Sonoma State University
Computer Science Department
CS210, Introduction to Unix, Spring 2023

Instructor Contact Information

Name: Mark Gondree
Pronouns: he/him/his
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Student Hours: By appointment at a variety of times.
Piazza is the preferred method of contact. Expect a response within 24 hours during M–F.
Note: This syllabus[1] is subject to change.

General Course Information

Class Days/Time: F 1:00PM - 3:50PM
Classroom: Darwin Hall 25
Format: In-person, synchronous — we meet synchronously in our designated class times at our designated classroom; all meetings will follow campus COVID protocols.

Prerequisites: GE Math eligibility and previous or concurrent enrollment in CS 215, or consent of instructor.

What Is This Course About?

Laboratory, 3 hours. An introduction to the use of Unix as a programming environment. Communicating with a Unix host, shells and shell commands, files and directories, X Window System, jobs and processes, scripting, programming utilities (compiler, linker, debugger, make, hex dump, etc.).

What Should You Expect to Learn?

Upon successful completion of this course, you will be able to:

- Use a Unix command line interface.
- Navigate the Unix file system and perform common file operations.
- Use standard Unix commands and utilities.
- Write basic shell scripts.
- Use regular expressions in Unix commands.
- Use the Unix development toolset (emacs, gcc, gdb, make).
- Demonstrate technical fluency in speaking about the Unix environment

[1] Note: This is a GoogleDoc at https://bit.ly/3IXgypx. Any changes will be announced via Canvas, usually preceded by class discussion.

What Do You Need to Be Successful?

Course Textbook

There is no textbook for this course. All course materials will be provided.

CS Department Unix server (blue.cs.sonoma.edu)

The majority of the work in this course will make use of the CS department unix server. You will learn how to access it as part of our course and it will be a primary resource. If you ever need your password reset or related technical support, reach out to our server admin, Roger Mamer (mamer@sonoma.edu, Darwin 27).

SSU Email

I'll send emails throughout the semester related to this course. These emails will be sent to your SSU email address, so make sure you check it regularly. You might consider having it forwarded to your preferred email provider, if you find checking the school email cumbersome. You should check your email at least once a day.

Canvas

Everything for this course can be found on Canvas (including this syllabus). Canvas always holds the most current and authoritative set of due dates, exam dates, assignment instructions, and other course material. Course announcements will be done via Canvas (which also sends these to your sonoma.edu email address). If this is your first time using Canvas, there is information on getting support in the "Information Technology and Library Resources" section of this syllabus.

Piazza

We will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates and myself. Rather than emailing me, I encourage you to post questions on Piazza so everyone benefits from my response. Piazza gives you the option of sending messages to me that are anonymous, too.

Student Hours

My student hours are an opportunity for you to connect with me, a chance to ask clarifying questions about content, and find support. You are encouraged to use my student hours. Student Hours are sometimes called "Office Hours" but I use the term Student Hours to highlight that it is time I have set aside for you. You may come with a small study group or your partners, or by yourself. Especially for questions related to grading, please see me during student hours—for your privacy and my full attention, before class, after class, and in class are not appropriate times for questions about grades.

What Will We Cover in This Course?

A detailed description of readings, assignments and weekly course topics will be posted to Canvas. Canvas will show the most accurate due date for each assignment and the true pace of our activities. Below highlights a plan of topics covered and planned dates for significant graded items. Our schedule is subject to change with fair notice via Canvas.

Week	Date		Class Topics
Week 1	1/27/23		Logging in & Navigating the Shell
Week 2	2/3/23		Shell utilities, Files, File types
Week 3	2/10/23		Pipes & Redirection, Text-based Editors
Week 4	2/17/23		Unix permissions
Week 5	2/24/23		Build a web page
Week 6	3/3/23		Exploring the build chain
Week 7	3/10/23		Process control
Week 8	3/17/23		Bash scripts
Week 9	3/24/23	🎁	Spring Break
Week 10	3/31/23	🎁	Cesar Chavez
Week 11	4/7/23		Bash expansions
Week 12	4/14/23		Bash scripts (cont.)
Week 13	4/21/23		Pipes and filters
Week 14	4/28/23		Pipes and filters (cont.)
Week 15	5/5/23		GDB and Valgrind
Week 16	5/12/23		Revision Control

Legend:

- The "gift" icon (🎁) indicates days without class due to breaks or holidays.
- Students who have scheduling conflicts impacting important dates should contact the instructor at the beginning of the semester.

