

Knight Foundation School of Computing and Information Sciences

Course Title: Secure C Programming for
Engineers

Date:

Course Number: COP 2270

Number of Credits: 3

Course Information

Catalog Description

Secure programming for engineering and science students using ANSI C. Developing algorithms and code for problems in engineering and science, using secure techniques. Not acceptable for CS majors.

Prerequisite

General computer knowledge and familiarity with the internet is expected

Textbook: C Program Design for Engineers, Second Edition by Jeri R. Hanly and Elliot B. Koffman Addison Wesley (Publisher)

ISBN: 0-201-70871-X

Subject Area Coordinator: Maria Charters

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Tentative Schedule

The following schedule is a rough estimation and is subject to change. While I will try to follow the schedule as closely as possible, changes to the schedule may occur depending on class progress and other unforeseen circumstances. Please keep in mind that this syllabus is an evolving document and may be changed to reflect the pace of the class. All the topics listed below need to be covered, so I will do my best to keep the class on track as much as possible.

Knight Foundation School of Computing and Information Sciences
COP 2270
Secure C Programming for Engineers

Week 1	08-27-2019	Syllabus, Compiling in C, Chapter 1
	08-29-2019	Chapter 1: Overview of Computers and Software
Week 2	09-03-2019	Chapter 2: Overview of C
	09-05-2019	Chapter 2: Overview of C
Week 3	09-10-2019	Chapter 2: Overview of C
	09-12-2019	Chapter 3: Data Types, Operators and Simple Functions
Week 4	09-17-2019	Chapter 3: Data Types, Operators and Simple Functions
	09-19-2019	Chapter 3: Data Types, Operators and Simple Functions
Week 5	09-24-2019	Chapter 4: Selection Structures: If and Switch Statements
	09-26-2019	Chapter 4: Selection Structures: If and Switch Statements
Week 6	10-01-2019	Chapter 4: Selection Structures: If and Switch Statements
	10-03-2019	Chapter 5: Repetition and Loop Statements
Week 7	10-08-2019	Chapter 5: Off-by-one-errors
	10-10-2019	Review for Mid Term
Week 8	10-15-2019	Mid Term – Part 1 (Up to Chapter 5)
	10-17-2019	Mid Term – Part 2 (Up to Chapter 5)
Week 9	10-22-2019	Chapter 6: Modular Programming
	10-24-2019	Chapter 6: Modular Programming
Week 10	10-29-2019	Chapter 6: Modular Programming
	10-31-2019	Chapter 7: Arrays
Week 11	11-05-2019	Chapter 7: Arrays
	11-07-2019	Chapter 7: Arrays
Week 12	11-12-2019	Chapter 8: Multidimensional Arrays
	11-14-2019	Chapter 8: Multidimensional Arrays
Week 13	11-19-2019	Chapter 8: Multidimensional Arrays
	11-21-2019	Chapter 10: Text and Binary File Processing
Week 14	11-26-2019	Chapter 10: Buffer overflow prevention
	11-28-2019	Thanksgiving Holiday
Week 15	12-03-2019	Final Exam – Part 1 (Cumulative)
	12-05-2019	Final Exam – Part 2 (Cumulative)

Knight Foundation School of Computing and Information Sciences
COP 2270
Secure C Programming for Engineers

Course Grading

Grading Scale:

A	B	C	D	F
90 – 100	80 – 89	70 – 79	60 – 69	0 – 59

Evaluation Criteria:

Assignment	Weight
Participation	10%
Homework Assignments	15%
Programming Projects	40%
Midterm Exam	15%
Final Exam	20%

Assignment Policies:

- *You must write your own programs.* Each individual student must complete all assignments on their own unless groups are *explicitly* assigned. If any incidence of plagiarism or cheating is suspected, it will be reported via the proper FIU procedures.
- Homework assignments will most likely be taken from the textbook and may not be full programs. You will be required to turn in all homework assignments as a text document or PDF file submitted to Canvas unless otherwise indicated in class.
- There will be four programming projects for you to write throughout the semester. You will ***only need to submit the source code for your projects***. Any projects that do not compile will receive a grade of 0%. Projects that do not meet all assignment criteria will receive grades less than 100%. Please include the following header in all of your projects:

/******

Name: Last Name, First Name
Panther ID: XXXXXXXX
Project #: XX
Program Description: *A brief description of the assignment*
Due Date: MM/DD/YYYY

I understand that this programming assignment cannot be joint work with another student in the class or the work of someone who has previously taken this class. I hereby certify that I worked on this assignment by myself, I did not share any part of my code with my classmates, and I did not copy any part of the code from anyone else or the Internet.

