Design has a strong influence in symbolic and visual communications, material objects, service design, and shaping complex systems. Design’s ability to influence service design and complex systems makes it a crucial skill to have in a world rife with societal challenges.

The design thinking concept has risen to prominence as a problem-solving method that utilizes the strengths of design. Featuring iterative phases and the emphasis on understanding and engaging the people and context in every problem we encounter, it can lead to more meaningful and effective human-centered outcomes.

Additionally, design thinking is defined by an acceptance of competing constraints – feasibility (what is functionally possible within the foreseeable future); viability (what is likely to become part of a sustainable model); and desirability (what makes sense to people and for people). Therefore, the outcomes are often mindful in being both sustainable and adaptable to the changing needs of the people and its context.

To understand why design thinking is a problem-solving process that fits the needs of the public and non-profit sector, we need to understand that the nature of the societal challenges that we are currently facing are complex, long-term, and constantly evolving in form. They challenge problem-solvers like yourselves to question and think deep, to produce novel ideas and synergies between existing ones, and make them tangible and visible to others. This interpretive, embodied approach in understanding and solving problems stands in contrast to current methods that are often purely driven by numbers, analysis, and rationality.

As someone who is interested in advancing the common good, you need to learn how to use both methods in tandem to benefit the public and non-profit sector. This holistic approach may just be exactly what we need to tackle the grand challenges of our society. Human-centered design fits in as a complement.

This course serves as an introduction to this method – one that will require you, the student, to listen intently, experiment, indulge in creativity, and challenge your own boundaries of knowing and doing. You will spend the next seven weeks learning the principles behind the practice, develop and sharpen your design sensibilities, and apply these skills to your existing knowledge in doing good work in the public and non-profit sector.

Key Learning Outcomes
At the end of the semester, you will:

- Understand how design thinking serves as a complementary practice to problem-solving in the public and non-profit sector.
- Be able to apply design principles and methods to societal challenges.
- Use design skills to work independently (individually) and collaboratively (in team).
- Understand and practice user experience and perspective, iteration, prototyping, and feedback as core principles to the design thinking work that you do.
Your Instructors
Joint office hours: Tuesdays 5-6pm
Office: HHH 271

Sook Jin Ong
Email: ongx068@umn.edu
Phone: 612-625-8777

Janene Cowan
Email: cowan036@umn.edu
Phone: 773-484-3086

Materials

- A blank notebook or sketchbook. Pick a blank one – no lines please. You can choose what you would like to use – some prefer hard bound, ring bound, or soft bound. Size: preferably at least letter-sized. You may be tempted by a smaller sketchbook, but for our purposes it may be less helpful. We will refer to this as the visual journal.
- Markers, colored pens, colored pencils. Your choice.

New to You
This course will challenge your comfort zones. We will incorporate three key design practices into the structure of our course:

- Using design principles to be effective communicators of change.
- Visual thinking and practice. The visual journal is a key element of this practice. I am looking for consistency of practice. This is yours to keep, and it can develop into a lifelong practice that is the foundation to innovative thinking. If you keep up with your visual journal and use it consistently as a space for you to ideate and write down your thoughts, you will not need to worry about your grades for this segment. The key is constant practice.
- Candid feedback. This is a common practice for designers, and allows us to learn how to build a learning community among ourselves. We will incorporate candid feedback sessions during class.

Course flow

<table>
<thead>
<tr>
<th>Week 1 Prep</th>
<th>Pre-class materials (check Moodle for list and links):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- What is Design thinking and why is it so popular? <a href="https://www.interaction-design.org/literature/article/what-is-design-thinking-and-why-is-it-so-popular">Link</a></td>
</tr>
</tbody>
</table>

**Pre-class assignment:** Review the materials guided by the following questions:
- What are key themes from the pre-class materials?
- What stands out as new to you? What is familiar to you?
- What are some questions that you might have?
**Week 2 Prep**
**Sept 14, 2017**

**Exploring the Problem Space:**
1. **Challenging Assumptions**
2. **Leveraging Empathy**

**Pre-class materials (check Moodle for list and links):**
Review the following materials.
- Designkit.org - Methods: (filter by Question) What tools can I use to understand people? [http://www.designkit.org/methods](http://www.designkit.org/methods)
- Background reading on the client projects – check Moodle

**Weekly Skills Practice:**
- Watch this video of Seven Elements of Graphic Facilitation: [https://www.youtube.com/watch?v=S5DJC6LaOCI](https://www.youtube.com/watch?v=S5DJC6LaOCI) prior to working on the Visual Harvest worksheets.
- Complete the Visual Harvest worksheets by Jen Mein and Dan Wagner. [http://z.umn.edu/7elements](http://z.umn.edu/7elements). Do this inside your visual journal. Use what you learned to take key notes from this week’s pre-class materials.

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**Week 3 Prep**
**Sept 21, 2017**

**Deeper dive into understanding the user and problem definition**

**Pre-class materials (check Moodle for list and links):**
Review the following materials. Remember to use your visual journal for notes.
- Do additional research to supplement your persona or user journey map.

