PROBLEM SOLVING INITIATIVE COURSE—FALL 2018

"Fake News": Truth, Misinformation, and Public Trust

Professor Mark Ackerman
School of Information and College of Engineering
Email: ackerm@umich.edu

Professor Sherman Clark
Law School
Email: sjclark@umich.edu

Brief Background on the Problem Solving Initiative (PSI)

The PSI's goal is for students to develop problem solving skills and learn to work in collaborative spaces with an appreciation for the norms, language, perspectives, and practices of other disciplines. Students in PSI classes apply their subject matter expertise in practical ways in the service of solving emerging and complex problems.

PSI Course Philosophy and Structure

We are deliberately *not* structuring this course as a conventional graduate course involving linear delivery of prepared content. The goal is for *you, the students*, to come up with solutions to big problems in the world, working on a multidisciplinary team. We, the instructors, aren't sitting back hiding the answers. We don't have them. Really. We see ourselves as facilitators, conveners, and project leaders, but *you* are ultimately running the show.

Further, we haven't mapped out how this class will go from beginning to end. We've spent a lot of time researching the background questions, but we have not yet sketched out the entire agenda because we need to steer the ship in response to the questions you ask, the ideas you have, and the information that materializes during our shared discovery process. Consequently, this will occasionally get a bit chaotic. It may turn out that we pursue solutions that ultimately turn out to be unworkable. That's OK, too. Learning by failing is part of the game.

Therefore, please enter this course with a spirit of flexibility, creativity, and ingenuity. Remember that our goal is to mimic the best kind of problem solving in the real world: teams made up of people with different expertise, viewpoints, strengths, and backgrounds pooling their ideas, time, sweat, and muscle to get things done.

"Fake News"—Truth, Misinformation, and Public Trust

In this Problem Solving Initiative course, students will explore potential solutions to a problem that may pose a threat to American democracy. The problem could be described most broadly as a failure of public trust in sources of truth about matters of fact. Public actors lie and accuse each other of lying. Media outlets present competing narratives. Citizens do not know who to trust or believe. Misinformation and conspiracy theories spread though social media. In this course, we will tentatively focus on a particular set of manifestations of this problem. Our aim in this course will be to come up with creative concrete potential (albeit inevitably partial) interventions, solutions, or projects that might help people identify and trust sources of truth and/or that might prevent the spread of misinformation.

We may draw in insights from a range of inter-connected fields, including: Psychology: Why do people believe what they believe? Computer Science: How do attacks on truth actually work? Might competing algorithms help people evaluate information? Social Media: Do Facebook reliability ratings and the like hold promise? Communications: How do how people get and process information? Journalism: Might alternative structures of reporting foster accuracy and trust? Law: Law deals with truth finding in various contexts. Are there lessons there? These categories are merely illustrative. Potential solutions may involve incremental advancements in one or more of these areas; but we should also try to think beyond pre-existing categories: A generation ago, Twitter and its impact would have been almost inconceivable. Perhaps our current problems will require us to expand or alter our current conceptual framework.

Early in the term, we will try to frame the problem and our potential approaches to it. We will do some background reading. We will think and learn about ways in which teams address problems. We will hear from people who are thoughtful about or expert in the areas that seem relevant to our problem. We will then break into teams and begin to seek solutions—calling upon addition outside expertise or insight as we focus our inquiries.

Halfway through the term, students will make presentations describing tentative approaches. In light of what we learn, we will regroup—perhaps reframe the problem, refocus our efforts, even reorganize the teams. Then we will dig back in. At the end of the term, students will make presentations. We will call these "capstone" presentations; but we are under no illusion that we will have complete solutions to this deep set of social problems. That said, this is a Problem Solving Initiative course—not a seminar. Our purpose is not merely to explore this fascinating and important problem, but rather to identify a set of concrete (albeit perhaps tentative and partial) solutions. That will not be easy. But is should be fun. And it is definitely worthwhile. Our democracy may be at risk. Let's try to figure out how to help save it.

Schedule and Logistics

Classes at the Law School start at the scheduled time.

We will begin class promptly at 3:15.

Our class meets on Wednesdays in Room 1025 of South Hall, which is the "new" law school building just across Monroe Street from the main law quad.

Each week, we will divide our time between "lab time" (when student teams can work together) and "class time" (during which we will talk together as class, hear from speakers, etc . . .).

You will see that most weeks of the schedule are open. This is not a traditional class in which content is predetermined. It is a problem solving course in which we, as a class, will deliberate over the resources we need to have to address the problem. This means that your ideas about what to read, what to discuss, what speakers to invite, and the like will be critical.

