CMPSCI 120
Fall 2018
Problem Solving with the Internet

Professor William T. Verts

Class Lectures:
Monday, Wednesday, Friday, 11:15AM–12:05PM, ILC S331. I will miss Monday December 10 due to an all-day faculty retreat; I will likely have a TA hold a quiz or other in-class exercise that day.

Office Hours and Email:
LGRC A357, M/W/F 2:45-3:45 & by appointment. I must miss hours on Monday, December 10.
verts@cs.umass.edu   Personal, for asking questions.   Put CMPSCI 120 in the subject line.
literacy@cs.umass.edu   For submitting labs and homework. Put CMPSCI 120 in the subject line.
TA office hours in LGRT 222 yet to be arranged. TA office is shared by all TAs and graders for all my courses.

Book:
Computer Science Companion, REVISED 3RD Edition, 2017 Printing, ISBN 9781524943998, ~$28, by me. (It is OK if you have the unrevised 3RD edition from 2016, but the revised version has new information, errors have been corrected, and it is now in color.) Other than handouts, we will get all other reference materials from the Web itself. There are many reference books on HTML, CSS, JavaScript, and Python available at local book stores; I'll provide references when appropriate, but purchase is not mandatory. The *Computer Science Companion* is a required text for COMPSCI 105, 119, 120, and 145.

Web Sites:
http://people.cs.umass.edu/~verts
http://people.cs.umass.edu/~verts/cmpsci120/cmpsci120.html
http://people.cs.umass.edu/~verts/cmpsci120/quizzes/quizzes.html
http://people.cs.umass.edu/~verts/cmpsci120/GenEdStatement.html

Twitter and other Social Media:
Please do not "friend" me on Facebook, Linked-In, or other social networks. I reserve Facebook for relatives, hiking buddies, and friends from high school, and I largely ignore Linked-In. I do not often post messages on Twitter.

Course Scoring (percentages may change according to number and type of assignment):

Midterm #1	15%	early October, in-class. Open notes.
Midterm #2	15%	early-mid November, in-class. Open notes.
Final Exam	20%	Wednesday, December 19, Hasbrouck 20, 10:30am-12:30pm. Open notes.
Projects	40%	Throughout semester: Late penalties will apply as appropriate.
Homeworks/Quizzes	10%	Occasional; some on-line, some on paper.

Letter grades will be assigned according to final computed course score:
A ≥ 90%, A- ≥ 88%, B+ ≥ 86%, B ≥ 80%, B- ≥ 78%, C+ ≥ 76%, C ≥ 64%, C- ≥ 62%, D+ ≥ 60%, D ≥ 50%, F < 50%. Missing any exam incurs an automatic F for the course. Fractional final course scores will be rounded to the nearest integer. For example, 87.49999 rounds down to 87 (B+), while 87.50000 rounds up to 88 (A-).

Computer:
You are expected to do all work on your own personal computer. However, most projects can be accomplished on computers in campus OIT labs. For the lectures I will switch between PCs running Windows 10 and Macs running OS/X, arbitrarily, or as my demonstrations require, or I may run both simultaneously. While this course is largely platform agnostic, there will be some (free) programs I will have you use that are designed to work exclusively on a Windows PC – these will also work on a Mac if it is also running Crossover (which is not free). I may also provide some free software that will run on either platform.

Notes:

1. **<u>DO YOUR OWN WORK, INCLUDING HOMEWORK AND LAB WORK.</u>** You may <u>discuss</u> homework and lab assignments with other students, but you <u>may not share files or disks</u>. Upon discovery of duplication, I will contact you for a conference, as required in the guidelines set out by the University of Massachusetts Academic Honesty Policy, and we will resolve the issue according to those guidelines. See the document at: **`http://www.umass.edu/dean_students/academic_policy/`**

2. **<u>Do not</u>** ask for extra work after the end of the semester to boost an undesirable grade. I never grant such requests.

3. Please contact me directly if you have any concerns about the running of the course, the TA, grading, etc.

Day-By-Day Syllabus

Normally, I would publish at this time a day-by-day breakdown of each lecture. However, there are a number of items that are in flux, including scheduling a guest speaker, so I may publish a day-by-day schedule in the near future.

General Course Outline

This course can be divided into several general sections, covered in roughly this order:

1. History of the Internet and the Web

2. Search Engines and searching strategies. Net neutrality.

3. Bias and the Internet (aka: Defense against the Dark Arts). Guest Speaker.

4. Email protocols.

5. Basic Networking Hardware.

6. Client-Server model, Internet Protocols, Domain Name Servers, URLs, and Packet Sniffers.

7. Introduction to HTML.

8. UNIX, Telnet, and FTP.

9. Intermediate HTML and CSS. Deprecated tags.

10. Bitmapped graphics file formats and favicons.

11. SVG graphics files.

12. Advanced HTML.

13. Introduction to Client-Side Programming with JavaScript.

14. Introduction to Server-Side Programming with Python.

15. Encryption

16. Viruses and Malware.