**Principles of Interaction Design**

**CS378/INF350/AET339**

**50955/27670/19737**

Fall, 2015

GDC 6.202

T/Th 9:30-11

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**Office Hours:** Wednesdays, 9:30 – 10:30 a.m. and 11:30-12:30

And by appointment.



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**I. Rationale:**

Information interaction happens all around us: on websites, in libraries, on mobile phones, and in games. Interaction design focuses on *experiences* with the objects of design. An interaction designer asks about the experience of an interface. A game is one example of a particularly rich interactive object. A game incorporates more than just principles of play; many video games, for example, include elements of information interaction such as interface design (what are the controls, how does the interface appear?), instructional design (how does the player know what to do?), and information architecture (what are the rules, or the mechanics of play?). This class serves as an introduction to principles from interaction design that can inform game design.

**II. Course Aims and Objectives:**

***Aims***

Students taking this class should expect to do a lot of hard work puzzling out *explanations* for human interaction behaviors and also learning about *rules* related to interaction design. Human interaction behaviors are complex and often even conflicting. I expect students to be able to talk about these conflicts and *justify* decisions about when to follow one design rule or when to break that design rule and follow another.

***Specific Learning Objectives:***

The student successfully completing this class will:

* be able to explain the rudimentary aspects of how human beings process information,
* be able to think in creative ways about designing for interaction (i.e., students should understand how to standardize as well as innovate),
* be able to justify design choices with the use of both heuristics and user studies,
* be able to describe what the methods of interaction design are and have experience with some of them,
* be able to explain why software developers should NOT depend on their own intuitions for what is a usable design, and
* be familiar with evaluation tools for interaction design and have experience with some of them.

**III. Format and Procedures:**

This course will entail three major instructional techniques:

1 – *Discussion* about the scientific underpinnings of interaction design and the methods of designing interactions

2 – activities and *exercises*, to practice the use of such methods, and

3 – individual and group *projects* to demonstrate knowledge about such methods and establish good habits.

I do very little formal lecturing in this class. You will be required to be *interacting* (!) for most of our in-class time together.

**IV. Course Schedule:** *\*\*This syllabus represents my current plans and objectives.  As we go through the semester, those plans may need to change to enhance the class learning opportunity.  Such changes, communicated clearly, are not unusual and should be expected.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Main Topic(s)** | **Work to do at home**  **Readings – to be completed before class** | **Due** |
| 8/27 | Introductions  Syllabus and concepts |  |  |
| 9/1 | Discuss readings and conduct in-class activities | Read chapter 1 in Norman | Sign up for presentation days |
| 9/3 | Discuss readings and conduct in-class activities  2x Student presentations | Read chapters 2 & 3 in Norman. |  |
| 9/8 | Discuss readings and conduct in-class activities  Student presentation | Read chapter 4 in Norman | *Bring to class a picture or verbal description of good and poor designs. NOT web sites. Physical objects.* |
| 9/10 | Discuss readings and conduct in-class activities  Student presentation(s) | Read pages 12, 14, 18, 20, **26** in Lidwell et al. (as well as accompanying images) |  |
| 9/15 | Discuss readings and conduct in-class activities  Student presentation(s) | Read pages 82, 102, 104, **138**, **24** in Lidwell et al. (as well as accompanying images) | *Bring to class 2 URLs showing a good and poor WEB design (based on what we’ve read).* |
| 9/17 | Discuss readings and conduct in-class activities  2x Student presentation(s) | Read **44**, 128, 130, 132, 202, 208 in Lidwell et al. (as well as accompanying images) |  |
| 9/22 | Discuss readings and conduct in-class activities  Student presentation(s) | Read 46, 50, 52, 64, 66 in Lidwell et al. (as well as accompanying images) | *Bring to class an edge example game – stretch the idea of “game” but be able to justify your choice.* |
| 9/24 | Discuss readings and conduct in-class activities  Student presentation(s) | Read chapter 7 in Norman  Read Nielsen (on Canvas) |  |
| 9/29 | Review |  |  |
| 10/1 | Exam 1 |  | **Exam** |
| 10/6 | Discuss readings and conduct in-class activities  Student presentation(s) | Read Ensmenger (on Canvas).  Read Lidwell 182 | *Bring to class an example of a game that excludes some people –because of age, gender, or other.* |
| 10/8 | Discuss readings and conduct in-class activities  Student presentation(s) | Read Francisco-Revilla et al. (on Canvas) |  |
| 10/13 | Discuss readings and conduct in-class activities  Student presentation(s) | Read selected chapters from Bogost (provided on Canvas). |  |
| 10/15 | Discuss readings and conduct in-class activities  Student presentation(s) | Read Golimbisky & Hagen (on Canvas). | *Bring to class a description of an object that doesn’t come with a user manual but should.* |
| 10/20 | Discuss readings and conduct in-class activities  Student presentation(s) | Read 22, 28, 38, 58, 64 in Lidwell et al. (as well as accompanying images) |  |
| 10/22 | Discuss readings and conduct in-class activities  Student presentation(s) | Read 34, 48, 110, 120, 122, 124 in Lidwell et al. (as well as accompanying images) |  |
| 10/27 | Discuss readings and conduct in-class activities | Read 184, 186, 190, 206 in Lidwell et al. (as well as accompanying images) | **Evaluation report due** |
| 10/29 | Discuss readings and conduct in-class activities.  Discuss evaluations | Read 56, 74, 142, 150 in Lidwell et al. (as well as accompanying images) |  |
| 11/3 | Discuss readings and conduct in-class activities | Read 62, 170, 210 in Lidwell et al. (as well as accompanying images) |  |
| 11/5 | Discuss readings and conduct in-class activities | Read 90, 94 in Lidwell et al. (as well as accompanying images) | *Bring to class a description and image of a “confounding” object.* |
| 11/10 | Discuss readings and conduct in-class activities | Read 78, 132, 168 in Lidwell et al. (as well as accompanying images) |  |
| 11/12 | Review |  |  |
| 11/17 | Exam 2 |  | **Exam** |
| 11/19 | Lab class – data review and prototype review |  |  |
| 11/24 | Career opportunities. |  | *Bring to class two job descriptions.* |
| 11/26 | THANKSGIVING – NO CLASS |  |  |
| 12/1 | Present and discuss design concepts (5x) |  |  |
| 12/3 | Present and discuss design concepts (5x) |  | **Game concept briefs due.** |

