

# CS 1428: Foundations of Computer Science I

## Fall 2014

Sections 003 & 004

**Instructor:** Dr. Jill Seaman  
Comal 307G  
js236@txstate.edu

**Course Webpage:** <http://www.cs.txstate.edu/~js236/cs1428>

**Office Hours:** M, W: 10:00am – 10:30am  
M, W: 3:30pm – 4:30pm  
R: 1:30pm – 3:30pm  
and by appt.

**Meeting Time/Place:** Section 003: MW 11:00AM-12:20PM DERR 113  
Section 004: MW 2:00PM-3:20PM ASBN 150

**Text:** Tony Gaddis, Starting out with C++: From Control Structures through Objects, 8th Edition, ISBN: 0133769399

**List of recommended/required readings:**  
Chapters 1-7, 11.1-11.8  
See course website for a weekly schedule.

**Course Description:** Introductory course for computer science majors, minors and others desiring a technical introduction to computer science. The course emphasizes problem solving, algorithm development, structured programming, good coding style, and programming in C++.

**Prerequisites:** MATH 1315

### Course Objectives:

At the end of the course, the students should be able to:

1. Describe the properties of good algorithms.
2. Design and develop good algorithms using a top-down approach.
3. Use the C++ programming language to implement, test, and debug algorithms for solving simple problems.
4. Explain the concepts of data types, variables, and literals and use them in programs.
5. Write C++ code that solves computational problems.
6. Use an if or if-else construct to implement branching in an algorithm.
7. Use a for loop for definite iteration.
8. Use a while or do-while loop for indefinite iteration.

9. Use functions and parameters to simplify longer programs and reuse code from previous solutions.
10. Demonstrate the mechanics of parameter passing with emphasis on the difference between pass by value and pass by reference.
11. Manipulate data in arrays.
12. Create a new data type by using a structure.
13. Analyze and explain the behavior of simple programs involving the fundamental programming constructs covered in this class.
14. Modify and expand short programs that use the constructs covered in this class.
15. Describe strategies that are useful in debugging.
16. Use a Windows- or Mac-based editor and compiler environment to develop programs in C++.

<b>Grading:</b>	Attendance:	Required	
	Quizzes:	5%	8-10, lowest dropped
	Programming Assignments:	20%	7, lowest dropped
	Lab:	15%	one of sections L09—L16
	Exam I:	15%	Oct 1 (W)
	Exam II:	15%	Nov 12 (W)
	Final Exam (comprehensive):	30%	
	section 003:	Wed Dec 10	8:00 - 10:30am
	section 004:	Wed Dec 10	2:00 - 4:30pm

**Attendance:** I will record attendance every day and I expect you to be in class every day. However, it is not part of the calculation of your final grade.

**Quizzes:** Quizzes are announced during the previous class and will count for 5 points each.

**Makeup Policy:** Missed quizzes and programming assignments cannot be made up. Exams may be made up in exceptional circumstances, with documentation and/or approval from the instructor.

**Late policy for programming assignments:** see the PA submission policy on the class webpage.

**Notifications from the instructor:** Notifications related to this class will be sent to your Texas State e-mail account. Be sure to check it regularly.

**TRACS:** We will use the TRACS website for the following:

- Grades (Gradebook2 tool)
  - Programming assignment submissions (Assignments tool)
- Everything else will be on the class webpage (including lecture presentations)

**Campus Labs:** Use **MCS 590** to work on your programming assignments. You may also use your own computer, but you should install CodeBlocks (or some other C++ IDE) first. The lab instructors and tutors can help you with the installation.

**HELP:** In addition to the instructor's office hours, there are other places to obtain assistance. Lab tutors and instructors are available in MCS 590/594 and your lab instructors will hold office hours in their respective offices.

**Withdrawals/drops:** You must follow the withdrawal and drop policy set up by the University and the College of Science. You are responsible for making sure that the drop process is complete.  
<http://www.registrar.txstate.edu/registration/drop-a-class.html>

**Last day to drop: October 23, 2014.**

**Classroom Behavior:** The main rule is to not disrupt or distract other students during class. For example, do not browse the web, watch videos, or type loudly on a laptop computer. Please silence your phones and other devices. Do not carry on a conversation with your neighbor during class (unless you are instructed to do so). No smoking or vaping in the classroom. Please do not arrive late or leave early (without notifying the instructor).

**Academic Honesty:** You are expected to adhere to both the University's Academic Honor Code as described here: <http://www.txstate.edu/effective/upps/upps-07-10-01.html>, as well as the Computer Science Department Honor Code, described here: [2013 0426 HonestyPolicy CSPPS.doc](http://www.txstate.edu/cs/2013_0426_HonestyPolicy_CSPPS.doc).

- **All assignments are to be done individually!** You may discuss general strategies for attacking assignment problems with other students in the class but **you must write your own code**.
- Do not include code obtained from the internet in your programming assignment (except what is provided by the instructor).
- **Do not email your program to anyone (except the instructor)!**

The penalty for submitting a program that has been derived from a common ancestor of another students' program or from the internet or any other source will be a 0 for that assignment. Violators will be reported to the Texas State Honor Code Council (<http://www.txstate.edu/honorcodecouncil/>).

Your submitted programs may be run through an internet service designed for detecting plagiarism in software code.

**Accommodations for students with disability:**

Any student with a special needs requiring special accommodations should inform me during the first two weeks of classes. The student should also contact the office of disability services at the LBJ student center.