



CSCI 340 - Operating Systems Syllabus

Time/Location: 10:00-10:50am MW OCNL 121
11:00-11:50am Lab/Off.Hr MW OCNL 244

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Prerequisites: Grade of **C-** or above in CSCI 311 and CSCI320.

Catalog Description:

Operating system fundamentals, including history, process and thread management, concurrency with semaphores and monitors, deadlocks, storage management, file systems, and I/O.

Required Textbook:

[Operating System Concepts, 7th Edition](#)
by Abraham Silberschatz, Greg Gagne, Peter Baer Galvin
Wiley ISBN: 978-0471694663 <http://www.os-book.com/>

Resources: <http://www.ecst.csuchico.edu/~renner/csci340>
WileyPlus/Vista course pages & account on ecst server

You are responsible for accessing web-based course materials on a regular basis. Web-based activities will include graded quizzes, exercises, and labs.

Objectives:

The objectives of this course are to:

1. help students become familiar with the fundamental concepts of operating systems;
2. help students become competent in recognizing operating systems features and issues; and
3. provide students with sufficient understanding of operating system design and how it impacts application systems design and performance.

Course Outcomes

Upon successful completion of this course, the student shall be able to:

1. exhibit familiarity with the fundamental concepts of operating systems;
2. exhibit competence in recognizing operating systems features and issues; and
3. apply a mature understanding of operating system design and how it impacts application systems design and performance.

Relationship of Course to Program Objectives

This course supports the achievement of the following program objectives:

- Problem Analysis and Solution Design: *Significant*
- Oral and Written Communication: *Some*
- Social and Ethical Issues: *Minimal*
- Applicability to Future Endeavors: *Significant*

Relationship of Course to Program Outcomes

This course supports the achievement of the following program outcomes:

- *Outcome A*: An ability to apply knowledge of math, science, and engineering.
- *Outcome B*: An ability to design and implement programs as well as to analyze and interpret code and data.
- *Outcome C*: An ability to design a system, component, or process to meet desired needs.
- *Outcome E*: An ability to identify, formulate, and solve computing problems.
- *Outcome G*: An ability to communicate effectively.
- *Outcome H*: The broad education necessary to understand the impact of computing solutions in a global and societal context.
- *Outcome J*: A knowledge of contemporary issues.
- *Outcome K*: An ability to use the techniques, skills, and modern computing tools necessary for computing practice.



Grade Evaluation*:

This course is designed to give students an equal opportunity of exposure to both Theory and Practice. Students are expected to demonstrate proficiency on both the theoretical and practical aspects of this course.

Labs	30%
Quizzes/Exercises	20%
Midterm Exam	20%
Final Exam	30%

Lab Details:

Students will work individually on assignments, unless explicitly indicated otherwise on project specifications. If/When *pairing* is allowed, it will be expected that the work is done with partners sitting side-by-side >80% of time, in a truly collaborative fashion, not parsing out of subtasks. ABSOLUTELY NO LABS will be accepted without a design/usage file AND ample documentation in ALL source files.

Final Grades*:

Final grades shall be expressed as a percentage of the maximum possible score of all evaluated materials. Letter grades will be given according to the following scheme:

Scale	letter grade	University Definition
[93,100]	A	Superior Work
[90,93)	A-	
[87,90)	B+	
[83,87)	B	Very Good Work
[80,83)	B-	
[77,80)	C+	
[73,77)	C	Adequate Work
[70,73)	C-	
[67,70)	D+	
[63,67)	D	Minimally Acceptable Work
[60,63)	D-	
[0,60)	F	Unacceptable

Any grade discrepancy must be submitted in writing, along with original document, within 1 week of distribution.

Quizzes/Exercises/Readings:

There will be both in-class and online quizzes and exercises throughout the semester. These will be posted in advance, whenever possible. However, you should ALWAYS come to class having prepared the reading and any recommended/required exercises for that days reading. YOU ARE EXPECTED TO HAVE READ THE CHAPTER IN ADVANCE OF ITS PRESENTATION.

Exams: There will be two exams given for this class; you **must** be present for both. Make-up exams will not be given without approval* from the professor. Any unapproved absence from an exam will yield a score of zero, no exceptions.

***Excused Absences:**

Requests for excused absences will be carefully reviewed and verified before approval or disapproval. Medical emergencies/crises must be officially documented and verifiable. Under normal circumstances, the following will not be grounds for approval: outpatient visits to a physician, traffic, car problems, work, etc.

Late drops and Incompletes:

University policies enforcing drop dates and criteria for incompletes will be strictly adhered to and at the professor's discretion. LATE DROPS are generally not given.

Academic Dishonesty:

You are required to turn in your own work and not the work of others. Collaboration on homework, projects and exams is prohibited, unless otherwise specified by the professor. Likewise, plagiarism[†] of other's work or web-related sources constitutes as a serious infraction. A penalty will be enforced for any student participating in any form of academic dishonesty. At the discretion of the professor, penalty may range from a zero grade for that assignment, to an F for the course. For serious or repeated infractions, the Vice-President for Student Affairs may also be notified with the recommendation of permanent suspension from the University.

†Plagiarism is an act that violates Section IV-A of the University Code. The copying of programs entirely or in part is considered plagiarism. You may discuss the programming assignments, general strategies, or algorithms with other people, but you may not collaborate in the detail development or actual writing of programs.

Tentative Schedule

Week	Chapter	Topic	Notes
1	Ch.1	Introduction	(omit 1.10)
2	Ch.2	OS Structures	(omit 2.8)
3	Ch.3	Processes	
4	Ch.4	Threads	
5	Ch.5	CPU Scheduling	(omit 5.9)
6	Ch.6	Process Synchronization	
7	Ch.6 (cont)		
8	MIDTERM EXAM		
9	Ch.7	Deadlock	(focus on 7.1-7.4)
10	Ch.8	Main Memory	(omit 8.6 & 8.7)
11	Ch.9	Virtual Memory	(focus on 9.1-9.6)
12	Ch.10	File System Interface	(omit 10.5 & 10.6)
13	Ch.11	File System Implementation	(focus on 11.1-11.5)
14	Ch.12	Mass Storage	(omit 12.3,7,8,9)
15	Ch.13	IO Systems	(omit 13.6)
16	FINAL EXAM		

NOTE: The above schedule is subject to change. It is your responsibility to make sure you know what is to be covered in the following weeks and if any changes were made on the schedule. Check the online pages regularly (between each class period).

*It is my policy to post scores to the gradebook on course web pages. Feedback will be provided via the web pages. I do **not** return exams. If you would like to see your work, request for additional feedback, or view exams, please feel free to do so during office hours.*

Please advise me immediately (within 1 week of start of classes), if you have a disability that will require a reasonable accommodation for the successful completion of this course.