Course Description

This course will provide experience in planning and conducting research. Emphasis will be placed on preliminary research including theoretical, applied, and analytical aspects of design projects and processes. Students will examine how humans navigate the visual environment and how design factors can enhance communication. Design prototyping, testing, and analysis is included. Students will develop design research prototypes and evaluate the effectiveness of designed projects using appropriate research strategies. Basic research methods will be introduced.

Course Objectives. In this course, students will:

1. examine developmental methodologies in design planning
2. investigate design precedents and analyze their effectiveness in terms of product and process, human factors, and the role of aesthetics in the digital environment
3. explore the relationship of theory to practice
4. develop models and morphologies to construct and describe the design process
5. create design research prototypes and assess their effectiveness
6. exercise analytical skills in the review of data provided by the prototype testing
7. develop new procedural methods to produce effective design
8. produce knowledge about specific prototyped projects

Course Expectations

- Students should contact the instructor with questions or concerns.
- An Incomplete grade will be given only in case of a documented emergency.
- Work must be original. Plagiarism/overly-derivative work is not acceptable.
- Students are expected to participate in discussion and critique sessions.
- Professional behavior is expected at all times.
- Reasonable accommodations will be provided for students with disabilities. Please contact the instructor to work out the details for any accommodation. You will need to work with the Office of Disabilities Services, 12 Johnston Hall.
- All activities in the University, including this course, are governed by the University of Minnesota Student Conduct Code. Students who engage in behavior that disrupts the learning environment for others may be subject to disciplinary action under the Code. In addition, students responsible for such behavior may be asked to cancel their registration (or have their registration canceled).
- Academic misconduct is defined as any act that violates the rights of another student with respect to academic work or involves misrepresentation of a student’s own work. Academic misconduct includes but is not limited to: cheating on assignments or examinations, plagiarizing pieces of work, or sabotaging another’s work. Discovery of academic misconduct is grounds for failure.
Topics, Class Format, Assignments and Grading

There are four units in this course based on the Martinson design research model:
1. Object Studies
2. People Studies
3. Change Studies
4. Process Studies

See the class schedule for topic dates, textbook readings, and deadlines.
There are many readings and resources included in the class. I am not expecting that you will read everything. In providing a number of ready resources I am hoping that everyone in the class finds one or two articles each week that are really helpful to an individual's specific interests. Each person will be responsible for leading a discussion session (in teams of 2 or 3) during the semester.

Each student will complete one project OR paper for each unit. Papers should be approximately pages in length and written for an academic audience.

Grade Weight of unit projects and/or papers: 2@ 25% each; 2@10% each; you decide
Object project/paper
People project/paper
Change project/paper
Process project/paper
Concept Map 15%
Discussion Leadership and participation (just do it!)
Design Principles exploration in forums (3) 15%

Final grades
90% and above = A
Represents achievement that is outstanding relative to the level necessary to meet course requirements.
80% and above = B
Represents achievement that is significantly above the level necessary to meet course requirements
70% and above = C
Represents achievement that meets the course requirements in every respect
60% and above = D
Represents achievement that is worthy of credit even though it fails to meet the course requirement

(+ and — grades will be awarded at the discretion of the instructor and will be most influenced by participation)
Assignments

1. Concept map that illustrates the design research process 15%

2. Three forum entries on different design principles from the Lidwell, etal. text. For the object, people, and change units you will find a principle in the book that you can discuss in terms of design research on object/people/change. You can use visual examples along with text. Try for 200-400 words. There are three separate forums, one for each topic. 15%

3. Discussion Leader in small groups. (expected of all; no points/grade weight). Participation in all discussion sessions is expected. Grad students should not need to be awarded points for this.

4. Unit Papers and/or projects 60 points total; you select 2 to be 25% each; 2 to be 10% each. For each of the four units you will complete a paper and/or project related to the content of the unit. The length/depth is the equivalent of a five-page paper. The focus of the content is totally up to you. You may want to use these papers/projects as explorations for your thesis work (or, if you are finishing this semester as your thesis work).

Here are some ideas:

Unit One Objects:
- Comparative analysis of objects similar to something you are making.
- Semiotic analysis of four different posters on a health issue.
- Prototypes of an object with different variants for different cultural groups.

Unit Two People:
- A pilot study of a focus group on interdisciplinary experience.
- A pilot study of a visual analysis experiments.
- A pilot usability study of three existing TV remotes.
- An interview of an elderly person regarding cell phone interfaces.

Unit Three Change:
- A plan for a workshop for junior high students.
- A visual campaign for an issue dealt with by a non-profit.
- Improve a current object/process/space.
- A case study of three designers working on literacy issues.

Unit Four Process:
- Develop a new diagram of the design process.
- Adapt a process to include human factors issues.
- Find a process new to you and use it to make something.
- Make a collaborative work with a colleague.