How Will You Be Graded?

There will be several assignments due throughout the duration of this course. Detailed instructions will be provided for each assignment, but here is a quick preview of what to expect.

Class Activities and Weighting

Class activities are divided into these types:

- **Participation**: Some activities (like exit tickets, discussion boards, and polls) are graded on participation, as its primary purpose is engagements, zero-stakes assessment, and feedback.

- **Explore Activities:** These activities give automatic feedback, can be done multiple times, and are designed in the spirit of exploration and practice.
- **Demo Activities**: Time in class is provided where you demonstrate your proficiency with a particular "micro" skill.
- **Challenge Activities**: Graded activities where automatic feedback is not provided. These are a quiz-like assessment building off of explore activities,

Your overall course grade will be determined from graded items, weighted per below, rounded to the nearest integer.

Item	Percentage
Participation Activities	5%
Explore Activities	50%
Demo Activities	15%
Challenge Activities	30%

Grading Scale

All CS majors must take this course for a letter grade. The course letter grade will be determined using the below scale (after rounding). At SSU, D- is the lowest passing grade.

A	94% – 100%	B+	87% – 89%	C+	77% – 79%	D+	67% – 69%
A-	90% – 93%	B	84% – 86%	C	74% – 76%	D	63% – 66%
		B-	80% – 83%	C-	70% – 73%	D-	60% – 62%

Up to 3% may be added to your final grade at the instructor's discretion for constructive participation in the class. Constructive participation includes in-class participation; asking good questions or providing helpful responses via Piazza; etc. Regular attendance is necessary but not sufficient for this bonus. No other adjustments of borderline grades will be considered.

Late policies

Absent extenuating circumstances (illness, family emergency), late submissions will be accepted under the late policy until the advertised "Until" deadline on Canvas. In particular:

- If you remain until the end of the lab (working on labs in this class), you will be given a single, week-long extension on the current assigned lab.
- Otherwise and absent extenuating circumstances (illness, family emergency), late submissions will be accepted under the late policy until the advertised "Until" deadline on Canvas. The late policy is 5% per day, and never grows more than -50%.

Administrative drops

If you do not indicate your commitment to taking this course in the first two weeks of the semester, you may be administratively dropped from the class. In this course, your commitment is evidenced by:

- Attending class every day in the first week and completing the "Start Here" module by the end of your first week of class
- Otherwise communicating with the instructor to explain your lack of progress, before the end of your first week of class.

Regrade request policy

Regrade requests will be accepted up to 1 week after a graded item is returned. The reason for the regrade request must be explained in email, with a copy of the assignment to be re-graded, to the instructor's university email. Note that all regrade requests, except for those pointing out mistakes in the totaling of points, will cause the entire assignment to be re-graded. The adjusted grade may therefore be higher or lower than the initial grade.

Incomplete grade policy

It is the policy of the Computer Science Department that a grade of Incomplete (I) shall be assigned only when the instructor concludes that a clearly identifiable portion of course requirements cannot be met within the academic term for unforeseen, but fully justified, reasons; and when there is still a possibility of earning credit.

An incomplete shall *not* be assigned when:

- The request is made before the thirteenth week of instruction
- It is necessary for the student to attend a major portion of the class when it is next offered (i.e., if a student needs to repeat a class, an incomplete should not be given)
- The student is not passing the course with a C- or better at the time of the request
- The student is unable to keep up with course work due to an excessive course load.

The condition for removal of the Incomplete shall be entered on the “Request for Incomplete” form and a copy filed in the department office prior to listing an “I” on the Grade Roster. The student must retain the grades for any coursework that was due prior to the incomplete being assigned. An incomplete grade cannot be removed on the basis of work taken at another institution nor by re-enrolling in the course.

An incomplete must be made up within one calendar year immediately following the end of the term in which it was assigned. This limitation prevails whether or not the student maintains continuous enrollment. Failure to complete the assigned work will result in an incomplete “I” being converted to a “NC” which will affect the grade point average.

What Should We Expect of Each Other?

Attendance and Participation

Regular and active participation is an essential, unmistakably important aspect of this course. I expect that you will log in to Canvas at least three times on separate days over each week and attend all our classes. Please read my announcements, engage with our lessons, and review our Piazza forum at least weekly. Your participation on a weekly basis is not only a requirement, it is an essential aspect of your learning process. You are expected to do the assigned work, notify me when emergencies arise, and make up missing assignments taking advantage of any late policy.

