Instructor: Dr. Steve Bannerman  
E-mail Address: sbannerman@angelo.edu  
Office Phone: +1.804.277.9579  
Office: CS Department...likely won't be there much  
Office Hours: Not many...can potentially Skype in the evening, by appointment  
Class Times: MWF 1300-1350  
Classroom: MCS 111A

Textbook  
Gaddis, T. (2018). *starting out with C++: From Control Structures through Objects (9th Edition)*, Pearson,  
Book Only: ISBN 9780134498379

Description  
Problem solving and program development techniques emphasizing modular design. Includes advanced programming topics such as class design, structures, strings, pointers and bit manipulation in C++ using a Unix environment.

Prerequisites  
CS 1336 (Computer Science I) is a prerequisite for this course. Please see me if you haven't taken it or if you're unsure about your proficiency in C++ programming.

Grading Breakdown  
Your course grade will be based on the following:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>40%</td>
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<tr>
<td>Exams</td>
<td>60%</td>
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Student Learning Outcomes  
- become familiar with the internal storage of integral data.  
- learn how to create, compile, link, and run a program in a Unix operating environment.  
- learn how to create multi-file source programs.  
- be introduced to bit manipulation, including left and right shift operators and bitwise operators (not, and, or, exclusive or).  
- be introduced to pointers.  
- learn about character data, including its representation and available functions for testing and manipulating characters.  
- be introduced to the string data type and various functions for manipulating strings.  
- be introduced to structured data.  
- be introduced to object oriented programming using the class concept.
Class format
This class will meet in a computer lab.

Unlike in some sections of CS 1336, we will be using the GNU C++ compiler in a Unix environment. In most lab sessions, I will present new material, answer questions, assign new lab assignments and help everyone get started on them. I plan to make as much class time available as possible to work on the lab assignments, but you will still likely need to spend significant time outside of class on most of the assignments.

Discussion and giving and receiving help are generally encouraged when working on assignments, but all work you turn in must be your own; anything you turn in you must be prepared to explain in detail. You must list everyone you helped and/or got help from on each assignment. Failure to do so is considered taking credit for work not done and thus cheating.

There will likely be four exams: three midterms and one final; in-class exams must be completed independently. Attendance is important and expected. You are responsible for the content of each class meeting. You have a duty to inform me as soon as you know that you'll have to miss a class. Blackboard (http://blackboard.angelo.edu/) will be used to keep track of grades and assignments.

Semester schedule
This schedule should be considered approximate and tentative.

Week/topic
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January 14th/number systems
January 23rd/number systems
January 28th/internal numerical representation
February 4th/internal numerical representation
February 11th/bitwise operations
February 18th/bitwise operations
February 25th/pointers
March 4th/pointers
March 11th/spring break
March 18th/characters and strings
March 25th/characters and strings
April 1st/structures
April 8th/structures
April 15th/classes
April 22nd/classes
April 29th/classes

Final Exam
The final exam for this course is scheduled for Wednesday, May 8th, 1300–1500.

Academic Honesty
Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. By remaining enrolled in this course you agree to adhere to the Academic Honor Code, which is contained in both print and web versions of the Student Handbook.

Accommodations
Persons with disabilities which may warrant academic accommodations must contact Student Services in order to request and to implement academic accommodations. For ASU’s policy on absences due to religious holy days, please see OP 10.19 at http://www.angelo.edu/opmanual/.