Department of Computer and Electrical Engineering
and Computer Science
Florida Atlantic University
Course Syllabus

1. Course title/number, number of credit hours	
Foundations of Computer Science/COP3014	# of credit hours 3
2. Course prerequisites, corequisites, and where the course fits in the program of study	
COP2220	
3. Course logistics	
Term: Fall 2018 This is a classroom lecture course *Class location and time* AL 189 W,F 11:00AM-12:20PM This course has limited design content.	
4. Instructor contact information	
Instructor's name *Office address* *Office Hours* *Contact telephone number* *Email address*	Lofton Bullard EE429 Wednesday & Friday: 8:30AM-10:30PM; Thursday: 9-11AM 561-297-3985 lbullard@fau.edu
5. TA contact information	
TA's name *Office address* *Office Hours* *Contact telephone number* *Email address*	None
6. Course description	
This course is an introduction to the field of computer science. Its central goal is to aid students in discovering if they want to major in computer science. The course exposes students to various sub-disciplines of computer science through the creation and manipulation of computer programs pertinent to those sub-disciplines. While programming is only a part of computer science, it is a requisite part, a tool at the heart of most computer science research and learning. Accordingly, this course centers on programming, including its many aspects: design, coding, debugging, analysis, documentation and testing.	
7. Course objectives/student learning outcomes/program outcomes	
Course objectives	The course will provide a good understanding of the C++ programming language. The student will learn good programming principles and proper use of the C++ language. The material learned in this course is fundamental for the computer science and computer engineering programs. The programming assignments will provide valuable experience with programming in C++, designing classes, implementation, testing and debugging.

Student learning outcomes & relationship to ABET outcomes 1-7	6. An ability to apply engineering/computer science theory and hardware/software development fundamentals to develop and conduct appropriate experimentation, analyze and interpret data, and use computing/engineering judgment produce engineering/computing-based solutions/conclusions. (Experimentation and/or simulation)

8. Course evaluation method

Computer Projects - 20 % Midterm - 40 % Final Examination - 40 %	*Note*: The minimum grade required to pass the course is C.

9. Course grading scale

Grading Scale:
90 and above: "A", 87-89: "A-", 83-86: "B+", 80-82: "B", 77-79 : "B-", 73-76: "C+", 70-72: "C", 67-69: "C-", 63-66: "D+", 60-62: "D", 51-59: "D-", 50 and below: "F."

10. Policy on makeup tests, late work, and incompletes

No makeup tests will be given, except with documentation from a Doctor. Late assignments will only be accepted and graded, if excused by me. Blackboard will allow you to submit an assignment after the due date and time. However, Blackboard will mark a late assignment late. Incomplete grades will only be given if the student is passing the class and has proper documentation for the reason of the incomplete.

11. Special course requirements

None
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12. Classroom etiquette policy

University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones and laptops, are to be disabled in class sessions.

13. Attendance policy statement

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled

class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

14. Disability policy statement

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/

15. Code of Academic Integrity Policy Statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty 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 University Regulation 4.001.

16. Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to http://www.fau.edu/counseling/

17. Required texts/reading

Walter Savitch, Problem Solving with C++, 9th Edition, Pearson, 2015

18. Supplementary/recommended readings

None

19. Course topical outline

a) Simple C++ Statements
b) Relational and logical operators
c) Boolean expressions (if, if-else, switch, break,--,++, for, while, while-do
d) Top-down Design
e) Functions: predefined, user-defined
f) Type casting
g) Black box analogy and procedural abstraction
h) Local and global variable
i) Scope and block scope namespace
j) Call-by-value
k) Call-by-reference
l) function name overloading
m) void functions
n) pre/post conditions, stubs,and drivers
o) Steams and basic file i/o
p) Character i/o
q) Arrays
r) Strings and Vectors
s) Pointers and Dynamic Arrays
t) Classes and Structures
u) Friends, Overloaded Operators, and Arrays in Classes
v) Separate Compilation and Namespaces
w) Pointers and Link Lists
x) Recursion
y) Templates and Standard Template Library
z) Inheritance