Senior Design CEN 4914

Class Periods: First Friday of the month - online P10 5:10pm -6:00pm
Location: Course class - https://ufl.zoom.us/j/92899576982 and To be arranged with faculty advisor
Academic Term: Spring 2024

Course Facilitator:
Sanethia Thomas, PhD sanethiat@ufl.edu
To book office hours. https://calendly.com/drsanethiathomas_meeting/meeting

Teaching Assistant:
- Shaina Murphy, Shainamurphy@ufl.edu

Course Description

This course involves completing a significant CEN-related project. In this course, you will synthesize what you have learned in your other CISE courses by developing a semester-long project to solve real-world problems and to develop research and development skills. This is an opportunity for you to put into practice the skills and techniques that you have learned during your undergraduate studies. Students will conduct design and development of a significant software system or module. This kind of experience is one familiar to Computer Science and Computer Engineering majors who have worked in industry and government after having received their baccalaureate degrees. Thus, the class will bear directly upon practical experience and job skills. The course facilitator will provide guidance on course requirements but you will work primarily with your faculty advisor throughout the course. The course facilitator will grade how well you complete the assignments according to the rubrics; the faculty advisor will grade your technical expertise and implementation.

Course Pre-Requisites
CISE senior standing and approved project proposal. (For CIS4914, proposal is instantiated as a registration form. For CEN4914 the prerequisite is CEN 3913, which includes preparation and submission of the project proposal and registration form).

Course Objectives

- Develop openness to new ideas in computer science, develop the ability to draw reasonable inferences from observations and learn to formulate and solve new computer science problems using analytical and problem-solving skills;
- Develop the ability to synthesize and integrate information and ideas, develop the ability to think creatively, develop the ability to think holistically and develop the ability to distinguish between facts and opinion;
- Develop the ability to work individually and as part of a team, develop a commitment to accurate work, develop management skills, improve speaking and writing skills, improve the ability to follow directions, instructions and plans, and improve the ability to organize and use time effectively;
- Develop a commitment to personal achievement, the ability to work skillfully, informed understanding of the role of science and technology, a lifelong love of learning, and cultivate a sense of responsibility for one's own behavior and improve self-esteem/self-confidence.

Materials and Supply Fees
There is no supply fee for this course.

Required Textbooks and Software
No textbook is required for this course.

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	High
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	High
3. An ability to communicate effectively with a range of audiences	High
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	High
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	High
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	High
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	High

Course Schedule The following is a **TENTATIVE** overview of the course schedule **(subject to change):**

Week	Dates		Class/Assignments
1	Jan 8	Jan 12	Add/ Drop Week; No class
2	Jan 15	Jan 19	Class #1: 1/19 (online P10 5:10pm -6:00pm)
3	Jan 22	Jan 26	Unit 1: Project Proposal - 1/28 (Recording)
4	Jan 29	Feb 2	
5	Feb 5	Feb 9	Class #2: 2/2 (online P10 5:10pm -6:00pm)
6	Feb 12	Feb 16	Unit 2: Presentation 1 - 2/18 (Recording)
7	Feb 19	Feb 23	
8	Feb 26	March 1	Class #3: 3/1 (online P10 5:10pm -6:00pm)
9	March 4	March 8	
10	March 11	March 15	Spring Break
11	March 18	March 22	Unit 2: Presentation 2 - 3/24 (Recording)
12	March 25	March 29	
13	April 1	April 5	Class #4: 4/5 (online P10 5:10pm -6:00pm)
14	April 8	April 12	
15	April 15	April 19	Unit 4: Project Submission and Documentation 4/21
16	April 22	April 24	Final Presentation 4/24 (Recording) **Poster or Demo Showcase 4/24 – **In person Attendance is Mandatory. Failure to attend will result in a 0 grade and Incomplete for the course.** **UF ONLINE Students are required to do a poster but are not required to attend the showcase, even if the team is mixed.**

Attendance Policy, Class Expectations, and Make-Up Policy

Assignments are due by the time listed on Canvas. Assignments and project work can be turned in late with a cascading deduction: one (1) business day from the canvas date is 10% penalty; two (2) business days from the canvas date is 30% penalty; or three (3) business days from the canvas date is 60% penalty. Assignments submitted after 11:59pm on a due date of Friday is considered late if turned in at 12:00am on Saturday and will be considered 1 day late until Monday 11:59pm. Assignments will not be accepted after 3 business days. Weekly progress reports are considered class participation and cannot be turned in late nor can be made up.

