CS 5301: Advanced Programming Practicum
Spring 2017

Instructor: Dr. Jill Seaman
Comal 307G
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Course Webpage: http://www.cs.txstate.edu/~js236/cs5301

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

Meeting Time/Place:
T 11:00AM-12:20PM DERR 234
R 11:00AM-12:20PM MCS 590

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/ 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%	Thurs, May 4, 11:00AM to 1:30PM

Attendance: is extremely important!

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

Quizzes: There is a quiz at the beginning of class each Tuesday 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.

Academic Honesty: You are expected to adhere to the University's Academic Honor Code as described here.

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.

Week	Topic	Gaddis Chapters
1	Operators, Data Types & I/O	1 + 2 + 3
2	Branching & Looping	4 + 5
3	Functions & Arrays	6 + 7
4	Pointers & Structures	9 + 11
5	Classes & Objects	13 + 14
6	Operator Overloading, Lists & Templates	14 + 16
7	Inheritance & Polymorphism	15
8	Linked Lists	17
9	Stacks & Queues	18
10	Recursion	19
11	Searching & Sorting	8 + 19
12	Trees & Heaps	20
13	Sets & Hash Tables	N/A
14	Review	5-7,9,11,13,14,17,19