

CSE 20133 - Introduction to Computing for EE Majors

CSE 20232 - C/C++ Programming

Fall 2018

Instructor:	Corey Pennycuff	Class Meeting:	MWF 9:25 - 10:15
Email:	cpennycu@nd.edu		123 Nieuwland Science Hall
Office Hours:	Tu, We, & Th, 10:30AM-12PM	TA Office Hours:	TBA
	382 Fitzpatrick, or by appointment		

Course Description

This course teaches the fundamentals of programming in the C and C++ programming languages. Homework assignments will focus on practical, programming-based problems. The course lectures give the information necessary for students to be able to understand the requisite programming theory as well as the interaction of code with the underlying hardware. As with any any skill, practice is required to develop competence and skill in computer programming. As such, this course will provide assignments and challenges for the purpose of exercising and strengthening programming ability.

Organization

This course is taught through in-class lectures as well as through online supplementary materials that may be provided from time to time. This class will also utilize online forums when necessary, to provide for inter-student communication, peer help, and other announcements.

Course Objectives

1. To introduce students to the command line environment for interaction with remote computers, as well as basic competencies of the CLI.
2. To teach students the C and C++ programming languages, covering basic and intermediate topics.
3. To provide students with exercises and assignments that will help to solidify their knowledge and grow their skill in programming.
4. To help students develop the confidence and skills to tackle non-trivial programming problems.

General Course Topics

1. Command Line Skills
2. C/C++ Introduction
3. Variables and Variable Types

4. Control Flow Structures
5. Functions and Recursion
6. C-strings and Arrays
7. Structs and Objects
8. Pointers
9. STL structures
10. Iterators, Ranged-For Syntax, and other C11, C14, and C17 features
11. Advanced project organization and 3rd-party library integration

Text and Required Supplies/Resources

- Recommended (not required): **C++: The Complete Reference, 4th Edition** by Herbert Schildt. ISBN-10: 0072226803. ISBN-13: 978-0072226805.
- Online resources such as <http://www.cplusplus.net> should be referenced as needed.
- Resources will be updated at <https://nd.edu/~cpennycu>.
- Command Line introduction videos at <https://goo.gl/NQcLwt>

Grading Plan

- Grade composition:

Homework	—	55%
Midterm Test	—	15%
Final Test	—	15%
End-of-term Project	—	15%
- Extra Credit may be assigned from time to time at the discretion of the Instructor.

Classroom Rules of Conduct

1. Use of electronics are permitted during lectures, providing that their use is related to the lecture subject and that it is not distracting to other students.
2. Homework is due at the beginning of class on the stated due date, unless otherwise indicated.
3. No late homework will be accepted. No excuses are accepted.
4. All work that a student submits must be his or her own, original solution to the problem or assignment. Any exceptions to this rule will be explicitly stated.
5. All work must conform to the CSE specific application of the Honor Code (<https://cse.nd.edu/undergraduates/honor-code>).
6. Any and all plagiarism, cheating, unauthorized answer-sharing, or any other form of academic dishonesty will be strictly dealt with in accordance with the Notre Dame Academic Code of Honor (<http://honorcode.nd.edu/>).