CS 3100
Operating Systems
Spring 2012 Syllabus

Your goal must be to learn, my goal must be to help you learn

Instructor: Delroy A. Brinkerhoff
Office Hours: 1:30 - 2:30 MW, 11:30 - 1:30 Tue
Office Location: TE 111A
Phone: 626-7345
E-Mail: dabatwsu@gmail.com (class questions, read frequently), dbrinkerhoff@weber.edu (general)

Time and Room: 11:30 - 1:20 MW TE 103C

Text: Operating System Concepts Essentials (similar to the 8th Edition)
Author: Silberschatz, Galvin, and Gagne

Prerequisites: CS 2420

Grading:
- Programs 30% (see Canvas for dates & details)
- Midterms 30% (on Chi Tester taken in a testing center; closed book/notes).
  Students are responsible for knowing the exam dates and the testing center hours
  • Midterm 1, Chaps 1 - 6; 2/26 - 3/2; NO CLASS 2/27)
  • Midterm 2 / Final, Chaps 9 - 11 (4/17 - 4/24)
- Programming Tests 30% (in class; open book/notes/examples; up-loaded to Canvas)
  • Test 1: 1/31 - 2/4 (ch 1 - 3, project 1)
  • Test 2: 2/21 - 2/25 (date tentative; ch 4, 6, project 2)
  • Test 3: 4/11 - 4/15 (ch 9, 10, project 3)
- Quizzes 10% (on Chi Tester taken in class - closed book / notes)

  90% ≤ total < 100% A
  86% ≤ total < 90% A-
  82% ≤ total < 86% B+
  78% ≤ total < 82% B
  74% ≤ total < 78% B-
  70% ≤ total < 74% C+
  62% ≤ total < 70% C
  0 ≤ total < 62% E

Incomplete Grades: An “Incomplete” may be given only when the student, having satisfactorily completed approximately 80% of the required work, is unable to complete the class work for a legitimate reason (such as illness, accident, or other emergency).

Programs and Problems: All programs are submitted electronically through Canvas & are due by 11:59 p.m. on the due date.

Problems: Programs are graded on Windows from the command line with MS Studio 2010. Assignments and due dates are located on Canvas. For your convenience, an announcement is always made on Canvas whenever a significant change is made (an assignment is posted or any due date changes). Please configure Canvas to forward the announcements to you and review the Canvas calendar or syllabus sections frequently.

Attendance: Attendance is mandatory! Please do not schedule work or leisure activities that conflict with class.

Study Time: A common “rule of thumb” for allocating study time is 2 to 3 hours of study per credit hour (i.e., 8 - 12 hours per week for CS 3100). Please do not overload your schedule.

Quizzes: You must be in class to take the quizzes

Bad Weather Policy: Please do not take unnecessary risks in inclement weather. Quizzes and programming tests will be rescheduled in the event of bad weather.

CS Lab Use: Do not unplug any cables. Please plug laptops into the outlets in front of your seat.

Program storage is not guaranteed on lab computers– please bring a flash or external drive to class. Laptops should be connected to the secure Weber network.

Do not play games or view any non-class-related web sites during class, this includes on laptops.
Honesty & Fair Use: Each student is expected to maintain high standards of honesty and ethical behavior. Homework and programs must represent the student’s own, best effort. You are encouraged to study together and to work together on the homework and programs at the conceptual level. This means that it is okay to discuss ideas, algorithms, syntax, and code in general with others. You may also get ideas and code fragments from books or from the Internet. However, you may not copy answers, whole functions, classes, files, or programs from someone else, from a book or from the Internet; nor may you exchange or share code in any electronic format - including code from previous semesters. If this is or any other dishonesty is demonstrated, you will fail the course and may face University disciplinary action. If you have any questions about what is acceptable and what is not acceptable, you may ask the instructor.

Please do not ask students (passed or present) to see copies of their assignments. Please do not give other students (current or future) copies of your assignments.

Plagiarism will result both in a failing grade and university sanctions. The university expels students plagiarism is proven the second time.

Disclaimer: This syllabus is subject to change at any time. Alterations made in class or on Canvas supercede this document. Please see Canvas for current information.

Students with Disabilities: Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Services Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

Objectives:

• Course Objectives
• Understand the purpose of and the services provided by operating systems
• Understand the advantages and potential disadvantages of the four main operating system architectures: ad hoc, layered, microkernel, and modular
• Understand many of the internal data structures and algorithms that operating systems use to efficiently manage computing resources.
• Understand and be able to use operating system calls to access computing services not available through language-specific library functions
• Understand how operating systems spawn new processes and threads, and will have practical experience programming these operations in one operating system.
• Understand how operating systems synchronize concurrent tasks, and will have practical experience programming these synchronization tasks in one operating system.
• Understand and have solved problems relating to task scheduling.
• Understand how directories and file systems are implemented.
• Understand and have solved problems relating to disk scheduling algorithms.