CIS 4930: Special Topics: Internet Computing

Computer & Information Science & Engineering · University of Florida

CREDIT HOURS

3-credits hours

PREREQUISITE

Completion of COP 3503 with a passing grade or instructor permission.

COURSE DESCRIPTION

Software development and problem-solving as applied to real-world problems with solutions designed and implemented in various languages. Topics include mark-up languages (e.g., HTML), style sheets (e.g., CSS), client-side scripting (e.g., JavaScript), software libraries (e.g., jQuery), server side-scripting (e.g., PHP), relational databases (e.g., MySQL), and software diagrams (e.g., ERDs). Prior programming experience is assumed and required. Students will extend course topics via programming assignments and a culminating web application group project extending across the duration of the semester.

INSTRUCTIONAL METHOD

This is a blended learning course designed around the "flipped classroom" instructional strategy with a variety of learning activities designed to facilitate your learning and mastery of the course learning outcomes. The course is organized into modules, each with reading assignments, practice tutorials, instructional video(s), and programming assignments. All students are expected to complete the reading assignments and instructional videos prior to class. Class time is devoted to short lectures, live coding examples, discussions, group project planning, show-and-tell, and practice exercises.

INSTRUCTOR INFORMATION

Name: Albert Ritzhaupt, Ph.D.

Email: aritzhaupt@coe.ufl.edu

Website: http://www.aritzhaupt.com/

Office Phone: (352) 273-4180

Cell Phone: (904) 859-9799

Office Location: Norman Hall 2801B

CLASS MEETING TIMES AND LOCATIONS

Our class will meet on Tuesdays and Thursdays in different rooms:

- Tuesdays (Period 5) from 11:45 AM - 12:35 PM in FAC 0120
- Thursdays (Periods (5 - 6) from 11:45 AM - 1:40 PM in FAB 0103

Showcase Date and Time: Thursday, May 4, 2023, from 10:00 AM - 12:00 PM (Mandatory Attendance)

OFFICE HOURS

Please email me to schedule a time to meet in person or virtually. My regularly scheduled office hours are:

- Wednesday from 2:00 PM - 4:30 PM

Please note that my office is located in Norman Hall 2801B.

TEXTBOOK INFORMATION

There is no required textbook for this course. However, there are several online readings, practice tutorials, and instructional videos that are clearly outlined on the syllabus and in the Canvas shell. You are expected to review these resources before class.

REQUIRED SOFTWARE/HARDWARE

You will need access to a variety of software packages this semester, including integrated development environments (IDE), robust text editors, database management systems, software modeling tools, web browsers, SSH clients and SFTP clients, web servers, and various operating systems. All of these tools are available on the CISE servers, UF Apps server, or for free download. You will need to request and configure your CISE account immediately: https://it.cise.ufl.edu/support/. Follow the instructions on this page very carefully. Set up your Hello World page by following the instructions step-by-step.

The development tools include and operating system includes PHP, HTML, CSS, Bootstrap, JavaScript, jQuery, MySQL, Linux, and AJAX. You will also need a robust text editor, such as NotePad++ or jEdit, or BBEdit for Mac for the first few assignments in which you are not permitted to use an IDE. For designing software diagrams, you can use Microsoft Visio on the UF Apps server: https://login.apps.ufl.edu/. You will also be able to use a web-authoring package or integrated development environment for some of the later deliverables, like Dreamweaver or Eclipse. You can use PuTTY as your SSH client and Filezilla for SFTP. Finally, you are strongly encouraged to use GitHub for your group projects.

COURSE DELIVERABLES

There are two primary forms of deliverables in this course: programming assignments, and the group project. Each of the items has a hard deadline that will be posted in advance and will not be adjusted without extenuating circumstances. Any extenuating circumstances must be communicated in advance to the instructor.

