CMPSCI 120
Fall 2019
Problem Solving with the Internet

Professor William T. Verts

Class Lectures:
>   Monday, Wednesday, Friday, 11:15AM–12:05PM, Goessmann 20.

Office Hours and Email:
>   LGRC A357, M/W/F 2:45-3:45 & by appointment.
>   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***, 4TH Edition, 2019 Printing, ISBN 9781524992613, ~$28, by me. 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%	Friday, December 13, Goessmann 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.

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 or exclusively on a Mac. 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.

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.