ECE 114/L: C for Engineers

Fall 2015

Lecture: Mondays, 12:00pm - 2:50pm, Room 9-205, Section 04
Lab: Wednesdays, 12:00pm - 2:50pm, Room 9-205, Section 04

Webpage: [www.cpp.edu/~jlcannons/ece_114_2015_fall.html](www.cpp.edu/~jlcannons/ece_114_2015_fall.html)

Professor: Jillian Cannons

Email: jlcannons@cpp.edu

Office: 9-324A

Tentative Office Hours: Mondays and Wednesdays 3:15pm-4:00pm

Course Description: Computer programming for ECE. Problem-oriented computer language applications to electrical networks.

Lab Description: This laboratory helps students to learn how to apply the ECE 114 course materials with hands-on computer programming exercises and engineering application. Students practice algorithm development, programming style, and debugging techniques in the computer laboratory.

Textbook: *C++ How to Program Late Objects Version (7th Edition)* by Deitel and Deitel

Prerequisite: MAT 114 Co-requisite: ECE 114L

Reading Assignments: Weekly reading from the textbook will be assigned. Basic comprehension will be evaluated through a quiz at the start of each lecture.

Quizzes: There will be 9 in-class quizzes, one at the start of each lecture in weeks 2 through 10. Your lowest quiz score will be dropped.

Lab Assignments: There will be 9 programming assignments, each given at the start of the lab session. They are to be individually completed and demonstrated during the lab. Source code will also be submitted for evaluation via email by the end of each lab session. Your lowest score will be dropped.

Projects: There will be a project involving an in-depth programming problem and a written report. The project is to be individually completed during the quarter and demonstrated during the final lab session.

Test: There will be one in-class test.

Exam: The final exam will be cumulative.

Late Policy: Late assignments or projects will not be accepted.

Grade Scheme: You will receive the same grade for both the lecture and the lab. Your grade will be based on a score computed using the following weighting:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Lab Assignments</td>
<td>40%</td>
</tr>
<tr>
<td>Project</td>
<td>10%</td>
</tr>
<tr>
<td>Test</td>
<td>20%</td>
</tr>
<tr>
<td>Final</td>
<td>20%</td>
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</tbody>
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Academic Honesty:

- Students are encouraged to discuss course concepts to improve understanding; however, lab assignments and projects should be individual, original work and not taken from a fellow student or from the Internet.
- Cheating on an assignment, project, quiz, or test will result in a score of zero on that assignment, project, quiz, or test.
- Cheating on the final exam will result in an “F” for the course.

Lab Policies:

- Food and drinks are not permitted.
- Internet (except course notes) and email (except for code submission) are not permitted.
- Lab demonstrations will consist of answering questions about / explaining your source code and then running it to show your output.

Calculators: Calculators are not permitted.

Test and Exam Schedule: The dates below are generally fixed; however, exceptions might be made for valid reasons. Please talk to me early to discuss options if you know of a conflict.

Test November 2, 2015 (Week 6)
Final Monday, December 7, 2015 11:30am - 1:30pm

Tentative Lecture Schedule: The following is subject to change:

Week 1 Ch. 2 Introduction to C++ programming  
(main, input / output, variables, math, increment / decrement operators)
Week 2 Ch. 3 Control statements  
(if, else, switch, logical operators)
Week 3 Ch. 3, 4 Loops  
(while, for, continue, break, nesting)
Week 4 Ch. 5 Functions  
(definition, parameters, scope, overloading)
Week 5 Ch. 5 Functions  
(standard library, header files, recursion)
Week 6 Ch. 5 Test, Random numbers, Bit operations  
(seeding, operators, shifting)
Week 7 Ch. 6 Arrays  
(declaration, passing to functions, 1D, multidimensional)
Week 8 Ch. 6 Searching, Sorting  
(linear search, insertion sort)
Week 9 Ch. 7 Pointers  
(declaration, pointer operators, pointer arithmetic, arrays of pointers)
Week 10 Ch. 7, 8 Strings, Files  
(string declaration, creating files, reading from / writing to files)