

CSI 250 – Computer Architecture – Fall 2018

Professor: Shaun D. Ramsey, Ph.D. (Dr. Ramsey with he/him/his pronouns)

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Office: DUNN N106a

Office Hours: MW 1:30 - 2:30pm, Tu 11:30am-12:30pm

(or by drop-in and appointment)

Tentative QSC Drop-In Hours: Tu 5:30-7:30pm, Th 7-8pm in DUNN N103

Class meetings: 250 TR 10 DUNN N103

Text: Essentials of Computer Architecture by Comer

Web: <http://shaunramsey.com//250>

Overview and Advising: This course is effectively a survey course covering a broad range of organization and architecture components and concepts. Digital logic, type representations and main memory will be considered. In addition, assembly and assembly related issues will cover another large chunk of this course. As a survey of the field of architecture, this course covers many aspects that come together to form a cohesive basis for further study in the field.

Suggestions: Get into a group. You may point out programming errors and discuss design with others, but all code must be of your own creation as that is the only way to learn. Copying the homework of another might help you pass an assignment, but your ability with programming and problem solving will definitely reveal itself during the examinations. So, do the work!

Grade Breakdown:

Exam I:	25%
Exam II:	25%
Final:	25%
Homework:	25%

Attendance: Attendance is mandatory in this course. On your sixth absence in a MWF course or your fourth absence in a TTh course, you automatically fail the course. As a matter of courtesy, you are expected to notify Dr. Ramsey before class describing the reason of your absence. You must be present on the day of an exam or you will receive a 0. There is no distinction between excused and unexcused absences. It is quite likely that I will email you to discuss the reasons you have missed the class, but it is ultimately your duty to keep track of your absences and to contact me. Missing a class may result in missed classwork and/or quizzes. There are no make-up quizzes or classwork. It is your responsibility to obtain assigned homework, announcements and class notes from a classmate. Coming late (or leaving early) to class will also count against you. In this case, every two late arrivals (lates) count as an absence. Missing more than 15 minutes of a class counts as a full absence. Thus, for MWF, you fail the course with 12 lates or 6 absences or any mix of the two that

add up to 6. Examples are: 2 lates and 5 absences, 4 lates and 4 absences, 6 lates and 3 absences, and so on.

Lateness: As a general rule, late assignments receive a grade of 0. However, if you hand in a late assignment, I will consider it for partial credit. I encourage you to do this, as we learn this material by doing it!

Accommodations: If you have an accommodation that has been reported to the college, please let me know as soon as possible so I can work to meet your accommodation. Please notify me of any necessary accommodation at least two weeks prior to the requirement so we can make it happen. If you suspect you might need an accommodation, I recommend that you speak with OAS as soon as possible.

Academic Honesty: You are always subject to the Honor Code of Washington College. Always sign the honor code on materials that you hand in (including homework and exams). All work must be your own. When handing in any assignment, including a program, you are required to cite every reference, including web pages. Failure to do so will be considered plagiarism. For exams in this course, you will be expected to sign the honor code and you may be audio, image, or video recorded.

OIT Wants You: Washington College Office of Information Technology Infrastructure Team would like to welcome you to campus. As part of our mission, we strive to provide a working environment for students such as yourself to develop professionally. More specifically, it is our desire to offer opportunity for Computer Science majors to join our team their Freshman year and work on the team all four years with additional opportunities for summer employment. Additionally, a couple of you may develop your skills through classroom and work experience to become either Student Network or Software Analyst during your Junior/Senior years. If you would like more information on these opportunities please contact Brad Smith at bsmith6@washcoll.edu.

Career Center: It is important to utilize all the resources available to you. The Career Center is a wonderful center dedicated to helping you. You can receive mock interviews there, attend a career fair (next one is 9/27 at 3:30), and even attend a workshop on graduate school admissions (next one is 10/23 at 7pm). For more information on these programs and other ways to connect with the Center for Career Development, please contact Nanette Cooley at ncooley2@washcoll.edu.

Quantitative Skills Center: The Quantitative Skills Center (QSC) is a free tutoring service provided to the students of Washington College. The QSC is located on the main floor of the Miller Library. The QSC has drop in hours and appointment hours available to fit all schedules. The appointment sessions are one-on-one with a student tutor. Drop in hours will usually be small group and you can feel free to come and go as you please during the available times. See the top of this syllabus for the CS times! Please go to the Quantitative Skills Center website, washcoll.edu/offices/quantitative-skills-center, for more information or contact the Director, Kerrin Ehrensbeck by email at kehrensbeck2@washcoll.edu.

General Schedule:

Week 1 Transistors, Gates, Logic, Algebra, Units
Week 2 Continued Digital Logic, Clock
Week 3 Flip-flops, K-Maps
Week 4 Bases, Units
Week 5 Catch-up, Exam
Week 6 Data Representations
Week 7 Multiplication, State of the Art
Week 8 Assembly, Pipelines, Clocks, Instructions
Week 9 Compilation, Linking, Optimizations
Week 10 Catch-up, Exam
Week 11 CISC, RISC, Stalls and Forwarding
Week 12 Memory
Week 13 Parallelism
Week 14 Catch-up, Review

Note: This document and a tentative week by week schedule are available from the website listed above.