**Weekly Skills practice:**
- Upload at least one persona or user journey map per group member related to your client project
- **Due: 12.00pm Wednesday, September 20, 2017.**
### Week 4 Prep
**Sept 28, 2017**

**Generating Alternative Scenarios:**
1. **Ideation**
2. **Concept Development**

**Pre-class materials (check Moodle for list and links):**
- Review the following materials. Remember to use your visual journal for notes. Sketch, draw, reflect, observe.
  - Ideation for Design- Preparing for the Design Race; [https://www.interaction-design.org/literature/article/ideation-for-design-preparing-for-the-design-race](https://www.interaction-design.org/literature/article/ideation-for-design-preparing-for-the-design-race)

**Weekly Skills practice:**
- Upload your group's project plan outline. It should include some of the material previously created - e.g. persona(s), user journey maps, definitions of the problem, other relevant research.
- **Due:** 12.00pm Wednesday, September 27, 2017.

### Week 5 Prep
**Oct 5, 2017**

**Enacting New Practices: Prototype and Test**

**Pre-class materials (check Moodle for list and links):**
- Review the following materials. Remember to use your visual journal for notes.
  - Get Started with Prototyping; [https://www.interaction-design.org/literature/article/design-thinking-get-started-with-prototyping](https://www.interaction-design.org/literature/article/design-thinking-get-started-with-prototyping)

**Pre-class assignment:** Review the materials and continue taking notes in your visual journal. Don’t forget to document your current process along the way. Complete the following skills practice:

**Weekly Skills practice:**
- Continue to refine your bundled ideas, themes and bring them to class.
- Find at least one case study related to a bundled idea. Document and upload any learnings about execution, implementation, etc, to use for your project.
| **Week 6 Prep**  
**Oct 12, 2017** | **Pre-class materials (check Moodle for list and links):**  
Review the following materials. Remember to use your visual journal for notes.  
- Obstacles to Problem Solving and Innovation in Design Thinking:  
- Designkit.org: Methods (filter by) Question: “How do I make my concept real?”  
- Designkit.org Methods (filter by) Question: “How do I plan for what’s next?” |

| **Week 7 Prep**  
**Oct 19, 2017** | **Weekly Skills Practice:**  
- Group: Preparation for presentation to client for feedback  

**FINAL REPORT DUE OCTOBER 22, 2017, BY 11.59pm** |

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### Grading

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual journal</td>
<td>10%</td>
</tr>
<tr>
<td>Weekly skills practice</td>
<td>30% (10% for each skills practice, 3 total)</td>
</tr>
<tr>
<td>Group presentation</td>
<td>15%</td>
</tr>
<tr>
<td>Group final deliverables</td>
<td>45%</td>
</tr>
</tbody>
</table>
Student Conduct Code

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected to adhere to Board of Regents Policy: Student Conduct Code. To review the Student Conduct Code, please see: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf.

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Use of Personal Electronic Devices in the Classroom

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference: http://policy.umn.edu/education/studentresp.

Scholastic Dishonesty

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, the student may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: http://policy.umn.edu/education/instructorresp.

The Office for Community Standards has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: https://communitystandards.umn.edu/avoid-violations/avoiding-scholastic-.... If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class—e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Makeup Work for Legitimate Absences

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see: http://policy.umn.edu/education/makeupwork.

Appropriate Student Use of Class Notes and Course Materials

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see: http://policy.umn.edu/education/studentresp.
Grading and Transcripts
The University utilizes plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following:

For additional information, please refer to: http://policy.umn.edu/education/gradingtranscripts.

A  4.000 - Represents achievement that is outstanding relative to the level necessary to meet course requirements
A-  3.667
B+  3.333
B  3.000 - Represents achievement that is significantly above the level necessary to meet course requirements
B-  2.667
C+  2.333
C  2.000 - Represents achievement that meets the course requirements in every respect
C-  1.667
D+  1.333
D  1.000 - Represents achievement that is worthy of credit even though it fails to meet fully the course requirements
S Represents achievement that is satisfactory, which is equivalent to a C- or better.

Sexual Harassment
"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy: http://regents.umn.edu/sites/regents.umn.edu/files/policies/SexHarassment.pdf

Equity, Diversity, Equal Opportunity, and Affirmative Action
The University provides equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EQ_AA.pdf.

Disability Accommodations
The University of Minnesota views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

- If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact the DRC office on your campus (UM Twin Cities - 612.626.1333) to arrange a confidential discussion regarding equitable access and reasonable accommodations.
- Students with short-term disabilities, such as a broken arm, can often work with instructors to minimize classroom barriers. In situations where additional assistance is needed, students should contact the DRC as noted above.
- If you are registered with the DRC and have a disability accommodation letter dated for this semester or this year, please contact your instructor early in the semester to review how the accommodations will be applied in the course.
- If you are registered with the DRC and have questions or concerns about your accommodations please contact your (access consultant/disability specialist).

Additional information is available on the DRC website: (UM Crookston - https://www.crk.umn.edu/units/disability-resource-center, UM Duluth - http://www.d.umn.edu/disability-resources, UM Morris -http://www.morris.umn.edu/academicsuccess/disability/, UM Rochester -http://r.umn.edu/student-life/student-services/disability-resources, UM Twin Cities - https://diversity.umn.edu/disability/) or e-mail (UM Crookston - myers062@crk.umn.edu, UM Duluth - access@d.umn.edu, UM Morris - hoekstra@morris.umn.edu, UM Rochester -sdzavada@r.umn.edu, UM Twin Cities - drc@umn.edu) with questions.
Mental Health and Stress Management

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: http://www.mentalhealth.umn.edu.

Academic Freedom and Responsibility: for courses that do not involve students in research

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost. [Customize with names and contact information as appropriate for the course/college/campus.]

* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".