Industrial & Systems Engineering Senior Design Project

EIN 4335 Section 1221
Class Periods: Tuesdays | Period 7-9 (1:55 – 4:55 PM)
Location: CSE E222
Academic Term: Spring 2024

Instructor:
Dr. Mengyu Li
Email: mengyu.li@ufl.edu
Office Location: 379 Weil Hall
Office Phone: 352-294-6391
Office Hours: Tuesdays 3:30 – 4:55 pm, or by appointment (virtual option available)

Teaching Assistant/Peer Mentor/Supervised Teaching Student:
N/A

Course Description
The integration of industrial and systems engineering methodologies with emphasis on methods of successful implementation on a real-world problem. A project and case-study oriented course.
Credits: 3

Course Pre-Requisites / Co-Requisites
None

Course Objectives
The purpose of this course is to give students skills in carrying out a project for a designated client, just as practicing engineers. This course brings together many of the tools presented in previous courses to solve the problems defined in the project. Students also acquire additional experience in giving presentations and technical writing. Students will:
- Solve a client-driven problem and present their answer for review
- Gain exposure to ISE as a profession
- Illustrate the use of ISE in practice
- Acquire background in professionalism, including business etiquette, ethics, and teamwork
- Integrate a variety of ISE tools and use those tools in problem-solving
- Further develop writing and presentation skills

Materials and Supply Fees
There are no required supplies, but you may have to purchase project related items such as (binders, printing, etc.) not to exceed $50 per team.

Relation to Program Outcomes (ABET):
This is supports the follow PEOs of our BSISE program:
Within five years of graduation, BSISE graduates:
- Are successful professional using industrial and systems engineering skills;
- Acquire advanced knowledge through continuing education or advanced degree programs;
- Are active leaders in their profession and/or community.

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	High

public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
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	Medium
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	Medium
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	High

*Coverage is given as high, medium, or low. An empty box indicates that this outcome is not covered or assessed in the course.

Required Textbooks and Software
- None

Recommended Materials
- None

Course Schedule*
*This is a _tentative_ outline. The instructor reserves the right to make changes as she sees necessary.

Week	Dates	Topic(s)
Week 1	1/9/2024	Introduction to Senior Design / Project Introductions / Travel Requirements
Week 2	1/16/2024	Project Assignments / Team Building / Team Charter & Agreement
Week 3	1/23/2024	Interacting with Clients
Week 4	1/30/2024	Project Work Time
Week 5	2/6/2024	Presentation/Report Writing Skills & Midterm Requirements
Week 6	2/13/2024	Presentation Workshop / The elevator pitch 1
Week 7	2/20/2024	**Midterm Presentation *Required**
Week 8	2/27/2024	Check-in with Dr. Li
Week 9	3/5/2024	**Spring Break! No class**
Week 10	3/12/2024	Working in a Global Environment
Week 11	3/19/2024	The Game of Life
Week 12	3/26/2024	Project Work Time
Week 13	4/2/2024	Project Work Time
Week 14	4/9/2024	Moving forward
Week 15	4/16/2024	Project Work Time
Week 16	4/23/2024	**Poster Session *Required**

Note: The team is responsible for scheduling the final presentation with the industry sponsor. The team should schedule this so that the instructor and the faculty advisor are available to attend, either in person or virtually.

Attendance Policy, Class Expectations, and Make-Up Policy
- Attendance is required (unless instructed otherwise) and shall be monitored. The first absence is -5 points, the second absence is -20, and the third absence is -25. **If you miss more than 3 class periods you will not pass the class.** Students unable to attend should notify the instructor of excused absences via email IN ADVANCE of the planned absence; in emergencies, the notification should occur BEFORE the next scheduled lecture.
- Requirements for 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/
- Regardless of whether an absence is excused or unexcused, students are responsible for any coursework missed as a result of the absence.
- You are expected to be present for the Midterm Presentation, Poster, and Final Presentation session. Please plan accordingly.

Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade
Class Participation/Attendance	50	5.0%
Team Charter	50	5.0%
Team Agreement	25	2.5%
Midterm Presentation	100	10.0%
Midterm Report	100	10.0%
Midterm Peer Eval (Individual)*	25	2.5%
Poster	100	10.0%
Final Presentation	100	10.0%
Final Report	200	20.0%
Final Peer Eval (Individual)*	25	2.5%
Other Deliverables (Meeting Minutes, etc.)	50	5.0%
Sponsor Eval	50	5.0%
Faculty Eval	50	5.0%
Instructor Eval	75	7.5%
TOTAL	**1000**	**100%**

*Peer evaluation grades are for completion of the assignment. The results of both peer evaluations will be considered in the final letter grade assigned for the course.

Grading Policy

Percent	Grade	Grade Points
93.0 - 100.0	A	4.00
90.0 - 92.9	A-	3.67
87.0 - 89.9	B+	3.33
83.0 – 86.9	B	3.00
80.0 – 82.9	B-	2.67
77.0 - 79.9	C+	2.33
73.0 – 76.9	C	2.00
70.0 - 72.9	C-	1.67
67.0 - 69.9	D+	1.33
63.0 - 66.9	D	1.00
60.0 - 62.9	D-	0.67
0 - 59.9	E	0.00

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

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.

Online Course Recording
Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

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:

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 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.