* COMP 198 21st Century Applied Text Computing *

T *Lecture/Lab (DC 1315)* – 3:30-4:50

Who:	Michael Gousie
Where:	Discovery Center 1325
When:	Tue 11:00-12:30, Wed 3:30-5:00; Fri 2:00-3:00 (unless meeting) and by appointment
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Content:

- Need to sort a large dataset?

  No need to open a spreadsheet or write a program. A few keystrokes in Linux will do it for you in a flash!

- Need to create a document with complex math equations?

  LaTeX will help you create a publisher-quality result!

- Need a beautiful data graphic?

  Several free tools help you build visualizations literally in minutes!

These are some of the problems we will solve in this course. You will learn how to use Linux and see how much you can accomplish by typing commands rather than loading bloatware and incessantly using the mouse. You will solve sticky problems, create nice graphs, learn a new programming language, and more. Topics include (subject to change):

- Linux command line
- Linux file system
- the shell and scripting
- makefiles
- text editing (a new way!)
- using and cleaning big data
- data visualizations using `gnuplot`, Datawrapper, and/or Flourish
- making figures and diagrams with `xfig`
- version control (Git/GitHub)
- creating LaTeX documents

Required Text:

None. All resources will be on the course web page or otherwise available online.

Requirements:

There will be four quizzes during the course of the semester. The quizzes will comprise 40% of your grade. These will be done online using the computers running Linux in csLab. Quizzes will entail using the tools and techniques discussed in class. There will be several homework/programming assignments, roughly one week in length. These will be submitted electronically in Canvas. These assignments will account for 55% of your grade. The remaining 5% of your grade will come from in-class participation. It is therefore to your advantage to come to class, although attendance will not be taken.

There will not be a final exam.

Grading:

Grades will be assigned according to the following scale:

A = 93-100, A− = 90-92, B+ = 87-89, B = 83-86, B− = 80-82, C+ = 77-79, etc.

Quiz Schedule:

Exam	**Weight**	**Date**
Quiz 1	10%	February 17
Quiz 2	10%	March 17
Quiz 3	10%	April 7
Quiz 4	10%	April 28

Course Policies:

- You are responsible for all material covered in class.
- If you must miss a quiz for any reason, you must inform me **before** the test. Except in the case of emergency, illness, or you found aliens via Wheaton's original observatory (Where is that?), makeup quizzes will not be given.
- We will be using Linux on the computers in csLab. You are also welcome to install Linux on your own laptop, but quizzes will be done on the lab computers.
- Assignment due dates are **firm**.
  - All electronic assignments must be submitted in Canvas by 11:59:59 PM on the due date unless otherwise noted. Assignments submitted on the following day will receive a 15% penalty. Anything turned in later will receive a 0. Hard copy, if required, must be submitted the following day or as indicated in the program specifications.
  - Although deadlines are firm, please contact me **beforehand** if there are extraordinary circumstances.
  - Assignments may be turned in early! You can also resubmit assignments any number of times before the deadline if you find an error in an earlier submission.
  - There will not be any individual "extra credit" work. If you did not have time to do a good job on the original assignment, how will you have time to do *additional* work?

- You are expected to adhere to the Honor Code.
  - Although *discussion* of projects or homework is encouraged, the final *implementation* of programs should be the result of your own work. Any copying of programs or homework is prohibited.
  - AI can help you speed up many of the tasks you will be asked to perform this semester. However, your assignments should still be **your own work**. Copy/paste is not the way to learn how to program, whether you are doing this from another person or from an AI application.

    If you are unsure where the line is between collaborating with AI and copying from AI, we recommend the following heuristics:
    * Never hit *Copy* within your conversation with an AI assistant (and then *Paste* into your code). You can copy your own work into your conversation, but do not copy anything from the conversation back into your assignment. Instead, use your interaction with the AI assistant as a learning experience, then let your assignment reflect your improved understanding.
    * Do not have your assignment and the AI agent itself open on your device at the same time. Similar to above, use your conversation with the AI as a learning experience, then close the interaction down, open your assignment, and let your assignment reflect your revised knowledge. This heuristic includes avoiding using AI assistants that are directly integrated into your composition environment: just as you should not let a classmate write content or code directly into your submission, so also you should avoid using tools that directly add content to your submission.
  - If a turned-in assignment looks suspicious, I may ask you to explain the purpose, function, and details of your answers; if you can't, it will be considered plagiarized.
  - Collaboration on quizzes is prohibited.
  - You will be required to write and **sign** the pledge on all hard copy turned in:

    I have abided by the Wheaton Honor Code in this work.
  - Any violation of the above guidelines will result in a 0 for the assignment/quiz and/or a failing grade for the course.
- Please do not leave once class has begun. This is distracting to the class and to the instructor.
- Accommodations for disabilities:

Wheaton College is committed to providing equitable access and supportive services for all students to fully access and thrive in the academic, residential and social aspects of student life. Affirmatively, Wheaton provides appropriate accommodations for eligible students with documented disabilities to afford equal access to educational programs and services. Individuals with disabilities and other access concerns requiring accommodations or information on accessibility should reach out to Accessibility Services at the Filene Center:

~ accessibility@wheatoncollege.edu or (508) 286-3794 ~

Course Schedule (subject to change):

Wk #	Date	Topic	Note
	January		
1	Jan 20	No class meeting	
2	Jan 27	Introduction; what are we doing??	
	February		
3	Feb 3	Linux – you are in total control	
4	Feb 10	cat, diff, tar, grep, awk, sed – these are real things!	
5	Feb 17	Scripting; a different way to program	Quiz 1
6	Feb 24	More scripting	
	March		
7	Mar 2	Let's create some plain text!	
8	Mar 9-13	*SPRING BREAK*	
9	Mar 17	Getting and cleaning data	Quiz 2
10	Mar 24	Visualizing data with `gnuplot`	
11	Mar 31	Visualizing data with Datawrapper	
	April		
12	Apr 7	Creating a professionally typeset document (no, it's not Word)	Quiz 3
13	Apr 14	Making sure it's the right version with Git	
14	Apr 21	Making figures with `xfig`	
15	Apr 28	Putting it all together	Quiz 4
	May		
16	May 4-8	*Final exam week*	