Preliminary Reading:

Please read the flowing prior to our first class meeting:

Marwick, Alice, and Rebecca Lewis. 2017. "Media manipulation and disinformation online."
Pages 1-56
https://datasociety.net/output/media-manipulation-and-disinfo-online/

C Thi Nguyen. 2018. "Escape the echo chamber." Aeon, newsletter, April, 2018.
https://aeon.co/essays/why-its-as-hard-to-escape-an-echo-chamber-as-it-is-to-flee-a-cult

Tim Boucher. 2018. "Adversarial Social Media Tactics Exposing Red Team Tricks To Empower Blue Team Defenders." Medium.
https://medium.com/@timboucher/adversarial-social-media-tactics-e8e9857fede4

Hannah Arendt. "Truth and Politics." The New Yorker, February 25, 1967. Pages 1-4.
https://idanlandau.files.wordpress.com/2014/12/arendt-truth-and-politics.pdf

Student Learning Outcomes

By the end of this course, students should have a better understanding of, and appreciation for, the complexities in the class problem. Students also should have developed or refined skills in:

(1) **Multidisciplinary Teambuilding and Collaboration**. In this course, we will focus on further developing your teamwork skills. This class will give students the opportunity to work with faculty and experts in small teams throughout the semester, and you will be required to think explicitly about things such as what makes a team work well, how to make the best use of individual collaboration styles, how to speak to and listen to students from different disciplines and take full advantage of their varied perspectives and areas of knowledge, and how to reach consensus in the midst of competing proposals.

(2) **Problem Solving**. In this course, we will give students a framework for solving complex problems. Along these lines, students will learn to think about how to define – or, often, redefine – a problem, how to get comfortable with ambiguity and risk, how to assess available research and different proposed solutions to the same problem, and how to apply their teamwork skills and disciplinary knowledge to the process of crafting innovative solutions to the challenges before them. An outside consultant, Andy Burnett of KnowInnovation, is available to facilitate student skill development in Creative Problem Solving.

(3) **Communication**. The ability to communicate effectively is a valuable skill that many graduate and professional students are still developing. Students may be able to generate brilliant, path-breaking solutions to complex problems, but if they cannot communicate these proposed solutions across disciplines and to their intended audiences (e.g., funding sources, legislators, etc.) effectively, their ideas are unlikely to be adopted. Effecting significant change requires presenting ideas in a compelling way. Patrick Barry, a member of the Law School's faculty who teaches writing and oral advocacy skills, is available to facilitate student development in this area.

Grading and Grade Assessment Descriptions

This course will be graded. We recognize that grading a non-traditional course largely based on collaborative work and team presentations is challenging. However, it is not unprecedented, and we have worked with the Center for Research on Learning and Teaching (CRLT) to develop grading metrics that we believe are workable and fair. This course is not bound by the Law School's forced grading curve. However, we intend to assign grades that comply with the Law School's target mean of around 3.75 for seminars, clinics, and practice simulations.

Your course grade will be based on your performance on the following:

1. Attendance and In-class Participation (20% of Final Grade)
Attendance at every class session is mandatory. Students are expected to engage with guest speakers, classmates, and faculty regularly. Students are expected to complete readings and other tasks assigned by faculty members. Assessment of student in-class participation will be based on whether the student participated regularly and in a manner that fostered learning.

2. Team Participation (20% of Final Grade)
Students should plan to work with members of their team inside and outside of class, To assess team participation, instructors will consider how effectively students applied concepts from the Creative Problem Solving module regarding problem solving styles, assigned readings on effective teams, and class exercises on team building.

2. Reflection Memos (20% of Final Grade)
As we learn and think about problem solving in multidisciplinary environments, each student must write six (6) two-page reflection memos over the course of the semester. The memos will address the following topics and will be due on the indicated days.

Memo #1: As we begin this course, what are your expectations regarding multidisciplinary problem solving? What challenges and what benefits do you foresee? DUE. Fri., Sept. 14

Memo #2: Reflect on your own skills. What are your strengths and weakness in the problem-solving context–as opposed to other academic or professional context? DUE Fri., Oct 5.

Memo #3: What differences have you observed in how students from different fields approach problems? To what do you attribute these differences? DUE Fri., Oct. 19.

Memo #4: What was your view of misinformation and public trust in sources of information when you entered the class? How, if at all, has it shifted? DUE Fri., Nov. 2.

Memo #5: What have you found most beneficial about multidisciplinary collaboration so far? What has been most challenging or frustrating for you? DUE Fri., Nov. 16.

Memo #6: What have you learned about problem solving as a result of taking this course? How has this experience shaped your thinking? DUE Fri., Nov. 30.

6. Final Presentation (40% of Final Grade)

Students will present the class solution to a panel at a capstone in December. The class will present for roughly 30 minutes. You then will have approximately 30 minutes to engage with panelist questions and comments and 20 minutes to respond to general audience Q&A.

Here are criteria by which student proposals will be evaluated:

a. **Impact**: Does the proposal solve a real problem or address a need?
b. **Creativity and Innovation**: Does the proposal offer creative and innovative way to address the challenge?
c. **Conceptual Development**: Does the proposal address the need and propose change in a thorough manner? Have the students thought through the issue in detail?
d. **Coherence**: Does the proposal have a clear and coherent form and is it clearly and coherently expressed?
e. **Feasibility**: Is the proposal feasible? (Note: We want you to be creative and not limited by what is currently feasible, but you should be able to articulate a path, even if tentative, toward feasibility under certain specified conditions.)
f. **Interdisciplinarity**: Does the proposal explicitly include components from the different fields or disciplines represented by the students' home units, including law?