Absences do not require explanation and I have made sure in this class that you can still succeed if you occasionally suffer an absence. I never need a doctor's note or other evidence to "prove" or legitimize an emergency — I trust you, and doctors have more important things to do than write notes for professors. It is sufficient to write me a (private) note via Piazza about your absence and letting me know if you are ok.

An Inclusive Learning Environment

Your experiences are important to me, because they are different from mine and I often benefit from them. I am committed to a learning environment where diverse perspectives are recognized, respected, and seen as a source of strength. I embrace diversity broadly, along a number of dimensions including race, ethnicity and national origin, gender and gender identity, sexuality, socio-economic class, age, religion, and disability. Our discipline needs more people like you, and more people unlike you too. Let me know how I can make our learning environment more inclusive and supportive. I, like many people, am still in the process of learning from other people's perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it. Anonymous feedback through Piazza is always an option.

In particular, I want to refer to you using your preferred name and pronouns. First, you can help me by correcting me. Respecting you is important to me. Let me know if I am pronouncing your name incorrectly or misgendering you. Second, if you predominantly use a different name or nickname, I strongly recommend you make it your preferred name through MySSU so that your professors and peers see it via Canvas, email, class rosters, etc.

If you have a physical, psychological, or learning disability or another special need, you will be fully accommodated in this course. I will work with the DSS to provide equal access for all students. Please contact Disability Services for Students (DSS) as soon as possible and note that you must be registered each semester. Use of DSS services, including testing accommodations, requires prior authorization by DSS in compliance with university policies and procedures. More information is under "Campus Policy on Disability Access for Students."

Academic Honesty and Supportive Collaboration

Collaboration is a complex idea in the programming world, since professionals routinely work in teams sharing code; they also navigate a variety of complex intellectual property rules that sometimes encourage (and sometimes discourage) sharing code more generally. In our class, the collaboration policies are more artificial than the real world since they are designed to support you, as a beginner learner, to grow towards mastery and independence.

Supportive collaboration

Generally, I encourage you to seek help from and provide support to your peers, but only in ways that do not steal learning opportunities from them or from yourself. I call this "supportive collaboration." It is not only allowed, it is encouraged.

Warning: The boundary between collaboration and plagiarism is often unclear. Once you see someone's solution, it is hard to unsee. It is safer to collaborate without looking at each other's

screens. Use drawings to communicate ideas. Use references to past labs and class resources to establish common ground ("I just modified everything after line 40 in the textbook solution to 9.4, and that really helped me as a guide"). Help identify tools that are useful ("I found using a while loop was helpful") without sharing code. If you just share your screen and show someone how you did it, you are robbing them of a learning opportunity.

In particular. You are responsible not just for understanding every line of code you write, but also for knowing what would happen if your code was modified in some way or how to modify it to accomplish some nearby task.

Group work collaboration policy

When collaboration is required for group work, the group's work must be the sole effort of that group's members. Outside of group work, you may discuss ideas and approaches with other students and the course staff, but you should work out all details and write-up all solutions on your own. The following actions will be penalized as academic dishonesty:

- Copying part or all of another group's assignments
- Copying old or published solutions
- Looking at another group's work or discussing another group's work in great detail. You will be penalized if your solution matches another group's solution too closely.
- Using a non-private repository to hold code or homework solutions.
- Sharing your group's work or describing your work in great detail to anyone other than your group members or the instructor.

There is no collaboration of any form allowed on exams or quizzes, unless explicitly directed. Generally, graded work is to be completed by the individual student unless otherwise specified and following the university's policies on academic integrity. This includes making use of old exams or sample quizzes not provided by the instructor for student use.

Academic Honesty

Academic dishonesty will be severely penalized; at a minimum, you will receive a grade of 0 on the assignment. For more information, see SSU's cheating and plagiarism policy and the Dispute Resolution Board website.

What happens when life impacts you as a student?

We are whole individuals with multiple facets to our lives: family, friends, work, etc. These facets make us better people, give us unique perspectives, and add to our educational journey. The fullness of our lives can be both rewarding and stressful. Illness and emergencies can (in the short term) limit us from being the best version of ourselves in the classroom. Know that we can try to handle it together. We can find a plan that works for you in your journey.

