

Design Methods for Interaction & Systems Syllabus

IMT540A — Autumn 2010

- **Lecture Days:** Tuesdays & Thursdays
- **Lecture Times:** 1:30 p.m.-3:20 p.m.
- **Class Location:** Mary Gates Hall, Room 254
- **Credit Hours:** 5

Class Website

The class website will be your main stop for the most up-to-date information on the course schedule, assignment descriptions, and links to important resources. Class website is:

<http://courses.washington.edu/imt540a/>

Instructors

Faculty: Dr. Julie A. Kientz

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Course Overview

IMT 540 is an intensive, project-based introduction to the user interface design process and is oriented toward practical methods for approaching a design problem. Design is a unique form of inquiry. We design whenever we change some existing situation into a preferred one. The difficulty, of course, is how to envision a preferred situation and then get to it. In this class we will develop an appreciation for the nature of design and we will develop specific skills for studying and creating interactive systems. You will find the concepts and methods covered in this class to be widely applicable – you will be able to use them when designing organizations of people, when designing information structures, and when

designing a business plan. But, in this class we shall focus on the design of interactive systems, on human-centeredness and on usability. The major question is how do we design interactive systems that are useful, usable, and enjoyable?

Aims

The general aims of this course are to:

1. Develop an appreciation for the theory and sensibilities of design
2. Develop skills in the use and application of a variety of design methods, specifically applicable to user-centered design
3. Improve individual and collaborative skills in design-based problem solving

Objectives

On the successful completion of this course, you should be able to:

1. Given a problem setting, critically discuss the appropriateness of potential design methodologies such as contextual design, scenario-based design, participatory, etc.
2. Describe the impediments to achieving a human-centered design process within organizations
3. Discuss the various roles in information system design, including visual designers, interaction designers, information architects, design ethnographers, project managers, product managers, technical developers
4. Gather useful information about users and activities through observation or systematic inquiry
5. Use, adapt and extend classic design standards, guidelines, and patterns
6. Employ selected design methods at a basic level of competence: affinity diagrams, card sorting, scenarios of use, personas, storyboarding, sketching, heuristic evaluation, and usability evaluation
7. Create a paper prototype for a small system and plan and perform a usability evaluation

Materials & Books

- **REQUIRED:** Spiral bound sketchbook with blank pages (can purchase at UW bookstore)
- **RECOMMENDED:** Norman, D.A. (1988) *The Design of Everyday Things*. New York: Basic Books. ([Amazon](#))
- **RECOMMENDED:** Buxton, B. (2007) *Sketching User Experiences*. Sketching User Experiences. San Francisco: Morgan Kaufmann. ([Amazon](#))
- **RECOMMENDED:** Moggridge, B. (2007) *Designing Interactions*. Cambridge, MA: The M.I.T. Press. ([Amazon](#))



Tools

GradeBook

All course grades will be made available through Catalyst's GradeBook. The link for the GradeBook for this class is: <https://catalyst.uw.edu/gradebook/jkientz/32024>

Mailing List

We will have a class mailing list, which you can reach via imt540a_au10@u.washington.edu. Feel free to post links relevant to class or questions about assignments that may pertain to the whole class.

Course Design Credit

Many course materials are adapted from those of instructors of previous year's courses and similar courses, including Jacob Wobbrock, Dave Hendry, Batya Friedman, and Andrew Ko. Please do not distribute materials without the instructor's consent.

Assessment

Grade Distribution

Component	Worth
Class Participation	10%
Reading Reflections & Quizzes	20%
Individual Assignments	15%
Sketching Project	10%
Group Design Project	35%
Final Exam	10%

Graded Components

Class Participation (10%)

By actively participating in class you can develop your professional skills for design. Here are some examples of how you can participate:

1. Treat all with respect – be constructive in all discussions
2. Come to class prepared – read carefully prior to class meetings
3. Be an active listener – be attentive, be engaged, use in-class technology with discretion
4. Ask challenging questions
5. Comment, build on, or clarify others' contributions
6. Help your classmates use technologies
7. Post useful or interesting information to the class discussion list
8. Visit the instructor during office hours to chat, to ask questions, or to give feedback

Please write a 2-3 paragraph personal statement on how you contributed to the class (optional). If you submit a statement, it must be turned in on the last lecture day on **December 9th at 1:30 P.M.**

Reading Responses & Quizzes (20%)

Along with each set of readings, you will receive a set of questions and things to think about while you read. Your typed answers to these questions must be both concise and thoughtful. Responses typically should be only 1 page. Responses must be based on the readings, not "off the top of your head." Seven (7) of 14 reading responses must be turned in. If more than 7 are turned in, only the first 7 will be counted. Grades are either a check (✓) (pass) or a minus (–) (no credit). Very rarely will a plus (+) be awarded for exceptional work (extra credit). You cannot turn in more than 7 to replace minus grades.

