

CS 795/895 – HUMAN COMPUTER INTERACTION, SPRING 2022

COURSE INFORMATION

- Instructor : Dr. Sampath Jayarathna, Web: <http://www.cs.odu.edu/~sampath/>
- Contact : Office: 3109, Email: sampath@cs.odu.edu , Phone: (757) 683-7787
- Office Hours : Wednesday (Virtual), 5.00 PM – 6.00 PM, or email me for an appointment
- Schedule : Thursday, Room: CONST 2099, Time: 5.45 PM – 8.00 PM
- Website : <http://www.cs.odu.edu/~sampath/courses/s22/cs795/>
- Piazza : <https://piazza.com/odu/spring2022/cs795/home>
- Gather : <https://gather.town/events/PA4psxJqdUUS9aU21qqf>
- Blackboard : <https://www.blackboard.odu.edu/>
- Prerequisites : There are no specific course prerequisites for this course. But, I expect you to be comfortable learning new programming languages/tools/APIs.

WHAT IS THIS COURSE ABOUT?

This course is designed to introduce graduate students in computer science, topics to principles of and research methods in human-computer interaction (HCI), an interdisciplinary area concerned with the study of the interaction between humans and interactive computing systems. Research in HCI looks at major cognitive and social phenomena surrounding human use of computers with the goal of understanding their impact and creating guidelines for the design and evaluation of software and physical products and services in industry.

In this course, we'll study Human Computer Interaction (HCI) areas; including history and importance of HCI; design theories; modeling of computer users and interfaces; empirical techniques for task analysis and interface design; styles of interaction and future interaction techniques such as brain-computer interfacing (BCI).

We will work on a semester-long team project to design, implement and evaluate a mainstream technology. This assignment helps foster an research & development spirit, which is at the heart of blending computer science, interaction design and HCI.

WHAT WILL YOU GET FROM THIS COURSE?

After successfully completing this course, students should be able to:

- Explain characteristics of good and bad interaction design and use them to evaluate human computer interactions
- Explain characteristics of users that influence human computer interaction and use them inform interface development
- Explain, analyze and develop interaction evaluations including qualitative and quantitative methods.

- Explain and develop requirements for interaction design
- Constructs interactions using evaluation-based iterative process for directing the design of user interfaces

REQUIRED/OPTIONAL MATERIALS:

- **Required textbook.** No textbook is required. All the key course content will be documented in slides, which will be available in the course website after each lecture.
- List of optional but recommended materials. You may find some of these optional textbooks helpful, though none are required:
 - Interaction Design: Beyond Human-Computer Interaction, 4th Edition, Jenny Preece, Helen Sharp, Yvonne Rogers, Wiley, 2015
 - The Design of Everyday Things, Revised and Expanded Edition, Donald Norman, Perseus, 2013.
- **Bring Your Own Device (BYOD).** You must have a computing device (Laptop, Tablet, or Phablet), we will do some activities in class and you should have a device in class to fully participate.

TENTATIVE COURSE SCHEDULE

Topics: The tentative topics are as follows. Topics and specific course activities may change as needed. PowerPoint slides will be available on the course web page after each lecture.

Week 1: (January 13) Syllabus and Introductions

Week 2: (January 20) Interaction Design

Week 3: (January 27) Establishing Requirements

Week 4: (February 03) Data Gathering and Analysis

Week 5: (February 10) Design and Prototyping

Week 6: (February 17) Cognitive Aspect of Design

Week 7: (February 24) Social and Emotional Interactions, **Quiz 1**

Week 8: (March 03) Project Workday – No Classes

Week 9: (March 10) Spring Break

Week 10: (March 17) User Interfaces

Week 11: (March 24) Usability Evaluations

Week 12: (March 31) Accessibility and Ethics

Week 13: (April 07) Future of HCI, **Quiz 2**

Week 14: (April 14) Project Workday – No Classes

Week 15: (April 23) Group Presentations/Demo

WHAT YOU CAN EXPECT FROM ME:

I have an open-door policy i.e., office visits. My posted office hours are times when I will make concerted effort to be available. Occasionally administrative meetings or emergencies may interfere with these posted times. The open-door policy is: if my door is open, I am in and welcome walk-in visitations. I am committed to supporting students with disabilities. If you have challenges related to these issues or others, I want to work with you to help you succeed. Please come and talk to me, since only you can properly communicate your situation to me.

