Comp 150Q - 1M: Computer Programming I
Fall 2008
Course Syllabus

Instructor: Brian J. Shelburne
Office: 329 E BDK Science Center
Class Meetings: Lecture: MWF 12:40 - 1:40 Rm. 144 BDK Science Center
Lab: Th. 9:00 – 11:10 Rm. 144 Science
Office Hours: MWF 2:00 – 5:00 or anytime outside my regularly scheduled classes and meetings

Texts: Python Programming: An Introduction to Computer Science; John Zelle

Course Objectives:

Although the title of this course is "Computer Programming I", this course is not exclusively a programming course. While Python programming makes up the bulk of the material covered, the course also provides an introduction to many topics and areas of interest in computer science. These topics are broken down into seven areas:

1. A History of Computers
2. Representing Numbers on the Computer: Binary Numbers; Fixed Point Floating Point and ASCII Character Representations
3. Boolean Logic, Gates and Digital Circuits
5. Programming Languages Machine Code, Assemblers, High Level Programming Languages, Compilers vs Interpreters, Language Paradigms
6. Operating Systems, Files and Directories
7. Complexity

The Zelle text will be used to cover the Python language in detail. Most of the breadth issues listed above will be covered by handouts and/or course web-pages.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Three in-class tests each 100 points</td>
<td>300</td>
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<tr>
<td>Graded Programming Assignments</td>
<td>450</td>
</tr>
<tr>
<td>Lab Grade</td>
<td>50</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
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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.

Labs and Assignments:

Lab attendance on Thursday is de facto mandatory since labs will be used to introduce weekly programming assignments which in most cases will be due on Wednesday of the following week. If you miss a lab, you will in all likelihood have great difficulty with the assignment. Moreover each lab missed will result in 5 points subtracted from your lab grade. Exceptions will be made only in the case of illness, family emergency, or required attendance at a university-sanctioned event (athletic or academic) provided I’m contacted ahead of time.

Academic Integrity

Academic dishonesty of any kind on programming or written assignments or on an exam is not acceptable. This includes, but is not limited to, copying code in whole or part (even if the code is subsequently altered), plagiarism, and/or unauthorized collaboration with another individual on assignments or tests. The University Honor Code will be followed.
All programming and written assignments must carry the following pledge which must be signed by the student.

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.

Work on graded programming assignments must be your own. Although you may freely ask questions about the syntax of the Python language or about what an assignment calls for, you should not ask for help on the specifics of how it’s done. Note that distinction between what to do vs. how to do it. Proper judgment is called for but I trust all parties to make responsible decisions.

For assignments, each student (or pair, if applicable) must turn in their own copy of the assignment, and should fully understand the assignment being turned in. If two students (or pairs) turn in substantially the same program/answers for an assignment in which similarities would ordinarily not be expected, this will be taken as possible evidence of inappropriate collaboration.

All legitimate help obtained from another student must be documented as part of the header comment block (see below).

It is your responsibility to ask about the propriety of any specific situations for which you are not sure. A good rule of thumb is, if you have any doubts about something, don’t do it. Seek clarification first. Ask before you begin doing anything that may be inappropriate.

As an added safeguard be sure to properly dispose of all program listings and notes from an assignment.

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. See your Student Handbook for additional details regarding academic dishonesty.

Header Comment Block:

All programming assignments must begin with the following header comment block which lists your name, the date, the file name of the program, a short description of what the program does, a list of people (if any) legitimate help was obtained from and the signed pledge.

```
# Name:
# Date:
# File:
# Desc:
# I Received Help From:
# 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.
# _____________________________________________________________
```

All assignments must be handed in at the beginning of class 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.

Important: Since collaboration is allowed and indeed is encouraged for in-class labs, the header comment block for labs need not list whom help was received from and should not carry the pledge.

Attendance Bonus: If no more than three lectures or labs (excused or unexcused) are missed, a 20 point bonus will be awarded at the end of the course.
**Final Note:** Any student with a documented disability who needs to arrange reasonable accommodations must contact me ASAP. Early notification is highly preferable. You may speak to me after class, in my office, call me or send me e-mail. You will also need to contact Melinda Finkle, Academic Coordinator, at mfinkle@wittenberg.edu, 327-7924, Room 203 Recitation Hall who handles disability accommodations to obtain a self-identification letter.

**Comp 150 Syllabus**  
*Fall 2008*

<table>
<thead>
<tr>
<th>Week</th>
<th>Calendar Dates</th>
<th>Sections Covered – Topics</th>
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| 01   | Mon Aug 25 – Fri Aug 29 | Ch 1 – An Intro to Python  
Computer Organization  
Lab: Hello World Program, Chaos |
| 02   | Mon Sept 1 – Fri Sept 5 | Ch 2 – IPO programs; Loops; Simple IF statements  
Lab: |
| 03   | Mon Sept 8 – Fri Sept 12 | Ch 3 – Computing with Numbers: ints, long ints, float types  
Representing Numbers on the Computer  
Lab: Numerical Programming and control Statements |
| 04   | Mon Sept 15 – Fri Sept 19 | Ch 4 – Computing with Strings, Lists and sequences  
Lab: Programming with Strings |
| 05   | Mon Sept 22 – Fri Sept 26 | Ch 4 – File Processing  
Operating Systems, Files and Directories  
Ch 5 – Graphics  
Lab: File Processing & Simple Graphics  
Test #1 |
| 06   | Mon Sept 29 – Fri Oct 3 | Ch 5 – Interactive Graphics, Event Driven Programming  
Lab: Interactive Graphics |
| 07   | Mon Oct 6 – Fri Oct 10 | Ch 6 – Functions and Parameters  
Lab: Program Modularization |
| 08   | Wed Oct 15 – Fri Oct 17 | Ch 7 – Decision Structures, Exception Handling  
Boolean Logic, Gates and Digital Circuits  
Lab: Finding the Day of the Year |
| 09   | Mon Oct 20 – Fri Oct 24 | Ch 8 – Loops; Robust Programming  
Lab: Common Patterns for Loops  
Test #2 |
| 10   | Mon Oct 27 – Fri Oct 31 | Ch 9 – Simulation & Design  
Lab: Designing a Game |
| 11   | Mon Nov 3 – Fri Nov 7 | Ch 10 – Defining Classes  
Lab: Craps and Cannon Balls |
| 12   | Mon Nov 10 – Fri Nov 14 | Ch 11 – Data Collections: Lists, Arrays, and Dictionaries  
Lab: Implementing a Set and Other Useful Data Structures |
| 13   | Mon Nov 17 – Fri Nov 21 | Ch 12 – OO Design  
Programming Languages  
Lab: Blackjack  
Test #3 |
| 14   | Mon Nov 24 | Ch 12 - continued  
History of Computers |
| 15   | Mon Dec 1 – Fri Dec 5 | Ch 13 – Searches, Sorts, & Recursion  
Lab: Game of Life  
Test #3 |
| 16   | Mon Dec 8 – Fri Dec 12 | Ch 13 – continued  
Complexity  
Lab: The Mandelbrot Set |
| 17   | Th Dec 18: | 8 – 11 AM - Final Exam |