

**CSCI 530 01W: Operating Systems
Summer II 2014 (Web-based)
TENTATIVE SYLLABUS (subject to change at any time)**

INSTRUCTOR:

Dr. Ray Maleh
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Office Hours: Virtual Office, questions will be answered within one business day.

CLASS MEETING TIMES:

July 7, 2014 - Aug. 7, 2014

TEXTBOOK:

Operating Systems *Internals and Design Principles* --- 7th Edition by William Stallings Prentice-Hall Inc., 2012.

COURSE DESCRIPTION:

General theory and concepts behind operating system design are discussed in this course. Topics include operating system structures, memory management, process scheduling, process synchronization and communication, deadlocks, and case studies of other commercially available operating systems.

STUDENT LEARNING OUTCOMES:

1. List and understand the basic functions and parts of an operating system (OS).
2. Understand modern memory management techniques, including virtual memory.
3. Understand fundamental concepts of OS such as multiprogramming and multiuser systems.
4. Understand process management algorithms, structures, and threading.
5. Understand issues with concurrent and parallel programming, including deadlocks.
6. Learn specific mechanisms for modern OS such as Linux and Windows Vista.

METHOD OF EVALUATION (Tentative):

Your grade in the course will be calculated as follows:

Mini-Projects (4x, 20% each):	40 %
Biweekly Quizzes (4x, 10% each):	40%
Final Exam	20 %

Four homework assignments/mini projects will be assigned. The assignments will typically consist of one or two hand calculations as well as a programming component which will ask you to simulate some operating system procedures. The code for these assignments must be in C, C++, or Java (I assume everyone is familiar with at least one of these languages). For the programming components,

please include the output of your program in your homework and provide your source code separately. The due dates of the homework assignments will be announced on e-College. You will have one week to complete each assignment. Homework assignments are to be typed and submitted on e-College in some sort of text file (raw text or Microsoft Word). Multiple files (including source files) are to be submitted separately and should not be encapsulated into any sort of compressed file or folder (e.g. zip or rar). A drop box will be created for each assignment. Homeworks will be due exactly one week after they are assigned.

There will also be a series of biweekly quizzes administered every Thursday evening between 6:00 PM and 11:59 PM central standard time during the first four weeks of class. Typically, each quiz will consist of 10 multiple choice questions that are carefully designed to ensure that you are keeping up with the course material. You will have 15 minutes to complete each quiz. Quizzes will be open-book; however, no collaboration with other humans is allowed.

A final exam will be administered online and will consist of multiple choice questions. It will be administered on Thursday August 7, 2012. The exam is "open-book" and you are allowed to utilize any non-human reference. However, if you have to spend a lot of time looking up information, then you will find that you will have a harder time finishing the exam within the time limit. Also, you are not permitted to collaborate with other students in the class. I will use fairly sophisticated statistical techniques to evaluate whether there is a high probability of cheating when I come across two or more exams with many similar incorrect answers.

Your final letter grade will be determined as follows:

- A - total number of points ≥ 89.5
- B - $79.5 \leq$ total number of points < 89.5
- C - $69.5 \leq$ total number of points < 79.5
- D - $59.5 \leq$ total number of points < 69.5
- F - total number of points < 59.5

I reserve the right to curve the grades in the course; however, for a given raw average, you will at least earn the grade letter shown above (if not better). As you will notice, I have already incorporated a standard rounding scheme into the schedule of grades. Thus, please do not ask me to round your grade at the end of the semester.

At the end of every semester, there is always at least one student who asks to have his/her final grade changed due to some external heart-breaking circumstance (e.g. I need an "A" because a "B" will keep my core GPA below 3.0 and I can't graduate.) Don't try this on me! It is a waste of my time and your time. The only time I ever change a grade at the end of the semester is if there is an error on my part in grading.

TECHNOLOGY REQUIREMENTS

In order to successfully participate in and complete this course, you must have access to a computer with internet access that can run the e-College software. You will also need access to word processing software (preferably Microsoft Word). Within the e-College interface, you must be accessible with the following

tasks: reading and posting to a discussion thread, uploading and downloading documents from "Doc Sharing," uploading homework assignments/papers into an appropriate drop box, and taking exams online. If you are uncomfortable with performing these tasks, then you are encouraged to view the tutorial that is offered on the e-College website. In addition, you can always ask the e-College technical support staff or me if you require assistance.

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).

COURSE DROP POLICY:

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. IF YOU SIMPLY STOP COMING TO CLASS WITHOUT FORMALLY DROPPING AND YOU HAVE A FAILING GRADE, I AM REQUIRED TO GIVE YOU AN F.**

COURSE REQUIREMENT DEADLINES:

Credit will be given for ONLY those exam(s), program(s), homework(s) and/or project(s) turned in no later than the deadline(s) as announced by the instructor of this course. There will be no exceptions and no excuses accepted.

ACADEMIC ETHICS AND HONESTY STATEMENT:

Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. "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).

Academic dishonesty includes, but is not limited to, cheating on tests, plagiarism and collusion. ***Cheating*** includes copying from another student's test or homework assignments or projects or quizzes, using materials not authorized, collaborating with or seeking aid from another student during a test, knowingly using, buying, selling, stealing, or soliciting the contents of an unadministered test, and substituting for another person to take a test. ***Plagiarism*** is the appropriating, buying, receiving as a gift, or obtaining by any means another's work and the unacknowledged submission or incorporation of it in one's own written work. ***Collusion*** is the unauthorized collaboration with another person in preparing written work for the fulfillment of course requirements. Academic dishonesty is a serious offense in college. You will be given not only a failing grade on the assignment or test, but also a failing grade for the class. Further, it will result in suspension from college.

PLAGIARISM:

In any written paper or test or assignment or quiz or project including code and/or documentation, you are guilty of the academic offense known as plagiarism if you half-copy or copy another author's sentences, words or any part of the content. **This will result in an automatic grade of "F" for the**

course. Hence any of these must be fully avoided in order not to fail the class. Students copying from work done in previous semesters by former students as well as copying from internet sources without proper referencing will result in you failing this course. You cannot mix the author's words with your own or "plug" your synonyms into the author's sentence structure. To prevent unintentional borrowing, resist the temptation to look at the source as you write. The author's words, phrases, sentences must be put in your words and in your way of writing! When you do this, you are demonstrating your ability to understand and comprehend the material!

STUDENTS WITH DISABILITIES:

Students requesting accommodations for disabilities must go through the Academic Support Committee. For more information, please contact the Director of Disability Resources & Services, Halladay Student Services Bldg., Room 303D, (903) 886-5835.