WHAT YOU CAN GIVE TO THE CLASS:

It is extremely important for you to be engaged in the course. Otherwise, you will fall asleep and wonder what happened to your tuition dollars. So, I encourage you to ask questions during lecture and actively

participate at the piazza forum. For the first few weeks, when asking a question at the class, state your name so that I know who you are.

Cell phones and Tardiness: You may have cell phones in class, but they must be on mute, or airplane mode and not answered until the end of class. You are expected to arrive on time so that you do not cause a disruption in the middle of class. I would like to start the class at the scheduled time. If you cannot make it on time or want to leave early for some reason, please let me know. Persistent tardiness will be noted.

Please give the instructor your attention. Do not talk among yourselves during the class -- even if you think you are whispering, it is still distracting.

COMMUNICATION

Piazza: All questions will be fielded through Piazza. The primary benefit is that for many questions everyone can see the answer and other students can answer as well. I will endorse good student responses. Additionally, I expect you to actively participate in online discussions at Piazza. You can post public or private messages that can only be seen by the instructor. You will be signed up with your odu email, but you may switch to another email.

Blackboard: Blackboard will be used primarily for grade dissemination.

Email: If you send email to me, please be sure to include your name and the course number in the body of the e-mail. You should also use an appropriate subject line that looks like “CS795-HW1” etc. Failure to follow these guidelines may result in delayed response. *Again, email should only be used in rare instances*, I will probably point you back to Piazza if you have a question related to course materials and/or relevant to other students in the class.

Gather: We’ll use gather.town platform to simulate the team meetings in a virtual world for your projects. This is a temporary setup until go we back to physical classroom.

COURSE ACTIVITIES

The scores you receive on the various graded tasks in the class will be weighted as follows:

40%	Team Project: Progress Checks (10pts), Group Presentation/Demo (10pts), Final Report Submitted to IRI Conference (20pts)
20%	Quizzes (2)
30%	Homework Assignments
10%	in-class activities/participation
100%	Your Total Score for the class

Project: Details, requirements and submission information will be on the course website later. For the project, you will work in teams of 2-3 students. Your scores on group work may be adjusted based on your contribution (peer-evaluation).

Quiz: Attendance in class and participation in the discussion are both important to your success in the course. As one crude measure of your participation and course preparation, you will have around 2 scheduled quizzes spread across the semester. I will use them to gauge what topics we need to devote more time to and as an indicator that you were in class.

In Class Activities: Attendance in class and participation in the discussion are both important to your success in the course. As one crude measure of your participation and course preparation, we will have in class activities related to lecture topics to supplement the learning. I will ask you to bring a computing device (laptop, tablet).

Homework: We will have 6 homework assignments, each worth 5% of your overall grade.

GRADES

Final course grades are based on the overall average. Overall class grade (not the individual grade) windows may be increased in size if the instructor finds it appropriate. Final score in % will be rounded to the nearest whole number.

A: 94-100, A-: 90-93, B+: 87-89, B: 84-86, B-: 80-83, C+: 77-79, C: 74-76, C-: 70-73, F: 0-69

Grading correction: Bring any assignment or exam grading correction requests to the instructor within 1 week of receiving the grade, or before the end of the semester, whichever comes first. After that, your grade will not be adjusted. If you find a mistake in grading, please let the instructor know. Your grade will not be lowered.

There is no separate grading scale for PhD students, but PhD students will typically be held to a higher standard.