## Feedback Statement

During this course I will be asking you to give me feedback on your learning in informal as well as formal ways, including through anonymous Canvas surveys about readings and in-class activities. These surveys are not required or graded, but it’s very important for me to know your reaction to what we’re doing in class, so I encourage you to respond.

**V. My Assumptions**

Students in my class should be motivated to learn in new ways and to respect their colleagues in the course by being considerate of others as well as being present and participating in group projects thoughtfully. Students in this class come from very different backgrounds – some from Computer Science, some from Fine Arts, and others from elsewhere. This diversity is a strong asset to us and is a partial reflection of the real world of interaction design! However, it also means that students have varying expectations about class format and to that end I wish to say here that this class is NOT here either to teach you programming or to teach you about any particular software or to teach you about art. Nor is this class a compromise among any of those skills or knowledge types. Rather, this course is here to teach you about explanations for how things (and people!) work, so that you can use those constructs with deliberate intent in particular situations. Why do some products fail and others succeed? Why should designers standardize, and when should they not standardize? For this class, you should think deeply use what we read and talk about in class – don’t just use your own preferences or a friend’s anecdote to explain something without thinking about why you might have such a preference or about conflicting viewpoints!

**VI. Course Requirements:**

1. Class attendance and participation policy:

You are expected to attend class and participate in discussions and activities. Be sure your name gets on the activity sheets, and be active in participating. I understand that some students will speak more than others and I have provided a variety of ways that you can participate so be sure to complete assignments before class, and to be present and active. This class is an activity-focused class. You need to be present in class to do well in the course overall. Lateness and absences will earn you negative points (partial for lateness). I will allow 3 absences without penalty.

Personal technology is NOT allowed in the classroom except during the allowed times. We will be using computers provided in the room for several class activities and you may use your own technology ONLY to assist with these activities. If you need to take notes during lectures using a laptop or cell phone, you may see me about getting approval. You will need to install WriteRoom, Think, or a similar application that blocks out distractions as well as demonstrate to me that you know how to use said application. This class is heavily focused on your participation so please focus during activities, discussions and lectures.

**A note about Religious Holy Days**

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, I will give you an opportunity to complete the missed work within a reasonable time after the absence.

**2.** Course Readings/Materials:

**Required Textbooks (you obtain these):**

Lidwell, W., Holden, K., & Butler, J. (2010). *Universal principles of design, revised and updated: 125 ways to enhance usability, influence perception, increase appeal, make better design decisions, and teach through design*. Rockport Pub.

