instructor

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office hours: 5:00 – 5:45 pm in Chemistry 122, or by appointment

class meeting

Mondays: 5:45 – 7:00 pm in Chemistry 122

Wednesdays: 5:45 – 7:00 pm in Sycamore 200 and 212, and Ballantine 314 (as assigned)

associate instructors

Wednesday sections:

31478: Sycamore Hall room 200
Prianka Rayamajhi prrayama@indiana.edu
Sharon Zhu zhuxiao@indiana.edu

31476: Sycamore Hall room 212
Tori Rice tjrice@indiana.edu
Shengfan He he32@indiana.edu

31477: Ballantine Hall room 314
Danny Rudzinski drudzins@indiana.edu

course materials

The course schedule, project briefs, and resources can be found on Oncourse.

The course blog, featuring the lectures, interim assignments, reading response questions, and linked material, can be found at:

http://designerlinessi300.blogspot.com/
course introduction and overview

This course introduces students to the foundations of Human-Computer Interaction Design (HCI/D). The field of Human-Computer Interaction (HCI) has origins primarily in computer science and cognitive psychology. As HCI expands its scope beyond workplace efficiency and productivity, it is increasingly seeking a “designerly” sensibility that is rooted in traditions of the arts, architecture, fashion, interior design, product design, graphic design, and service design, among others.

It’s important to know that the practice of design is not a scientific endeavor (Cross, 2007). It certainly uses science, and it may be studied scientifically, but as a practice, it is something entirely different. Design researcher Nigel Cross conducted studies of the design processes of several master designers. Rather than seeing a data-driven process, Cross discovered all of the designers creatively navigated among natural laws and basic principles (e.g., “form follows function”), their own experiences and particular perspectives as individual designers, their own goals for the project, and the particular needs/constraints of the particular client.

In this course, we will take a design-oriented perspective on HCI. The primary objective is to provide students with the necessary skills to conduct design research and develop conceptual designs as well as to cultivate their capacity to offer that “particular perspective” in solving design problems so as to meet users’ needs. Students will also be able to develop a substantive design portfolio as a result of the course for internships and industry positions.

course elements

Reading responses

Throughout the course there will be assigned reading, from the textbook and also those posted on Oncourse, which students are to read critically and answer assigned reading response questions. These responses are to be submitted via the Assignments portion of Oncourse by noon of the due date.

Projects

There will be four major projects used to explore the key course themes assigned throughout the term. In each case projects will be completed by teams of four students.

**Project 1: Analyzing Form + Function**

In this project students will reflect on the major elements of the design language (form) of the IU Art Museum and Fine Arts Library and the extent to which it does or does not support the activities, e.g. finding books, that take place there (function).

Deadline: Monday, 22 September

**Project 2: Assessing Modes of Interaction**

This project will introduce students to the framework of signifiers, constraints, and mapping through which they can understand the way in which people interact with design. Students will choose two different pieces of exercise equipment of a similar type and compare the relative success from a use point of view of each.

Deadline: Monday, 13 October

**Project 3: Usability Testing**

In this project students will use an assigned framework for usability testing to assess the degree to which a website of their choosing does, or does not, support the use for which it is intended.

Deadline: Monday, 3 November

**Project 4: Human-Centered Design**

The final project will follow the methods set out in IDEO’s *Human-Centered Design* book. Students will apply the methodology to an assigned task, producing a prototype design and rationale for their decisions.

Deadline: Monday 8 December

**Exams**

Two closed book and closed note exams based on the readings and study questions provided will be given:

- exam 1: Monday, 20 October
- exam 2: Monday, 15 December at 5:45 pm
Design Journals

Students will not be allowed to use their laptops or digital devices in class to facilitate their concentration on the course subject matter. Instead students are required to get a designerly journal and appropriate pens and markers, and encouraged to take “sketchnotes” as a preparation for the ideation stage of interface design. The thoroughness of your notetaking in your journal will be assessed at the semester’s end.

There is no specific requirement, since such choices are highly individual, but one approach might be:

1. A high quality sketchbook (without lines or gridded) for all of your notes and design sketches. Look for sketchbooks by Canson or Strathmore; Rhodia and Moleskine are fine too. You might find that a spiral bound sketchbook (so that it opens flat) measuring 5.5 x 8.5 inches, 100 pages, and perforated.

2. Two quality black artist pens; Pigma Micron Pens 05 and 08 (or equivalent).

3. Two Faber Castell (or equivalent) graphite pencils, 3B and 8B.

4. A small pencil sharpener.

5. An artist eraser, Factis (extra soft).

6. Tombow Duel Brush marker, color N89 (or equivalent).

7. A small carrying case for your supplies and a set of “design markers” (optional).

You can purchase these things at any good art store. In Bloomington, go to **Pygmalion’s Art Supplies** at 108 N. Grant Street. They’ve bundled these supplies in one package. Tell them you’re a student in I-300.