In addition, in each class there is a 50% chance of a reading quiz, independent from any other class. Reading quizzes will be administered at 1:30 P.M. **sharp**, and be collected at 1:40 P.M. **sharp**. Anyone coming late to class must still turn in their quiz by 1:40 P.M. or receive no credit. Quizzes will be designed to take 5 minutes by those who have done the reading carefully. Even if you choose not to hand in a reading response for this class, if a quiz is administered, you are expected to take the quiz. With a 50% chance per quiz, approximately 7 quizzes can be expected. However, because sometimes “life happens,” each student is allowed one free pass from any quiz, but you must be present in class during the quiz to use the free pass. To use your free pass, you write your name on the quiz and then write FREE PASS beneath it. This guarantees you an automatic 5/5 on that quiz. If you accidentally use your free pass more than once, quizzes beyond the first one will be graded normally. (So if no answers were marked, you will receive a 0/5.)

Individual Assignments (15%)

To give you practice with specific methods for interaction design, you will complete three assignments. All assignments must be conducted independently, unless otherwise stated by the instructor. Detailed assignment descriptions and instructions will be posted on the course website with sufficient time for assignment completion. Unless otherwise stated, assignments are **due at the beginning of class by 1:30 P.M. on their designated due date.**

Assignment	Worth	Due
A1: Thinking About Design	5%	10/12/10
A2: Prototyping	5%	11/16/10
A3: 1-week Real World Deployment	5%	11/13/10

Sketching Project (10%)

One of the goals of this course is to be able to think critically about existing information systems and interactions and come up with ways of improving them. It is also good to practice sketching design ideas, so that you become more comfortable and more experienced. Thus, for the first 8 weeks of the quarter, you will keep a sketchbook where you will think about objects or interactions in your daily life and sketch ideas for how they could be improved. Each week, we will have a theme where you will do three sketches on products or information systems related to that theme. For example, for the theme “In the kitchen,” you might redesign your toaster knobs, come up with a new recipe sorting tool, or a smart refrigerator. The idea can focus on an entire system or one specific interaction. The focus is on quantity of sketches and not quality. Futuristic, creative, and original ideas are welcome and encouraged. The themes for each week will be as follows:

- **Week 4:** In the Kitchen – cooking, appliances, eating, food storage, etc.
- **Week 5:** Shopping – finding items, purchasing, money, customer service, etc.
- **Week 6:** Sports and Recreation –sports equipment, outdoor activities, sporting events, etc.
- **Week 7:** Entertainment – movies, video games, television, reading, museums, etc.
- **Week 8:** Travel & Transportation – air and car travel, bus travel, bicycling, etc.
- **Week 9:** Education – class lectures, assignment turn-ins, elementary school, etc.

Every **Tuesday** for the six weeks listed above, you must bring your sketchbook to class with at least three new sketches related to the theme. Each sketch must be on a single page, numbered and dated. The back of each sketch page should also be left blank to leave room for notes and critique signatures. You

will break into small groups to discuss and critique each others' sketches and get feedback on your ideas, and each critique will sign your sketches indicated that you've discussed them. Take good notes during these sessions, as you'll need them for your reflection assignment. At the end of the quarter, you will write a short reflection upon your sketching experience, its usefulness in the generation of design ideas, and what you learned from feedback during the group critique sessions.

Group Design Project (35%)

Design in the real world nearly always takes place with teams of people with diverse backgrounds working together toward a common goal. Developing group work skills, cooperation, and teamwork is an essential skill for students to learn who want to work in this space. Thus, a large component of this course will be to work as a team on a design project. Design teams will consist of 5 members and will be designated by the instructor during the first week of class to ensure diversity and fairness. The topic for the design projects will be up to the individual teams, but suggestions will be made by the instructor.

The group project will consist of a number of different components, the full descriptions of which will be posted on the course website. Each component must be conducted and submitted as a group and will be due by in class by **1:30 P.M. on their designated due dates.**

Project Component	Worth	Due Date
P1: Project Declaration, Team Form	1%	10/19/10
P2: User Research – Contextual Inquiry	5%	10/26/10
P3: Conveying Research – Personas & Scenarios	4%	11/02/10
P4: Design Sketches & Ideas	5%	11/09/10
P5: Prototypes	5%	11/23/10
P6: Experiment Design	5%	12/2/10
P7: Final Report & Presentation	10%	12/13/10 & 12/17/10

Final Exam (10%)

Whereas the group project will be used to assess your mastery of design process and practice, the final exam will be used to assess your understanding and retention of course knowledge. If you do the readings carefully, the final exam should not be difficult. The final exam for this course will take place on the final lecture day, Thursday, Dec. 9th at 1:30 P.M. No alternate exams will be given; you must make the exam time. The exam will mostly be short answer, multiple choice, and some design exercises.

