COURSE CONTENT AND OBJECTIVES:

Design thinking is an iterative problem solving process that employs design based techniques to gain insight for producing innovative solutions. It can be applied to virtually any type of organizational or challenge.

Through projects, lectures, readings, videos, and discussions, students will learn design thinking techniques to enhance creative analysis and problem solving. In teams, students will directly apply what they have learned to a variety of human centered design challenges. Students will innovate, prototype, and test designs that address real-word problems with real-world constraints. Projects range from ways to improve everyday situations to community issues. Students will give presentations and receive feedback to sharpen their communication and storytelling skills.

COURSE GOALS:

- Explain the methods and processes of design thinking
- Investigate problems, develop research methods, and synthesize results to form solutions
- Develop a deeper understanding of the users and their interaction with the designed environment
- Understand that in addition to the creation for innovative objects and places, design can be applied to the development of new processes, services, interactions, and collaboration in a variety of fields.
- Recognize that design requires an interdisciplinary approach and the value of design thinking as a means for innovative problem solving across disciplines.

LEARNING OUTCOMES:

1. Students will be able to **empathize with a broad group of stakeholders** to understand their needs through the ethnographic method.
2. Students will be able to **define and re-define innovation challenges** by asking the right questions, and not necessarily focusing on the right answers.
3. Students will be able to **develop many creative ideas** through structured brainstorming sessions.
4. Students will be able to **develop rapid prototypes** to bring their ideas into reality as quickly as possible, and obtain feedback.
5. Students will be able to **gain the competence to approach many different problems** and challenges with an open, creative, empathetic, and prototype-driven mindset.
6. Students will **develop confidence in creative problem-solving**.
CLASS POLICIES, AND PROCEDURES:

1. Presentations, Readings, and Videos are sequenced to prepare students for the design thinking process.
2. The Design challenges require a demonstration of the ability to apply course concepts and information.
3. Progress from one class to the next is expected and requires significant and regular time investment outside of class.
4. A positive attitude is essential to the learning activities.
5. Attendance is required; come prepared with all necessary tools and materials.
6. Discussion/Journal entries are required and designed to stimulate creative thinking, incorporate feedback and new ideas.
7. Team dynamic is essential for a successful outcome
8. Field Trips may be required

TEAMS:

The class will be broken up into interdisciplinary teams of 3-4 students. Teams will be composed during our second day of class. Each team will be required to develop a form of on-line communication. This will be the central communication vehicle for the team. Each day, individuals will be asked to write on the topic posted on Learn@UW as it pertains to the team design challenge. For example, during the “ideation” phase, individuals may write a post on the things they are seeing in the world that are inspiring for their project.

CHECK-INS AND ROAD BUMPS

Every other day groups will be required to informally present on their progress and findings to the group. This is an opportunity to get feedback on the progress, test prototypes, offer new perspectives, and gain new insights. For each design thinking project, students will be required to document what went well (WWW) and what was inspirational each class day. While the projects are group activities, each student is required to document their own observations.

PRESENTATIONS

Each team will be required to present their progress during each stage of the design process. A final presentation that will be the key deliverable for the project. It can be presented in any visual format (video, display…) that best conveys the solution.

Key Deliverables:
• Articulation of the design challenge
• Actionable insights based on the design research conducted
• Key themes and opportunity areas identified from the insights
• Visualized concepts that address the opportunity areas – refined prototype (s)
• A compelling, human-centered narrative that ties all the points above together

GRADING:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 1: Empathy</td>
<td>50</td>
</tr>
<tr>
<td>Part 2: Define</td>
<td>50</td>
</tr>
<tr>
<td>Part 3: Ideate</td>
<td>50</td>
</tr>
<tr>
<td>Part 4: Prototype</td>
<td>50</td>
</tr>
<tr>
<td>Part 5: Test</td>
<td>50</td>
</tr>
<tr>
<td>Final Presentation</td>
<td>150</td>
</tr>
<tr>
<td>Discussion Entries</td>
<td>60 (10 pts per insightful entry)</td>
</tr>
<tr>
<td>Peer evaluations</td>
<td>60</td>
</tr>
<tr>
<td>Attendance</td>
<td>120 (10 pts per day)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>640 points</td>
</tr>
</tbody>
</table>
GRADING SCALE:

