CEN4721c – Human-Computer Interaction

Course Syllabus, v1.1, last revised 8/26/2021

Course Logistics

Meeting Times:
- Tuesday 8-9th Periods (3:00 PM - 4:55 PM)
- Thursday 9th Period (4:05 PM – 4:55 PM)

Meeting Location:
- Little Hall 0113 (LIT 0113)

Instructor Information

Instructor: Jaime Ruiz, PhD
- E-mail address: jaime.ruiz@ufl.edu
  Put HCI in the subject. However, for faster response send emails through canvas.
- Office hours: TBD
- Office location: Virtual

Teaching Assistants:

Julia Woodward

- Office hours: TBD, Virtual

Nikita Soni

- Office hours: TBD, Virtual

Course Information

Catalog Descriptions:
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 junior and senior undergraduate students who wish to learn the basic concepts and current research into the design, creation, and evaluation of computer interfaces. Upon completion of this course, students will be able to design, build, and evaluate user 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 overarching concept is that the three courses in total will cover the pipeline of design, implementation, and evaluation. In HCI, you will 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.

Programming Languages
You can use any development environment and programming language.

Programming Requirements
Programming at a Data Structures level is required. You will be required to implement an interactive system.

Pre-requisites and Co-requisites:
- COP 3530 Data Structures with minimum grade of C.

Course Components:
This course involves the following core components:
- Lectures and Readings – core concepts will be presented and discussed.
- Midterm/Final – examination of foundational HCI material
- Assignments
- Course project - creation and evaluation of an interface
- Reading quizzes

Course Materials

Material and Supply Fees:
- None.

Textbooks and Software Required:
Optional: The Human-Computer Interaction Handbook 3rd Edition. Edited by Julie A. Jacko
Optional: Design of Everyday Things, Donald Norman

Course Outline

Course Topics:
1. Introduction to Human-Computer Interaction
2. History of HCI
3. User Centered Design
4. Prototyping
5. Foundations of HCI
6. Designing Interfaces and Interactions
7. Accessibility
8. Ethics for Human Subject Studies
9. Usability Testing
10. Statistics for HCI
11. Input Techniques and Technologies
12. Sensor and Recognition-Based Input
13. Designing for Children
14. Augmented Cognition
15. Research topics in HCI

Grading

The following items will contribute to students' grades in this course:

Course Project • Project Proposal 5% • Project Interface 10% • Project Study Design/IRB 5% • Project Final Report 10%	30%
Assignments Assignments can include both in-class and at home exercises.	15%
Quizzes Quizzes will be given on the assigned reading. These quizzes will cover only that week's reading(s). Students are able to miss 1 quiz without penalty.	5%
Class Participation	5%
Midterm	20%
Final	24%
Research Participation See Research Participation and Extra Credit policy below	1%

Grading Scale (ceiling to the nearest point):
- 100-93 A, 92-90 A-
- 89-88 B+, 87-83 B, 82-80 B-
- 79-78 C+, 78-73 C, 72-70 C-
- 69-68 D+, 68-63 D, 62-60 D-
- 59-0 E

This course will use the Canvas e-Learning course management system to post grades and to communicate with class members. If you have a question about the course that other students could benefit from hearing the answer, please post to the appropriate discussion thread on Canvas rather than sending individual emails to the instructor/TA.

Undergraduate Grading Scale Note:
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: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Honor Code & Collaboration:
High level questions, syntax topics, and algorithms can be discussed amongst each other and amongst the groups. Not allowed in this course include the following:
1) **plagiarism** (misrepresenting others' ideas as your own, can be fixed with simple citation),
2) **copying code**,
3) **social loafing** (e.g., for group work), and
4) **work offensive to others**.

As for other courses in CISE in the past, offenders will be held to the UF Honesty Policy (see below) including reporting incidents to the Dean of Students. The results of this have included failing grades, ethic lectures, and a permanent mark in records (which can lead to expulsion).

