DO NOT TYPE IN THIS BOX

Bulletin #: _____

Academic Year: _____

FLORIDA INTERNATIONAL UNIVERSITY
UNIVERSITY CURRICULUM COMMITTEE
Proposal for a Course Change

PART I. FILL OUT THIS SECTION COMPLETELY

1. **School/College** Engineering and Computing

   Div./Dept. in Which Taught School of Computing and Information Sciences

2. | COP | 2 | 270 | | 3 |
   |---|---|---|---|---|
   | **Alpha Prefix** | **1st Digit** | **Last 3 Digits** | **"C"-lec-lab "L"-Lab** | **Cr. Hrs.** |

3. **Present Course Title** C For Engineers

PART II. FILL OUT CHANGE INFORMATION ONLY

Change Effective 8 / 24 / 20 19

4a. **New Course Title** Secure C Programming For Engineers

b. **New Abbreviated course Title** *(for computer class schedules, transcripts)* Sec C Prog for Engineers

LIMITED TO 25 Characters *(including spaces)*

5a.

_____	____	_____	_____
New Alpha Prefix	**New 1st Digit**	**New Last 3 Digits**	**Change "C"-lec-lab "L"-Lab**

5b. Change Credit Hours: From _____ **To** _____

6. **New Catalog Description/Major Topics** *(not to exceed 200 characters including spaces)*

   College of Medicine and College of Law: Attach description not exceeding 1,000 characters including spaces.

   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.

7. **New Prerequisite(s):** _____

8. **New Corequisite(s):** _____

9. **Explain Reclassification Request:**

   Since SCIS is adding a new BS-in-Cybersecurity program, the proposed revised course becomes a required course. Also, the security features of this course will be beneficial to engineers.

10. **Does this proposed change impact the assessment process of a program or certificate? If yes, then send notification to assessment@fiu.edu.**

PROPOSAL REQUESTED BY:

Faculty Contact Nagarajan Prabakar _____ / _____ / 20 19

(Type name) **(Signature)**

prabakar@cis.fiu.edu 305-348-2033

(Email address) **(Phone number)**

Chairperson (Dept./Div.) S.S. Iyengar _____ / _____ / 20 19

(Type name) **(Signature)**

Chairperson (Curr. Comm.) Wei-Chiang Lin _____ / _____ / 20 19

(Type name) **(Signature)**

College/School Dean John Volakis _____ / _____ / 20 19

(Type name) **(Signature)**

Submit one original form. Attach one copy of the Course Justification and Course Syllabus: Course Description, Objectives, Learning Outcomes, Major Topics and textbooks.

COP-2270 Secure C Programming for Engineers

Course Change Justification

SCIS is adding a new BS-in-Cybersecurity program that requires C programming knowledge. For this reason, the revised COP-2270 course with security features will be a required course for this program.

Additionally, the security features of this course will be benefit engineers in incorporating security features in software that they develop.

COP 2270 Secure C Programming for Engineers

Instructor: **Email:**
Class time:
Class location:

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

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.

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)

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: XXXXXXX
     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

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.

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.