Instructor: Dr. Ralph Grove  
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Teaching Assistant: Venkata Yagnesh Suribhatla  
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Schedule:  
Meeting Time: TR 3:00-4:15pm  
Location: Const 1002  
Final Exam: Wednesday, April 29, 3:45-6:45 PM  
(No alternate exam times will be available.)  

Course Description:  
Fundamentals of the architecture and operation of modern computers. Basic computer logic: logic equations; gates; combinatorial logic. Basic computer arithmetic: binary numbers; floating point representation. System hierarchy, overview of a computer; integrated circuit technology. Performance: metrics; choosing benchmarks; Amdahl's law. Instruction Sets and Operations: assembly language; machine language; examples of other instruction sets.  
Prerequisites: MATH 102M or MATH 103M and a grade of C or better in CS 150 or ENGN 150.  

Learning Objectives:  
- Understand and define the basic elements of computer architecture  
- Understand and interpret digital logic circuits  
- Read and write MIPS assembly language instructions  
- Understand and apply binary number representation and basic computer arithmetic  

Course Content:  
- Computer Architecture and Performance (1.5 weeks)  
- Logic Design (5 weeks)  
- Assembly Language Instructions (5 weeks)  
- Computer Arithmetic (1 week)  


Website: http://www.blackboard.odu.edu
Assessment:
• Semester grades will be based on a weighted combination of the following items:
  • Homework (30%): Individual homework assignments will reinforce topics covered in class and in the readings.
  • Class Activities (10%): Students will complete group activities that reinforce topics presented in lectures. Activities will occur on various days, and will be posted on the website.
  • Midterm Exams (30%): Two midterm exams will be given during the semester.
  • Final Exam (30%): A comprehensive final will be given at the end of the semester.

• Scale (grade/minimum percentage score):
  A/93, A-/90, B+/87, B/83, B-/80, C+/77, C/73, C-/70, D+/67, D/60, F/0

Grading:
• Inquiries or disputes concerning grading should be made promptly, within 10 days of the posting of a grade. Older grades will not be reconsidered at the end of the semester.
• Grading of homework will be performed by the teaching assistant.
• Inquirers about homework grades should be sent first to the Teaching Assistant. If any inquiry is not satisfactorily resolved, then contact the instructor.

Late Assignments:
• A grade penalty of 10% will be assessed for assignments submitted up to 2 days late. No assignments will be accepted more than two days late.
• No extensions to assignment due dates will be given due to illness, school activities, routine problems etc., since there is plenty of time to complete assignments before the due date, with allowance for these situations. Extensions will be considered in the case of serious family emergencies, extended illness, or other lengthy absence only, and must be requested prior to the due date.

Class Policies:
• Absences:
  ◦ If you miss a class, you are responsible for material covered in that class, including any assignments and announcements made in class. Details of activities and assignments will be available on the class web site.
  ◦ Exams will be rescheduled only in the case of serious illness or emergency. Appropriate evidence may be requested. Students must notify the instructor in advance of the missed exam in order to reschedule.

• Academic Honor Code
  ◦ Old Dominion University is committed to students’ personal and academic success. In order to achieve this vision, students, faculty, and staff work together to create an environment that provides the best opportunity for academic inquiry and learning. All students must be honest and forthright in their academic studies. Your work in this course and classroom behavior must align with the expectations outlined in the Code of Student Conduct, which can be found at www.odu.edu/oscai. The following behaviors along with classroom disruptions violate this policy, corrupt the educational process, and will not be tolerated.
    ▪ Cheating: Using unauthorized assistance, materials, study aids, or other information in any academic exercise.
    ▪ Plagiarism: Using someone else’s language, ideas, or other original material without acknowledging its source in any academic exercise.
    ▪ Fabrication: Inventing, altering or falsifying any data, citation or information in any academic exercise.
    ▪ Facilitation: Helping another student commit, or attempt to commit, any Academic Integrity violation, or failure to report suspected Academic Integrity violations to a faculty member.
- Academic dishonesty will be reported to the Office of Student Conduct & Academic Integrity and may result in sanctions up to and including expulsion from the University.

- Accessibility
  - Students are encouraged to self-disclose disabilities that have been verified by the Office of Educational Accessibility by providing Accommodation Letters to their instructors early in the semester in order to start receiving accommodations. Accommodations will not be made until the Accommodation Letters are provided to instructors each semester.

- Classroom Etiquette:
  - Please do not:
    - Eat in the classroom
    - Carry on conversations during class
    - Use computers, tablets or cell phones in the classroom (step outside if necessary to take a call or message)
  - Please do feel free to:
    - Leave the classroom whenever necessary
    - Leave class early if necessary
    - Ask questions at any time

- Discussion Forums:
  - Please post questions (and answers) about assignments, general questions about the class subject, and any interesting and relevant news items to the Blackboard discussion forums. Students can learn a lot from each other, and these forums are a great way for you to help others by sharing what you know.

- Email:
  - When sending email, always include the class number in the subject line, e.g., Subject: CS170 homework 2 questions
  - This will help me to provide a quicker response to your message.

- Office Hours:
  - Students may drop in anytime during posted office hours. During other times when I'm in my office, I'll be glad to talk if my schedule is open, so feel free to ask.