Participation + Professionalism

Participation will consist of grades for pop quizzes, attendance, and a qualitative assessment. Elements of professionalism include:

**Timeliness** is critical in professional settings. Managers and clients don’t like to pay for work that’s turned in late, and they aren’t interested in hearing about why something is late. Start early and manage your projects so that you have plenty of time at the end to deal with unexpected surprises, failed disks, blackouts, cord-eating cats, misfiring romances, persistent coughs, appointments for a facial, PlayStation injuries, unstable roommates, flat tires, religious conversions, and
jury duty. Please don’t be the source of the next excuse (pedestrian or bizarre) to add to the above list.

The keys to success in this course, and in your work life, are to ensure that your work is on time, neat, and follows the project instructions. Use the project brief to as a “checklist” to ensure that you’ve addressed all of the project requirements while completing you work and before submission.

In this class, projects will generally be done in groups of two, though you may also do them individually if you prefer. In the work world, it is important to build on the work of others. When you present or submit your work, you need to be prepared to give an account of what part of a design concept or research is your own work and which part was inspired or informed by the work of others. You must properly attribute the work of others.

If you work with others and share ideas and properly attribute the contributions of others and are clear and truthful about the way you have added value and conducted your own synthesis, you will tend to be rewarded with better grade evaluations.

On the other hand, if you use the work of others without attribution and acknowledgement, you will be subject to academic sanctions concerning plagiarism with all deliberate intent. Acts of plagiarism—using the work of others without attribution or reusing your own work without attributing prior use—will be subject to a zero-tolerance policy in this class. If you believe that someone else in the class has used your work without attributing you, please talk to the instructor or one of the AIs.

helpful resources

*Digital Photography, Video, Printing, Scanning & Other Tools*
IU has worked out a special licensing arrangement with Adobe and students can now download the latest Adobe software suites from http://iuware.iu.edu using your student IU login for your own educational use.

You can also access http://lynda.com from http://iuware.iu.edu, which provides instruction for how to use Adobe tools. There are a lot of Adobe software tools worth mastering.

You are expected to learn these tools on your own using the instructions that come with the software or any of the myriad of self-tutor books on the topics, but this class is an opportunity to learn-by-doing in practicing your use of these tools.

You will also want to have a digital camera, since use of imagery to express your design ideas or conduct observational design research is particularly germane to this course. In general, any digital camera will do for our purposes.
**Academic Misconduct**
The class is morally and procedurally bound by IU’s policies on academic misconduct, the details of which you can read about at the following website:
http://www.indiana.edu/~code/

**Religious Observance**
In accordance with the Office of the Dean of Faculties, any student who wishes to receive an excused absence from class must submit a request form available from the Dean of Faculties for each day to be absent. This form must be presented to the course professor by the end of the second week of the semester. A separate form must be submitted for each day. The form must be signed by the instructor, with a copy retained by instructor, and the original returned to the student. Information about the policy on religious observance can be found here:

http://teaching.iub.edu/policies_religious.php?nav=policies

**English**
If English is not your native language or you are otherwise shy about speaking in class, please do not worry. You will not be penalized in any way for making contributions to the class in less than perfect English or for taking time to compose your answers. The instructor will frequently emphasize to the class the need for all of us to be supportive of each other when it comes to contributing to the discussions. There is no need to feel rushed when responding to questions in class—an important part of the class is the construction of a feeling of community with the faculty, the AIs, and your peers. You are encouraged to utilize the free Writing Tutorial Service provided by the university. You can learn more about it at http://www.indiana.edu/~wts/

**grading**
The relative importance of the components listed below in determining students’ final grades is as follows:

Reading responses  **10% total**

Projects 1 - 4  **15% each**

Exams  **7.5% each**

Design Journals  **5%**

Participation and professionalism  **10%**
The grading scale used is:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
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<tr>
<td>A</td>
<td>94-96</td>
</tr>
<tr>
<td>A-</td>
<td>90-93</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
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<tr>
<td>B</td>
<td>84-86</td>
</tr>
<tr>
<td>B-</td>
<td>80-83</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
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<tr>
<td>C</td>
<td>74-76</td>
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<tr>
<td>C-</td>
<td>70-73</td>
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<tr>
<td>D+</td>
<td>65-69</td>
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<tr>
<td>D</td>
<td>60-64</td>
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<tr>
<td>D-</td>
<td>50-59</td>
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<tr>
<td>F</td>
<td>0-49</td>
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</tbody>
</table>

required reading


*Note: e-versions can be obtained immediately from coursesmart.com*

rules and regulations

completion of assigned projects

The primary requirement in this course will be the competent completion of assigned projects. Each of these projects will have interim outcomes intended to teach you specific skills and methods. Completion of each interim activity will be considered in determining your grade for each project. These interim activities will compose part of your final project grade. *Preparedness and participation in all class activities is essential.*

Attendance, class work, late work, extensions, make ups, and incomplete

- absences are not “excused”
- you are expected to attend all classes, arriving promptly and staying until dismissed
- consistently late arrival, early departure, and/or frequent absence will adversely affect the “Participation and Professionalism” portion (10%)
of your semester grade
- you are responsible for acquiring and mastering all information, hand
  outs, materials, etc., missed because of lateness or absence; no other
  person is responsible for seeing that you obtain or master this material
- assignments are to be handed in on the dates and times scheduled
- incomplete work is accepted
- late work is not accepted
- work submitted by others is not accepted
- extensions are not granted
- make-ups are not granted

