

# CS 5301: Advanced Programming Practicum Fall 2017

**Instructor:** Dr. Jill Seaman  
Comal 210D  
js236@txstate.edu

**Course Webpage:** <http://www.cs.txstate.edu/~js236/cs5301>

**Office Hours:** M, W: 11:00am – 12:30pm  
T, R: 2:30pm – 3:30pm  
and by appt.

**Meeting Time/Place:**  
M 2:00PM-3:20PM DERR 235  
W 2:00PM-3:20PM MCS 590 (lab)

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

**Course Description:** Intensive review of programming through data structures.  
Includes syntax, semantics, problem solving, algorithm development, and  
in-class exercises.

## **Course Objectives:**

1. Students will be able to write syntactically correct code in C++.
2. Students will be able to recognize and use common programming idioms.
3. Students will be able to develop algorithmic solutions to word problems.
4. Students will be able to transform high-level algorithms into code using appropriate data structures.

## **Graduate Student Programming Exam policy:**

- Students must earn a grade of B or higher in CS 5301 to satisfy the programming requirement.
- Any student who earns a grade of C or lower the first time they enroll in CS 5301 must repeat the class in the very next long semester.
- Students can take the CS 5301 course only twice.
- Failing to register for CS 5301, or dropping the class without departmental permission, will be counted as a failing attempt at completing the programming requirement.
- Please see: [https://cs.txstate.edu/academics/graduate\\_program/comps/prog\\_exam/](https://cs.txstate.edu/academics/graduate_program/comps/prog_exam/) for more details.

**Notifications from the instructor:** Notifications related to this class will be sent to your Texas State e-mail account. Each week you will receive an email outlining the material we will cover in the next class.

**Grading:** Lab Exercises: 25%  
 Quizzes: 25%  
 Final Exam: 50% Wed, Dec 13, 2:00PM to 4:30PM

**Attendance:** is extremely important!

**Lab Exercises:** These will be done during class time each Wednesday in the lab and must be implemented and submitted within the allowed time.

**Quizzes:** There is a quiz at the beginning of class each Monday on the previous week's material.

**Makeup Policy:** Missed quizzes and programming assignments cannot be re-done at another time. If you miss class for a valid, approved reason (illness, travel, etc) that day's score will be excused. If you do not miss any labs, I drop the lowest one. If you do not miss any quizzes, I drop the lowest one.

**All assignments are to be done individually.** Collaboration penalty: you will receive 0 points for code that is too similar to another student's. Please see the Lab Policy on the class website for further details.

### 5301 Topics

### Fall 2017 Schedule

Week	Topic	Monday		Wednesday
1	Operators, Data Types & I/O	8/28/2017	No class: weather	Class Introduction
2	Branching & Looping	9/4/2017	No class Labor Day	Week 1 lab
3	Functions & Arrays	9/11/2017	Week 1 quiz	Week 2 lab
4	Pointers & Structures	9/18/2017	Week 2 quiz	Week 3 lab
5	Classes & Objects	9/25/2017	Week 3 quiz	Week 4 lab
6	Operator Overloading, Lists & Templates	10/2/2017	Week 4 quiz	Week 5 lab
7	Inheritance & Polymorphism	10/9/2017	Week 5 quiz	Week 6 lab
8	Linked Lists	10/16/2017	Week 6 quiz	Week 8 lab
9	Stacks & Queues	10/23/2017	Week 8 quiz	Week 9 lab
10	Recursion	10/30/2017	Week 9 quiz	Week 10 lab
11	Searching & Sorting	11/6/2017	Week 10 quiz	Week 11 lab
12	Trees & Heaps	11/13/2017	Week 11 quiz	Week 12 lab
13	Sets & Hash Tables	11/20/2017	-----	No class Thanksgiving
14	Review	11/27/2017	Week 12 quiz	Week 13 lab
		12/4/2017	Week 13 quiz	Week 14 lab + quiz
		12/13/2017		<b>Final Exam</b>