ISM 220 Interactive Design and Prototyping

Instructor

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9:00-9:30 PM (CDM 801)

Course Information

ISM 220 Section 901
Class times: Wednesdays, 5:45-9:00 PM
Room: CDM 801
Campus: Loop
Course homepage: https://d2l.depaul.edu/
Last day to drop with no penalty: April 11, 2014; after April 12, a grade of "W" will be assigned

Course Summary

What does it take to create a digital application that is useful and usable? This course focuses on conceptualizing, designing, and prototyping interactive applications. Students will apply design principles and patterns in a user-centered design process, build interactive prototypes using Axure, and test and refine designs using evaluation methods.

Learning Objectives (LO)

1. Students will be able to create *sketches*, *wireframes*, and *interactive prototypes* by applying *user research methods* in a *user-centered design process*. (LO1)
2. Students will recognize common *design patterns* and practice applying them. (LO2)
3. Students will be able to produce a coherent interaction design that reflects *design and usability principles*. (LO3)
4. Students will be able to refine interaction designs by applying design and prototype *evaluation methods*. (LO4)

Required Texts

- Tidwell, Jennifer. (2011). *Designing Interfaces: Patterns for Effective Interaction Design* (2nd Edition). ISBN 1449379702
- Additional reading materials will be provided on D2L.

Prerequisites

ISM 210 *Introduction to Human-Computer Interaction* or GD 200 *Graphic Design I*.

Class Format

Class meetings involve a combination of lecture, discussions, hands-on activities, student presentations, and group work. Group work takes place both during and outside of class. I encourage and expect participation and cooperation from each student, as the success and enjoyment of this class depends on it.

Software

Coursework involves the use of Axure RP, a wireframing and prototyping tool. Class time will be used for demonstration and practice using Axure; however, you will also be expected to seek help from peers and use online resources to build skills on your own.

Software Access. Axure RP is installed on the computers in CDM 801. To obtain a copy for use on your own computer, apply for a free license through Axure's "Good Student Program" here: https://www.axure.com/free-software-for-students. Please do this as soon as possible. You will need an unofficial transcript from Campus Connection. Axure RP resources are available online: http://www.axure.com/learn.

Evaluation & Grading

Coursework includes the following components:

Coursework	Grade Proportion
Participation/Axure RP Practice	10%
Individual Assignment	20%
Design Patterns Presentations	10%
Team Design Project	40%
Team Participation	10%
Quizzes	10%
Total	100%

Participation/Axure RP Practice. This portion of the grade is based on a combination of attendance, being prepared to discuss assigned readings, contributions to class discussions/activities, and Axure skills practice. In some cases, satisfactory work from in-class activities (such as Axure practice) must be handed in or posted on D2L in order to receive participation credit.

Individual Assignment. Students will practice user-centered design methods in an individual assignment.

A1 User Study (LO1)

Design Pattern Presentations. Students will present examples of selected design patterns. (LO2)

Team Design Project. In small teams, students will address a common design challenge and produce a design for a web site. (LO1, LO2, LO3, LO4)

P1 Concept Exploration (LO1)

P2 Paper Prototype / Requirements (LO2, LO3, LO4)

P3 Final Project & Presentation: Mid-/hi-fi Prototype (LO2, LO3, LO4)

Team Participation. Each team must complete a team working agreement at the start of the team design project. At the completion of each team assignment, students must complete an D2L online peer review of their fellow team members. The review is used, if necessary, to adjust a student's grade on the assignment, and in determining each student's overall team assignment participation grade component.

Quizzes. Short quizzes will assess understanding of design patterns and key ideas from the readings. (LO2)

*Time Budget***.** Students should allow approximately 3-4 hours of work outside of class for each scheduled hour of class; this works out to 10-12 hours each week (on average) for most students. Team meetings and project collaboration may increase the amount of time required.

