CMPT-120: Introduction to Computer Science
and
Programming I (Fall 2012)

Course Details

Semester
- Fall 2012
- Location: HC1325
- Time: Saturdays 9:30am - 12:20pm
- Laboratories: Saturdays 12:30pm - 1:20pm in HC7050

Instructor
- Dr. Bill Havens
- Office: HC 2134
- Email: havens at sfu.ca
- Office hours: Saturdays 1:30-2:30 pm

Teaching Assistant
- Kamyar Khodamoradi
- Email: kka50@sfu.ca

Syllabus

This course introduces Computing Science and computer programming to students without prior experience in programming. The course involves extensive instruction in the Python programming language which is both powerful and easy to learn. Topics include a general introduction to Computing Science; algorithms and pseudo-code; procedural programming; datatypes and control structures; fundamental algorithms; basics of computability and complexity; overview of computer architecture; and object-oriented programming.

Lectures

Saturdays for 3-hours with one 20 minute cafe break. The lectures will be informal and based on the CMPT-120 Study Guide and textbook (see below) and other materials. We will be using the Python 2.7 interpreter in class.

Laboratories

There will be 10 labs starting in week 2 in room HC7050. Each lab is supervised by the TA and requires about 1 hour to complete. Working in groups in labs is encouraged. Remember to show your work to the TA before leaving the laboratory. Grading for laboratories is Pass/Fail.

Assignments

There will be 5 programming assignments during the term. See the class calendar for due dates. They will get progressively more interesting and difficult. The laboratories will be used to reinforce the skills needed to complete the programming assignments.

Exams

• Theree will be two midterm exams in the regular classroom for 50 minutes at the beginning of class. See the class calendar for dates. The exams will be closed book and notes.

• The final exam will be 2 hours long, also closed book on Sunday, December 11. Location to be announced later.

Course Web Page

• http://www.cs.sfu.ca/CourseCentral/120/havens/

• Note that ALL assignments, labs, handouts (other than this one), email archive *et cetera* for this course will be located on this web page. Course information will NOT be provided in hard copy.

Textbooks

• *CMPT120 - Study Guide (2010edition*) by Greg Baker, 2010 (download at http://www.cs.sfu.ca/CC/120/ggbaker/guide/)

• *How to Think Like a Computer Scientist: Learning with Python* by Allen Downey Jeffrey Elkner & Chris Meyers, Green Tea Press (download at http://www.cs.sfu.ca/CC/120/ggbaker/ref/thinkpy/)

Programming Assignments

All assignments will be done in the Python programming language using the IDLE development environment. NOTE: we will learn the Python language in this course. Python is available in the CSIL Programming Laboratory and for free download at http://www.python.org/download/releases/2.7/

All assignments must be done using Python solely. Fortunately, it is a very good programming language sutiable for both teaching and software development with good tutorial documentation. Please see the web link "Expectations for Assignments" for more details on your programming assignments.

Grading

• The course will be graded on a weighted combination of examinations and homework assigments as follows:
  ‣ 20% - Programming Assignments (5)
  ‣ 10% - Laboratories
  ‣ 30% - Midterm Examinations (2)
  ‣ 40% - Final Examination

• Students must attain an overall passing grade on the weighted average of exams in the course in order to obtain a clear pass (C or better).

- Assignments are due at 4pm on the specified date using the CMPT Submission Server (see Assignment and Examination Schedule link).
- Late assignments will be accepted for a maximum of 3 school days incurring a penalty of 10% per day. No excuses are required nor entertained by the instructor. After this grace period, assignments will not be accepted.

Honour Code

I take very seriously my job of teaching at SFU. It is an honour to stand in front of you and tell you what I know. Understanding programming and developing proficiency in expressing your thoughts algorithmically is a great art. I enjoy conveying to you my sense of this art. You can be as proud of your computationally fluency and skill as any good poet or fine artist or musician. I wish you the best in developing your skills.

However, there is another side to this relationship. It is professional responsibility. We have a tacit contract between yourself as student and myself as a representative of the university. It is called the honour code. I expect that you will learn as much as you can in the course in the best way you can. This will include listening to lecture, asking questions and, significantly, working together with your classmates in understanding the course material and studying for the examinations. I encourage you to work together in groups to tutor each other.

However, when you complete your programming assignments and written examinations, you must work completely alone. There is a subtle distinction here which is often misunderstood by undergraduate students. Please understand that there is a rigid boundary between discussing the material of the class and the demonstration of your proficiency in the material as demonstrated by homework and examination. You cross this boundary when you begin to code your assignments and when you enter the examination hall. The boundary is absolute. If you consult with your colleagues about the actual code to your programming assignments then you have violated the honour code. If you obtain assistance in a written examination then you have violated the honour code. The penalty for violation of the honour code is failure in the course.

On the other hand, the course material is not too difficult. In fact it is very interesting to learn. If you commit yourself to attending lectures, performing the laboratories and rehearsing the material after class (perhaps with classmates) and doing the assignments (by yourself), then you will have no trouble passing the course.

Please keep up. Do not wait until the night before an assignment or exam to study. It is best to spend 15 to 30 minutes everyday on the material than the whole night before a due date. Talk to me or a TA if you are having problems. Please enjoy the course.