

## **SUSTAINABILITY INNOVATION LAB**

Macalester College, Spring, 2024

3:30-4:30 PM Wednesdays, Library 250

### **About Your Professor**

Dr. Megan Butler

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Office Hours: 1:20-3:30 and 4:30-5:00 Wednesdays in the Innovation lab or by Appointment

### **Course Description**

The goal of this class is to enable future environmental leaders to build the skills they need to research and craft effective solutions to wicked environmental problems. Using a design thinking methodology, this course will guide participants through the hands-on experience of developing innovative interventions aimed at addressing problems in their community. Using the Macalester campus and the neighboring community as a living laboratory, students will combine theory and practice while working collaboratively to build ideas that are compelling, impactful, and realizable. Over the semester, student teams will define a problem, identify, and evaluate solutions, and develop pilot and pitch implementation plans. Through collaborative activities, workshopping sessions and participatory lectures, students will practice empathy and systems-thinking and build skills that promote creative thinking, collaboration, negotiation and acting. This course will involve group work and require participants to be highly interactive and share creative ideas to develop practical approaches to addressing real-world problems. The goal of this course is to help future leaders hone the skills they need to craft effective solutions for environmental and/or social challenges to create holistic approaches and integrated solutions.

### **Course Objectives**

By the end of the course, students will be able to:

- Understand the concepts of design thinking and human centered design and how they can be used in environmental problem solving
- Work as part of an interdisciplinary team
- Use human-centered design techniques and processes to research a local environmental problem and design a solution
- Build skillsets related to teamwork, stakeholder engagement and strategic planning

### **Course Format**

This class will use a flipped classroom format. In this format, class time will not be spent on lectures. Rather, lectures will be pre-recorded, and you are expected to watch the lecture prior to coming to class. Every week before class you will be expected to watch a brief lecture, complete

required readings and/or participate in an online discussion forum. The 60- minute class time will be devoted to interactive discussions and workshops. Please let me know if you have any questions or concerns regarding this format.

## Course Texts

All reading materials will be available via the course Moodle website

Two books we will reference frequently are the Field Guide to Human-Centered Design and The Little Book of Design Research Ethics by IDEO.org. Both of these are available on moodle and can be downloaded for free at <http://www.designkit.org/>

## Course Assignments and Grading

Your grade for the course will be calculated as follows:

- Group Project
  - Team Development and Problem Identification: 20%
  - Stakeholder Engagement & Solution Identification: 20%
  - Solution Piloting Research and Presentation: 20%
- In class Participation: 40%

Late assignments will be marked down one full letter grade per 24 hours late. Brief descriptions of each of these activities and assignments are described below. Complete descriptions of all assignments will be provided in class and are also posted on Moodle.

**Participation:** This course will require attendance and active participation in class. Missing a class workshop will make it very difficult for you to complete your project as part of your team. Beyond showing up, your participation grade will also be based upon your active participation during class discussions, activities, and workshops. To actively participate, it will be necessary to come to class prepared with pre-recorded lectures, readings and homework completed. Your participation grade will also be influenced by peer evaluations completed by your team-members for the semester-long project.

## Sustainability Innovation Project

This course revolves around guiding you through a semester-long application project. The project will be divided into three sections: team building and problem identification, stakeholder engagement & solution identification, and solution piloting. Expect to complete both weekly homework assignments and pre-class VoiceThreads/discussion posts.

**Team Development & Problem Identification:** During this part of the project you will begin working with your team, your team identify a topic you would like to work on and conduct both desk and in-person research to identify and define a problem you will work on together for the rest of the semester. You will have the following assignments:

- Pre-course survey
- Point of Obligation Video
- Team How Might We Statement

- Skills Assessment
- Researching the Problem Discussion Post
- Complete VoiceThreads & Readings Before Class

Stakeholder Engagement & Solution Identification: During this section of the project you will begin working on identifying a solution to your problem. As part of this process you will need to identify and speak with stakeholders involved with the problem, research what has already been done related to your project both locally and nationally/internationally, and hone your ideas based upon this research. You will have the following assignments:

- Team Stakeholder Analysis
- Team Interview Guide
- Individual Interview Summaries (2-3)
- Interview Discussion Post
- Team Empathy Map
- Team MOU
- Solution Presentation (Midterm)
- Complete VoiceThreads & Readings Before Class

Solution Pilot: During this final section of the course, it will be time to get our hands dirty. The final part of the course will be focused upon piloting the solution your team has come up with. You will have the following assignments:

- Complete VoiceThreads & Readings Before Class
- Team SMART goals
- Team SWOT Analysis
- Team Theory of Change
- Project Implementation/Deliverables
- Final Presentations

Most days, class workshop time will be devoted to beginning and preparing assignments that will be due the following weeks. Some of the work will be completed in class but you will have some work to complete outside of the weekly workshop.