Grading Scale. Final letter grades will be given based on the following minimum percent of total points earned:

If the final numeric grade is less than:	and greater than or equal to:	the final letter grade is:
-	93	A
93	90	A-
90	87	B+
87	83	B
83	80	B-
80	77	C+
77	73	C
73	70	C-
70	67	D+
67	60	D
60	0	F

Grade Responsibility. Every effort is made to provide the student with the resources and support needed to succeed in the course. Grades are assigned fairly and impartially based on the coursework submitted by the student, without regard to external circumstances such as GPA goals or employer tuition reimbursement minimum grade requirements. It is the student's responsibility to earn his or her final grade. Please do not ask for a grade which you do not earn.

Student Support & Communication. Support for students is provided through weekly office hours dedicated to the course (refer to p. 1 of this syllabus) and through online question-and-answer (Q&A) discussion forums on D2L. The instructor makes every effort to respond to Q&A postings within 24 hours. However, due to schedule issues, it occasionally may take longer to receive an instructor response. Email should be used only for personal issues or for student-specific coursework questions. Make all questions clear and specific.

> **Please include the course number (ISM 220) in the email Subject: field and include your full name in the body of the email.**

Note: The instructor does not preview homework assignments.

Class Schedule (*provisional—subject to revision*)

Assignments must be submitted to D2L **by 11:59 PM** on the due date indicated below, unless otherwise specified.

MODULE 1 Interaction Design and the User-Centered Design Process

Week 1

Wed Apr 2

Course Logistics Introduction (PM-00)

Interaction Design and the User-Centered Design Process; Design Heuristics (PM-01)

Reading: Nielsen's 10 Design Heuristics
http://www.nngroup.com/articles/ten-usability-heuristics/

Activity: Website design heuristics analysis

Design Patterns as Elements of Interaction Design (PM-02)

Reading: Tidwell, Preface

Activity: Sketching design patterns

Sign-up: Four (4) design patterns for presentation (Due: Weeks 4 through 8)

▷ **Assigned:** Student Questionnaire

Sun Apr 6

▶ **Due:** Student Questionnaire

MODULE 2 Understanding User Needs

Week 2

Wed Apr 9

Learning About Users (PM-03)

Reading: Tidwell, Ch. 1 What Users Do
Observing the User Experience: A Practitioner's Guide to User Research, 2nd edition. Goodman, Kuniavsky & Moed pp. 129-139 on Interviewing; *Will be provided.*

Discussion: Design Challenge

Activity: User interviews

More User research Methods (PM-04)

Reading: Universal Methods of Design. Martin & Hanington. *Excerpts will be provided*.

Analysis & Synthesis (PM-05)

Reading: Universal Methods of Design. Martin & Hanington. *Excerpts will be provided*.

▷ **Assigned:** A1 User Study (Due: Sun Apr 20)

Sun Apr 13

▶ **Due:** Group Formation Survey

MODULE 3 From Defining to Designing

Week 3

Wed Apr 16

Sketching and Ideation (PM-06)

Activity: Begin group work; Ideation methods

Establishing Software Requirements (PM-07)

Activity: User stories

▷ *Discussion*: A1 research results. *Please bring the results of your user interviews to class (i.e., printed notes). Not graded, but required in class participation.*

Sun Apr 20

▶ **Due:** A1 User Study

MODULE 4 Shaping the User Experience / Prototyping

Week 4

Wed Apr 23

Creating Organization and Structure;
Introduction to Prototyping (PM-08)

Reading: Tidwell, Ch. 2 Organizing Content: Information Architecture and Application Structure

Activity: Axure RP practice

▸ **Due:** Design Pattern Presentations for students scheduled to present

▷ **Assigned:** P1 Concept Exploration (due Sun May 4)

Week 5

Wed Apr 30

Paper Prototyping (PM-09)

Reading: Rettig, Marc. "Prototyping for Tiny Fingers." *Communications of the ACM 37,* no. 4 (April 1994): 21-27. *Will be provided.*

▸ *Activity:* Building paper prototypes. *Please bring interface sketches from P1 to class. Not graded, but required in class participation.*

Designing Navigation (PM-10)

Reading: Tidwell, Ch. 3 Getting Around: Navigation, Signposts, and Wayfinding

▸ **Due:** Quiz 1

▸ **Due:** Design Pattern Presentations for students scheduled to present

User Testing with Paper Prototypes (PM-11)

