

EGN 1935 Introduction to Engineering Design and Programming

1. Catalog Description:
Credits: 3
First year introduction to engineering work with an emphasis on computer programming, basic electronic circuits, solid modeling and mechanical design
2. Pre-requisites and Co-requisites:
Prereq: None
3. Course Objectives:
4. This course is designed to provide the new engineering student with experiences in problem solving, engineering design, programming, and technical communication skills that will provide a foundation for success at the University of Florida. Students will follow the complete life cycle of a typical engineering design project from the inception and idea generation stage all the way to manufacture, experimentation and re-evaluation. Students will work on individual exercises and group projects in these topics where they will learn the importance of team work, project management, and planning. The skills learned throughout the semester will be applied to a final design project. Student groups will demonstrate the performance of their final projects at a final design review presentation.
5. Contribution of course to meeting the professional component:
Not applicable
6. Relationship of course to program outcomes: Skills student will develop in this course
Not applicable
7. Instructor: Philip Jackson
 - a. Office location: NSC 202E
 - b. Telephone: (352) 392 - 4521
 - c. E-mail address: philipbjackson@ufl.edu
 - d. Class Web site: <http://elearning.ufl.edu>
 - e. Office hours: MF 7th, 8th period
8. Teaching Assistants: Alex Mochrie
 - a. Office location: HA-105, Sante Fe College Campus
 - b. Telephone: none
 - c. E-mail address: alexmochrie@ufl.edu
 - d. Office hours: R 9:30a – 12:15p
9. Meeting Times: R 9:30a – 12:15p
10. Class/laboratory schedule: One 165-minute class sessions per week
11. Meeting Location: HA-105, Sante Fe College Campus
12. Material and Supply Fees: None
13. Textbooks and Software Required
 - a. Title: none
 - b. Author: none
 - c. Publication date and edition: none
 - d. ISBN number: none

14. Recommended Reading

- a. Title: none
- b. Author: none
- c. Publication date and edition: none
- d. ISBN number: none

15. Course Outline

Week of	Topics
January 4	Introduction to Engineering Introduction to Design
January 9	Mechanical Design SolidWorks, Parts and Features
January 16	SolidWorks, Assemblies SolidWorks, Animation
January 23	Manufacturing 3D Printing
January 30	Design Project Management Time Management Financial Management
February 6	Engineering Ethics Professional Development
February 13	Introduction to Mechanics
February 20	Mechanical Design
February 27	Introduction to Dynamics and Control of Robots
March 6	SPRING BREAK – No Class
March 13	Introduction to Programming
March 20	Programming Fundamentals I
March 27	Programming Fundamentals II
April 3	Basic Circuit Analysis Electronic Circuits
April 10	Microcontroller Fundamentals
April 17	Design Presentations

16. Attendance and Expectations:

Class attendance is optional. Those who have no scheduling conflicts with the recording of live lectures are encouraged to attend, but doing so is not mandatory. All homework will be submitted electronically and all quizzes will be administered through Canvas.

17. Grading:

Quizzes:	20%
Participation:	20%
Homework:	20%
Final Design Project:	40%

18. Grading Scale:

A	90 - 100	C	70 – 76.99
A-	89 – 89.99	C-	69 – 69.99
B+	87 – 88.99	D+	67 – 68.99
B	80 – 86.99	D	60 – 66.99
B-	79 – 79.99	D-	59 – 59.99
C+	77 – 78.99		

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>

19. 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>

20. 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 (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-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.

Note that failure to comply with this commitment will result in disciplinary action compliant with the UF Student Honor Code Procedures.

See <http://www.dso.ufl.edu/sccr/procedures/honorcode.php>

21. Accommodation for Students with Disabilities – Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.
22. UF Counseling Services –Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
 - UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, <http://www.counseling.ufl.edu/cwc/Default.aspx>, counseling services and mental health services.
 - Career Resource Center, Reitz Union, 392-1601, career and job search services.
 - University Police Department 392-1111
23. Software Use – All faculty, staff and student 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.
24. Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.