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Academic Integrity

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COP 2270
Secure C Programming for Engineers

FIU Core Values: ***Responsibility, Truth, Freedom, Respect & Excellence***

- *All students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the core values.*
- *All students should understand that if they are found responsible for academic misconduct, they will be subject to the FIU Academic Misconduct Policies & Procedures. The FIU Academic Integrity home page (<https://integrity.fiu.edu>) provides a flow chart that illustrates the informal and formal resolution process. The Informal Resolution Form is available for completion online.*

*The instructor abides and endorses the University's policy on academic integrity. Any form of academic misconduct is considered a **serious** offense. Should you have academic or personal problems that are getting in the way of your academic success, please contact your instructor.*

FIU's Policy for academic misconduct includes these definitions for these intentional acts or omissions:

Cheating: The unauthorized use of books, notes, aids, electronic sources; or unauthorized use of online exams, library materials or assistance from another person with respect to examinations, course assignments, field service reports, class recitations; or the unauthorized possession of examination papers (or online examination) or course materials, whether originally authorized or not. Any student helping another cheat may be found guilty of misconduct.

Plagiarism: The deliberate use or appropriation of another's work without any indication of the source and the representation of such work as the student's own. Any student who fails to give credit for ideas, expressions, or materials taken from another source, including internet sources, is guilty of plagiarism. Any student helping another to plagiarize may be found guilty of academic misconduct.

Misrepresentation: Intentionally lying to a member of the faculty, staff, administration, or an outside agency to gain academic advantage for oneself or another, or to misrepresent or in other ways interfere with the investigation of a charge of academic misconduct.

Misuse of Computer Services: The unauthorized use of any computer, computer resource or computer project number, or the alteration or destruction of computerized information or files or unauthorized appropriation of another's program(s).

Bribery: The offering of money or any item or service to a member of the faculty, staff, administration or any other person in order to commit academic misconduct.

Knight Foundation School of Computing and Information Sciences
COP 2270
Secure C Programming for Engineers

Conspiracy and Collusion: The planning or acting with one or more fellow students, any member of the faculty, staff, or administration, or any other person to commit any form of academic misconduct together.

Falsification of Records: The tampering with, or altering in any way any academic record used or maintained by the University.

Academic Dishonesty: In general, by any act or omission not specifically mentioned above and which is outside the customary scope of preparing and completing academic assignments and/or contrary to the above stated policies concerning academic integrity.

Considerations

Please review these final considerations of general behavior that you should keep in mind throughout the semester:

- As this is a college course, you must take ownership of your learning experience. This means that I will not call your attention if I see you engaged on your smart phone, tablet, or computer unless it is a disruption to the rest of the class
- DO NOT pose a disruption to your fellow classmates!
- I will do my best to announce reminders of the upcoming assignment due dates, but it is your responsibility to complete them by the due date whether or not I give you a reminder. All due dates will be clear online once the assignments are available on Canvas
- If you need to step out during class time, please do so quietly. You do not need to raise your hand or ask permission
- If you feel like you are falling behind on the material, please let me know immediately. The University has tutoring resources that I can refer you to
- As of the beginning of this term, I will not be offering extra credit for this class. If something changes throughout the term, I will make an announcement in class
- While I try to be lenient on late assignments, you will need to have my approval before missing an assignment in order to receive credit for any late work. For example, you cannot email me after Assignment X has already been collected asking for an extension.

Assessment Plan for the Course & how Data in the Course are used to assess Program Outcomes

Student and Instructor Course Outcome Surveys are administered at the conclusion of each offering, and are evaluated as described in the School's Assessment Plan:

<https://abet.cs.fiu.edu/csassessment/>