*\*\*\* Which edition you read does not matter so feel free to purchase a used copy.*

Norman, Donald A. (1990). *The design of everyday things*. New York: Doubleday

*\*\*\* Please note that the UT library has two electronic copies of this. Which edition you read does not matter and you can also purchase it for relatively low prices at online venues.*

**Optional Resources (you don’t need to obtain these; they are suggestions):**

Bogost, Ian.( 2011). *How to Do Things with Videogames*. Minneapolis: University of Minnesota Press.

Carroll, J. M. (Ed.). (1991). *Designing interaction: Psychology at the human-computer interface* (Vol. 4). CUP Archive.

Hagen, R., & Golombisky. K. (2013) *White Space Is Not Your Enemy: A Beginner’s Guide to Communicating Visually through Graphic, Web & Multimedia Design*. Burlington, Mass.: Focal Press.

Moggridge, Bill. (2007). *Designing Interactions*. Cambridge, Mass.: MIT Press.

Schell, J. (2008). *The Art of Game Design: A book of lenses*. CRC Press.

*\*\*\* The UT library has an electronic copy of this.*

Dethier, V. G. 1989. *To know a fly*. Boston: McGraw-Hill.

**Selected readings and videos available via Canvas (I provide these):**

Bogost, Ian.( 2011). *How to Do Things with Videogames*. Minneapolis: University of Minnesota Press. Selected chapters.

Ensmenger, Nathan. "Making programming masculine." *Gender codes: Why women are leaving computing* (2010): 115-139.

Francisco-Revilla, L. & Crow, J. (2010). Interpretation of web page layouts by blind users. In Proceedings of the 10th annual joint conference on Digital libraries. ACM, New York, NY, USA, 173-176.

Hagen, R., & Golombisky. K. (2013) *White Space Is Not Your Enemy: A Beginner’s Guide to Communicating Visually through Graphic, Web & Multimedia Design*. Burlington, Mass.: Focal Press. Selected chapters.

Nielsen, J. 1994. Usability inspection methods. In Conference Companion on Human Factors in Computing Systems (CHI '94), Catherine Plaisant (Ed.). ACM, New York, NY, USA, 413-414

**3.** Assignments, Assessment, and Evaluation

**Late Assignments**

It is important to complete your work on time, both so you can stay on track and so you can work with your fellow students. You will be docked 10% each day every day late for any assignment.

NB: Late exams are not possible outside of extreme circumstances and will receive a 0. Plan ahead.

**Evaluation**

Your work will be graded on college-level writing and presenting standards, demonstrated insight, completion of expectations of the assignment, and coherence of organization. In general, work receiving an “A” will demonstrate clarity of purpose, organization, and communication. It will also demonstrate original interpretation of course material. A “B” signifies work that meets expectations, meaning that all aspects of the assignment are completed, but it lacks either some aspects of preparation or it lacks significant insight into the material or frequent grammatical errors. A “C” for work denotes work that meets expectations but is poorly constructed, supported, or inconsistent argument, or work with multiple errors. A “D” indicates that work barely meets the requirements of the assignment and is the lowest passing grade.

**Assignment details:**

*Exams*

There will be two multiple-choice and short answer exams to check your knowledge about the course readings, videos, and lectures. The first is worth *11 points* and the second is worth *12 points.* The exams total *23 points*.

*Topic presentation*

With a partner, you choose a discussion/activity day (highlighted in gray on the schedule) to present and demonstrate your understanding of a specific topic related to one of our interaction design in games. You need to prepare a visual (such as a slide deck or handout) with both images and text that communicate your ideas to an audience. You also must prepare discussion questions for that day. You must submit your questions and a pdf of your visuals via canvas as well as presenting in class. Your presentation should be 5-10 minutes excluding discussion. I lead discussions using your prepared questions along with some of my own. You should have enough material to discuss but you may not go over 10 minutes. You should both take a turn talking (that leaves each of you around 3-5 minutes). *12 points.*

*Evaluation*

You will need to provide a report of 3 abbreviated forms of evaluation of existing designs. You may evaluate a website, an app, or even an object. You will use 3 of the various techniques we discuss in class. Reports will include some writing, as well as charts and other visuals as appropriate. Format will depend on the three methods you choose. We will discuss this more as we conduct classes. How did you get the data? How can you visually present the data in a concise way? *20 points.*

*Concept a design (group project)*

In groups of 3 students, you will choose a game and evaluate it using three of the techniques we learn in class. You will write a one page design brief and create a visual for your design using a technique from class. Keep in mind that I consider group work to be an important skill. I will provide time in class for you to work together, but you will also need to find time to work together outside of class time. *25 points.*

*Participation*

I grade participation based on attendance, alertness in class, and demonstrated preparedness in class. You will lose points for lateness, absences, or not completing readings or at-home work (which often includes activities to prepare for class in addition to readings.) Being prepared means both doing the readings and assignments outlined on the syllabus as well as completing a few at home assignments that I will provide throughout the course!