Illness, Accidents, and Emergencies

I have designed the course to provide some flexibility for students who experience hardships related to illnesses, accidents, mental health challenges and family concerns. These include reasonable extensions on assignments, and opportunities to make-up exams. It is important to

note that any flexibility that I provide is something that I would offer any student without compromising the learning outcomes or modalities of the course. For instance, I cannot change the course modality to online for a student, nor can I allow a student to use notes in a traditionally closed notes exam. The most important thing that you can do is communicate with me. I can work with you to determine what options there are for you to succeed. This flexibility should not be confused with the term “accommodations” which is reserved for students referred to me by Disability Services for Students (DSS)

I never need a doctor's note or other evidence to "prove" or legitimize an emergency — I trust you, and doctors have more important things to do than write notes for professors. It is sufficient to write me a (private) note via Piazza about your absence and let me know if you are ok. When you are able to return to class, we can discuss next steps. In general, I care that you are ok. If I do not know why you are missing class or missing graded work, I will reach out to learn. If I can't reach you in a timely manner (in a week, for example), I may email your advisors and/or a care team to try to follow-up with you to see if you are ok.

Class Disruptions (power outages, fires, etc)

Sonoma County has seen an increase in fire activity and public safety power outages that have had an impact on campus operations intermittently since 2017. We need to cultivate in ourselves both flexibility and resilience, in the event that we experience a similar disruption to our course this semester. We both have duties here: you can try to not leave things for the last minute; I can try to be flexible; and we can be kind and understanding with each other.

I will maintain contact with the class via Piazza or Canvas to announce when changes or course adjustments are needed. In the event of campus closure, we will follow SSU guidance for class continuity. When permitted under that guidance, this class will continue as an online, synchronous class via Zoom.

- Please sign up to receive university emergency alerts by texting SSUALERTS to 67283.
- If I am 10+ minutes late, I might be experiencing some minor delay. Check Piazza: if there isn't a note, ask for a status update. If I am 20+ minutes late, assume class is canceled and expect a video to replace that material.
- Whenever there is any outage affecting infrastructures used by class for more than 48 hours, or for the 24-hour period before the due date, I will be adjusting due dates. This means: prolonged blue.cs.sonoma.edu outages and Canvas outages will all require adjustments.

Be aware: all my due dates already have some flex in them. If you face disruptions impacting you less than 72 hours: in most cases, you can recover from that without asking for adjusted due dates. That said, you are the best judge re: your own schedule — tell me as soon as possible if you are impacted and believe there needs to be adjustments.

Childcare Disruptions

Currently, the university does not have a formal policy on children in the classroom. The policy described here is just a reflection of my own beliefs and commitments to students, staff and

faculty parents. I ask that all students work with me to create a welcoming environment that is respectful of all forms of diversity, including diversity in parenting status.

- All exclusively breastfeeding babies are welcome as often as necessary, and you can feed without missing class (let's talk, we'll find a way that makes you feel comfortable).
- For older children and babies, I understand that unforeseen disruptions in childcare often put parents in the position of having to miss class to stay home with a child. While it is not meant to be a long-term childcare solution, occasionally bringing a child to class in order to cover gaps in care is perfectly acceptable.
- In all cases where babies and children come to class, I ask that you sit close to the door so that, if your little one needs special attention and is disrupting learning for other students, you may step outside until their needs have been met.

Finally, I understand that often the largest barrier to completing your coursework once you become a parent is the tiredness many parents feel in the evening once children have finally gone to sleep. While I maintain the same high expectations for all students in my classes regardless of parenting status, I am willing to problem-solve with you in ways that make you feel supported as you strive for school-parenting balance.

Religious Observances

The observance of religious holidays (activities observed by a religious group of which you are a member) and cultural practices are an important reflection of diversity. As your instructor, I am committed to providing equivalent educational opportunities to students of all belief systems. At the beginning of the semester, you should review the course requirements to identify foreseeable conflicts with assignments, exams, or other required attendance. If at all possible, please contact me within the first two weeks of the first class meeting to allow time for us to discuss and make fair and reasonable adjustments to the schedule and/or tasks.

Athletic Schedules

To student athletes: I value your identity as a scholar/athlete. Please notify me before the end of the drop/add period about any possible game conflicts with our class schedule (and as soon as possible about subsequent changes). Give me a copy of your game calendar and weekly schedule to help me with rescheduling.

What resources exist to support you as a student?

Basic Needs

We learn as whole people. To learn effectively, you must have basic security: a roof over your head, a safe place to sleep, enough food to eat. If you are having trouble with any of those things, please visit Student Affairs' Basic Needs webpage for resources to support your well-being both inside and outside the classroom.

