UNIVERSITY OF TEXAS AT DALLAS
COURSE SYLLABUS

COURSE INFORMATION:

Course Number: CS 4348, Section 001 (Tuesday/Thursday 4:00pm)

Course Title: Operating Systems Concepts

Credit Hours: 3

Term: Fall 2022

PROFESSOR CONTACT INFORMATION:

Name: Greg Ozbirn

Phone Number: 972-883-4725

Office Location: ECSS 3.608

Office Hours: 2:30 pm – 3:30 pm, MW

Email Address: ozbirn@utdallas.edu

Website: www.utdallas.edu/~ozbirn

COURSE PRE-REQUISITES, CO-REQUISITES, AND/OR OTHER RESTRICTIONS:

Prerequisites: CS/SE 2340 and CS/SE 3377 and CE/CS/SE 3345.

COURSE DESCRIPTION:

An introduction to fundamental concepts in operating systems: their design, implementation, and usage. Topics include process management, main memory management, virtual memory, I/O and device drivers, file systems, secondary storage management, and an introduction to critical sections and deadlocks.

STUDENT LEARNING OBJECTIVES/OUTCOMES

Ability to understand processes
Ability to understand threads
Ability to understand and develop concurrent programs
Ability to understand simple memory management
Ability to understand virtual memory
Ability to understand scheduling algorithms
Ability to understand of I/O management
Ability to understand of file management
Ability to understand OS virtualization

REQUIRED TEXTBOOKS AND MATERIALS:

Operating Systems, Internals and Design Principles, Ninth Edition, by William Stallings, ISBN-13: 978-0-13-467095-9. © 2018 by Prentice-Hall, Inc.

SUGGESTED COURSE MATERIALS

Extra material may be posted on eLearning.

ASSIGNMENTS & ACADEMIC CALENDAR

Class	Date (29 classes)	Material Covered	
1,2	Aug 23, 25	Introduction, Chapter 1	Hardware Overview
3,4	Aug 30, Sep 1	Chapter 2	OS Overview
5,6	Sep 6, 8	Project 1	
7,8	Sep 13, 15	Chapter 3	Processes
9,10	Sep 20, 22	Chapter 4, Review	Threads
11,12	Sep 27, 29	**Exam 1** (ch. 1-4), Chapter 5	Concurrency, Synchronization
13,14	Oct 4, 6	Chapter 5	
15,16	Oct 11, 13	Project 2, Chapter 6	Deadlocks
17,18	Oct 18, 20	Chapter 7, Chapter 8	Memory Mgmt
19,20	Oct 25, 27	Chapter 8, Review	Virtual Memory
21,22	Nov 1, 3	**Exam 2** (ch. 5-8), Project 3	
23,24	Nov 8, 10	Chapter 9, 10	Scheduling
25,26	Nov 15, 17	Chapter 11, 12	I/O, File Systems
	Nov 22, 24*	Fall Break, Holiday*	
27,28	Nov 29, Dec 1	Chapter 14	Virtualization
29,30	Dec 6, 8	**Exam 3** (ch. 9-12, 14)	

GRADING POLICY:

The grade will be determined as described below. The lowest assignment score (assignments only, not projects or exams) is dropped. No other bonus work, make-up work, dropped scores, or other means of raising your grade should be expected. At the end of the semester, it is possible that grades may be curved, but a curve should not be expected.

Exam 1	20%
Exam 2	20%
Exam 3	20%
Project Average	30%
Assignment Average	10%

Letter grades are determined using the standard 10-point range for each letter, then dividing this range into three equal parts to determine the +/- designation.

COURSE & INSTRUCTOR POLICIES:

Assignments and projects must be turned in on time. Due dates will be followed by a 24-hour grace period. After the 24-hour period ends, the score is recorded as a zero. It is your responsibility to upload your work early enough to avoid possible problems uploading to eLearning. It is your responsibility to ensure that you have submitted the correct items. It is recommended that you double-check your submission to ensure it is correct.

Exams must be taken on time. Exceptions require advance approval by the instructor. It is up to the instructor to determine whether an exception will be made, and will depend largely on proof of extraordinary circumstances. Otherwise, a missed exam will either incur a substantial penalty or be recorded as a zero.

Exams have time limits. Students who continue to write on the exam after time is called or who start writing before the exam begins are subject to a penalty.

Students are expected to attend all class lectures. If absent, the student is still responsible for any material covered or anything said which the student missed.
The department policy for attendance is as follows: missing three consecutive classes results in a letter grade reduction, and missing four consecutive classes results in an F in the course.

All assignments, projects and exams are to be individual efforts. You are not to collaborate with other students, give your work to other students, or discuss solutions with other students prior to submission. Copying of assignments, projects and exams, in whole or in part, from other students in this semester or previous semesters will be considered to be an act of scholastic dishonesty.

Grades are not based on needs or consequences, but are based only on performance.

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Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

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Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

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Class Participation

Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

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Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct.](#)

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

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Off-campus Instruction and Course Activities
N/A

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources

The information contained in the following link lists the University's academic support resources for all students.

Please see http://go.utdallas.edu/academic-support-resources.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please review the catalog sections regarding the credit/no credit or pass/fail grading option and withdrawal from class.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.

Syllabus Addendum

Each student in this course is expected to exercise independent scholarly thought, expression and aptitude. This addendum to the course syllabus is provided to assist you in developing and maintaining academic integrity while seeking scholastic success.

General Comments:
- All academic exercises (including assignments, essays, laboratory experiments and reports, examinations, etc.) require individual, independent work. Any exception(s) will be clearly identified.
- Be sure your name or identifying number is on your paper.
- Complete and turn in academic exercises on time and in the required format (hardcopy, electronic, etc.).
- Retain confirmation of document delivery if submitted electronically.
- Retain all research notes and drafts until the project or assignment has been graded.
- Obtain written authorization from your instructor prior to submitting a portion of academic work previously submitted for any academic exercise. (This includes an individual or group project submitted for another course or at another school.)

Essays and Significant Papers:
Be prepared
- ☐ To present periodic drafts of work in process
- ☐ To correctly and completely reference all sources of information using the citation format prescribed
- ☐ To turn your completed assignment in timely and in the prescribed manner (electronic, hardcopy, etc.)

Examinations:
Be prepared
- ☐ To leave all personal belonging at the front of the room or other designated location (this includes cell phones, turned off of course, and beverage containers)
- ☐ To present your UTD Comet Card
- ☐ To remove your cap or hat
- ☐ To remove the batteries from any electronic device (e.g. calculator)
- ☐ To exchange blue books or bring them early as required
- ☐ To change seating
- ☐ To sign out when exiting the testing room
- ☐ To be escorted for lavatory use

All episodes of suspected scholastic dishonesty will be reported according to University policy. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students and the University, policies on scholastic dishonesty will be strictly enforced. Penalties that may

be assessed for scholastic dishonesty may be reviewed in *Subchapter D. Penalties* at
http://www.utdallas.edu/student/slife/chapter49.html.