

# **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. Kwansun Cho**

a. Office location: NEB 538

b. Telephone: 352-448-1243

c. E-mail address: ckstone@ufl.edu

d. Class Web site: Canvas

e. Office hours: Mondays and Wednesdays from 2:00pm to 3:30pm

## **7. Teaching Assistant – Kyle Ditzig**

- a. E-mail address: kyle.ditzig@ufl.edu
- b. Office hours: Tuesdays from 9:35am to 10:25am, Thursdays from 12:50pm to 1:40pm, and Fridays from 10:40am to 11:30am
- c. Office location: NEB 222

## **Teaching Assistant – Dean Sullivan**

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

## **8. Meeting Times and Location**

LAR 310 MWF 12:50pm-1:40pm

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

3 class periods each week consisting of 50 minutes each

## **10. Material and Supply Fees**

None

## **11. 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

## 12. Recommended Reading

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

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

Tentative: see table below.

## 14. Attendance and Expectations

Cell phones and other electronic devices 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>.

## 15. Grading

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

## 16. 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>.

## **17. 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 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.

## **18. 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.

## **19. 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.

## **20. 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

## **21. 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.

## **22. 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 (1/7)	Introduction	Compiling and Running C++ Program PA0 (no grade)	
2 (1/14)	C++ Basics	PA1 (C++ Basics)	
3 (1/21)	Flow of Control		No class on Jan. 21 (Martin Luther King, Jr. Day)
4 (1/28)	Flow of Control Function Basics	PA2 (Flow of Control)	
5 (2/4)	Function Basics Review and Exam 1	PA3 (Function Basics)	<b>Exam1 (Feb. 8)</b>
6 (2/11)	Parameters and Overloading	PA4 (Parameters and Overloading)	
7 (2/18)	Arrays	PA5 (Arrays)	
8 (2/25)	Structures and Classes	PA6 (Arrays)	
9 (3/4)			No classes (Spring Break)
10 (3/11)	Review and Exam 2 Constructors and Other Tools	PA7 (Structures and Classes)	<b>Exam 2 (Mar. 13)</b>
11 (3/18)	Constructors and Other Tools		

	Operator Overloading, Friends and References		
12 (3/25)	Operator Overloading, Friends and References Strings	PA8 (Operator Overloading, Friends and References)	
13 (4/1)	Strings Pointers and Dynamic Arrays		
14 (4/8)	Pointers and Dynamic Arrays	PA9 (Pointers and Dynamic Arrays)	
15 (4/15)	Three Building Blocks of OOP (Encapsulation, Inheritance, Polymorphism)		
16 (4/22)	Review and Exam 3		<b>Exam 3 (Apr. 24)</b>