Course: CS3810-Computer Systems Organization and Architecture

Text: Computer Organization and Design: The Hardware/Software Interface (fifth edition), D. Patterson and J. Hennessy, Morgan Kauffman, 2014. ISBN-13: 978-0-12-407726-3

Meets: MWF 01:30pm – 2:20pm Engineering 106

Course Description: Examines organization and high-level architecture of computer systems. Covers terminology, data representation, Boolean algebra, and combinational sequential logic circuits. Covers processor and memory design for optimal performance, I/O subsystems, networking, and computer security.

Prerequisites: 2.0 GPA; grade of C- or better in CS 1410.

Credits: 3

Instructor: Prof. Bryan Willis

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Phone: 435-757-4092

Office:

Office Hours: (as needed) in the Engineering Atrium. **For all other times, please visit the receptionist in Old Main 414 to ask for availability.**

Course Objectives:

objective	level of proficiency	evaluation method
memory hierarchy	familiarity	assignments, exams
virtual memory	mastery	assignments, exams
storage and I/O topics	mastery	assignments, exams
multicores & multiprocessors	familiarity	assignments, exams
clusters	mastery	assignments, exams
GPU systems	familiarity	assignments, exams

How to contact me: Please email me if you have any question or need to talk to me. Feel free to ask short questions via email, but I may not respond if I am swamped (and I am often swamped).

Attendance: Your attendance is expected -- every day class is scheduled. I often make important announcements in class that are not repeated on canvas. **If you miss a class, please talk to someone else to find out what you missed.**

Course Handouts: Class notes, program assignments, and special announcements will be made available on canvas.

Exams: Exams account for 70% of your final grade. There are five one-hour exams, each graded on a 100-point scale. Each exam emphasizes material covered in class since the previous exam; however, because the material for each exam builds on previous material, each exam can be considered comprehensive. Students are responsible for material covered in prerequisite courses. All exams will be taken over the CS department iNetTest utility at ciltest.usu.edu and administered at the TarLab in ESLC 131. Exams open at 10am on the Wednesday before they are due, and close at 10pm Friday of the due date.

Make-up Exams: There will not be a need for any make-up exams in this class.

Homework: Homework accounts for 30% of your final grade. There are 14 assignments, worth a total of 2400 points. The point value for each homework problem is specified next to the problem in the text. The last homework assignment is a programming assignment worth a total of sixty points. Because electrons are easy to recycle, all homework will be submitted via canvas.

Regrading: If you feel that an assignment or exam of yours has been graded incorrectly, submit a concise written summary of your concern to the instructor. Indicate specifically why you believe your work was graded incorrectly. Requests of the form "I feel I deserve more points" will be rejected almost instantaneously.

Points:

sum of all exams - 70 points
sum of all homework - 30 points

total: 100 points

Grading:
90-100 points - A
80-89 points - B
70-79 points - C
50-69 points - D
0-50 points - F

Academic Dishonesty: This course adheres to the cheating policy for courses in the Department of Computer Science found at http://www.cs.usu.edu/htm/cheating-policy/. Cheating on assignments or exams in any form will not be tolerated. Negative point values, failure in the course, and academic expulsion are possible consequences of academic dishonesty.

Extra Credit: No extra credit is available. Don't ask.

Incompletes: According to university policy, incompletes are not to be given for poor performance. There will be no incompletes given except for conditions beyond the student's control. Such conditions have to have written documentation. The term "conditions beyond the student's control" includes (1) incapacitating illnesses that prevent a student from attending classes for a period of at least two weeks; (2) a death in the immediate family; (3) financial responsibilities requiring a student to alter course schedule to secure employment; (4) change in work schedule as required by an employer; or (5) other emergencies of this nature. When an incomplete is given, it is anticipated that the remaining work will be finished within two or three weeks. If the course must be retaken to make up the work, an incomplete is not appropriate. There are provisions in case of emergency to permit a student to withdraw (grade of W) from a course after the regular drop period when it is not feasible to give an I.

ADA Statement: Students with physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations in accordance with the Americans with Disabilities

Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

Late Adds: The last day to add this class is January 26. Attending this class beyond that date without being officially registered will not be approved by the Dean's Office. Students must be officially registered for this class. No assignments or tests of any kind will be graded for students whose names do not appear on the class list.

Here are some important dates:

January 15- Last Day to Add Class

January 18 - MLK day (no class)

February 15 - President's Day (no class)

February 16 - Attend Monday Schedule

March 7 - Last day to drop

March 7-11 - Spring Break (no class)

April 29 – Classes End

April 25-29 - No Test Week