Activity: Paper prototype Bring Paper Prototype in progress

Sun May 4

▶ **Due:** P1 Concept Exploration

▶ **Due:** P1 Peer Review

Week 6

Wed May 7

Organizing the Page (PM-12)

Reading: Tidwell, Ch. 4 Organizing the Page: Layout of Page Elements

Working with Lists (PM-13)

Reading: Tidwell, Ch. 5 Lists of Things

‣ **Due:** Design Pattern Presentations for students scheduled to present

▷ **Assigned:** P2 Low-Fidelity Prototype (due Sun May 18)

MODULE 5 Designing with Usability Principles in Mind

Week 7

Wed May 14

Designing Interaction with Design Heuristics in Mind (PM-14)

Reading: Tidwell, Ch. 6 Doing Things: Actions and Commands

Designing for Error (PM-15)

Reading: Tidwell, Ch. 8 Getting Input from Users: Forms and Controls

Activity: Heuristic evaluation

‣ **Due:** Quiz 2

‣ **Due:** Design Pattern Presentations for students scheduled to present

Sun May 18

▶ **Due:** P2 Low-Fidelity Prototype

▶ **Due:** P2 Peer Review

Week 8

Wed May 21

Designing for Mobile and Social Interaction (PM-16)

Reading: Tidwell, Ch. 9 Using Social Media

Reading: Tidwell, Ch. 10 Going Mobile

Heuristic Evaluation (PM-17)

‣ **Due:** Design Pattern Presentations for students scheduled to present

MODULE 6 Projects: Putting It All Together

Week 9

Wed May 28 ***Project work*** **(PM-18)**

Week 10 *Last class meeting*

Wed Jun 4 ***Final presentations*** **(PM-19)**

- **Due:** P3 Group presentations

Week 11 *Final exams week*

Wed Jun 11
- **Due:** P3 Final Project: Mid/high-fi Prototype
- **Due:** P3 Peer Review

Grades will be posted ASAP but no later than 11:59 PM on Jun 20.

Policies & Expectations

An asterisk '' following a heading indicates an instructor-specific policy*

Guidelines for Class Behavior

- Be on time.
- Take an active role in class discussions and activities.
- Be a respectful participant by keeping phones in silent mode.
- ***When working in a computer lab, please keep eyes up (and off your individual monitors) when attention should be paid to the group discussion or presentation. It is unprofessional and disrespectful to the instructor and other students to be surfing the internet, chatting, or checking social media***.
- Practice professionalism in your communications (face-to-face, emails, etc.) with the professor and fellow students.

Attitude

A professional and academic attitude is expected throughout this course. Measurable examples of non-academic or unprofessional attitude include but are not limited to: talking to others when the instructor is speaking, mocking another's opinion, cell phones ringing, emailing, texting, or using the internet whether on a phone, tablet, or computer. If any issues arise a student may be asked to leave the classroom. The professor will work with the Dean of Students Office to navigate such student issues.

Civil Discourse

DePaul University is a community that thrives on open discourse that challenges students, both intellectually and personally, to be Socially Responsible Leaders. It is the expectation that all dialogue in this course is civil and respectful of the dignity of each student. Any instances of disrespect or hostility can jeopardize a student's ability to be successful in the course. The professor will partner with the Dean of Students Office to assist in managing such issues.

Attendance*

Students are expected to attend each class and to remain for the duration. Attendance will be taken. Coming 15 minutes late or leaving 15 minutes early constitutes an absence for the student. ***The overall grade for participation drops 20% after any unexcused absence. Please communicate with me if you must be absent for any reason.*** Students are individually responsible for material they may have missed due to absence or tardiness. Please notify me in advance if you have any special needs.

Excused Absence

In order to petition for an excused absence, students who miss class due to illness or significant personal circumstances should complete the Absence Notification process through the Dean of Students office. The form can be accessed at http://studentaffairs.depaul.edu/dos/academicprocesses.html. Students must submit supporting documentation alongside the form. The professor reserves the sole right whether to offer an excused absence and/or academic accommodations for an excused absence.