Counseling and Psychological Services (CAPS)

The purpose of Counseling and Psychological Services (CAPS) is to support your mental health and wellbeing. To accomplish this, CAPS offers short-term individual and group counseling, workshops, crisis intervention services, consultation, referral, training, and outreach. All currently enrolled students who pay the mental health fee (a mandatory campus fee paid at registration) are eligible for their services. There are no additional charges. CAPS strives to acknowledge, accept, and support the perspectives of a diverse campus population. This includes, but is not limited to, race/ethnicity, gender, age, sexual orientation, ability, religious/spiritual affiliation, socio-economic status, and immigration status.

LARC

The SSU Learning and Academic Resource Center (LARC) offers free peer tutoring in over 50 courses each semester and provides weekly drop-in math tutoring. You can schedule tutoring appointments by clicking here and registering for an account, if you haven't done so before.

MESA

The MESA program provides a resilient learning community for historically underrepresented students in STEM majors. Students get opportunities to engage in a scholarly community with opportunities in tutoring, mentoring, research, and leadership development. You can become a member, or just benefit from their programs and tutoring as a non-member.

LSAMP

The LSAMP program provides some limited support for students who face social, educational, or economic barriers to careers in STEM, such as textbook support and funded research opportunities. Look to see if you can benefit.

The HUB

The HUB fosters connection by cultivating meaningful conversation and building community within and between diverse cultures. HUB programs and events focus on inclusivity, equity, and community-building. Overall, the HUB provides opportunities for students to expand their worldviews, deepen their awareness of who they are in relation to others and place, and to feel at home in a community that cares about and works toward a vital and just society.

Information Technology and Library Resources

Course LMS: Canvas

Canvas is SSU's Learning Management System (LMS). Canvas is the place where you will find the course syllabus, read posted announcements, participate in online class discussions with classmates, submit your assignments online and view the materials for this course. To access the Canvas course use your SSU Seawolf ID and password to log into SSU's Online Services portal. Click on the **Canvas** link. When you get to the Canvas Dashboard, click on the course title you would like to access.

Visit the SSU Canvas Support Center to review frequently asked questions about using Canvas and also to view a list of technical recommendations.

Canvas and General IT Help Desk

Contact Information Technology (IT) if you need assistance accessing Canvas or other information about computing and information technology at SSU. Three ways to contact the IT Help Desk are:

- Call: 707-664-4357
- Email: helpdesk@sonoma.edu
- Visit Location: Schulz 1000

General Student Computing

Review the information posted at IT Get Started, Students. There you will find computer use guidelines and a list of available computer labs.

Plugins

Download plugins that may be needed to access some content on or linked from SSU websites and Canvas. (If applicable, list any other plugins that may be needed to access/use publisher materials).

Canvas Help

- Getting Started with Canvas
- Student FAQs
- Canvas Student Overview Video
- How to Get Started with Canvas (Students)
- Canvas Community Student Video Guides
- Canvas Student Written Guides

Canvas Community

Visit the Canvas Community to view written Instructor Guides, written Student Guides, and/or Video Guides.

Library Research Guides and Subject Librarians

The University Library can help you find information and conduct research. You can make an appointment with a subject librarian, get help online, or drop by the library during open Research

Help Hours. Additional relevant library resources include the Computer Science Subject Librarian and Information for Distance Learners.

University Policies

There are Important Policies and Procedures for Students that you should be aware of, such as the add/drop policy; deadlines and penalties for adding and dropping classes; cheating and plagiarism policy; grade appeal procedures; accommodations for students with disabilities, and the diversity vision statement.

Dropping, Adding, Withdrawing

Students are responsible for understanding the policies and procedures about how to add a class, petition to withdraw from an individual class, repeat a course, change your major, or apply to graduate. The registrar offers various how-to guides for assistance.

Campus Policy on Disability Access for Students

If you are a student with a disability, and think you may need academic accommodations, please contact Disability Services for Students (DSS), Voice: (707) 664-2677, TTY/TDD: (707) 664-2958, as early as possible in order to avoid a delay in receiving accommodation services. Use of DSS services, including testing accommodations, requires prior authorization by DSS in compliance with university policies and procedures. See SSU's policy on Disability Access for Students.

Academic Integrity

Students should be familiar with the University's Cheating and Plagiarism Policy. Your own commitment to learning, as evidenced by your enrollment at Sonoma State University and the University's policy, require you to be honest in all your academic coursework. Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified.