COP 2271   Computer Programming For Engineers - MATLAB

1. Computer programming and the use of computers to solve engineering and mathematical problems. Emphasizes applying problem solving skills; directed toward technical careers in fields employing a reasonably high degree of mathematics. The programming language used depends on the demands of the departments in the college. Several languages may be taught each semester, no more than one per section. Students required to learn a specific language must enroll in the correct section. (M)
   Credits: 2; can be repeated with change in content up to 6 credits.
2. Prereq: MAC 2312 with minimum grade of C.
3. The main objective of this course is to provide a foundation in programming for engineering problem solving using the MATLAB software package. Students will develop the skills to implement software solutions to a wide-range of engineering problems. Furthermore, students will be able to apply these skill sets to other programming languages.
4. N/A
5. N/A
6. Dr. Ira Hill
     a. NSC 204B
     b. (352) 392-4523
     c. ijh3@ufl.edu
     d. http://elearning.ufl.edu
     e. Monday 7-8th period and Thursday 7th period
7. Travis Pinnock, Coleman Hilburn, Tyler Noel, Joe Printy, David Dawson, Tanner Thorton, Kaileigh Rock, Peter Filep
     a. Weil 202
     b. Telephone - N/A
     c. Canvas class email
     d. Multiple hours during the week all listed on the class website in Canvas
8. Tuesday and Thursday 6th period
9. 2 classes per week for 50 minutes
10. NEB 201
11. N/A
12. A textbook not required, and notes are provided through Canvas. Students will need access to MATLAB either freely through UF Apps (https://apps.ufl.edu/vpn/index.html) or for purchase at the following: https://www.mathworks.com/store/link/products/student
13. Recommended Reading:
     a. MATLAB: A Practical Introduction to Programming and Problem Solving
     b. Stormy Attaway
     c. July 1, 2013 3rd edition
     d. ISBN-10: 0124058760
14. Course Outline:
     • Introduction to programming
     • Input/Output

- if statements
- while loops
- for loops
- switch statements
- Vectors and strings
- Plotting/graphing
- Matrices
- Functions
- Ciphers
- Image processing
- Search algorithms
- Structures/maps
- Advanced topics

15. Lecture attendance is always optional but encouraged! All lectures will be recorded and provided for download on our course website (Canvas, http://lss.at.ufl.edu (Links to an external site.)). Lectures will generally be posted within several hours of recording on the same day.

16. Grading distribution:
    - Assignments – 35%
    - Exam 1 – 22%
    - Exam 2 – 22%
    - Final Project – 21%

17. The final grade demarcations will not be higher than table shown below (i.e. an A will always be 90-100 despite the curve). Individual assignments or exam will be curved but instead the entire course at the end.
    - A: 90-100%
    - B+: 87-89.99%
    - B: 80-86.99%
    - C+: 77-79.99%
    - C: 70-76.99%
    - D+: 67-69.99%
    - D: 60-66.99%
    - E: 0-59.99%

    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

18. Makeups for exams, quizzes, and the final project are not normally allowed. If you cannot attend an exam or quiz, you must contact the instructor well in advance. Submitting an exam, quiz, or final project late will result in a zero. Arrangements will

be made for students on a case-by-case basis for excused reasons. Failure to contact the instructor prior to the exam, quiz, or final project will result in a zero.

You are allowed to submit homework assignments up to 24 hours late with a penalty of 20 points. This only applies to homework and not the final project or extra credit assignments. It is the student's responsibility to honor and respect the given deadlines posted on the Canvas class website.

Please read the university policies for further details:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

19. 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

20. 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.

21. 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

22. 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.

23. 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/.