Computer Architecture
CS 470
Introduction

Yashwant K. Malaiya
Colorado State University
Course Syllabus

- **Instructor:** Yashwant K. Malaiya  
  malaiya@cs.colostate.edu  
  **Office:** 356 CSB  
  **W 4:10-5 PM, F 10:10-11AM**
- **GTA:** Athith Amarnath  
  athith.amarnath@colostate.edu
- **Hours:** TBD
CS470

- **Prerequisites:** CS270, CS 370
- **Text:** Patterson & Hennessy, *Computer Organization & Design: The Hardware/Software Interface*, 5th ed.
  - Some material will be taken from recent publications and other sources.
- **Homework/Labs:**
  - Use of simulation at the logic level and some will use a machine/assembler level simulator.
- **Tests:** There will be one midterm and a comprehensive Final Exam.
- **Quizzes,** about twelve, mostly on canvas, but some may in the class, may be unannounced.
- **Term project:** Proposal (1-page): March 21, progress report: April 11, final report May 4.
  - A short presentation powerpoint presentation will be required as scheduled.
# Grading

<table>
<thead>
<tr>
<th>Element</th>
<th>Date</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm</td>
<td>March 10</td>
<td>20%</td>
</tr>
<tr>
<td>Final exam</td>
<td>May 8</td>
<td>25%</td>
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<tr>
<td>Homework &amp; programs</td>
<td>as assigned</td>
<td>about 18%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>In-class or on-line</td>
<td>about 18%</td>
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<tr>
<td>Term Project</td>
<td>Due on 5/4/17</td>
<td>15%</td>
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<tr>
<td>Participation</td>
<td></td>
<td>4%</td>
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Policies

• Assignments are due on the due date at the start of class, or by the time specified if electronic submission using RAMCT is required.
• You may turn assignments in up to 24 hours late for a 20% penalty. No credit will be given after that. In some cases, there may be no late period.
• If you will not be able to take an exam or make an assignment deadline due to an exceptional reason that can be documented, you must request the instructor in advance for possible alternative arrangements.
• Policies on cheating, plagiarism, incomplete grades, attendance, discrimination, sexual harassment, and student grievances are described in the [Student Information Guide](#). This course will adhere to the CSU Academic Integrity Policy as found in the General Catalog and the Student Conduct Code.
• Students are expected to be on time to class and stay until the class is complete, silence cell phones, to be alert and attentive and to use laptops only for class purposes.
Topics

- Review of logic design basics
- Computer Performance and Trends
- Assembly language programming
- Computer Arithmetic
- Central Processing Unit
- Paralleism for enhanced performance
- Memory Hierarchy
- Storage and IO
- Multiple processor systems