Software Assignments

There will be seven software assignments that you are to complete during the semester. The software assignments are designed to provide you with an opportunity to apply the skills and concepts you have learned. You are welcome to share ideas, help each other debug source code, and compare results. However, the submissions should be your individual work. Do not plagiarize in this course. Your submissions must be representative of your intellectual work. Assignments are due on Sunday evenings by 11:59 PM.

Web Application Group Project

The group project will require the collaborative development of a real-world web application involving a variety of technologies in a team-oriented environment. There will be approximately five members per team. More details will be provided in the group project specifications in Canvas. Each team will select a captain to communicate with the instructor about expectations.

Class time will be devoted to group planning, coordination, and communication with the instructor.

Extra Credit

The instructor reserves the right to award up to 5-points of extra credit to individual students who have consistently provided high-quality work and provided meaningful help and support to their peers either in class or in the discussion forums. Extra credit will be awarded at the end of the semester by the instructor based on the stated criteria. In particular, students are encouraged to assist each other in the assignment discussion forums by providing examples, troubleshooting, and answers to questions in a respectful and helpful tone.

GRADING SCALE

Final course grades will be determined using scores from the following:

- 60% - Programming Assignments (7)
- 40% - Web Application Group Project (1)

Range	**Letter Grade**
93% - 100%	A
90% - 92%	A-
87% - 89%	B+
83% - 86%	B
80% - 82%	B-
77% - 79%	C+

73% - 76%	C
70% - 72%	C-
67% - 69%	D+
63% - 66%	D
60% - 62%	D-
< 60%	E

Note: A grade of an 'I' will not be awarded unless there are extenuating circumstances.

LEARNING OBJECTIVES

Upon successful completion of this course, the student will be able to:

1. Define the protocols and systems used on the Web.
2. Navigate a Linux-based operating system using common commands.
3. Explain the functions of clients and servers on the Web.
4. Connect to a web server to upload and download files.
5. Use flowcharts to illustrate problem-solving logic and entity-relationship diagrams to illustrate a database design.
6. Implement static websites using HTML and CSS.
7. Implement interactive websites using client-side scripts (JavaScript) and server-side scripts (PHP).
8. Design and implement an interactive and responsive website using software libraries and frameworks like jQuery and Bootstrap.
9. Demonstrate the ability to insert, update, delete and select data to and from a MySQL relational database.
10. Demonstrate leadership by interacting within a team-based software development environment.

COURSE POLICIES

Attendance

Students are expected to attend all of their scheduled classes and satisfy all course objectives as outlined by the instructor. The effect of absences on grades is determined by the instructor, who reserves the right to deal with individual cases of nonattendance. It is the student's responsibility to give the instructor notice prior to any anticipated absence, and within a reasonable amount of time after an unanticipated absence. Furthermore, it is the student's responsibility to catch up on all missed assignments and information covered in class.

Instructor Student Contact

This course will use Canvas as a means of communication. All questions related to the course material should be submitted to the instructor using the Canvas messaging service. Emails will also be accepted for personal matters. When emailing the instructor, you must include your full name, the course you are enrolled in, and a clear description of the matter.

Late Work

In order to receive full credit for work, students must turn in required deliverables on the specified due date. Late work will not be accepted unless you fall under special circumstances (e.g., religious holidays, military duty, etc.). You are welcome, however, to submit work early.

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must first register with the Dean of Students Office (http://www.dso.ufl.edu/). The Dean of Students Office will provide documentation to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students with academic concerns related to this course should contact the instructor in person or via email. Students also may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an

instructor and to seek confidential assistance at the UF Counseling & Wellness Center, 352-392-1575. Visit their website for more information: http://www.counseling.ufl.edu/. Also, crisis intervention is always available 24/7 from Alachua County Crisis Center: (352) 264-6789.

Academic Integrity and Academic Honor Code

As a student at the University of Florida, you have committed yourself to upholding 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 the 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.

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. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Software Use

All faculty, staff, and students of the University of Florida are required and expected to obey 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 the University policies and rules, disciplinary action will be taken as appropriate.