CS 5301: Advanced Programming Practicum
Spring 2014

Instructor: Dr. Jill Seaman
Nueces 221
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Course Webpage: http://www.cs.txstate.edu/~js236/cs5301

Office Hours:
M:	12:00pm – 1:00pm
T:	2:30pm – 3:30pm
W:	11:00am – 12:00pm
R:	2:30pm – 4:30pm

and by appt.

See course website for Lab Assistant office hours.

Meeting Time/Place: R 6:30PM-9:20PM DERR 241 and DERR 231

Text: Starting out with C++: From Control Structures through Objects, **Tony Gaddis**, 7th Edition, ISBN: 0132576252

Also: Data Structures and Other Objects using C++, by **Main and Savitch** 4th Ed. ISBN: 0132129485

Data Structures and Problem Solving Using C++, **Weiss**, 2nd Ed. ISBN 0-201-61250-X

Prerequisites:
- C or higher in CS 3358: Data Structures
- OR consent of the instructor

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 a 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.

Comprehensive Exam policy: You have two attempts to pass this class with a grade of B or higher. Dropping this class will count as one attempt.

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 1, 8:00PM to 10:30PM

Attendance: is extremely important!

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

Quizzes: There is a quiz at the end of each class on that week's material

Academic Honesty: You are expected to adhere to both the University's Academic Honor Code as described here, as well as the Computer Science Department Honor Code, described here: 2013 0426 HonestyPolicy CSPPS.doc.

> **All assignments are to be done individually.** There is no collaboration allowed during class. 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 or otherwise provide an electronic copy of your program to another student.

Week	Topic	Gaddis	Weiss	Main & Savitch
1	Operators and Data Types, I/O	1 + 2 + 3		
2	Control Constructs & Functions	4 + 5 + 6		
3	Functions & Arrays, & Structures	7 + 11	1	
4	Pointers, References, Dynamic Mem Alloc	9	1	4
5	Classes & Objects	13 + 14	2	2
6	Operator Overloading & Templates	14 + 16	2 + 3	2 + 6
7	Polymorphism & Virtual Methods	15	4	14
8	Linked Lists	17	17	5
9	Stacks & Queues	18	16	7 + 8
10	Recursion	19	8	9
11	Searching & Sorting	8 + 19	9	12 + 13
12	Trees	20	18 + 19	10
13	Sets & Search Tables		20	3 + 12
14	Graphs		15	15