



CSE224 - Programming Tools Syllabus

Course Description

Learning to use the Unix operating system, with a focus towards using it as a development environment. Topics include commands, tools, and interaction mechanisms (pipes, etc.), as well as shell programming (bash). Also a review/continuation of C programming, particularly as it relates to a Unix environment (command line arguments, I/O, etc.). Use of debugging tools and techniques, profiling, makefiles and source code control will also be discussed.

Prerequisite/Credits

A grade of “C” or better in CSE 121 or Instructional Unit.

Credits: 5

Teacher Information

Name: Nicholas J. Macias

E-Mail: nmacias@clark.edu

Office: SBG 115

Office Hours: Announced in class and posted on my office door

Text and Materials

Required Text: [The Linux Command Line](#) (free PDF download) by William Shotts.

Reference Material: [C Primer Plus](#), 5th Edition, Prata, ISBN-10: 0-672-32696-5, Sams Publishing

Required Supplies/Materials: USB flash drive

Tentative Schedule - Subject to Change

WEEK 1: Welcome, introduction to the course, policies and procedures;
Unix overview; programming overview; introduction to shell programming

WEEK 2: basic Unix commands; more shell programming

WEEK 3: C programming review; vi refresher

WEEK 4: Filesystems; shells

WEEK 5: advanced programming

WEEK 6: Debugging/gdb; makefiles

WEEK 7: Regular expressions

WEEK 8: More shell programming; processes

WEEK 9: GUIs; group project

WEEK 10: awk/sed

WEEK 11: profiling, source code control; wrap-up; review.

WEEK 12: Comprehensive Final Exam. For schedule visit:

http://www.clark.edu/enroll/registration/dates/final_exam_schedule.php



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Course Outcomes	Assessment	Supported Program Outcomes
Using Linux/UNIX commands (ls, pwd, more, less, who, etc.) to get information about users, files and processes.	Computer assignments In-class assignments Tests	AST2-B
Design, code and debug Linux/UNIX shell scripts; sed, awk, etc.	Computer assignments In-class assignments Tests	AST2-A AST2-C
Utilize source code control (cvs, rcs, etc.) and Linux/UNIX <i>make</i> utility to manage the revisions and configuration of a program consisting of multiple source files and directories.	Computer assignments In-class assignments Tests	AST2-B AST2-C
Use a source code debugger (e.g gdb) to trace execution, review variables during execution, and set breakpoints in debugging a program.	Computer assignments In-class assignments Tests	AST2-B AST2-C
Design, code and debug a graphical user interface (GUI), with focus on ease-of-use.	Computer assignments In-class assignments Tests	AST2-A
Use a profiler (e.g. gprof) and understand its application.	Computer assignments In-class assignments Tests	AST2-B AST2-C
Demonstrate the ability to work effectively in a team.	Computer assignments In-class assignments Final ECS Project	AST2-C

Grading

100 points total, awarded as follows:

Programming Assignments:	10%
One-Day Programs:	15%
Midterm:	25%
Final:	40%
Service Learning Project	10%



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Course Policies:

- **Academic Honesty and Plagiarism:** You are expected to do your own work. Copying or rewriting someone else's online or offline work, having someone else do your work, or cheating in any fashion will result in zero points for that test or assignment in addition to penalties prescribed by college policies. A second offense will result in an automatic 'F' for the class.
- **Late Paper/Assignment Policy:** Points are only awarded for tests, quizzes, assignments and projects that are completed and delivered on the assigned due dates and times. In all other instances, zero points will be awarded (except for extreme circumstances, where the student has made prior arrangements with the instructor).
- **Missed Exam/Assignment Policy:** Points are only awarded for tests, quizzes, assignments and projects that are completed and delivered on the assigned due dates and times. In all other instances, zero points will be awarded unless the student has made prior arrangements with the instructor.
- **Computer or Equipment Misuse:** Students are expected to obey the Equipment and Computer Usage Guidelines. Students who misuse the equipment or computers will be expelled from the class and/or lab.

Support Services:

If you have emergency medical information, which should be shared; or if you require assistance in case the building should be evacuated; please make an appointment to see me as soon as possible.

Accommodations. Reasonable accommodations are available for students who have a documented disability. Disability Support Services (DSS) coordinates reasonable accommodations for students with disabilities and/or temporary health conditions (could include a temporary injury or pregnancy). Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the Disability Support Services office as soon as possible to better ensure that accommodations are implemented in a timely manner. All accommodations must first be approved through Disability Support Services. Disability Support Services is located in PUB 013, which is on the lower level. For an appointment or information, please visit www.clark.edu/dss or contact 360-992-2314 (voice) or 360-991-0901 (video phone) or email dss@clark.edu. Once you have established accommodations with Disability Support Services, please contact me as soon as possible to discuss your needs in this course.

College-Wide Policies:

Non-discrimination Policy: Clark College affirms a commitment to freedom from discrimination for all members of the college community. The college expressly prohibits discrimination against any person on the basis of: Race, color, national origin, disabled veteran status, sex, sexual orientation, age, gender identity, creed, gender expression, Vietnam-era veteran status, religion, marital status, and presence of physical, sensory or mental disability. The responsibility for, and the protection of, this commitment extend to students, faculty, administration, staff, contractors, and



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those who develop or participate in college programs. It encompasses every aspect of employment and every student and community activity.

Code of Student Conduct:

See http://www.clark.edu/about/governance/policies-procedures/student_code.php for Clark College's Code of Student Conduct.

Additional Information:

All assignments and grades are posted on Canvas: <https://clarkcollege.instructure.com/>

Keys to Success:

- Come to every class, on-time, prepared to learn; don't simply take notes and plan to read them later. Be an active participant; ask questions; think about the material and try to understand it in class.
- Use the computer as a resource for answering questions: try things; write and test code to solidify your understanding.
- Get to know other students; discuss the material; form study groups; bounce ideas off one another.
- Make sure the work you submit is entirely your own. Don't begin assignments with already-written code and then modify it into your own. This is not only academically inappropriate, but it will deny you the opportunity to actually learn the skills you're trying to learn in this course.
- Keep up with the course; do not fall behind. If you don't understand something, ask about it as soon as possible. Don't let questions linger for more than a day, or you're likely to fall further behind.

Class Cancellation:

In the event of bad weather conditions or other events, check the local radio & TV stations, newflash or the Clark College website, to see if Clark College is delayed or closed: www.clark.edu

Engineering and Computer Science Course Policies:

Visit http://www.engrcs.com//courses/ECS_Course_Policies.pdf for additional information and supporting materials.