

CS 173 Intermediate Computer Science  
Fall 2014

**Course Objectives:** In this course, we will build upon the fundamental programming and problem solving skills you acquired in your introductory CS course. We will talk more formally about software development, using a new (to you) programming language called C++. A unifying theme in this course is the Abstract Data Type, a formal specification of a logical object containing both data and operations on this data. We will focus on how ADT's can provide important abstraction necessary in the construction of large software systems.

**Textbook:** C++ **Early Objects** 8<sup>th</sup> edition by Tony Gaddis, Judy Walters, Godfrey Muganda

The textbook has an accompanying webpage with material that will be used often.

Additional materials, including a document to help you make a transition from Python to C++, appear on my webpage. For those who would like more material about Python and C++, an option is the book by Reed and Zelle, titled Data Structures and Algorithms Using Python and C++.

**Instructor:** Joan Krone

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Labs, tests, and homework will be announced during class meetings.

**Grading**

midterms	25%
final	25%
labs	25%
homework	10%
class contributions	5%
quizzes	10%

**Attendance:** Students are expected to attend class regularly. In the event that a student must miss a class, the student is responsible for finding out what assignments were made, what due dates were announced, and what material was covered. Students are encouraged to read the assigned material and view any online materials before the class meetings and be ready to ask questions about the material covered.

**Exams and Assignments:** Students are required to take exams and to turn in assignments on the dates and at the times those events are scheduled. There will be homework every day. You will not need to turn in the homework most of the time. However, pop quizzes will be given based on the homework, so you will have an opportunity to get credit for your homework through the pop quizzes. All midterm exams will be announced in advance. There will be no make-up quizzes or exams. If a student misses a quiz, a grade of 0 will be recorded. The lowest quiz score will be dropped.

## Tentative Schedule

<b>Week</b>	<b>Readings</b>	<b>Topics</b>
Aug. 28	Chapter 1	problem solving in CS purpose of programming languages using linux and the gnu C++ compiler
Sept. 1	Ch. 2 - 4	I/O, math, conditionals, strings
8	Ch. 4 - 5	conditionals, repetition
15	Chapter 6	functions and parameters
22	Chapter 7	classes and objects
29	Chapter 8	arrays
Oct. 6	Chapter 9	searching, sorting, analysis
13	Chapter 10	addresses and pointers
20	Chapter 11	classes and objects
27	Ch. 17	linked structures
Nov. 3	Chapter 18	stacks and queues
10	Abstractions and Implementations of ADT's using Software Engineering Principles	
17	ADT's	
Dec. 1	Hierarchical construction of software	
8	Project Work	

Note: Some of the textbook material is there for reference, and not all of it will be covered in class. It is important that you keep up day to day and not put off reading or doing homework or labs. Most assignments will leave plenty of time to complete the work, but it is assumed that you will start on the work the day it is assigned in order to finish the assignment on time.

Specific homework and lab assignments will be made in class and due dates announced.

**Disability statement**

Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately as soon as possible to discuss his/her specific needs. I rely on the Office of Academic Support & Enrichment center in 104 Doane to verify the need for reasonable accommodations based on documentation on file in their office.

**Academic integrity**

The students and faculty of Denison University and the Department of Communication are committed to academic integrity and will not tolerate any violation of this principle. Academic honesty, the cornerstone of teaching and learning, lays the foundation for lifelong integrity.

Academic dishonesty is, in most cases, intellectual theft. It includes, but is not limited to, providing or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for evaluation. This standard applies to all work ranging from daily homework assignments to major exams. Students must clearly cite any sources consulted – not only quoted phrases but also for ideas and information that are not common knowledge. Neither ignorance nor carelessness is an acceptable defense in cases of plagiarism. It is the student's responsibility to follow the appropriate format for citations.

As is indicated in Denison's Student handbook, available through [mydenison.edu](http://mydenison.edu), instructors must refer every act of academic dishonesty to the Associate Provost, and violations may result in failure in the course, suspension, or expulsion. (For further information, see <http://www.denison.edu/student-affairs/handbook/article7.html>.)