

CS 4393/5153 User Interfaces – Fall 2011

Location: SB 2.02.10
Time: TR 3:30-4:45pm
Professor: John Quarles
Office: 4.01.11
Email: [jqp@cs.utsa.edu](mailto:jpq@cs.utsa.edu) (Put UI in the subject)

Office Hours:

- T 11-12:30, R 11-12:30
- By appointment (email)
- Drop by the office

Course Description:

A study of the major topics in user interfaces and human-computer interaction (HCI), including interface design (principles, theories), usability and evaluation methods, software tools, and interactive devices.

Note that there is a significant amount of software engineering and implementation in this course. Taking this course will 1) give you a broad overview of the current research in HCI 2) result in a large project that you can be proud of and show off to people and 3) teach you to design and conduct usability studies. You will learn the process of interface design through the application of augmented reality games, using the GoblinXNA game engine.

What is this course, and who is it for?

This course is directed towards undergraduate students who wish to learn the **basic concepts** and **current research** into the design and creation of user interfaces. The course involves three core components:

- Lectures/Discussions – core HCI topics will be presented and discussed. There will be more interactive group discussions than lecturing.
- In class case studies – activities that will challenge students to conceptually design interfaces and usability studies for particular applications.
- Book/Research paper reading – book chapters and cutting-edge HCI research conference and journal publications will be read and discussed in-class.
- Creation and Evaluation of interfaces – students will also 1) create new interfaces and 2) evaluate the interfaces through user studies.

Upon completion of this course, students will be able to understand interface design and be able to effectively evaluate interfaces.

Prerequisites:

Undergraduate: CS3773 Software Engineering

Graduate: experience with software development and data structures

Texts:

Required: The Resonant Interface: HCI foundations for interaction design by Steven Heim

Tentative List of Topics:

1. *Interface Paradigms and Frameworks*
2. *Design guidelines, principles and theory*

3. *Evaluating Interface Designs*
4. *Software Tools (GoblinXNA)*
5. *Augmented Reality, and 3D Interaction*
6. *Classic topics: Menu, Forms, and Dialogs*
7. *Multimodal Interfaces*
8. *User Modeling*

Grading:

Undergraduate:

- 30% Group Project
 - Develop a game and associated interfaces, evaluate interfaces from part 1 with 20 users
- 40% Individual Assignments
- 15% weekly quizzes
- 15% class participation (discussion of readings, in class activities, presentations)

Graduate:

- 30% Group Project
 - Develop a game and associated interfaces, evaluate interfaces from part 1 with 30 users
- 40% Individual Assignments
- 15% weekly quizzes + research paper quizzes
- 15% class participation (discussion of readings, in class activities, presentations)

There will be no final exam or midterm exam. The final exam time will be used to demonstrate your final projects to the rest of the class, although you will already have demoed them to me.

To make an 'A' in this course, one must go above and beyond the set requirements for projects and assignments. **Criteria:** 80% correctness, 20% Quality

Basic Workload and Schedule:

Weekly: there is going to be a significant amount of reading in this class. We will spend a large amount of class time discussing the readings and taking short quizzes on them outside of class. Moreover, students will design, present and evaluate interface prototypes in class every Thursday. There will be an assignment due each week.

Graduate students will additionally be reading assigned research papers from scholarly conferences, and each take quizzes on the papers. Moreover, graduate students will have additional requirements in projects and assignments.

Semester:

August – November: A series of assignments in GoblinXNA and solidify the basic design principles presented in class and readings.

October: Students in groups will create a new game and associated interfaces (may involve a combination of coding, physical creation, etc.)

November: students will evaluate the game interfaces

December: Demo your game and present study results to the class and anyone else who I decide to invite.

The course requires an above average time commitment in terms of reading and implementation.

Equipment and Facilities:

You can work on these projects at home or in a lab using GoblinXNA. Some of the resources for GoblinXNA will already be installed on the lab computers. Also, each group will have access to a Logitech Web Cam 9000 Pro to implement augmented reality games and interfaces.

Course Webpage: <http://www.cs.utsa.edu/~jpg/Site/teaching/uiu-f11/>

Class Policy

Collaboration:

The projects may be performed in groups, depending on the size of the class. Assignments quizzes and presentations will be individual unless otherwise noted.

Late Assignments: No late assignments will be accepted. Only under EXTREME circumstances will we make an exception

Tardiness: Please be considerate of your instructor and fellow students by being on time to class.

Attendance: Attendance is not required but participation is. Not participating in class discussions and activities will significantly affect your final grade. If you are sick, please contact me, and we will work out a way for you to catch up. Each class period, there will be something to turn in. This will determine part of your participation grade.

Suggestions for success:

- Ask questions. If you are uncomfortable with asking in front of the class, please talk to me after class or during office hours.
- Have fun and experiment. Going above and beyond is expected if you want an A in this class.
- Aim to have your final project be a paper you could publish

If you have any questions about how prepared you are, please feel free to see me at anytime. We can discuss whether this class is a good fit for you.

Class Disruption:

To reduce distraction to your fellow classmates, please:

1. turn off all cell phone ringers
2. do not read the newspaper or browse the web during class
3. do not disrupt other students' learning

Multiple and/or willful disregard will lead to an escalating penalties from emails to verbal chats to a deduction in the class participation grade will be assessed.

The University of Texas at San Antonio is a community of scholars, where integrity, excellence, inclusiveness, respect, collaboration, and innovation are fostered.

As a Roadrunner,

Academic Dishonesty:

The penalty for a first offense is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all the cases, the course grade is reduced to “F”. Students are expected to report cases of academic dishonesty to the course instructor immediately.

I expect you to uphold the following:

Roadrunner Creed

I will:

- Uphold the highest standards of academic and personal integrity by practicing and expecting fair and ethical conduct;
- Respect and accept individual differences, recognizing the inherent dignity of each person;
- Contribute to campus life and the larger community through my active engagement; and
- Support the fearless exploration of dreams and ideas in the advancement of ingenuity, creativity, and discovery.

Guided by these principles now and forever, I am a Roadrunner!

The University of Texas at San Antonio Academic Honor Code

A. Preamble

The University of Texas at San Antonio community of past, present and future students, faculty, staff, and administrators share a commitment to integrity and the ethical pursuit of knowledge. We honor the traditions of our university by conducting ourselves with a steadfast duty to honor, courage, and virtue in all matters both public and private. By choosing integrity and responsibility, we promote personal growth, success, and lifelong learning for the advancement of ourselves, our university, and our community.

B. Honor Pledge

In support of the ideals of integrity, the students of the University of Texas at San Antonio pledge:

“As a UTSA Roadrunner I live with honor and integrity.”

C. Shared responsibility

The University of Texas at San Antonio community shares the responsibility and commitment to integrity and the ethical pursuit of knowledge and adheres to the UTSA Honor Code.