You can miss 2 classes without penalty. The more classes you miss, the more each absence negatively impacts your grade. Similarly, lateness adds up and also impacts your grade more and more. *20 points.*

**4.** Use of *Canvas* in class

In this class I use Canvas—a Web-based course management system with password-protected access at <http://canvas.utexas.edu> —to distribute course materials, to communicate and collaborate online, to post grades, to submit assignments, and to give you online quizzes and surveys. You can find support in using Canvas at the ITS Help Desk at 475-9400, Monday through Friday, 8 a.m. to 6 p.m., so plan accordingly.

**VII. Grading Procedures: Grades** will be based on:

*Grading scale:*

|  |  |  |
| --- | --- | --- |
| A | 100% | to 94% |
| A- | < 94% | to 90% |
| B+ | < 90% | to 87% |
| B | < 87% | to 84% |
| B- | < 84% | to 80% |
| C+ | < 80% | to 77% |
| C | < 77% | to 74% |
| C- | < 74% | to 70% |
| D+ | < 70% | to 67% |

**VIII. Academic Integrity**

**University of Texas Honor Code**

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Each student in this course is expected to abide by the University of Texas Honor Code. **See the UT Honor Code above.** Any work submitted by a student in this course for academic credit will be the student's own work. For this course, collaboration is allowed in the following instances: *Your game redesign.*

You are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e-mail, an e-mail attachment file, a diskette, or a hard copy.

Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this Code can also be extended to include failure of the course and University disciplinary action.

During examinations, you must do your own work. Talking or discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.

**IX. Other University Notices and Policies**

**Use of E-mail for Official Correspondence to Students**

* All students should become familiar with the University's official e-mail student notification policy. It is the student's responsibility to keep the University informed as to changes in his or her e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. It is recommended that e-mail be checked daily, but at a minimum, twice per week. The complete text of this policy and instructions for updating your e-mail address are available at **<http://www.utexas.edu/its/help/utmail/1564> .**

**Documented Disability Statement**

Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone). Faculty are not required to provide accommodations without an official accommodation letter from SSD. *(Note to Faculty: Details of a student’s disability are confidential. Faculty should not ask questions related to a student’s condition or diagnosis when receiving an official accommodation letter.)*

* Please notify me as quickly as possible if the material being presented in class is not accessible (e.g., instructional videos need captioning, course packets are not readable for proper alternative text conversion, etc.).
* Please notify me as early in the semester as possible if disability-related accommodations for field trips are required. Advanced notice will permit the arrangement of accommodations on the given day (e.g., transportation, site accessibility, etc.).
* Contact Services for Students with Disabilities at 471-6259 (voice) or 1-866-329-3986 (video phone) or reference SSD’s website for more disability-related information: <http://www.utexas.edu/diversity/ddce/ssd/for_cstudents.php>

**Behavior Concerns Advice Line (BCAL)**

If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual’s behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit <http://www.utexas.edu/safety/bcal>.

**Q drop Policy**

The State of Texas has enacted a law that limits the number of course drops for academic reasons to six (6). As stated in Senate Bill 1231:

“Beginning with the fall 2007 academic term, an institution of higher education may not permit an undergraduate student a total of more than six dropped courses, including any course a transfer student has dropped at another institution of higher education, unless the student shows good cause for dropping more than that number.”

**Emergency Evacuation Policy**

Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation:

* Familiarize yourself with all exit doors of the classroom and the building. Remember that the nearest exit door may not be the one you used when you entered the building.
* If you require assistance to evacuate, inform me in writing during the first week of class.
* In the event of an evacuation, follow my instructions or those of class instructors.

Do not re-enter a building unless you’re given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.

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*Changes to the syllabus*

I may make minor changes to the syllabus to suit the needs of the class during the semester.. It is your responsibility to come to class and keep track of Canvas to receive any such announcements.