

EEL 3834 Programming for Electrical and Computer Engineers

1. Catalog Description (3 credits)

Develops computer skills and the art of writing good computer programs using examples and exercises relevant to electrical and computer engineering.

2. Pre-requisites and Co-requisites (Be specific – 5000 level courses should list topics, for example Phys 2049 or equivalent)

None

3. Course Objectives

To implement and debug solutions to programming problems using C++; to use problem solving techniques to understand, formulate, and/or apply basic algorithms involving control flow constructs, functions, classes, and data structures

4. Contribution of course to meeting the professional component (ABET only – undergraduate courses)

3 credits of Engineering Design

5. Relationship of course to program outcomes: Skills student will develop in this course (ABET only undergraduate courses)

EE2, a, d, e, k

6. Instructor - Prof. Daniela Oliveira

a. Office location: MAE 208

b. Telephone: 352-392-6618

c. E-mail address: daniela@ece.ufl.edu

d. Class Web site: Canvas

e. Office hours: Tuesdays (2:30-4pm) and Thursdays (noon-1:30pm)

Teaching Assistant – Sebastian Betancur

- a. E-mail address: sbm725@ufl.edu
- b. Office hours: TBD
- c. Office location: TBD

7. Meeting Times and Location

Room: LAR 0330

Tuesdays | Period 2 - 3 (8:30 AM - 10:25 AM)

Thursdays | Period 3 (9:35 AM - 10:25 AM)

8. Class/laboratory schedule, i.e., number of sessions each week and duration of each session

2 class periods each week consisting of 100 and 50 minutes each, respectively

9. Material and Supply Fees

None

10. Textbooks and Software Required

- a. Title: Absolute C++
- b. Author: Walter Savitch
- c. Publication date and edition: 2015, 6th edition
- d. ISBN number: 978-0133970784

11. Recommended Reading

- a. Title: Professional C++
- b. Author: Marc Gregoire
- c. Publication date and edition: 2014, 3rd edition
- d. ISBN number: 978-1118858059

12. Course Outline (provide topics covered by week or by class period)

Tentative: see table below.

13. Attendance and Expectations

Cell phones and other electronic are to be silenced. No text messaging during class or exams.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

14. Grading

Exam 1 (15%), Exam 2 (15%), Exam 3 (20%), Programming assignments (40%), Preparation/Participation (10%)

15. Grading Scale

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	0-59

“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>.

This statement must be included in every grade scale for 5000 level graduate syllabi:

“Undergraduate students, in order to graduate, 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. Graduate students, in order to graduate, must have an overall GPA of 3.0 or better (B or better).” Note: a B- average is equivalent to a GPA of 2.67, 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>.

This statement must be included in every grade scale for 6000 level graduate syllabi:

“In order to graduate, graduate students must have an overall GPA and an upper-division GPA of 3.0 or better (B or better).” Note: a B- average is equivalent to a GPA of 2.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: <http://gradcatalog.ufl.edu/content.php?catoid=12&navoid=2750#grades>.

16. Make-Up Exam Policy

If you have a University-approved excuse and arrange for it in advance, or in case of documented emergency, a make-up exam will be allowed and arrangements can be made for making up missed work. University attendance policies can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Otherwise, make-up exams will be considered only in extraordinary and documented cases, and must be taken before the scheduled exam. The student must submit a written petition to the instructor two weeks prior to the scheduled exam and the instructor must approve the petition.

17. 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.

18. Accommodation for Students with Disabilities

Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide documentation to the student who must then provide this documentation to the course instructor when requesting accommodation.

19. 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, psychological and psychiatric services, 3190 Radio Rd, 392-1575, online: <http://www.counseling.ufl.edu/cwc/Default.aspx>,
- Career Resource Center, Reitz Union, career and job search services, 392-1601.
- University Police Department, 392-1111 or 911 for emergencies

20. 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.

21. Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online 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>.

Tentative Scheduling

Week	Topic	Assignment	Reminders
1 (08/19)	Introduction and C++ basics	Compiling and Running C++ Program PA0 (no grade)	
2 (08/26)	Flow of Control	PA1 (C++ Basics and flow control)	
3 (09/02)	Function basics	PA2 (Functions)	
4 (09/09)	Parameters and Overloading		
5 (09/16)	Arrays	PA3 (Arrays)	
6 (09/23)	Structures and Classes		Exam1 (Thursday, September 26)
7 (09/30)	Constructors	PA4 (Structures and Classes)	
8 (10/07)	Operator overloading, friends, and references	PA5 (Constructors, overloading, friends, references)	
9 (10/14)	Strings	-	
10 (10/21)	Pointers and dynamic arrays	-	Exam 2 (Tuesday October 22)

11 (10/28)	Streams and File I/O	PA6 (Strings and pointers)	
12 (11/04)	Recursion	PA7 (File I/O)	
13 (11/11)	Inheritance	PA8 (Recursion)	
14 (11/18)	Polymorphism and virtual functions	PA9 (Inheritance)	
15 (11/25)	Exception handling		No class on the 28 (Thanksgiving)
16 (12/02)	-	-	Exam 3 (Tuesday December 3)