

CEN4721c/CAP5100 Human-Computer Interaction

Spring 2015

NEB 0201, 5th period (11:45 AM – 12:35 PM)

Professor: Benjamin Lok

Office: CSE Room E544

Email: lok@cise.ufl.edu (please put HCI in the subject)

Office Hours (CSE 544): MW 4th period (10:40 AM - 11:30 AM)

Teaching Assistant (TA): Diego Rivera-Gutierrez [Primary], Min Chen [Secondary]

Office: CSE Room 309

Email: djrg@cise.ufl.edu, min@cise.ufl.edu

TA Office Hours (CSE): TTh 7th period (1:55 PM - 2:45 PM)

Course Description:

A study of the major topics in human-computer interaction, including interface design (principles, theories), software tools, virtual environments, interactive devices, collaboration, and visualization.

What is this course, and who is it for?

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

- Lectures – core HCI topics will be presented and discussed
- Research paper reading – recent HCI research conference and journal publications will be read and discussed in class.
- Creation and Evaluation of an interface – each student will 1) create their own interface and 2) evaluate their interface

Upon completion of this course, students will be able to understand and be able to evaluate the criteria used in developing interfaces.

How does HCI fit in with other courses?

HCI is in of a set of three courses that include Interaction Design (taught in the fall) and Research Methods (taught in the spring). The over-arching concept is that the three courses in total will cover the pipeline of design, implementation, and evaluation. In HCI, you'll end up doing parts of design and evaluation with most of your time focused on implementation. You do not have to have taken Interaction Design or Research Methods to take HCI.

Prerequisites:

COP 3530 Data Structures

Texts:

Required: *Designing the User Interface 5th Edition*, Ben Shneiderman and Catherine Plaisant.

Optional: *Design of Everyday Things*, Donald Norman

Tentative List of Topics:

1. Introduction to Human-Computer Interaction
2. (evaluation) User Studies Design
3. (evaluation) User Studies Evaluation
4. (implementation) Agile methodology and Scrum framework
5. (design) Design guidelines, principles and theory
6. (design) The Media Equation (summary of book)
7. (design) Design of Everyday Things (summary of book)
8. (implementation) Direct Manipulation and Virtual Environments
9. (implementation) Command and Natural Languages
10. (implementation) Human Computation
11. (evaluation) Study Ethics
12. (implementation) Virtual Humans

Grading:

- 15% Project #1 (user study)
- 10% Project #2 (propose project)
- 20% Project #3 (create new interface)
- 10% Project #4 (study design)
- 10% Project #5 (pilot test)
- 25% Project #6 (Evaluate new interface)
- 10% quizzes/assignments
- NO FINAL EXAM

Score (rounded to the nearest point)	Grade
100-92	A
91-90	A-
89-88	B+
87-82	B
81-80	B-
79-78	C+
77-72	C
71-70	C-
69-68	D+
67-62	D
61-60	D-
59-0	E

A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

We will be using the e-learning course management system to post grades and to communicate with the class members.

Expectations for the graduate and undergraduate Human-Computer Interaction courses:

The graduate and undergraduate course offerings of Human-Computer Interaction differs in the six class projects. The graduate class projects (90% of the course grade) require more study participants, more extensive data analysis, longer project reports, and more programming.

Workload:

Weekly: class lectures, readings outside of class, in-class quizzes on readings

Semester:

January: students will conduct a study that compares simple interfaces for a web-based task.

February - March: students will identify a task that would be enhanced through an improved interface. Students will identify a client for this interface. Students will create a new interface (involving a combination of coding, creation, etc.)

March - April: students will evaluate the new interface

The course requires an average to above average time commitment.

Programming Languages

You can use any development environment and programming language.

Programming Requirements

Programming at a Data Structures level is required

Honor Code & Collaboration:

High level questions, syntax topics, and algorithms can be discussed. Not allowed in this course include the following: 1) plagiarism (misrepresenting others ideas as your own), 2) **copying code**, and 3) work deemed offensive to others.

Honesty Policy - As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams).

Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.

Accommodation for Students with Disabilities – Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

UF Counseling Services – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.

- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.

- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.

- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

Software Use – All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Assignments: A late penalty of -10% for each day late will be assessed. After **3** days (weekends count), you will receive a 0. **Requests for extreme circumstances must be requested in writing BEFORE the due date.** Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.”

Attendance: Attendance is not required and will not be graded. If you are sick or will be absent for a significant period, please contact me, and we will work out a way for you to catch up.

Incompletes: Incompletes will be not be granted except under previous agreement of the professor. To be considered for an incomplete, the student *must* 1) let the professor know at in advance that they are seeking an incomplete, and 2) provide documentation to support the request.

Course Webpage: <http://ufhcispring2015.wordpress.com>

Undergraduate ABET:

Contribution of course to meeting the professional component (ABET only – undergraduate courses):

This course contributes to meeting the 48 hour or 37.5% of total credit hours minimum required by ABET in the Engineering Topics Curricular Area of the professional component..

Relationship of course to program outcomes: Skills student will develop in this course (ABET only undergraduate courses):

This course is related to (but does not assess) the following ABET outcomes:

- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (g) an ability to communicate effectively

Miscellany – To reduce distraction to your fellow classmates, please:

1. Turn off all cell phone ringers
2. No open laptops
3. Do not read the newspaper