The following is a rough guide describing the level of work that corresponds to student grades. The descriptions are necessarily general, but we hope it helps you understand our grading.

A	Consistently excellent work in all areas, with at least one outstanding piece of significant work. A student who earns an "A" will take full ownership of the project, be organized and attentive to details, will always allocate sufficient time and effort to carry out tasks responsibly, and will recognize, consider, and appropriately resolve ethical issues. The student will show initiative and creativity in planning and developing solutions, rather than merely carrying out plans outlined by the professor, and will be reflective, professional, and respectful. S/he will have shown considerable progress in mastering the various skills necessary to be an effective problem solver and multidisciplinary collaborator, and will actively prepare, participate, and take initiative in all class sessions and team sessions.
A-	Mostly excellent work in all areas and some very good work.
B+	Consistently very good work or a mix of generally very good work, occasional excellent work, and some competent work.
B	Competent and adequate work with some very good work, but with some weaknesses.
B-	On the whole, competent work but with some significant lapses or shortcomings.
C	On the whole, marginally competent work with frequent lapses or shortcomings.
C- or below	Serious difficulties with performance; failing to meet responsibilities.

Students enrolled in and registered through schools or colleges that permit pass/fail grading may be able to opt for pass/fail grading in this course. Students must verify that option with their home schools or colleges. Students who choose the pass/fail option will receive a grade of "pass" if they meet the conditions set forth by their schools or colleges for such a grade.

Class 1 **Wednesday 09/05/18**
Introduction to course topic, class challenge, and course expectations;
Faculty and student introductions; Discussion of assigned readings

Friday, September 7

Mandatory PSI Boot Camp for all Fall 2018 PSI students with Patrick Barry and Andy Burnett (South Hall, from 1:00-5:00 pm)

The goal of the Boot Camp is to provide students with a foundation and a set of skills that they can apply throughout the semester. Patrick Barry will present a module on communication skills for the first hour of the Boot Camp (1:00-2:00 pm). In this session, students will learn how to communicate new ideas effectively. The remaining three hours (2:00-5:00 pm) of the Boot Camp will be a module on Creative Problem Solving ("CPS") run by Andy Burnett. During this session, students will be introduced to the CPS model. The idea behind the CPS model is that skills to improve creativity and problem solving abilities can be taught and/or developed. The CPS approach is intended to help PSI students as they assess solutions to their class challenge; work with team members; bring to bear their expertise, skills, and ideas; and take responsibility for their own learning.

*Homework: Watch *Introduction* and the *Basics of Creative Behavior* (videos 1-5) from Andy Burnett's Creative Problem Solving (CPS) series prior to the September 7 Boot Camp

Class 2 **Wednesday 09/12/18**

- ### *Class 3* **Wednesday 09/19/18**

- ### *Class 4* **Wednesday 10/03/18**

- ### *Class 5* **Wednesday 10/10/18**

- ### *Class 6* **Wednesday 10/17/18**
  Preparation for midterm presentation
  Student midterm feedback session with CRLT

- ### *Class 7* **Wednesday 10/24/18**
  [Review of CRLT midterm feedback session to take place this week outside of class time]
  Midterm panel presentation
  Class discussion on path toward developing comprehensive class solution
  *Homework: Review videos of past PSI capstones

- ### *Class 8* **Wednesday 10/31/18**

- ### *Class 9* **Wednesday 11/07/18**

- ### *Class 10* **Wednesday 11/14/18**

- ### *Class 11* **Wednesday 11/28/18**
  Capstone presentation dry run with comments from Patrick Barry

- ### *Class 12* **Wednesday 12/05/18**
  Capstone presentation (followed by faculty and student debrief dinner)

Safety and Self-Care

All students in this class should be aware that we will have frank discussions throughout the semester. In addition, some of the readings and discussions may be uncomfortable or difficult. Throughout the course, faculty members will remain available for individual conversations about these topics and others.

Mental Health and Wellbeing

The University of Michigan is committed to advancing the mental health and wellbeing of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, contact **Counseling and Psychological Services (CAPS)** at (734) 764-8312 and https://caps.umich.edu/ during and after hours, on weekends and holidays, or through its counselors physically located in schools on both North and Central Campus. For a listing of other mental health resources available on and off campus, visit: http://umich.edu/~mhealth/.

Disability Statement

The University of Michigan is committed to providing equal opportunity for participation in all programs, services, and activities. Request for accommodations by persons with disabilities may be made by contacting the Services for Students with Disabilities (SSD) Office located at G 664 Haven Hall. The SSD phone number is 734-763-3000. Once your eligibility for an accommodation has been determined, SSD will contact the Law School's Office of Student Life (734-764-0516, lawstudentlife@umich.edu) with a recommendation, and Student Life will work with you and SSD to finalize and facilitate your accommodations. For more information about this process, please contact the Office of Student Life.