CS 5301: Advanced Programming Practicum
Spring 2018

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

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

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

Meeting Time/Place:
　　　　　　T 11:00AM-12:20PM HINES 202
　　　　　　R 11:00AM-12:20PM MCS 590 (lab)

Text:　　　　Starting out with C++: From Control Structures through Objects, **Tony Gaddis**, 9th Edition, ISBN: 0134544846 (8th edition is allowed)

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 3, 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.

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

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

Spring 2018 Schedule

	Tuesday	Thursday
1/16/2018	Class Introduction	Week 1 lab
1/23/2018	Week 1 quiz	Week 2 lab
1/30/2018	Week 2 quiz	Week 3 lab
2/6/2018	Week 3 quiz	Week 4 lab
2/13/2018	Week 4 quiz	Week 5 lab
2/20/2018	Week 5 quiz	Week 6 lab
2/27/2018	Week 6 quiz	Week 7 lab
3/6/2018	Week 7 quiz	Week 8 lab
3/13/2018	No class Spring Brk	No class Spring Brk
3/20/2018	Week 8 quiz	Week 9 lab
3/27/2018	Week 9 quiz	Week 10 lab
4/3/2018	Week 10 quiz	Week 11 lab
4/10/2018	Week 11 quiz	Week 12 lab
4/17/2018	Week 12 quiz	Week 13 lab
4/24/2018	Week 13 quiz	Week 14 lab + quiz
5/3/2018		**Final Exam**