COMP 4272/6272: System Administration and Unix Programming

Fall 2022
Section 001

Instructor	Gustav Borstad, Ph.D.
Office	Manning 212
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Office Hours	Monday and Thursday 1 - 3 p.m. Or by appointment.
Class Room	Dunn Hall, Room 119
Class Time	Monday and Wednesday 5:30 to 6:55 p.m.

Important Dates

- **Semester Endpoints:** August 22 – November 30, 2022
- **Labor Day:** September 5, 2022 (Monday)
- **Fall Break:** October 8 – 11, 2022 (Saturday – Tuesday)
- **Last Day to Withdraw:** October 14, 2022 (Friday)
- **Thanksgiving Holidays:** November 23 – 27, 2022 (Wednesday – Sunday)
- **Study Day:** December 1, 2022 (Wednesday)
- **Final Exam:** Wednesday, December 7, 2022 5:30 to 7:30 p.m.

Course Description

Fundamental of UNIX and operating systems principles; principles and practices of systems administration and management; network file systems; account management; OS installation; startup and shutdown, booting, backup, restore; system administration tools; web administration; duties and responsibilities of a system administrator.

Optional Texts

- *The Art of UNIX Programming* by Eric S. Raymond, (The Addison-Wesley Professional Computng Series)
  ISBN-10: 0131429019; **ISBN-13:** 978-0131429017
- *Linux in a Nutshell: A Desktop Quick Reference* by Ellen Siever, Stephen Figgins, Robert Love, and Arnold Robbins, 6th Edition (O'Reilly Media)
  ISBN-10: 0596154488; **ISBN-13:** 978-0596154486

- *Running Linux: A Distribution-Neutral Guide for Servers and Desktops* by Matthias Kalle Dalheimer and Matt Welsh, 5th Edition (O'Reilly Media) **ISBN-10:** 0596007604; **ISBN-13:** 978-0596007607

CO-REQUISITE COURSES
Physics I Laboratory (PHYS 2111)
Calculus I (MATH 1910)

TOPICS COVERED

1. Art and Culture
2. The History of UNIX
3. UNIX Paradigms
4. Unix Shells and Shell Commands
5. Shell Scripting
6. Editors
7. File Systems
8. Text Programming
9. Network Communications
10. Make
11. Unix Debugging
12. Programming in PERL
13. Programming in C
14. Graphical Environments
15. Understanding Mail

Other topics may include the following:
- Graphics Creation and Manipulation
- Version Control
- Security
- Windows Philosophy vs. Linux / UNIX Philosphy
- Patch / Upgrade Philosophies

Additional course information will be uploaded to Canvas (accessible at the bottom of the UofM homepage.

PROFESSIONAL CONDUCT AND HONOR CODE
Students are expected to conduct themselves in a professional manner. Please familiarie yourself with the *Student Code of Rights and Responsibilities*.

COLLABORATION   Students are permitted and encouraged (but not required) to discuss the ideas and
POLICY   concepts of any classroom topic or assignment. Unless otherwise specified, the prod-
                uct of each assignment and test is expected to be sole, individual work each student.
                Specifically, students can discuss ideas and concepts but one student is not permitted
                to write code or prose for another student. All help is expected to be documented
                and credited appropriately.

> *Warning 1: Each student should accept help with care. It is very easy to
> mislead yourself into believing that you understand a concept when others
> are providing aid or assisting. In a crunch (such as an exam), this error
> can prove fatal.*

> *Warning 2: Please give help with care. Collaboration is intended to im-
> prove understanding of a concept. If too much help is given, students may
> be enabled to fail!*

Plagiarism or cheating behavior in any form is unethical and detrimental to proper
education and will not be tolerated. All work submitted by a student (projects,
programming assignments, lab assignments, quizzes, tests, etc.) is expected to be a
student's own original work. The plagiarism is incurred when any part of anybody
else's work is passed as your own (no proper credit is listed to the sources in your
own work so the reader is led to believe it is therefore your own effort.

Students are allowed and encouraged to discuss with each other and look up resources
in the literature (including the internet) on their assignments, but appropriate refer-
ences must be included for the materials consulted, and appropriate citations made
when the material is taken verbatim.

If plagiarism or cheating occurs, the student will receive a failing grade on the assign-
ment and (at the instructor's discretion) a failing grade in the course. The course
instructor may also decide to forward the incident to the University Judicial Affairs
Office for further disciplinary action. For further information on U of M code of stu-
dent conduct and academic discipline procedures, please refer to the *Student Code of
Rights and Responsibilities*.

GRADING   The final grade will be calculated using the following point system and grading
POLICY AND   scheme.
POINT
DISTRIBUTION

Category	Weight	Notes
Attendance / Participation	5%	
Exam I	20%	Monday, September 26, 2022 (Tentative)
Exam II	20%	Monday, October 24, 2022 (Tentative)
Exam III	20%	Monday, November 21, 2022 (Tentative)
Homework	15%	Due dates will be announced in class
Class Project	20%	Due date and details will be announced in class
Final Exam	0%	Wednesday, December 7, 2022 5:30 to 7:30 p.m. (Co...
Total	**100%**	

GRADE
RANGES

The final grades will be assigned according the following correspondence of numerical ranges to letter grades.

A+:	97 to 100%	C+:	77 to 79.$\bar{9}$%
A:	93 to 96.$\bar{9}$%	C:	73 to 76.$\bar{9}$%
A−:	90 to 92.$\bar{9}$%	C−:	70 to 72.$\bar{9}$%
B+:	87 to 89.$\bar{9}$%	D+:	67 to 69.$\bar{9}$%
B:	83 to 86.$\bar{9}$%	D:	60 to 66.$\bar{9}$%
B−:	80 to 82.$\bar{9}$%	F:	0 to 59.$\bar{9}$%

DISABILITY
RESOURCES

Please see the instructor if you need accommodations for a disability, or to fulfill cultural or religious obligations. Students with requests for accommodations should contact Disability Resources for Students (https://www.memphis.edu/drs/) to register and learn about the services available to support their learning. Students with disabilities are encouraged to speak with us privately about academic and classroom accommodations. It is strongly encouraged that you register with Disability Resources for Students (DRS) to determine appropriate academic accommodations. Disability Resources for Students is located in 110 Wilder Tower, their phone number is (901) 678-2880 (V/TTY), their email is drs@memphis.edu, and their website is https://www.memphis.edu/drs/. Disability Resources for Students coordinates all accommodations for students with disabilities.

Qualified students with disabilities will be provided reasonable and necessary academic accommodations if determined eligible by the appropriate Disability Resources for Students staff at the University. Prior to granting disability accommodations in this course, the instructor must receive written verification of a student's eligibility for specific accommodations from the Disability Resources for Students staff at the University. It is the student's responsibility to initiate contact with University's Disability Resources for Students staff and to follow the established procedures for having the accommodation notice sent to the instructor.