Extra Credit

In addition to possible points through plus (+) grades on reading reflections, there will be an opportunity to earn extra credit by submitting your group's final project to the CHI Conference (<http://www.chi2011.org>) as either a submission to the Student Design Competition or the Work-in-Progress poster category. More details about this opportunity will be discussed later in the course.

Grading

Work in this course will be graded to criteria. In other words, you won't be graded on a curve. Each deliverable is designed to test your achievement against one or more of the learning objectives. Different assignments emphasize different learning objectives. Four-hundred (400) points have been assigned to the course and each component of the course has been assigned a percent of the overall

grade. So, for example, participation is worth 10% of the final grade (40 points) and the group project is worth 35% of the final grade (140 points). The following scale is used to map points to numerical grades from 4.0 to 0.7: <http://www.onlinelearning.washington.edu/ol/handbook/grades.asp>

So, for example, to get a 3.0 in the class you will need to 340 points and to get a 3.9 you will need 392 points. Anything below 300 points (2.0) will be considered a failing grade. The following chart characterizes the numeric grades in words:

Grade	Performance Quality*
3.9 - 4.0	Superior performance in all aspects of the course with work exemplifying the highest quality. Unquestionably prepared for subsequent courses in field.
3.5 - 3.8	Superior performance in most aspects of the course; high quality work in the remainder. Unquestionably prepared for subsequent courses in field.
3.2 - 3.4	High quality performance in all or most aspects of the course. Very good chance of success in subsequent courses in field.
2.9 - 3.1	High quality performance in some of the course; satisfactory performance in the remainder. Good chance of success in subsequent courses in field.
2.5 - 2.8	Satisfactory performance in the course. Evidence of sufficient learning to succeed in subsequent courses in field.
2.2 - 2.4	Satisfactory performance in most of the course, with the remainder being somewhat substandard. Evidence of sufficient learning to succeed in subsequent courses in field with effort.
1.9 - 2.1	Evidence of some learning but generally marginal performance. Marginal chance of success in subsequent courses in field.
*Taken from Faculty Resource on Grading, http://depts.washington.edu/grading/practices/guidelines.html	

Class Policies

Academic Conduct

The following paragraphs discuss academic integrity, copyright and privacy concerns governing student conduct in the iSchool and the University of Washington. They apply to all assignments and communications in this course.

Academic Integrity

The essence of academic life revolves around respect not only for the ideas of others, but also their rights to those ideas and their promulgation. It is therefore essential that all of us engaged in the life of the mind take the utmost care that the ideas and expressions of ideas of other people always be appropriately handled, and, where necessary, cited. For writing assignments, when ideas or materials of others are used, they must be cited. The format is not that important as long as it is consistent, the source material can be located and the citation can be verified. In any situation, if you have a question, please feel free to ask the instructor or teaching assistant. Such attention to ideas and acknowledgment of their sources is central not only to academic life, but life in general.

Please acquaint yourself with the [University of Washington's resources on academic honesty](#).

Copyright

All of the expressions of ideas in this class that are fixed in any tangible medium such as digital and physical documents are protected by copyright law as embodied in title 17 of the United States Code. These expressions include the work product of both: (1) your student colleagues (e.g., any assignments published here in the course environment or statements committed to text in a discussion forum); and, (2) your instructors (e.g., the syllabus, assignments, reading lists, and lectures). Within the constraints of "fair use," you may download or copy slides, recordings or notes for your personal intellectual use in support of your education here in the iSchool. All of these examples are copyrighted expressions, and fair use by you does not include further distribution by any means of copying, performance, or presentation beyond the circle of your student colleagues in this class. If you have any questions regarding whether a use to which you wish to put one of these expressions violates the creator's copyright interests, please feel free to ask the instructor for guidance.

Privacy

To support an academic environment of rigorous discussion and open expression of personal thoughts and feelings, we, as members of the academic community, must be committed to the inviolate right of privacy of our student and instructor colleagues. As a result, we must forego sharing personally identifiable information about any member of our community including information about the ideas they express, their families, life styles and their political and social affiliations. If you have any questions regarding whether a disclosure you wish to make regarding anyone in this course or in the iSchool community violates that person's privacy interests, please feel free to ask the instructor for guidance.

