

Tentative Course Syllabus
TEXAS A&M UNIVERSITY – COMMERCE
CSCI 430 OPERATING SYSTEMS (OS)
CSCI 430 001 21205
Spring 2014 (01/13/2014 through 05/09/2014)

CLASS MEETINGS: Time: Tues & Thurs 11:00AM-12:15PM Location: EDS134	Instructor Office Hours (Jour209): Tues & Thurs: 12:15-2PM, 3:15-5PM or by appointment via email. (For your visits during the office hours, please still go ahead and drop me an email in advance in order to notify me that you will stop by, since I might have occasional mandatory meetings to attend, which might occasionally overlap with my office hours.)
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INSTRUCTOR:

Ünal “Zak” Sakoglu, Ph.D.
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Texas A&M University - Commerce
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Office Phone: 903-886-5242
URL: <http://people.tamu.edu/~sakogluunal>

TEXTBOOK:

Operating Systems Internals and Design Principles - 7th Edition
by William Stallings Prentice-Hall Inc., 2012, ISBN: 978-0-13-230998-1

COURSE DESCRIPTION:

Operating Systems (OS). A study of operating systems with emphasis on a multiprogramming environment; concentrates on principles involved in resource management; topics such as job scheduling and memory management are also studied. **Credit hours: 3.**

Prerequisites: CSCI241: Machine Learning and Computer Organization; and CSCI270 Data Structures and Algorithms.

STUDENT LEARNING OUTCOMES:

- (SLO430.1) Students will be able to identify the basic components, and functions of OS.
- (SLO430.2) Students will be able to identify modern memory management techniques.
- (SLO430.3) Students will be able to identify components of multiprogramming OS.
- (SLO430.4) Students will be able to identify processes, threads, and their management by the OS.
- (SLO430.5) Students will be able to identify concurrent programming techniques and job scheduling.
- (SLO430.6) Students will learn about some commercially available modern OS.

EXAMS & GRADING:

Attendance, class-participation & quizzes	20%
Homework Assignments	30%
Midterm Exam	20%
Final Exam (<u>Comprehensive of all the material covered</u>)	30%

COURSE OUTLINE/CONTENT:

Part One: Background (Chapters 1, 2)

Chapter 1. Computer system overview (Week 1 & 2: 1/14, 1/16, 1/21)

Parts of Chapter 2. Operating system overview (Week 2 & 3: 1/23, 1/28, 1/30)

Part Two: Processes (Chapters 3, 4, 5, 6)

Parts of Chapter 3. Process description and control (Week 4 & 5: 2/4, 2/6, 2/11)

Parts of Chapter 4. Threads (Week 5 & 6: 2/13, 2/18, 2/20)

Parts of Chapter 5. Concurrency I: Mutual exclusion (Week 7 & 8: 2/25, 2/27, 3/4)

Midterm Exam: (Week 8, Thursday, 3/6/2014)

Spring Break: (Week 9, March 10 through 14, 2014)

Parts of Chapter 6. Concurrency II: Deadlock and starvation (Week 10 & 11: 3/18, 3/20, 3/25)

Part Three: Memory (Chapters 7, 8)

Parts of Chapter 7. Memory management (Week 11 & 12: 3/27, 4/1, 4/3)

Parts of Chapter 8. Virtual memory (Week 13 & 14: 4/8, 4/10, 4/15)

Part Four: Scheduling (Chapters 9, 10)

Parts of Chapter 9. Uniprocessor scheduling (Week 14 & 15: 4/17, 4/22, 4/24)

The last week will be used for covering the course materials for missing days, if any; covering any unfinished course materials from the days before, if any; Q&A/review session if time permits, and possible participation in project presentations. (Week 16: 4/29, 5/1)

Final Exam: Finals Week, Tuesday, May 6th, 2014, 10:30am-12:30pm as per the final exam schedule: <http://www.tamuc.edu/admissions/registrar/academicCalendars/final-exam-schedule.aspx>

COURSE REQUIREMENTS:

Study: To plan a minimum of three hours of outside preparation for each hour of class is a safe time allocation for successfully completing the course.

Assignments: There will be regularly assigned homework problems. Assignments will be given and returned via the university's online **eCollege** system (<https://secure.ecollege.com/tamuc>) as a convenience to the students and the instructor. It is the student's responsibility to login and check the eCollege course shell/site daily for announcements, assignments and course-related content. ***It is very important that students follow the instructions carefully on the assignments.*** It is the student's responsibility to have all assignments ready on time by the given due date. Late assignment may *not* be accepted or may be *penalized* and assignment may not be accepted beyond a certain time. Important material from the text will be covered in class. Students should plan to take careful notes as not all material can be found in the texts or readings. Discussion and asking questions are very much encouraged. End of chapter activities and some online activities may be assigned to reinforce material in the text.

Exams: Two exams will be given, one midterm exam and one final exam. The exams will be closed book/notes and will test assigned readings and material discussed in class. The instructor may add other necessary exams if he sees necessary.

Attendance: Student participation will be graded by the level of class participation and attendance. Students are expected to attend every class. The student may fail the course if his/her absence is excessive (see the "University Rules and Procedures" section below).

Quizzes: *Unannounced* pop-quizzes will be given to help ensure students stay up with assigned material.

Students can see their graded assignment, quiz and exam papers during the office hours. The students have two weeks to see their graded papers after the grades are announced/uploaded to eCollege. This time duration is one week for the last two assignments, the last two quizzes and the final exam. Grades accumulated so far in the class by the students may be provided on eCollege to the students as a courtesy by the instructor so that the students can see where they stand gradewise. The overall course grades are finalized after all the exams, assignments, quizzes and attendances are weighed and evaluated at the end of the semester.

The instructor maintains the right to modify the course syllabus & policies within the semester if need arises.

ACADEMIC ETHICS:

"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student's Guide Handbook, Policies and Procedures, Conduct). Ethics include the issue of plagiarism, and copying parts or whole of assignments, quizzes and exams is just as serious as any other type of plagiarism. If you are caught sharing or using other people's work, you will warning on the first instance and you might receive a 0 grade. A subsequent instance might result in receiving an F grade for the course, and possible disciplinary proceedings. The student who shares as well as the one who copies will both receive a 0.

ATTENDANCE POLICY :

Student participation will be graded by the level of class participation and attendance. Students are expected to attend every class. The student may fail the course if the attendance is below a certain percentage. If a student is absent from class on the due date of any assignment, they are expected to make alternative arrangements to assure that the assignment is turned in ON TIME. Any student wishing to withdraw from the course must do so officially as outlined in the class schedule. **THE INSTRUCTOR CANNOT DROP OR WITHDRAW ANY STUDENT.**

COURSE REQUIREMENT DEADLINES:

Credit will be given for ONLY those exam(s), program(s), and/or project(s) turned in no later than the deadline(s) as announced by the instructor of this class unless prior arrangement has been made with the instructor. Late assignments will be penalized, and the instructor may not accept late assignments after a specified period.

METHOD OF EVALUATION (Tentative):

Final average Letter grade

90 – 100	A
80 – 89.99	B
70 – 79.99	C
60 – 69.99	D
Below 60	F

STUDENTS WITH DISABILITIES REQUIRING ASSISTANCE:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library

Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

StudentDisabilityServices@tamuc.edu

UNIVERSITY RULES AND PROCEDURES can be accessed at

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/>

Section 13 is about **Students (Academic).**