There are deadlines for each paper/project in the class schedule. I will review your submission and you can revise and resubmit with your final portfolio. The final portfolio will be a “finished and polished” set of all the work that you have done during the semester and should be turned in as a .pdf document via Moodle.
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<thead>
<tr>
<th>week/date</th>
<th>Topics</th>
<th>Activities</th>
<th>Readings</th>
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<tbody>
<tr>
<td>Week Five: 2/20</td>
<td>People Studies: Human Factors and Usability: User analysis, Usability testing</td>
<td>People Design Principle entry due</td>
<td>Bennett: Ch. 12 Purdue Owl V&amp;S: Research Interview Iowa: Focus Groups McDonagh&amp;B: Focus Groups Research Literature Review</td>
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<td>Week Seven: 3/6</td>
<td>Change Studies: Action research Experimental Research</td>
<td>People Paper/Project due</td>
<td>Danko: Design and Social Change IDEO guide IDEO Workbook First Things First Manifesto Design with Intention Design Ignites Change Living Principles: Creative Action</td>
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<td>Week Nine: 3/18 - 22</td>
<td>Spring Break</td>
<td>Relax and have fun! Sleep!</td>
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<td>Week Ten: 3/27</td>
<td>Process Studies: Models of Process; Collaborative processes;</td>
<td>Change Paper/Project due</td>
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<td>Week Eleven: 4/3</td>
<td>No class in McNeal today Class will be online Process Studies Practiced-based research Creative processes</td>
<td>Change or Process Principle entry due</td>
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<td>2015 Competencies Cross: Creative Leap Dorst: Creativity Pereira: Divergent Thinking Critiquing Sketching Oxman: Thinking Eye Balaam: Autoethnographic Design</td>
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<td>Wk Twelve: 4/10</td>
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<td>Process Paper/Project due</td>
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<td>Wk Thirteen: 4/17</td>
<td>Display and discussion of concept maps</td>
<td>Final concept map</td>
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<td>Wk Fourteen: 4/24</td>
<td>No class today</td>
<td>Work independently on your projects</td>
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<td>Wk Fifteen: 5/1</td>
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<td>Wk Sixteen: 5/8</td>
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<td>Portfolio of Unit Paper/Projects due</td>
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Release of Work Statement:
Students understand that enrollment in this course grants consent for their work to be selected for inclusion in college or departmental publications (online or in print). Your instructor may select to use your work to represent her/his skills as an instructor in a teaching portfolio (online or in print).

Attendance:
Attendance at all classes is expected. If you are ill or have a meaningful conflict please let the instructor know. If you have the flu – stay home and rest.

Workload and Late work:
University policy states that one credit equals three hours of work per week. As this is a three-credit course, you can expect to spend nine hours per week on graphic design research to achieve a passing grade. Three hours will be spent in class and six hours will be spent on readings and assignments per week. There are a variety of assignments: papers, projects, forum entries, and a concept map. See the Assignment description elsewhere in the syllabus. The class schedule identifies due dates. Late work may lose 20% of the grade earned.

Grading Structure:
http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html

Accepting and Returning Assignments:
Assignment drafts will be turned in and then returned during class. The final .pdf is submitted in .pdf form and will not be returned. The design principles discussions will occur in the forum section of Moodle.

Policy for Missed Exams:
There are no exams in this course.

Make Up Work for Legitimate Absences:
http://www.policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html

Extra Credit Options:
None available; spend your time on the assignments.

University Policies

Personal Electronic Devices in Classroom:
http://policy.umn.edu/Policies/Education/Education/CLASSROOMPED.html

Use of Class Notes and Materials:
http://policy.umn.edu/Policies/Education/Education/CLASSNOTESSTUDENTS.html
Scholastic Dishonesty and Student Conduct Code:
http://www1.umn.edu/regents/policies/academic/Student_Conduct_Code.pdf

Sexual Harassment:
http://www1.umn.edu/regents/policies/humanresources/SexHarassment.pdf

Statement on Climate of Inclusivity:
You are expected to be attentive during class, ask questions if you do not understand something, and to offer your opinion. You are also expected to listen respectfully to other students and to me when speaking. The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs and facilities without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Racism, sexism, homophobia, classism, ageism and other forms of bigotry are inappropriate to express in this class. Reports of harassment are taken seriously, and there are individuals and offices available for help. (or refer to http://www1.umn.edu/regents/policies/administrative/Equity_Diversity_EO_AA.pdf)

Academic Freedom and Responsibility:
http://www1.umn.edu/regents/policies/academic/Academic_Freedom.pdf

Availability of Disability and Mental Health Services:
If you have any special classroom requirements please contact one of the offices listed below. They will work with you and, if necessary, they will contact the instructor to work out the details for any necessary accommodations.

Student Academic Success Service 340 Appleby Hall, Mpls 612-624-3323
Counseling/Consulting Services 199 Coffey Hall, St. Paul 612-624-3323
Disability Services 180 McNamara, Mpls 612-626-1333
Center for Writing 10 Nicholson Hall, Mpls 612-626-7579

Or refer to http://ds.umn.edu/student-services.html and http://www.mentalhealth.umn.edu
Readings (in addition to the assigned textbook readings - more may be added) (see schedule on Moodle)

For Weeks One and Two:


For Week Four:


For Weeks Seven and Eight:


For Weeks Twelve through Sixteen:


Additional Resources