Requirements for make-up assignments, and other work in this course are consistent with university policies that can be found at Attendance Policies.

Grade reviews must be requested by email within one week of a grade being posted. After one week, grades will be revisited.

Peer Evaluations. Each team member will score their team members and themselves. They are to provide a rating and justification of the rating. A team member who has an average peer evaluation score of 70-79.9 will receive a 15% penalty for the associated assignments. A team member who has an average peer evaluation score of less than 70 will receive a penalty determined by the professor of the course considering the evaluated contribution and justification provided by their team members. Peer evaluations must be completed to receive a peer evaluation score.

For matters directed to the professor, email the professor directly.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. Click here to read the university attendance policies: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Getting Help
Technical Difficulties

For all issues with technical difficulties for Canvas, please contact the UF Help Desk at:

- http://helpdesk.ufl.edu
- (352) 392-HELP (4357)
- Walk-in: HUB 132

**Any requests for make-ups due to technical issues should be accompanied by the ticket number received from the Help Desk. The ticket number will document the time and date of the problem. You should e-mail your instructor immediately of the technical difficulty if you wish to request a make-up.

Code Submissions
Functionality is key to success in software development and computer science, so it is **extremely important** that the guidelines are followed. Failure to follow these instructions will result in penalties.

- Code must compile / run in debug and release mode. Debug information should never be released in the final version of a software project. **Projects that do not compile AND run will be graded accordingly**.
- Include only those files specified by the documents in your archive. Projects should have no directory structure except as explicitly mentioned in the documentation (i.e., relevant files and folders should be submitted in the root of the zip file.) It should be possible to open the archive, copy your files directly into the project, compile, and then run the project without further steps. **If the project has naming or organization error(s), its grade will be zero.**

Evaluation of Grades

Grade Category	Due Date	Grader	Weight
Project Proposal	1/28	Instructor	10%
Presentation 1	2/18	Instructor	15%
Presentation 2	3/24	Instructor	15%
Project Submission and Documentation	4/21	Advisor	20%
Final Presentation	4/24	Advisor	20%
Poster or Demo	4/24	Advisor	10%
Participation and activities	Ongoing	Instructor	10%

Grading Policy

Range (%)
A 94 – 100
A- 90 – 93
B+ 87 – 89
B 84 – 86
B- 80 – 83
C+ 77 – 79
C 74 – 76
C- 70 – 73
D+ 67 – 69
D 64 – 66
D- 60 – 63

More information on UF grading policy may be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

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: an average of C- is equivalent to a GPA of 1.67 and therefore does not satisfy this graduation requirement. For more information on grades and grading policies, please consult the catalog.

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 Honor 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. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

****Academic Dishonesty will be dealt with strictly.** Sharing / copying, "borrowing" of work that is not your own original work is considered academic dishonesty. code structure, discussing code structure, looking at code from another student or providing such code, and plagiarism, in addition to other dishonest behaviors, are all

considered academic dishonesty. Absolutely no information regarding assignment solutions may be shared by students except at a conceptual level. If students implement algorithms from other sources, they must cite those sources.

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:

Health and Wellness

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/.

Academic Resources

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 Connections 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*: https://distance.ufl.edu/state-authorization-status/#student-complaint*.

Tips for Success

Here are some tips that will help you get the most of this course:

- Schedule "class times" for yourself. It is important to do the coursework on time each week. You will receive a reduction in points for work that is turned in late!
- Read ALL of the material contained on this site. There is a lot of helpful information that can save you time and help you meet the objectives of the course.
- Print out the Course Schedule located in the Course Syllabus and check things off as you go.
- Take full advantage of the online discussion boards. Ask for help or clarification of the material if you need it.
- Do not wait to ask questions! Waiting to ask a question might cause you to miss a due date.
- Do your work well before the due dates. Sometimes things happen. If your computer goes down when you are trying to submit an assignment, you'll need time to troubleshoot the problem.
- To be extra safe, back up your work to an external hard drive, thumb drive, or through a cloud service.