present for every class**, we will allow up to one absence during the semester. If you must be absent, you should inform the teaching team and your student team **at least two weeks in advance** and arrange beforehand with your student team to make up the work.

Assignments and Grading:

- Final presentation -- 40% of grade
 - Due Apr 27
- Written assignments
 - Team artifacts & documentation -- 20% of grade
 - Four assignments, due Feb 2, Feb 16, Feb 23, Mar 9
 - Team blog posts -- 20% of grade
 - Four posts, due Feb 9, Mar 2, Mar 23, Apr 13
 - Individual reflection paper -- 10% of grade
 - Due May 4
- Attendance and participation -- 10% of grade

CLASS SCHEDULE:

Shopping Day: January 19 (optional)

1. Teams & Core Principles | Jan 26

Lecture: Course expectations, working in student teams, and core principles

In Class Exercises:

- Norm setting & designating norm captain
- Setting learning objectives for each student
- Create **Team Launch Document**

Reading:

- Duhigg, Charles. What Google Learned From Its Quest to Build a Perfect Team. The New York Times Magazine. 2016.
http://www.nytimes.com/2016/02/28/magazine/what-google-learned-from-its-quest-to-build-the-perfect-team.html?_r=1
- Kahn, William. A Student's Guide to Successful Project Teams. 2008.
- Background materials provided by Client

2. Clients & Project Scoping | Feb 2

Lecture: Client introductions

In Class Exercises

- Co-working session with clients
- Scope your project with client

Reading:

- Ideo.org. The Field Guide to Human-Centered Design. 2015. (Pages 17-25, Mindsets).
- Eisenmann, Thomas, Eric Ries, and Sarah Dillard. "[Hypothesis-Driven Entrepreneurship: The Lean Startup.](#)" Harvard Business School Background Note 812-095, December 2011.

Assignments:

- Team Launch Document Due

3. User Research I: Problem Definition | Feb 9

Lecture: Framing your Design Challenge

In Class Exercises:

- Complete ***Framing your Design Challenge worksheet***
- KJ Exercise

Reading:

- Ideo.org. The Field Guide to Human-Centered Design. 2015. (Pages 27-33, Methods)
- Sherwin, David. Five Step Process to Conducting User Research. Smashing Magazine. 2013. www.smashingmagazine.com/2013/09/5-step-process-conducting-user-research/
- Holdren, John. How to Avoid Common Pitfalls in Professional Writing. 2004.

Assignments:

- Blog Post I (Intro) Due

4. User Research II: Methods | Feb 16

Lecture: Methods for Conducting User Research

In Class Exercises:

- Develop list of users to interview
- Develop draft ***Research Plan***
- Create ***User Interview Guide***

Reading:

- Ideo.org. The Field Guide to Human-Centered Design. 2015. (Pages 34-67, Methods)
- 18F Methods Cards: Discover section. <https://methods.18f.gov/>

Assignments:

- Framing Your Design Challenge Due

5. Research Synthesis I | Feb 23

Lecture: Innovating in government & synthesizing your research and deriving insights

In Class Exercises (Optional):

- Journey mapping
- Developing lightweight personas

Reading:

- UK Government Digital Service. Design Principles. <https://www.gov.uk/design-principles>
- US Digital Service. Playbook. <https://playbook.cio.gov/>

Assignments:

- Research Plan & Interview Guide Due

6. Storytelling | Mar 2

Lecture: Turning your user insights into stories

In Class Exercises:

- Co-working sessions

Reading:

- Monarth, Harrison. "The Irresistible Power of Storytelling as a Strategic Business Tool." *Harvard Business Review*, 10 Dec. 2015, hbr.org/
- Gottschall, Jonathan. "Why Storytelling Is The Ultimate Weapon." *Fast Company*, 2 May 2012, www.fastcompany.com/

7. Insights | Mar 9

Lecture: None

In Class Exercises:

- Class Presentations on User Insights
- Co-working sessions

Assignments:

- User Insight Presentations
- Blog Post II (Research) Due

****No Class- March 16 (Spring Break)****

8. Brainstorming and Prototyping | Mar 23

Lecture: Turning your insights into prototypes you can test

In Class Exercises:

- Magic wand brainstorm
- Million dollar brainstorm
- Rapid prototyping workshop

Reading:

- Knapp, Jake. How to Decide What Ideas to Prototype. Fast Company. 2013. <http://www.fastcodesign.com/1672929/how-to-decide-what-ideas-to-prototype>
- Knapp, Jake. A Lightning-Fast Way To Make A Digital Prototype. Fast Company. 2013. <http://www.fastcodesign.com/1672940/a-lightning-fast-way-to-make-a-digital-prototype>
- 18F Methods Cards: Decide section. <https://methods.18f.gov/>

9. User Testing & Iteration | Mar 30

Lecture: Healthcare.gov: Testing & Iteration and When Products Fail

In Class Exercises:

- Co-working sessions

Reading:

- Brill, Steven. "CODE RED_ Inside the nightmare launch of HealthCare.gov and the team that figured out how to fix it." TIME, Mar 10 2014.
- Christian, Brian. The A/B Test: Inside the Technology That's Changing the Rules of Business. Wired. 2012. http://www.wired.com/2012/04/ff_abtesting/all/1

Assignments:

- Blog Post III (Prototypes & Testing) Due

10. Making Recommendations | Apr 6

Lecture: How to Make Recommendations that Get Implemented

In Class Exercises:

- Co-working sessions

11. Policy & Practice: Hacking the Bureaucracy | Apr 13

Lecture: Hacking the Bureaucracy: Red Laws and Blue Laws

In Class Exercises:

- Co-working sessions

Reading:

- Meyer, Erie. [User Researcher Is Not Illegal, Uncle Sam](#). Medium, 2017.

12. Demo Day Prep | Apr 20

Lecture: Class Recap

In-Class Exercises:

Teams present final deliverables to the class and get feedback, with a focus on:

- Quality of insights about users
- Quality of product / prototype
- Quality and feasibility of recommendations for clients

Assignments:

- Practice Presentation Due

13. Demo Day | Apr 27

Team presentations with clients

Assignments:

- Final Presentation Due

14. Final Deadlines | May 4th

Assignments:

- Blog Post IV (Recommendations) Due
- Individual Reflection Paper Due

ASSIGNMENT SCHEDULE:

Week 1 (Jan 26)	--
Week 2 (Feb 2)	Team Launch Doc Due
Week 3 (Feb 9)	<i>Blog Post I (Intro) Due</i>
Week 4 (Feb 16)	Framing Your Design Challenge Due
Week 5 (Feb 23)	Research Plan & Interview Guide Due
Week 6 (Mar 2)	--
Week 7 (Mar 9)	Class Presentations on User Insights Blog Post II (Research) Due
<i>*Spring Break</i>	--
Week 8 (Mar 23)	--
Week 9 (Mar 30)	Blog Post III (Prototypes & Testing) Due
Week 10 (Apr 6)	--
Week 11 (Apr 13)	--
Week 12 (Apr 20)	Practice Presentations Due
Week 13 (Apr 27)	Final Presentation Deck Due (Apr 27)
Reading Period (May 4)	Blog Post IV (Recommendations) Due <hr/> Individual Reflection Paper Due
<i>*Finals (May 8)</i>	<i>Debrief</i>