Course Policies

Research Participation and Extra Credit
As part of this course, you are required to participate in one study and are eligible to earn extra credit by participating in an additional CISE human-subjects research studies. Each study participated in will be worth 1-2%, and students can earn up to 1% extra credit on their final course grade. Participation in human-subjects studies will be handled by the CISE department's Research Participant System which can be accessed at https://ufl-cise.sona-systems.com. To view and sign up for a study, log in to the system using your GatorLink username and password. Once you have successfully logged in, you will be able to see a list of studies with available timeslots. If there are no studies listed, there are currently no opportunities to participate, and you should check back later. Since the system works on a first-come basis, it is recommended you do not wait until the end of semester when the number of timeslots is limited.

If you schedule an appointment for a study, it is your responsibility to show up or cancel at least 24 hours before the appointment. Multiple unexcused absences will lock you out of the system. In addition, it is your responsibility to assign earned credits to the correct course. At the end of the semester, your instructor will be provided a history of your participation for grading purposes. For assistance with the Research Participation System, please view the Frequently Asked Questions located at https://ufl-cise.sona-systems.com/faq_view.aspx.

Participation in a study for extra credit is optional, but strongly encouraged. A replacement extra credit activity of a 500-word essay on a real-world example of very good or very bad user experience design (with justification as to why it's good or bad based on concepts from the class) will be worth 1%.

Late Assignments:
Unless otherwise specified, assignments are to be submitted to canvas before the start of class. Specifics will be included in each assignment. Always check the assignment page for due dates. You lose 25% of the maximum possible grade for each extra day. After 2 days, you won't get any credit for the assignment unless you obtain prior permission from the instructor. Electronic submission is closed 48 hours after assignments are due; students not having submitted programs receive an automatic zero on the assignment. The only exception to this rule is if students contact the instructor **in writing before the assignment due date**.

Attendance:
Attendance will not be graded, however, attendance is highly recommended.

Make-ups:
Students who contact the professor **before the due date** with appropriate requests for extension and/or makeup assignments will be given an additional amount of time to make up

late assignments equal to the time lost due to the unforeseen circumstance.

There will be no makeup for missed quizzes and students will receive a zero. If a student is unable to attend a quiz due to a **documented** illness, accommodations will be made by the instructor according to university policy.

Incompletes:
Incompletes will be granted for only the most extreme circumstances, e.g. medical or family reasons. 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.

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

Classroom Expectations:
If a student who is withheld from campus attends class, the student should be asked to leave the classroom and be reported to the Dean of Students Office.

You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated.

To be courteous to your fellow students, please:
- Refrain from side discussions in class
- Turn all cell phone ringers to silent and step outside to take calls.
- Turn off all audible notifications on laptops and phones.
- Refrain from texting during class.
- Use laptops only for taking notes or looking up relevant information (no Facebook, YouTube, Twitter, etc.).

Guest Lectures:
In this course, guest lecturers are invited to present material related to their research and how it relates to the course material. These are experts in their fields and are taking time out of their busy schedules to share their knowledge with you. Please respect their time and attend the guest lectures as you would any other meeting of the course.

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

University Policies and Resources

Students Requiring Accommodations
Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation
Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

In-Class Recording
Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a

guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

University Honesty Policy
UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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." The Conduct Code (https://sccr.dso.ufl.edu/process/student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment
The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:
• Your academic advisor or Graduate Program Coordinator
• Jennifer Nappo, Director of Human Resources, 352-392-0904, jpennacc@ufl.edu
• Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
• Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use
All faculty, staff, and students 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.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://registrar.ufl.edu/ferpa.html

Campus Resources:

<u>*Health and Wellness*</u>

You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated. Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators**.**

If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus. UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the UF Health Screen, Test & Protect website for more information.

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: https://counseling.ufl.edu, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

E-learning technical suppor*t*, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling; https://career.ufl.edu.

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/.

Writing Studio, 302 Tigert Hall*, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.

Student Complaints Campus*:* https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/;https://care.dso.ufl.edu.

On-Line Students Complaints*:* http://www.distance.ufl.edu/student-complaint-process.