Catalog
Description: This course provides the fundamental concepts of programming in the language C.

Instructor: Tami Sorgente, Instructor of Computer Science and Engineering
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Class Times and locations: M/W 9:30 am – 10:50 am GS 117 CRN 11584
M/W 2:00 pm – 3:20 pm FL 409 CRN 11595
M/W 2:00 pm – 3:20 pm JU 335 CRN 11595 (PSL)

Office Hours: M/W 8:15 am – 9:15 am
T 9:30 am – 2:00 pm
F 9:30 am – 11:30 am and 1:00pm – 2:30 pm


Objectives:
1. To learn top-down design techniques, and modular programming using functions.
2. To learn control structures such as if-then-else, switch, and loop statements.
3. To learn the definition, and use of arrays, and strings.
4. To be introduced to file processing.
5. To be introduced to structures and their use.
6. To be introduced to the basic concept of data structures, and general programming techniques for larger programs.

Prerequisites by Topics:
A working knowledge of using a computer, Microsoft Windows and DOS operating systems.

Labs:
- CODELAB - The student must sign up and pay for a product called CodeLab. It is worth 10% of your final grade and is a required a part of this course. Weekly assignments will be electronically administered through CodeLab.
- COP2220 LAB Recitation – The student must attend COP2220 L – 50 minutes/ lab section per week

Administration:
Exam 1 20%
Exam 2 20%
Final Exam 25%
CodeLab 10%
Programming Assignments 20%
Participation 5%
Course information is available under Blackboard and access is restricted to enrolled students
http://blackboard.fau.edu

Programming Assignment Submissions and policies on make-up exams and late work:
Programming assignments must be electronically submitted before the specified time on the due dates to receive full credit. Programs submitted electronically after that time will have late penalties applied as follows:

- 1 second late – 24 hours late: 10 point penalty
- 24 hours – final deadline: 10 point penalty plus 2 points per additional day.

A printed copy of the assignment (“Hard Copy”) and sample output must be submitted in class on the due date to receive full credit on the assignment.

All exams must be taken on the date and time specified, any accommodations for make up exams and/or assignments must be made with and approved by the instructor, Tami Sorgente, prior to the exam or assignment due date.

Compiler Information: Assignments will be graded using Microsoft compiler. Please test all programs on a Microsoft compiler (in the lab or on campus) prior to submission for grading on Blackboard.

Cheating:
Cheating will not be tolerated in this class. All homework assignments, CodeLab questions and all work in this course must be INDIVIDUAL effort. Please take the time to read the documentation. You are responsible for the information outlined in it. Please see the instructor, any teaching assistant, or Engineering Student Services tutoring for assistance. Check the Where to Find Help Section on Blackboard.

Topics:
1. Overview of C
2. Compilation Process: editor, compiler, linker, capturing program output
3. Selection and control structures: if and switch statements
4. Repetition and loop statements: while, do, for loops
5. Programming style conventions: indentation, comments, naming, etc. and standards for documentation
6. Libraries, compiling and linking: basic concepts and header files
8. Program testing, debugging, and error handling techniques
9. Modular Programming
10. Simple Data Types, assignment, and arithmetic and logical operators and expressions
11. Input/Output in C: printf, scanf, fopen, fprintf, fscanf, fclose
13. Strings, and basic string functions
14. Structure types and their use
15. File processing
16. General programming techniques for larger programs, and other selected topics as time allows
Accommodations for students with disabilities:
In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) located in Boca Raton - SU 133 (561-297-3880), in Davie - MOD I (954-236-1222), in Jupiter - SR 117 (561-799-8585), or at the Treasure Coast - CO 128 (772-873-3305), and follow all OSD procedures.

FAU Honor Code:
Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty, including cheating and plagiarism, is considered a serious breach of these ethical standards, because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see http://www.fau.edu/regulations/chapter4/4.001_Honor_Code.pdf.

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<tr>
<th>STUDENT LEARNING OUTCOMES</th>
<th>RELATED TOPICS</th>
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| 2. Proficiency in the areas of software design and development, data structures, and operating systems | • Overview of C  
• Compilation Process: editor, compiler, linker, capturing program output  
• Selection and control structures: if and switch statements, and loops  
• Programming style conventions  
• Libraries, compiling and linking  
• Top-down design with functions. Return by value and by reference, and pointers  
• Program testing, debugging, and error handling techniques  
• Input/Output in C  
• Arrays, strings, and structures.  
• File processing  
• General Programming Techniques for Larger Programs |
| 3. An ability to plan and execute an engineering design to meet an identified need | • General Programming Techniques for Larger Programs  
• Modular programming  
• Several programming assignments to solve programming problems |
| 5. An ability to communicate effectively and to function on multidisciplinary teams | • Programming style conventions: indentation, comments, naming, etc. and standards for documentation  
• Top-down design with functions. Return by value and by reference. Const parameters, and pointer concepts  
• General Programming Techniques for Larger Programs |