

## CSI 250 - Computer Architecture - Spring 2010

**Instructor:** Dr. Shaun D. Ramsey   **Email:** sramsey2@washcoll.edu  
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**Office Hours:**                               DUNN N102 M 3:30-4:20, W 2:30-3:20  
and T 1:00-2:15

**Class meetings:** TR 2:30 TOLL S111

**Overview:** This course covers a broad range of architecture concepts. Digital logic, numerical representations, and main memory will be considered. In addition, assembly and assembly issues cover approximately one third of the course, but are not the primary focus. Many topics and main ideas are considered, but this course covers breadth more so than depth in the field.

**Advising:** CSI 250 requires several prerequisites in CSI 202 and MAT 201. Strong programming and binary math is required.

**Exams:** Tentative exam dates are: 2/9, 3/18, 4/13. The final exam will be administered during its scheduled slot during final exam week. An absence on the day of the exam will result in a grade of 0. Except in cases of very extreme emergency, exams must be taken on the day the exam is given. Before a make-up test is scheduled, documentation of the extreme emergency must be given. Make-up exams for tests missed due to an extreme emergency will be arranged for a time that is mutually convenient for the student and Dr. Ramsey.

**Attendance:** Attendance is mandatory in this course. On your fifth absence, 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.

**Grading:** Each exam (and the final) is worth 20% of your final grade. Homework, classwork and quizzes are worth the last 20% of your grade. Programming assignments must be handed in on time and compile. Late homework (and programming that does not compile) will receive a grade of 0. Homework is due by the beginning of class on the day it is due. Do not 'touch' or modify your files on the server after handing in the assignment as this will change the time stamp.

**Academic Honesty:** You are always subject to the Honor Code of Washington College. Always sign the honor code on materials that you hand in to me. All work must be your own.

**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.

**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. Copying another students code will result in immediate failure. Visit the math center and course mentor! There are lots of resources.

Rough Outline:

|         |                                |
|---------|--------------------------------|
| Week 1  | Digital Logic                  |
| Week 2  | Flip-flops                     |
| Week 3  | K-maps/State Reduction         |
| Week 4  | Arbitrary Base and Exam 1      |
| Week 5  | Data Representation            |
| Week 6  | Arithmetic                     |
| Week 7  | Assembly                       |
| SPRING  | BREAK                          |
| Week 8  | Assembly and Exam 2            |
| Week 9  | Assembly                       |
| Week 10 | CPU and Memory                 |
| Week 11 | Caches                         |
| Week 12 | Caches                         |
| Week 13 | Caches and Locality and Exam 3 |
| Week 14 | Virtual Memory                 |