

Course Syllabus S

CSE 237 -- Storage Systems

Time: TTh 11:40–1:15 PM

Location: Crown Classroom 208

[Prof. Scott A. Brandt](#)

Instructor: (<http://www.soe.ucsc.edu/~sbrandt/>)
(sbrandt@ucsc.edu (<mailto:sbrandt@ucsc.edu>))

Office: E2 369

Hours: T 2-3

Course Description

This course is a graduate level study of the issues in the design and implementation of computer storage systems.

The course proceeds by topic, beginning with systems of historical significance and ending with more modern systems. As time permits we will discuss current research topics of interest to the students in the class (and the professor, of course). The readings are taken from the research literature. Topics include, but are not limited to: Storage Technologies, File Systems, Distributed File Systems, High-Performance Storage Systems, Next Generation Storage Systems, and others.

In terms of preparation, you are expected to have basic operating system knowledge, such as presented in a standard undergraduate operating systems course. Ideally, you will have taken CSE 231, Advanced Operating Systems, or equivalent.

Course Schedule

(<https://canvas.ucsc.edu/courses/88815/pages/schedule>)

Course Requirements

Readings

The course is structured around a reading list of representative papers in various areas of operating

systems. We will cover 1–2 papers per class, for a total of ~40 papers over the term. It is essential that you read each paper **before** the class in which it will be discussed. Links to the papers will be provided.

Before the class in which each paper will be discussed, you must prepare a short summary of each paper. Summaries must concisely answer the following questions. (Copy this template and insert your answers below each question):

Name: <your name>

Paper: <Title and authors>

1. What is the problem the authors are trying to solve?
2. What other approaches or solutions existed at the time that this work was done?
3. What was wrong with the other approaches or solutions?
4. What is the authors' approach or solution?
5. Why is it better than the other approaches or solutions?
6. How did they test their solution?
7. How does it perform?
8. Why is this work important?
9. 3+ comments/questions

Discussions

This is a discussion-based graduate seminar class. I expect everyone to participate in the in-class discussions about each paper. If you don't contribute, I may call on you.

Project

You will be required to write a report on a topic in the area of computer storage systems. This report should be the results of 1) original research (preferred), 2) an implementation or analysis project, or 3) a *strong* survey of a particular area in storage systems that includes at least 10-20 papers that were not discussed in class. Reporting work done for another course is not acceptable. In developing your project you will be required to submit a proposal, design, etc. at regular intervals throughout the quarter. Because of the size of the class, groups of up to 3 or 4 students are encouraged to work together (with an appropriately scaled project). Time permitting, each project group will give a presentation on their work. [Additional information about the projects is available here.](#)

[\(https://canvas.ucsc.edu/courses/88815/pages/projects\)](https://canvas.ucsc.edu/courses/88815/pages/projects)

Exams

There will be a mid-term and a final exam. They will cover the readings and associated class discussions.

Grades

Your grade in the course will be computed as follows:

- 50% for the exams
- 50% for the project and presentation

Readings and class participation: As this is a seminar class, all students are expected to 1) read every paper and submit the summaries *before class*, 2) attend class, and 3) actively participate in class discussions to the extent possible given the size of our class.

Paper summaries are required: For each week's worth of paper summaries not submitted, your final grade will drop by 1 letter grade. If you want to get an A in class, you may miss no more than three paper summaries. If you miss eight or more paper summaries, you cannot receive a B in the class. The papers will all be available online; if you think you won't have time in a particular week, read and summarize the papers ahead of time.

Projects will be graded on both content and presentation (both written and oral/poster).

Academic Integrity

All of the work you turn in must be your own, with proper citations whenever you are presenting the work of others. If you get ideas or material from any source other than your own mind, you *must* cite that source. Failure to do so constitutes plagiarism and will not be tolerated—you will fail the course. When in doubt, err on the side of caution and cite your source.

Plagiarism in graduate school is far more serious than in high school or undergraduate studies. Your reputation depends on your integrity. You can overcome subpar work by doing better work, but it's much more difficult to overcome a reputation for dishonesty. ***Do your own work.***

I consider any use of AI to produce summaries or project materials to be plagiarism. Use of AI to create any course materials will result in dismissal from the class with an F, and a report to the university.

Do all of your writing for this class in Google Docs. That makes it easy to work on multiple computers and platforms, retains a secure backup of your work, facilitates collaboration, and stores a record of edits that can be useful in dispelling suspicion of AI usage. If I suspect AI has been used for any work, I will ask for access to your Google Doc to see the edit history. If you do not provide access upon request, that will be taken as an admission of plagiarism.

Course Summary:

Date	Details	Due
Fri Jan 9, 2026	 Syllabus Acknowledgement (https://canvas.ucsc.edu/courses/88815/assignments/766737)	due by 11:59pm
Tue Jan 13, 2026	 Summary: Ruemmler and Wilkes (https://canvas.ucsc.edu/courses/88815/assignments/803409)	due by 11:40am
Thu Jan 15, 2026	 Summary: McKusick et al. (https://canvas.ucsc.edu/courses/88815/assignments/803410)	due by 11:40am
Fri Jan 16, 2026	 Project Pre-Proposal (https://canvas.ucsc.edu/courses/88815/assignments/801718)	due by 11:59pm
Fri Jan 30, 2026	 Project Proposal (https://canvas.ucsc.edu/courses/88815/assignments/801720)	due by 11:59pm
Fri Feb 6, 2026	 Project Bibliography (https://canvas.ucsc.edu/courses/88815/assignments/801716)	due by 11:59pm
Fri Feb 13, 2026	 Project Plan (https://canvas.ucsc.edu/courses/88815/assignments/801717)	due by 11:59pm
Fri Feb 27, 2026	 Project Progress Report (https://canvas.ucsc.edu/courses/88815/assignments/801719)	due by 11:59pm
Thu Mar 19, 2026	 Final Paper Submission (https://canvas.ucsc.edu/courses/88815/assignments/801714)	due by 11:59pm