Syllabus
CS 2613 - Computer Organization
Spring 2012


Course Web Address: [https://learn.ou.edu/](https://learn.ou.edu/)

Instructor:  Dr. Mohammed Atiquzzaman
Office: DEH 250
Tel: 325-8077
Email: atiq@ou.edu

Office Hours: Mondays and Wednesdays 9.30 – 10:30 and by appointment

Lectures:  M W F: 10:30 - 11:20, CEC 119

Lab:  F: 9:30 - 11:20, CEC 439

Teaching Assistant:  Md. Shohrab Hossain
Office: DEH 115
Email: shohrab@ou.edu
Office Hours: Tues 11 – 12 noon and Thu 3 – 4 PM or by appointment

Prerequisite:  ECE 2213 (Introduction to Digital Design) or CS 2603 (Applied Logic for Hardware and Software)

Course Description:  An introduction to the architecture, organization and design of uniprocessor-based computer systems. Topics include processor, control and memory design and organization, pipelining and vector processing, computer arithmetic, I/O organization and a brief introduction to multiprocessors.

Course Outline:
- Overview and Background (Chapters 1-3)
- Register Transfer and Microoperations
- Basic Computer Organization and Design
- Programming Issues
- Microprogrammed Control
- Central Processing Unit
- Principles of Pipelining and Vector Processing
- Computer Arithmetic
I/O Organization
Memory Organization
Introduction to Multiprocessors

**Grading:** Approximately five homework sets will be assigned. A short in-class quiz will be given covering the material of each homework assignment.

Five lab exercises will be assigned. Each lab exercise will typically consist of a pre-lab portion followed by an in-class exercise where hardware circuits will be constructed.

One assembly language programming project will be assigned. Three exams, including the final, are also scheduled.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>Labs</td>
<td>15%</td>
</tr>
<tr>
<td>Programming Project</td>
<td>10%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>15%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**ABET Outcomes:** The course will measure ABET outcome I – an ability to use current techniques, skills, and tools necessary for computing practice.

**Students with Disabilities:** Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact the instructor as soon as possible to make necessary accommodations.

**Academic Integrity:** Rights and responsibilities under the academic misconduct code, University of Oklahoma Norman Campus can be found here: http://www.ou.edu/provost/integrity-rights/

**Student ratings:** The College of Engineering utilizes student ratings as one of the bases for evaluating the teaching effectiveness of each of its faculty members. The results of these forms are important data used in the process of awarding tenure, making promotions, and giving salary increases. In addition, the faculty uses these forms to improve their own teaching effectiveness. The original request for the use of these forms came from students, and it is students who eventually benefit most from their use. Please take this task seriously and respond as honestly and precisely as possible, both to the machine-scored items and to the open-ended questions.