If absence, late work, or incomplete work is due to circumstances beyond your
control, some adjustment may be made. The circumstances must be fully and
officially documented (e.g. hospitals; the police; community shelters). There will
be no adjustment made for absence, late work, or incomplete work due to
controllable events (such as visits to the Student Health Center, job interviews,
holiday flights, and work schedules).

faculty email response policy

While faculty will make every effort to reply to student emails in a timely way,
please expect it to take 24 hours to receive a response. Further, faculty are not
obliged to reply over the weekend so expect to hear late Monday or early
Tuesday if you email late Friday or over the weekend. Since design is such a
visual field it is often difficult to give email feedback in any case. Class time and
office hours are the best times to receive faculty input.

electronic devices

Cell phones, pagers, laser pointers, MP3 players, laptop computers, and other
electronic devices should be placed in “airplane mode” or turned off and put
away during class or academic-related events, unless otherwise indicated by the
instructor. It is the student’s responsibility to maintain and upgrade course-related
electronic devices, not the instructor, proctor, or Indiana University. The following
are electronic devices and issues commonly addressed in the classroom and
studio, however, this is not an inclusive sampling and instructors may expand
and modify these extensions of the Electronic Devices policy according to
individual courses and educational environments.
cell phones

Cell phones do not have a place in the classroom or at academic-related events, unless otherwise indicated by the instructor. Placing or taking phone calls, texting, and checking social media is not allowed during class and academic related events. Cell phones are not allowed during quizzes, tests, or exams.

disabilities

Students with special needs related to a disability that may affect performance in this course must notify the instructor after class, during office hours, or by individual appointment. This must be followed by the student’s declaration in writing to the professor. Students must establish eligibility for disability support services through the Office of Disability Services for Students in Wells Library room W302, 855-7578 before meeting with the professor. Professors will consult with the office of disability services for students after receiving written declaration from the student. This written student declaration will be compared with the Office of Disability Services for Students documentation and followed by the Office of Disability Services approval. It is our expectation as a department that this process should be executed in the first several weeks of class. A failure to document eligibility in the first several weeks would hinder technical support from the department.

While every effort is made to provide accurate and complete information in this syllabus, changes may be required to accommodate unforeseen circumstances, as well as the progress and interests of class members. Any changes to this syllabus will be announced in class.
Note: reading assignments, and reading response questions are found on the course blog: designerlinessi300.blogspot.com

<table>
<thead>
<tr>
<th>week</th>
<th>dates</th>
<th>monday</th>
<th>wednesday</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>August 25, 27</td>
<td>Course and Project 1 Introduction</td>
<td>Review of tools and techniques</td>
</tr>
<tr>
<td>2</td>
<td>September 1, 3</td>
<td>No class – Labor Day</td>
<td>Diagramming of organizational systems and building concept interim assignment due</td>
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<tr>
<td>3</td>
<td>September 8, 10</td>
<td>Preliminary discussion of Project 1 progress</td>
<td>Work period at Fine Arts Library</td>
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<tr>
<td>4</td>
<td>September 15, 17</td>
<td>Mapping of wayfinding experience and Universal Design principles interim assignments due</td>
<td>Final draft of Project 1 due</td>
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<td>5</td>
<td>September 22, 24</td>
<td>Project 1 due at noon</td>
<td>Project 2 introduction</td>
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<td>6</td>
<td>September 29 October 1</td>
<td>Review of student examples of signifiers, constraints, and mapping</td>
<td>Reiterate Project 2 requirements</td>
</tr>
<tr>
<td>Week</td>
<td>Date</td>
<td>Activity</td>
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| 7    | October 6, 8 | Initial analyses of pairs of exercise equipment due Emotional Design  
In-class review of Project 2 draft - extension |
| 8    | October 13, 15 | Project 2 draft due - extension  
Introduction of Project 3  
Review for mid-term exam  
Project 2 due - extension  
In-class usability testing exercise |
| 9    | October 20, 22 | Mid-term exam  
Report on initial pilot test of one of the web sites |
| 10   | October 27, 29 | Reiterate Project 3 requirements  
Final draft of Project 3 due |
| 11   | November 3, 5 | Project 3 due at noon  
Project 4 introduction  
Discussion of possible Project 4 topics |
| 12   | November 10, 12 | TBD  
Project 4 Proposal due |
| 13   | November 17, 19 | TBD  
Project 4 Research due |
| 14   | November 24, 26 | No class – Thanksgiving Break  
No class – Thanksgiving Break |
| 15   | December 1, 3 | TBD  
Project 4 Prototype due |
| 16   | December 8, 10 | Project 4 due at noon  
Review for Final Exam  
Study period |
<p>| exam | Monday, 15 December | Final exam in Chemistry |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
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<tbody>
<tr>
<td>5:45 – 7:00 pm</td>
<td>room 122</td>
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