ATTENDANCE, MAKE-UPS AND LATE POLICIES:

All project reports, homework assignments, are due at the beginning of class in all required forms (e.g., paper and/or submit on blackboard) on the due date. Changes to a submission's due dates will be avoided because they are unfair to those students who have organized their time to complete the assigned work. Individual accommodations will be discussed if you have a valid medical excuse.

Project due dates will be set to give ample time for completion of the project and will not be extended save for the unexpected and unlikely major, long-lived catastrophe. Start projects early--last minute computer malfunctions will not be accepted as a reason for delaying a project due date.

A quiz missed without an acceptable medical excuse will be recorded as a grade of zero (0).

For Homework assignments, each late submission will incur a 5 points penalty per day. A missed submission without an acceptable excuse will be recorded as a grade of zero (0). No submission will be accepted after 5th day and will be recorded as a grade of zero (0). **There will be no makeup for homework assignments or class activities.**

ACADEMIC OFFENSES

By attending Old Dominion University you have accepted the responsibility to abide by the honor code. If you are uncertain about how the honor code applies to any course activity, you should request clarification from the instructor. The honor pledge is as follows:

"I pledge to support the Honor System of Old Dominion University. I will refrain from any form of academic dishonesty or deception, such as cheating or plagiarism. I am aware that as a member of the academic community, it is my responsibility to turn in all suspected violators of the Honor Code. I will report to a hearing if summoned."

Scholarly dishonesty, especially plagiarism, will not be tolerated. Plagiarism is defined as "Failing to credit sources used in a work product to pass off the work as one's own. Attempting to receive credit for work performed by another, including papers obtained in whole or in part from individuals or other sources." **Students found to have engaged in plagiarism will be punished severely, typically earning an automatic F in the course and being reported to the Office of Student Conduct and Academic Integrity.**

Homework Assignments Collaboration Clarification: To clarify, your homework assignment is yours alone and you are expected to complete each independently. Your solution should be written by you without the direct aid or help of anyone else. However, I believe that collaboration and teamwork are important for facilitating learning, so I encourage you to discuss problems and general problem approaches (but not actual solutions) with your classmates. If you do have a chat with another student about a problem, you must inform me by writing a note on your submission (e.g., Bob pointed me to the relevant section for problem 3). The basic rule is that no student should explicitly share a solution with another student (and thereby circumvent the basic learning process), but it is okay to share general approaches, directions, and so on. If you feel like you have an issue that needs clarification, feel free to contact me.

DISABILITY RESOURCES

In compliance with PL94-142 and more recent federal legislation affirming the rights of disabled individuals, provisions will be made for students with special needs on an individual basis. The student must have been identified as special needs by the university and an appropriate letter must be provided to the course instructor. Provision will be made based upon written guidelines from the University's <https://www.odu.edu/educationalaccessibility> . All students are expected to fulfill all course requirements.

Students are encouraged to self-disclose disabilities that have been verified by the Office of Educational Accessibility by providing Accommodation Letters to their instructors early in the semester in order to start receiving accommodations. Accommodations will not be made until the Accommodation Letters are provided to instructors each semester. For additional information visit the Office of Educational Accessibility online or at 1525 Webb Center.

OTHER POLICIES

University Email Policy: The Old Dominion University e-mail system is the official electronic mail system for distributing course-related Communications, policies, Announcements and other information. In addition, the University e-mail user ID and password are necessary for authentication and access to numerous electronic resources (online courses, faculty Web pages, etc.)

Withdrawal: A syllabus constitutes an agreement between the student and the course instructor about course requirements. Participation in this course indicates your acceptance of its teaching focus, requirements, and policies. Please review the syllabus and the course requirements as soon as possible. If you believe that the nature of this course does not meet your interests, needs or expectations, if you are not prepared for the amount of work involved - or if you anticipate that the class meetings, assignment deadlines or abiding by the course policies will constitute an unacceptable hardship for you - you should drop the class by the drop/add deadline, which is located in the ODU Schedule of Classes. For more information, please visit the Office of the Registrar.