This will be a team project- you will be divided into teams and will work with your team to complete project deliverables throughout the semester. Your grade of the project will be based upon both successful completion of deliverables as well as peer evaluations from your teammates. Peer evaluations will be completed after each major deliverable to ensure that every team member is actively participating in the project.

### **Academic Integrity**

All students will be required to abide by the Macalester College academic integrity guidelines found at <https://www.macalester.edu/academicprograms/academicpolicies/academicintegrity/> Instances of suspected academic dishonesty (cheating, plagiarism, and using the same paper in more than one course) will be handled as outlined in the guidelines.

### **Artificial Intelligence (AI) Use Policy**

Using AI can impede your learning. The assignments in this class challenge you to develop creativity, critical-thinking, and problem-solving skills that AI does not have. Using AI technology could limit your capacity to do this type of work. As is the case for all courses at Macalester College, work submitted by you for this class should reflect both your own ideas and your own language and you should properly cite any resources you have consulted. If you have any questions about citation or about what constitutes academic honesty in this course or at Macalester in general, please feel free to contact me to discuss your concerns.

### **Accommodations**

My goal is that every student in this class can participate fully and be successful. If at any point you need guidance from me or information on where to go for additional help, please don't hesitate to talk to me. There are also several additional resources you have at your disposal here at Macalester:

The Macalester Academic Excellence (MAX) Center (x6121; Kagin Commons) is here to help you do your best at Macalester in meeting your own goals and highest standards. Through academic enrichment and support services, ranging from workshops to individual assistance, the MAX Center can help you excel in your academics. Professional counselors and peer tutors in writing, mathematics, science, and study skills provide personal assistance in: writing for any college course, from brainstorming through final editing, content areas such as calculus, statistics, organic chemistry, or cellular biology, or sharpening study and time management skills

The disability services office can help students obtain accommodation that will allow them to be successful at Macalester. If you have a temporary or permanent condition that requires accommodation please contact the Disability Services office at [disabilityservices@macalester.edu](mailto:disabilityservices@macalester.edu), or call 651-696-6948 to schedule an appointment to discuss your individual needs.

**Land Acknowledgement:** Macalester is located in Saint Paul, Minnesota in the ancestral homeland of the Dakota people who were forcibly exiled from the land because of aggressive and persistent settler colonialism. We make this acknowledgment to honor the Dakota people, ancestors, and descendants, as well as the land itself.

## Tentative Course Outline

<b>Date</b>	<b>Pre-Class Activity</b>	<b>Class Topic</b>
January 24 <sup>th</sup>	Read Syllabus & Make Sure You Can Get On VoiceThread	Course Introduction & Introductions to One Another
January 31 <sup>st</sup>	VoiceThread: Sustainability at Macalester	Campus Sustainability Tour
February 7 <sup>th</sup>	VoiceThread: Point of Obligation Presentations	How Might Me Statements
February 14 <sup>th</sup>	Discussion Post: Teamwork	Working in Teams
February 21 <sup>nd</sup>	Discussion Post: What we have learned from desk research	Talking to People
February 28 <sup>th</sup>	Post: Interview Progress Spreadsheet	Working with Communities
March 6 <sup>th</sup>	Discussion Post: What we have learned from interviews	System Mapping
March 13 <sup>th</sup>	Spring Break	Spring Break
March 20 <sup>th</sup>	Prepare Presentation	Solution Presentations
March 27 <sup>th</sup>	VoiceThread: Levers of Design	From Idea to Action
April 3 <sup>rd</sup>	VoiceThread: SWOT Case Study	Goals & Strategy
April 10 <sup>th</sup>	VoiceThread: Evaluation & Adaptive Management	Evaluation & Feedback
April 17 <sup>th</sup>	VoiceThread: Long Term Sustainability	Storytelling
April 24 <sup>th</sup>	Just Presentation Prep	Final Presentations

**\*See moodle for more detailed homework/reading schedule**

**\*\* This schedule will change based upon the availability of guest speakers**