Comp 150Q - 1M: Computer Programming I
Spring 2006
Course Syllabus

Instructor  Brian J.  Shelburne
Office    329 E BDK Science Center
Class Meetings  Lecture: MWF 10:20 - 11:20 Rm 144 BDK Science Center
Lab: Th 9:00 - 11:10 Rm 144 Science
Office Hours  anytime outside my regularly scheduled classes and meetings

Texts :  Problem Solving with C++ - The Object of Programming5 th Ed.; Walter Savitch
Computer Science Illuminated – 2nd Ed.; Nell Dale and John Lewis

Course Objectives:

Although the title of this course is "Computer Programming I", this course is not exclusively a programming course. While C++ programming makes up a large part of the material that will be covered, the course also provides an introduction to many topics and areas of interest in computer science. These topics are broken down into 14 areas:

1 - History
2 – Binary Values and Number Systems
3 - Data Representation - Integer, Floating Point and Character Representations
4 - Boolean Logic, Gates and Digital Circuits
5 - Computer Components and Organization
6 - Low Level Programming Languages– Machine Code and Assemblers
7 - High Level Programming Languages – Compilers and Interpreters
8 – Other Programming Languages; Programming Language Paradigms
9 - Operating Systems, File Systems and Directories
10 - Models of Computation - Finite State Machines & Turing Machines
11 - Computational Complexity
11- Networks and the World Wide Web
12 - Societal and Ethical Issues
13 - Software Engineering

The Savitch text will be used to cover the C++ language in detail. The Dale and Lewis text will be used to cover most of the breadth issues listed above. Other materials will be found in course web-pages. Be warned that there is a lot of reading for this course.

Grading : This course will be graded on 1000 points as follows

Three in-class tests each 100 points  300 pts
Graded Programming Assignments*  400 pts
Lab Grade  100 pts
Comprehensive Final Exam  200 pts
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1000 pts

The course letter grade will be determined by the standard >= 90% of 1000 points is an A, >= 80% of 1000 points is a B, >= 70% of 1000 points is a C, >= 60% of 1000 points is a D, and < 60% of 1000 points is an F.

Programming (and Written) Assignments - Academic Honesty Policy:

There will be approximately 10 - 12 graded programming assignments, the number of points for each assignment depending on the degree of difficulty. Work on graded programming assignments must be your own; no collaboration is allowed. This means that you may not consult with other students or with outside sources on the design, coding, and/or testing of a program assignment. It also means that if asked you are not allowed to assist anyone with the design, coding and/or testing of
their assignment; providing such assistance is also considered a violation of academic integrity. Therefore, do not show other students your code or notes and properly dispose of any program listings or notes from your assignments.

Cases of academic dishonesty will result in a grade of 0 for all parties involved and will be reported to the Honor Council. A second allegation of a violation of academic integrity will automatically result in an Honor Board hearing.

However, you may freely ask questions about the syntax of the C++ language or about what an assignment calls for (not how it's done) as long as the questions are sufficiently general and do not deal with the specifics of an assignment. Proper judgment is called for but I expect all parties to make responsible decisions.

If you have any questions about my expectations for academic integrity for this course, ask me. A good rule of thumb is, if you have any doubts about something, don’t do it. Seek clarification first.

All graded programming assignments must include the following signed pledge as part of the code

I affirm that my work upholds the highest standards of honesty and academic integrity at Wittenberg and that I have neither given nor received unauthorized assistance.

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All assignments must be handed in by 5:00 on the day they are due. A 10% per day penalty will be assessed against the grade for each day late (week-end count as one day). Assignments handed in more than three days late will not be accepted.

Class and Lab Attendance:

This is definitely a "hands-on" course meaning that for many classes we will be working directly with the computers in the lab. Lab attendance is mandatory; each missed lab will subtract 10 points from the 100 points that constitutes the Lab Grade. Only one excused absence due to illness or other emergencies will be granted if you contact me before the lab (voice mail or e-mail notification is acceptable); otherwise there are no exceptions.

Important: Collaboration is allowed and indeed is encouraged for in-class labs. To emphasize this, lab assignments will not carry the pledge given above.