- 100 – 95% A
- 94 – 90% AB
- 89 – 85% B
- 84 – 80% BC
- 79 – 75% C
- 74 – 70% D
- 69 – 65% F

REQUIRED TEXT:

Weekly readings are available through learn@uw. Links are attached to the agenda for each week. Design Thinking – Bootcamp Bootleg d.school Free download


OTHER USEFUL REFERENCES:

- Erwin, Kim [Communicating THE NEW Methods to Shape and Accelerate Innovation](http://www.wiley.com/go/krnim/communicating), Wiley, 2014
- Kelley, David and Tom; [Creative Confidence: Unleashing the Creative Potential Within Us All](http://www.amazon.com/Creative-Confidence-Unleashing-Potential-Dav/dp/0761154646), Crown Publishing, 2013. Available in audio or paper back from Amazon.com

A SAMPLE OF THE WEBSITES, COMPANIES AND PEOPLE TO FOLLOW:

- Cooper Hewitt [http://www.designmother90.org/solutions/?exhibition=12](http://www.designmother90.org/solutions/?exhibition=12)
- Makershed [http://www.makershed.com/?gclid=CKm26fd7jcACFQUFaQodqnsAGA](http://www.makershed.com/?gclid=CKm26fd7jcACFQUFaQodqnsAGA)
- Instructables [http://www.instructables.com](http://www.instructables.com)

LINKS TO VIDEOS AND READINGS

- How to Build You Creative Confidence [http://www.ted.com/talks/david_kelley_how_to_build_your_creative_confidence](http://www.ted.com/talks/david_kelley_how_to_build_your_creative_confidence)
- “Ira Glass on Storytelling” - Ira Glass [http://www.youtube.com/watch?v=loXJ3FtCJJA](http://www.youtube.com/watch?v=loXJ3FtCJJA)
- Design Thinking – Training Yourself to Be More Creative [http://www.youtube.com/watch?v=34EuT2KH2Lw](http://www.youtube.com/watch?v=34EuT2KH2Lw)
- Design Thinking -- Maximizing Your Students' Creative Talent: Co Barry at TEDxDenverTeachers [http://www.youtube.com/watch?v=nyt4YvXRRGA](http://www.youtube.com/watch?v=nyt4YvXRRGA)
- Schools Kill Creativity [http://www.ted.com/talks/ken_robinson_says_schools_kill_creativity](http://www.ted.com/talks/ken_robinson_says_schools_kill_creativity)
Special Needs? We wish to fully include persons with special needs in this course. Please let me know if you require any special accommodations in the curriculum, instruction or assessments of this course to enable you to fully participate. Confidentiality of any information shared with me will be respected.

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

GENERAL OPERATION PROCEDURES:

A. Academic honesty and high standards are expected of all students
B. Projects must meet specified format requirements (i.e. size/binding, labeling, etc.) or may be returned for modifications prior to grading
C. Students are responsible for obtaining information or announcements missed due to late arrival or absence.
D. It is not appropriate to schedule work or other appointments during class time
E. Make-up exams and grades of incomplete are given subject to UW policies and procedures, including informing instructor of need in advance.

There are many services on campus that can help students that are having difficulty. Here are a few helpful links to useful resources:

A. Master list of student services available at: www.wisc.edu/studentlife/studnetservices.php
B. University Health Service: www.wisc.edu/homejsp?catid=36
C. GUTS (Greater University Tutoring Service) www.guts.studentorg.wisc.edu/indexaxp
D. Tutoring help and other assistance in SOHE classes through SOHE Student Affairs Office, 262-2608