Incomplete Grades

An incomplete grade is a special, temporary grade that may be assigned by an instructor when unforeseeable circumstances prevent a student from completing course requirements by the end of the term and when otherwise the student had a record of satisfactory progress in the course. CDM policy requires the student to initiate the request for incomplete grade before the end of the term in which the course is taken. Prior to submitting the incomplete request, the student must discuss the circumstances with the instructor. Students may initiate the incomplete request process in MyCDM.

- All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptional cases will receive such approval.

- If approved, students are required to complete all remaining course requirement independently in consultation with the instructor by the deadline indicated on the incomplete request form.
- By default, an incomplete grade will automatically change to a grade of'F' after two quarters have elapsed (excluding summer) unless another grade is recorded by the instructor.
- An incomplete grade does NOT grant the student permission to attend the same course in a future quarter.

Withdrawal

Students who withdraw from the course do so by using the Campus Connection system (http://campusconnect.depaul.edu. Withdrawals processed via this system are effective the day on which they are made. Simply ceasing to attend, or notifying the instructor, or nonpayment of tuition, does not constitute an official withdrawal from class and will result in academic as well as financial penalty.

Retroactive Withdrawal

This policy exists to assist students for whom extenuating circumstances prevented them from meeting the withdrawal deadline. During their college career students may be allowed one medical/personal administrative withdrawal and one college office administrative withdrawal, each for one or more courses in a single term. Repeated requests will not be considered. Submitting an appeal for retroactive withdrawal does not guarantee approval.

College office appeals for CDM students must be submitted online via MyCDM. The deadlines for submitting appeals are as follows:

- Autumn Quarter: Last day of the last final exam of the subsequent winter quarter
- Winter Quarter: Last day of the last final exam of the subsequent spring quarter
- Spring Quarter: Last day of the last final exam of the subsequent autumn quarter
- Summer Terms: Last day of the last final exam of the subsequent autumn quarter

Coursework Grade Review Requests*

Every effort is made to grade in a fair and consistent manner. Should a disagreement arise about a coursework grade, the student may submit a grade review request in writing to the instructor. The request must be submitted within 48 hours after the assignment grade has been posted. The request must include the student's argument for a different grade evaluation, based on verifiable evidence presented by the student. The instructor handles grade review requests and responds to the student with a review decision as soon as possible.

Academic Integrity Policy and Plagiarism*

This course will be subject to the academic integrity policy passed by faculty. More information can be found at http://academicintegrity.depaul.edu/.

The university and school policy on plagiarism can be summarized as follows: Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic grade of 'F' in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else.

All assignment submissions to D2L are subjected to automated plagiarism analysis using *Turnitin*. Analysis results are visible to the student.

▶ Students must complete a short *Academic Integrity Awareness Quiz* before submitting their first assignment. If you have any questions about what constitutes an academic integrity violation or what its consequences might be, please be sure to have these questions answered before submitting your first assignment.

Resources for Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential.

To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at:

Student Center, LPC, Suite #370
Phone number: (773)325.1677
Fax: (773)325.3720
TTY: (773)325.7296

Online Instructor Evaluation

Instructor and course evaluations provide valuable feedback that can improve teaching and learning. The greater the level of participation, the more useful the results. As students, you are in the unique position to view the instructor over time. Your comments about what works and what doesn't can help faculty build on the elements of the course that are strong and improve those that are weak. Isolated comments from students and instructors' peers may also be helpful, but evaluation results based on high response rates may be statistically reliable (believable). As you experience this course and material, think about how your learning is impacted. Your honest opinions about your experience in and commitment to the course and your learning may help improve some components of the course for the next group of students. Positive comments also show the department chairs and college deans the commitment of instructors to the university and teaching evaluation results are one component used in annual performance reviews (including salary raises and promotion/tenure). The evaluation of the instructor and course provides you an opportunity to make your voice heard on an important issue—the quality of teaching at DePaul. Don't miss this opportunity to provide feedback!

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under *News* in D2L and sent via email.