

General Information

Instructor: Matt Bishop

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Office: 2209 Watershed Sciences

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Office Hours: M 3:10p–4:00pm; W 2:10pm–3:00pm; F 2:30pm–3:30pm; all in 2203 Watershed Sciences

Teaching Assistants

Teaching Assistant	Email	Office	Office Hours
Xiaoli Yang	xliyang@ucdavis.edu	55 Kemper on Zoom	Tu 11:00am–1:00pm W 12:00pm–1:00pm
Yu-Cheng (Tim) Hwang	timhwang@ucdavis.edu	55 Kemper 47 Kemper	M 8:00am–10:00am Tu 11:00am–12:00pm
Francesco Petrini	fgpetrini@ucdavis.edu	55 Kemper	Th 2:00pm–3:00pm

See the Canvas announcement of April 12 for Xiaoli Yang's Zoom URL.

Lectures

MWF 10:00am–10:50am in 198 Young

Discussion Section

A01: F 11:00am–11:50am in 100 Hunt

A02: W 1:10pm–2:00pm in 55 Roessler

Course Outline

Basic concepts of operating systems and system programming. Processes and interprocess communication and synchronization. Virtual memory, program loading and linking. File and I/O subsystems. Utility programs. Study of a real operating system.

Course Goals

Some goals we hope you achieve:

- Understand the basic concepts of operating systems, including file management, process management, process scheduling, memory management, process synchronization, deadlock, distributed systems, and protection in a multiprogramming system;
- Learn about the practical aspects of operating system design and implementation;
- Apply these concepts to an operating system;
- Understand what system calls are and how to use them; and
- gain experience in systems programming.

Prerequisite

We expect you to be comfortable with the following concepts and able to do the following:

- Assembly language programming, as covered in ECS 50;
- Basics of computer architecture, especially interrupts, process management, and memory management, as covered in ECS 154A;
- Data structures, such as queues, stacks, lists, as covered in ECS 34, 36C, or 60; and
- The C programming language (you will need to use C, not C++).

Text

R. Arpaci-Dusseau and A. Arpaci-Dusseau, *Operating Systems: Three Easy Pieces*, Arpaci-Dusseau Books (Aug. 2018). Available on the Web at <http://www.ostep.org/>.

Class Web Site

The class web site is on Canvas. To access it, go to <http://canvas.ucdavis.edu> and log in using your campus login and password. Then go to ECS 150 in your schedule. Announcements, assignments, handouts, and grades will be posted there, and you *must* submit any assignments there. The alternate web site, <http://nob.cs.ucdavis.edu/classes/ecs150-2022-02> has everything except grades, and you cannot submit work there.

PTA Numbers

The department policy on issuing PTAs is available at <https://cs.ucdavis.edu/undergraduate/current-majors/policies/>; click on “Permission to Add (PTA) Policy for Undergraduates”. If you need a PTA, please read that page, and follow the instructions there.

Important Dates

First day of instruction: March 28, 2022
 10-day drop deadline: April 8, 2022
 Last day to add: April 12, 2022

Midterm exam: April 27, 2022
 Last day of instruction: June 2, 2022
 Final exam: June 6, 2022 from 3:30pm to 5:30pm

Grading

This is the *planned* scheme for grading. We reserve the right to change it as we deem necessary!

Grades are assigned based on your overall score, which is out of 100 points. The letter grades, and the scores they are assigned to, are:

grade	%	grade	%	grade	%	grade	%	grade	%
		B+	87–89.99	C+	77–79.99	D+	65–69.99		
A	94–100	B	83–86.99	C	73–76.99	D	60–64.99	F	0–54.99
A–	90–93.99	B–	80–82.99	C–	70–72.99	D–	55–59.99		

Curve. The score of each assignment, lab exercise, and exam will be curved. The extra credit and final scores will *not* be curved.

Homework and Lab Exercises. These are due at 11:59PM on the due date, unless otherwise stated. See the handout **All About Homework** for more information.

Exams. Both the midterm exam and the final exam will be in the same classroom as lectures. These will be closed book and closed notes exams. No early or late exam will be given; if you miss an exam for medical reasons (you *must* document this; no other excuses are acceptable), you may be allowed or required to take a make-up exam, or the other parts of the course will be counted proportionally more (the choice is the instructor’s). In particular, forgetting the time or place of an exam is not an excuse for missing it!

Extra Credit. Extra credit is tallied separately and does not figure into the scores for assignments. At the end of the term, I will multiply the percent of the extra credit by 5 and add it into the overall score. So, for example, if you get 80% of the extra credit points, at the end of the quarter, your final score will be your overall score plus 4 ($= 80\% \times 5$).

Weighting. The weights of the assignments and exams are:

Homework assignments	25%
Lab assignments	25%
Midterm exam	20%
Final exam	30%

We reserve the right to change the grading schemes and the weighting.

Academic Integrity

The UC Davis Code of Academic Conduct, available at <https://sja.ucdavis.edu/files/cac.pdf>, applies to this class. For this course, all submitted work must be your own. You may discuss your assignments with classmates or the instructor to get ideas or a critique of your ideas, but the ideas and words you submit must be your own. Unless *explicitly* stated otherwise, collaboration is considered cheating.

Remember to cite, and give the source for, anything you copy or paraphrase, as is standard academic protocol. Plagiarism is cheating and will be handled as such.

Any cheating will be reported to the Office of Student Support and Judicial Affairs.

Public Health Expectations and Best Practices

Keeping our campus healthy takes all of us. You are expected to follow university public health requirements and pursue personal protection practices to protect yourself and the others around you. These include:

- Participate in the university's daily screening process.
Everyone must complete a Daily Symptom Survey (<https://symptomsurvey.ucdavis.edu/>) to access a university controlled facility.
- Participate in the university's testing program.
All students are required to participate in the COVID-19 testing program as required by their vaccination status — every four days for unvaccinated students and every 14 days for vaccinated students. You may test more frequently.
- Face coverings are strongly recommended and required in some locations.
Everyone is encouraged to wear a face covering indoors. Face coverings are required at the ARC testing kiosk, in mass transit and healthcare settings.
- Comply with the UC COVID-19 Vaccine Policy.
All UC Davis employees and students are expected to keep current on their vaccine status or hold an approved medical or religious exception. Failure to comply may result in discipline leading up to dismissal or disenrollment.
- Report your positive COVID-19 diagnosis and test result.
If you are diagnosed with COVID-19, notifying UC Davis is required and initiates the contact tracing process, including quarantine/isolation, close contacts notification and managing facility exposure risks.
- Assist in the contact tracing process.
If you're contacted by a case investigator, it means you have been identified as a close contact; please respond promptly. You must assist with identifying other individuals who might have some degree of risk due to close contact with individuals who have been diagnosed with COVID-19.

Other Information

You can get more information about COVID and the campus on the Campus Ready web site. The web site Resource FAQ for Students also has useful information about the University for students .