

# ISM 220 Interactive Design and Prototyping

## Instructor

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Office hours: Tues. 5:00PM - 5:30PM and by appt. (Please use BlueStar in Campus Connect or email me)

## Course Information

ISM 220 Section 401

Class times: Tuesdays, 1:30PM - 4:45PM

Room: 14 E. Jackson 507 (Daley Building, Loop Campus)

Course homepage: <https://d2l.depaul.edu/>

Last day to drop the course with no penalty: Sept 24, 2019. If dropped on or after Sept 25, 2019, 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 and build and refine interactive prototypes.

## Learning Objectives

1. Students will be able to create **sketches**, **wireframes**, and **interactive prototypes** of interaction designs as part of a **user-centered design process**.
2. Students will develop an understanding of common **design patterns** and practice applying them.
3. Students will be able to produce a coherent interaction design that reflects **design and usability principles**.
4. Students will be able to refine interaction designs by applying **evaluation methods**.

## Texts

The textbooks are freely available through Safari Books Online via the DePaul Library.

- Tidwell, Jennifer. (2011). *Designing Interfaces: Patterns for Effective Interaction Design* (2nd Edition).
- Neil, Theresa. (2014). *Mobile Design Pattern Gallery: UI Patterns for Smartphone Apps*.
- Additional reading materials will be provided on D2L.

## Prerequisites

ISM 210 or GD 200

## Software & Computers

The course involves Axure RP, a wireframing and prototyping tool. I will provide some demos and tutorials; however, you are expected to use learning resources on your own as well. Axure RP is installed on the computers in: CDM 801 Lab, CDM 1st Floor Lab, CDM 819 Lab, LPC SC 364. Apply for a free license ASAP here: <https://www.axure.com/edu>. If you prefer to use another prototyping tool (e.g., Sketch, Adobe XD), you will need permission from the instructor and will be responsible for identifying tutorials that enhance your learning of the tool.

## Grading

The final course grade is based on the following:

	Grade Proportion
<b>Individual Work</b>	
Attendance & Class Participation	10%
Design Exercises (3)	15%
Design Pattern Presentation	10%
Portfolio Piece	5%
<b>Group Project</b>	
P1 User Study and Concept Exploration	10%
P2 Low Fidelity Paper Prototype	5%
P3 Mid-Fidelity Wireframe Prototype	10%
P4 Interactive Hi-Fidelity Prototype	25%
P5 Final Presentation	10%
Total	100%

- **Attendance and Class Participation.** Class meetings will involve lecture, discussions, hands-on activities, presentations, and individual/group work. Because it is critical to be present in class, this portion of the grade is mainly based on the percentage of classes attended. Punctuality and contributions to discussions and class activities are also considered. Three (3) missed classes may result in failure of the course. See Attendance Policy below for more regarding expectations.
- **Design Exercises.** Assignments involve applying design patterns in user interface wireframes/prototypes.
- **Design Pattern Presentations.** Students will present examples and analyses of selected design patterns in use.
- **Group Project.** In small groups, students will conduct user research and produce a design for a website or mobile app. All students are expected to contribute equally.
- **Portfolio Piece.** Each student will construct a project summary to highlight skills and products developed in the class, which may be used in a professional portfolio.
- **Extra Credit.** Opportunities for extra credit may be offered, ex.: attending School of Design Speaker series talks, participation in CDM user studies, job/internship show and tell, and special topic mini-presentations.

**Grading Scale.** Letter grades are based on the following minimum percent of total points earned.

A	93.00%	Excellent
A-	90.00%	
B+	88.00%	
B	83.00%	Good
B-	80.00%	
C+	78.00%	
C	73.00%	Satisfactory
C-	70.00%	
D+	68.00%	
D	60.00%	
F	0.00%	Poor

## Class Schedule

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

Date	Preparation Before Class Required Reading/Watching	In Class Topics and Activities	After Class Assignments/Activities
<b>Module 1 Introduction / Design Patterns</b>			
<b>Sept 17</b> Class 1		<ul style="list-style-type: none"> <li>• <b>User-centered design, usability, and design patterns</b></li> <li>• <b>Activities:</b> Recognizing and sketching design patterns; Start <u>Design Exercise 1 - Design Pattern Application</u>, complete for homework.</li> </ul>	<p><b>Due Sun Sept 22:</b> <b>Group Formation Survey</b></p> <p><b>Due Tuesday Sept 24 in class:</b> <b>Design Exercise 1</b> <i>Bring to class (in paper form).</i></p>
<b>Module 2 Understanding Users and Context</b>			
<b>Sept 24</b> Class 2	<p><b>Read</b></p> <ul style="list-style-type: none"> <li>• Watch on <a href="https://www.lynda.com">lynda.com</a>: UX Research Methods: Interviewing</li> <li>• Browse D2L &gt; Content &gt; Assignment Examples</li> <li>• Browse: <a href="https://darkpatterns.org/">https://darkpatterns.org/</a> and some of the other pattern library links in Class 1 slides</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Learning about users and context</b></li> <li>• <b>User research and analysis</b></li> <li>• <b>Prototypes</b></li> <li>• <b>Activities:</b> Sharing of <u>Design Exercise 1</u>, Introduction to <u>Design Challenge</u>; Explanation of <u>P1 User Study and Concept Exploration</u>; Sign up for Design Pattern Presentations.</li> <li>• Studio: Launch group work; Planning user interviews and observations; Post Group Organization Plan.</li> <li>•</li> </ul>	<p><b>Due Sun Sept 29:</b> <b>Revised Design Exercise 1</b> <i>Submit final version to D2L.</i></p> <p><b>**Due Tues Oct 1 in class: P1 User Research Results:</b> In your groups, conduct user interviews and observations. Bring the results of your research to class (i.e., printed notes) - I will check them. Groups must bring in these results to receive class participation credit.</p>
<b>Module 3 Exploring Concepts &amp; Solutions</b>			
<b>Oct 1</b> Class 3	<p><b>Read</b></p> <ul style="list-style-type: none"> <li>• Watch on <a href="https://www.lynda.com">lynda.com</a>: UX Design: 5 Creating Scenarios and Storyboards</li> <li>• <b>IDEO Tool kit:</b></li> <li>• Find Themes: <a href="http://www.designkit.org/methods/5">http://www.designkit.org/methods/5</a></li> <li>• Excerpts from (Kumar, 2012): Observations to Insights, Insights Sorting, Design Principles Generation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis, synthesis &amp; ideation.</b> Bring your user research notes!</li> <li>• <b>Defining requirements with user stories</b></li> <li>• <b>Activities:</b> Generating insights and design principles from user research; Studio: Affinity diagramming; Ideation and representation methods</li> </ul>	<p><b>Due Sun Oct 6:</b> <b>P1 User Study and Concept Exploration</b> <i>Post to D2L submissions.</i></p>
<b>Oct 8</b> Class 4	<p><b>Read</b></p> <ul style="list-style-type: none"> <li>• Tidwell, Ch. 2 Organizing Content: Information Architecture and Application Structure</li> <li>• Tidwell, Ch. 3 Getting Around: Navigation, Signposts, and Wayfinding</li> <li>• Tidwell, Ch. 4 Organizing the Page: Layout of Page Elements</li> <li>• Neil, Ch. 1 Navigation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>NAVIGATION. Creating organization and structure</b></li> <li>• <b>Due: Design Pattern Presentations (1)</b></li> <li>• <b>Writing user stories</b></li> <li>• <b>Creating and testing paper prototypes</b></li> <li>• <b>Activities:</b> Designing navigation; Explanation of <u>P2 Low Fidelity Paper Prototypes</u></li> <li>• Studio: <b>Prototyping tool / Work on Design Exercise 2</b></li> </ul>	<p><b>Due Sun, Oct 13:</b> <b>Design Exercise 2</b> <b>Post to D2L submissions.</b></p> <p><b>Due Tues Oct 15:</b> <b>P2 Low Fidelity Paper Prototype</b> <b>Bring paper prototypes to class.</b></p>
<b>Module 4 Designing the User Experience</b>			
<b>Oct 15</b> Class 5	<p><b>Read</b></p> <ul style="list-style-type: none"> <li>• Prototyping for Tiny Fingers (Marc Rettig, 1994)</li> <li>• Tidwell, Ch. 5 Lists of Things</li> <li>• Neil, Ch. 4 Search, Sort, and Filter</li> <li>• Optional: The Skeptic's Guide To Low-Fidelity Prototyping (Busche, 2014)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SEARCH, SORT, AND FILTER</b></li> <li>• <b>Due: Design Pattern Presentations (2)</b></li> <li>• <b>Activities:</b> Designing search, sort, and filter;</li> <li>• Studio: Feedback and testing paper prototypes</li> </ul>	<p><b>Due Sun Oct 20:</b> <b>P2 Low Fidelity Paper Prototype</b> <i>Post to D2L submissions.</i></p>

<b>Oct 22</b> Class 6 Antionette Carrolle workshop and talk Oct. 25	<b>Read</b> <ul style="list-style-type: none"> <li>Tidwell, Ch. 8 Getting Input from Users: Forms and Controls</li> <li>Neil, Ch. 2 Forms</li> </ul>	<ul style="list-style-type: none"> <li><b>FORMS</b></li> <li><b>Due: Design Pattern Presentations (3)</b></li> <li><b>Creating and testing low fidelity prototypes</b></li> <li>Explanation of <a href="#">P3 Mid-Fidelity Wireframe Prototype</a></li> <li><b>Studio: Start Design Exercise 3, complete for homework.</b></li> </ul>	<b>Due Sun Oct 27:</b> <b>Design Exercise 3</b> <i>Post to D2L submissions.</i>  <b>Due Tues Oct 29:</b> <b>P3 Mid-Fidelity Wireframe Prototype</b> Bring prototype to class.
<b>Oct 29</b> Class 7	<b>Read</b> <ul style="list-style-type: none"> <li>Tidwell, Ch. 9 Using Social Media</li> <li>Neil, Ch. 8 Social Patterns</li> </ul>	<b>**Bring mid-fi prototypes ready to test</b> <ul style="list-style-type: none"> <li><b>SOCIAL PATTERNS</b></li> <li><b>Due: Design Pattern Presentations (4)</b></li> <li><b>Studio: Testing of mid-fi prototypes</b></li> </ul>	<b>Due Sun Nov 3:</b> <b>P3 Mid-Fidelity Wireframe Prototype</b> <i>Post to D2L submissions.</i>
<b>Module 5      Testing and Refinement</b>			
<b>Nov 5</b> Class 8		<ul style="list-style-type: none"> <li><b>Activities:</b> Project work and team check-ins.</li> <li><b>Activities:</b> Explanation of <a href="#">P4 Interactive High-Fidelity Prototype</a> and <a href="#">P5 Final Presentation</a></li> <li><b>Studio: Work on P4 and P5</b></li> </ul>	<b>Due Tues Nov 12:</b> <b>P4 Interactive Hi Fidelity Prototype</b> Bring prototype to class.
<b>Nov 12</b> Class 9		<b>**Bring hi-fi prototypes ready to test</b> <ul style="list-style-type: none"> <li><b>User testing of high fidelity prototypes.</b>  Bring testable prototypes to class.</li> </ul>	
<b>Nov 19</b> Class 10 <i>Last class meeting</i> Cennydd Bowles workshop and talk Nov. 21		<ul style="list-style-type: none"> <li><b>Final Presentations</b></li> </ul>	<b>Due Nov 19:</b> <b>P4 Mid-High Fidelity Prototype</b> <i>Post to D2L submissions.</i>  <b>Due Nov 24:</b> <b>Portfolio Piece.</b> <i>Post to D2L submissions.</i>

The P4, P5, and Portfolio Piece assignments are the final, culminating projects. There is no final exam in this course.

## Group Projects

Group projects will comprise a significant portion of this class. Plan for weekly time allocated to group work for this class once group work starts. Detailed instructions will be provided for each project. While the group may assign a primary role to each group member, all group members are jointly responsible for the entire assignment and presentation.

Generally, each group member will receive the same grade for a project, which is based on the overall quality of the project and presentation that was produced. However, in some cases, additional credit may go to those who make an exceptional contribution to a project and reduced credit to those who contribute little to a project.

**Team work and process.** Students will complete a [Group Formation Survey](#) which I will use to form groups. Group members will be expected to establish their own norms for communicating expectations, plans, check-ins, and deadlines. I encourage groups to use collaboration tools such as [Google docs](#), [Asana](#), and [Trello](#) to manage tasks and facilitate communication. This is a basic aspect of professional work and the ability to work well with others is key. In order to complete quality work that is completed by deadlines, I encourage groups to contact me with any questions so I can help. Do not wait until the last minute to ask for help! Here is [a great resource](#) for tips on working successfully in a group.

**Problems working in groups.** Ideally, working in a group is fun and allows individuals to learn from each other. As you probably have experienced, it can also be time-consuming and stressful. Please make an effort to stay positive, encouraging to others, flexible, and respectful. I encourage team members to address and confusions or tensions as early as possible. I am willing to step in to aid collaboration if needed; groups members should contact me. As soon as you encounter subpar performance by a teammate: talk to them and accurately record their performance in your team assessment.

**If groups are having difficulty working together, I reserve the right to establish new team configuration. For example, this might involve disbanding a team and requiring individuals to work individually, or I may assign specific roles and require to be cc'd on all group communication related to the project (ex., cc me on emails and send me meeting notes/decisions). Points may also be deducted for any individual that does not significantly contribute to group work by actively participating in meetings, contributing to creation and revision of deliverables, and working in a cooperative manner.** If you speak up early, I can help. If you wait until late in the quarter to speak up, you share responsibility for the problem — and there's little I can do. Since there is a lot of group work in this class, we need to make great efforts for individuals to work well together.

**Preferred Name & Gender Pronouns**

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the quarter so that I may make appropriate changes to my records. Please also note that students may choose to identify within the University community with a preferred first name that differs from their legal name and may also update their gender. The preferred first name will appear in University related systems and documents except where the use of the legal name is necessitated or required by University business or legal need. For more information and instructions on how to do so, please see the Student Preferred Name and Gender Policy at <http://policies.depaul.edu/policy/policy.aspx?pid=332>

# Policies & Expectations

## Attendance

Students are expected to attend each class and to remain for the duration. You are expected to arrive prepared for class (i.e., complete assigned readings and assignments) and to participate actively to get credit for this portion of the grade.

## Absence Policy

- Attendance will be taken in each class (and recorded in D2L).
- **Three (3) missed classes may result in failure of the course.**
- **Communicate with me if you must miss class or be late for any reason. I appreciate a quick email to let me know.**
- Students are individually responsible for material they may have missed due to absence or tardiness.
- Please notify me in advance if there are any special needs.

## Late Policy

- Arrive on time to every class.
- Being present and arriving on time to every class is my expectation for everyone. Important information is communicated at the beginning of class. If there is a reason why you cannot consistently arrive on time to class, please let me know.
- Communicate with me if you must be late to class for any reason. I appreciate it when you let me know.
- Tardiness that exceeds 30 minutes is counted as an absence.

## Class Behavior

- Food and drink during class is ok.
- Internet surfing and checking email, etc. during class when your attention is expected is disrespectful and unprofessional. I am asking for your cooperation and attention during class time.
- Be a respectful participant by keeping phones in silent mode and do not text in class. If you have a need to be available by phone (sick relative, etc.), please let me know.
- Be engaged in class discussions and workshop activities:
  - Show leadership and take initiative in group efforts
  - Show genuine effort to cooperate with others
  - Frequently and eagerly offer your thoughts, perspectives, and responses to instructor/classmates
  - Make contributions that reflect excellent preparation (i.e., complete required reading)
- Practice professionalism
  - Communicate (face-to-face, emails, etc.) with the professor and students in a professional manner
  - Use body language (ex., eyes, posture) that shows active listening during instructor/student presentations
  - Be careful not to distract others (socializing, sleeping, leaving early or during class, reading unrelated material, doing homework for another class or wearing inappropriate attire);
  - Be respectful towards others

## 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.

## Attitude

A professional 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 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.

## Late Assignments

Completing assignments on time is essential for this class. Thus, to encourage accountability, ***late assignments will not receive credit unless acceptable reasons are documented (sickness, family emergency) and communicated to me by 24 hours before due date.*** If you expect to need more time for an assignment, reach out to the instructor *sooner* rather than later!

## Email Policy

On weekdays, you can expect me to return emails within 24 hours. Expect a delayed response on weekends. In the spirit of practicing professional communication, make an effort to write email messages in a formal, professional tone (e.g., proper greeting, correct spelling, etc.).

## Civil Discourse

DePaul University is a community that thrives on open 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.

## Coursework Grade Review Requests

Every effort is made to grade in a fair and consistent manner. Should a disagreement arise about a course 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. A re-grading may result in points added, deducted, or no change. The instructor handles grade review requests and responds to the student with a review decision as soon as possible.

## **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. All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptions cases will receive such approval. Information about the Incomplete Grades policy can be found at <http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx>

## **Withdrawal**

Students who withdraw from the course do so by using the Campus Connection system. 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.

## **Resources for Students with Disabilities**

Students seeking disability-related accommodations are required to register with DePaul's Center for Students with Disabilities (CSD) enabling them to access accommodations and support services to assist with their success. There are two office locations:

Loop Campus – Lewis Center #1420 – (312) 362-8002  
Lincoln Park Campus – Student Center #370 – (773) 325-1677

Students who register with the Center for Students with Disabilities are also invited to contact Dr. Gergory Moorhead, Director of the Center, privately to discuss how he may assist in facilitating the accommodations to be used in a course. This is best done early in the term. The conversation will remain confidential to the extent possible. Please see <https://offices.depaul.edu/student-affairs/about/departments/Pages/csd.aspx> for Services and Contact Information.

## **Academic Integrity & Plagiarism**

This course will be subject to the university's academic integrity policy. More information can be found at <https://resources.depaul.edu/teaching-commons/teaching/academic-integrity/Pages/default.aspx>.

## **Academic Policies**

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at: <http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx>

## **Online Course Evaluations**

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the

instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Please see <https://resources.depaul.edu/teaching-commons/teaching/Pages/online-teaching-evaluations.aspx> for additional information.

## **Visit the Writing Center**

Consider visiting the Writing Center to discuss your written assignments for this course. Writing Center Tutors are specially trained undergraduate and graduate students who can help you at any stage of your writing project. They can help you focus and develop your ideas, review your drafts, and polish your writing, as well as answer questions about grammar, mechanics, style, and citation. You may schedule appointments on an as-needed or weekly basis. In addition to Face-to-Face appointments, the Writing Center also provides Written Feedback by Email and Online Appointments. Be sure to schedule your appointment with enough time to think about and incorporate the feedback you'll receive. Bring/upload your assignment handout and/or any other relevant materials to your appointment. To schedule a Face-to-Face, Written Feedback by Email, or Online Appointment, visit [www.depaul.edu/writing](http://www.depaul.edu/writing). You can also call one of our offices: (312) 362-6726 (Loop Office, 1600 Lewis Center) or (773) 325-4272 (LPC Office, 250 McGaw Hall). When possible, the Writing Center accepts walk-in requests, but it's always a good idea to schedule your appointment ahead of time. You may schedule tutorials on an as-needed basis or as weekly standing appointments up to 3 hours per week. All Writing Center services are free to the DePaul community.