Knowing violations of these principles of academic conduct, privacy, or copyright may result in University disciplinary action under the Student Code of Conduct.

Students with Disabilities

To request academic accommodations due to a disability, please contact Disabled Student Services: 448 Schmitz, 206-543-8924 (V/TTY). If you have a letter from DSS indicating that you have a disability which requires academic accommodations, please present the letter to the instructor so you can discuss the accommodations you might need in the class.

Academic accommodations due to disability will not be made unless the student has a letter from DSS specifying the type and nature of accommodations needed.

Student Code of Conduct

Good student conduct is important for maintaining a healthy course environment. Please familiarize yourself with the [University of Washington's Student Code of Conduct](#).

Quality of Written Assignments

As a graduate student in a field that requires excellent communication skills, this course has high expectations on the written quality and presentation of completed assignments and reports. Reports should be well organized, be thoroughly proofread, and free from grammatical errors. The use of appropriate, clear titles, figure captions, and headings is also important. Each assignment will have “quality of written assignments” as a graded component worth at least 10%. This does NOT apply to the sketchbook portion of the sketching assignment, as they are intended to be quick and low quality.

In addition to the above recommendations, all assignments should include the following information:

- IMT 540 A - Design Methods for Interaction & Systems
- Autumn 2010, Information School, University of Washington
- Assignment name (e.g., A1 – Design Thinking)
- Your name and e-mail address (all names and emails for group projects)
- Date due

Attendance

Students are expected to attend class regularly. Although attendance is not specifically graded, missing a significant number of classes will likely have a negative impact your class participation grade, as you will have fewer opportunities to participate in discussion and in-class activities. You may also miss the opportunity for graded in-class quizzes. If you must miss a class, due to an illness or other extenuating circumstance, please send an email to the instructor as soon as possible to make arrangements for a makeup of in-class activities.

Late Assignments

1. If you will miss the deadline, you should inform the instructor as soon as you can, indicating when you will submit the work. The instructor will try to accommodate your needs. You should use this clause only for extraordinary personal reasons (e.g., personal illness, death in the family, etc.).
2. It is at the instructor's discretion to accept late work or assign late penalties (see 1 above). In general, late work is deducted 10% of its total grade per calendar day. This does not count if you use one of your two deadline extensions (see below) until after the 2 day mark.

Work that is handed in late is penalized for two reasons. First, to be fair, all students should be given the same time limits. Second, if you spend too much time on one assignment, it is quite likely that you will have insufficient time to spend on subsequent assignments.

Deadline Extensions

Because everyone runs into conflicts with other courses and commitments, especially with group projects, I will grant a no-questions-asked 2 day extension on any 1 individual assignment and any 1 project deliverable without suffering a late grade deduction (not including the final class presentation). To request the extension, please send me an email at jkientz@uw.edu by midnight the day before the listed due date. If the new deadline falls on a non-lecture day (e.g., a Saturday), the assignment will be due via email as a digital or scanned copy (PDF) at 1:30 P.M. that day. Once your 2 extensions have been used, no more will be granted, so make sure you use them wisely. Also note that there will be no bonus for unused extensions, and you cannot stack extensions to receive a 4-day extension.

Contacting the Instructor

You are welcome to give me feedback about the course, to ask a question about an assignment, to share an interesting article or resource, to report that you will be absent from a class/lab, to request additional time for an assignment (because of significant health, personal, or educational matter), or similar communication. Please note the following guidelines:

- Email and office hours are the preferred and most reliable methods of contact
- For office hours, you can find me in my office
- Whenever appropriate, please copy the class listserv with your question or comment
- E-mail concerning assignments might not be replied to if it is sent within 36 hours of an assignment due date
- If your e-mail concerns your grade, please follow the re-grading policy (see below)
- E-mail that is sent on Friday afternoon or over the weekend it is not likely to be replied to until Monday or Tuesday of the following week
- If you don't receive a reply within 2 days or so, please resend your e-mail or ask about it during class or lab

Re-grading Policy

To have work re-graded, you must submit a Re-grade Request within five days of when your work was returned. The request must be a single page, printed on paper or sent by e-mail. It should contain the following information:

- Re-grade Request
- The information contained on the standard cover sheet
- An explanation for why you believe you deserve a higher grade.

The instructor will consider your request. If the instructor is convinced by your argument, your work will be re-graded. If not, the instructor will send you e-mail explaining why. No re-grades will be considered for late work.

Right to Revise

The instructor reserves the right to revise this syllabus.