

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: TR 1:30-2:20 pm, W 12:30-1:20 (or by drop-in and appointment)

QSC Drop-In: TBD but right here in DUNN N103 twice a week

Class meetings: 250 MWF 1:30 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 problem solution errors and discuss design and approaches with others, but all code and homework submissions 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 and departures (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. In addition, attendance is a portion of your grade as described in the grade breakdown.

Lateness: As a general rule, late assignments receive a grade of 0. I encourage you to do the assignments! 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.

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, and even attend a workshop on graduate school admissions. 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 and it has CS meetings in DUNN N103. 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 with a 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.

Counseling Center: We all experience stressful and difficult events as a normal part of life. As your instructor, I am not qualified to serve as a counselor, but I am a useful ear. So please feel welcome to open a discourse with me. I may guide you to a counselor and if you do need an actual counselor, Washington College offers counseling services on-campus that are available to you at no cost. All counseling services provided are completely confidential and in no way connected to your academic record. I strongly encourage you to take advantage of this valuable resource. Please contact The Office of Counseling Services at 410-778-7261, or email: vanderson2@washcoll.edu to schedule an appointment.

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.