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

Instructor:  Dr. Mohammed Atiquzzaman
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Office Hours:  Mondays and Wednesdays 9.30 – 10:30 AM and by appointment

Lectures:  M W:  10.30 – 11.20 AM, Felgar 304

Lab:  F:  9:30 – 11:20 AM, Felgar 304

Teaching Assistant:  Joseph McGill
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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. Short in-class quiz will be given covering the material of homework assignments.

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.
Quizzes 15%
Labs 15%
Programming Project 10%
Exam 1 15%
Exam 2 15%
Final Exam 30%
Total 100%

**ABET Outcomes:** The course will measure several ABET outcomes as listed below:

Outcome B: An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
Outcome C: An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
Outcome D: An ability to function effectively on teams to accomplish a common goal
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.

**Religious holidays:** It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required class work that may fall on religious holidays.

**Academic Integrity:** All work submitted for an individual grade, such as homework and projects should be the work of that single individual, not their friends or their tutor. Students who fail to do their own work not only violate the Code of Conduct for the University of Oklahoma, but also may fail to learn critical learning objectives for the class.

1. Do not show another student a copy of your homework or projects before the submission deadline.
2. Do not email your project to another student, even if they promise they will not copy it.
4. Make sure that your computer account is properly protected. Use a good password, and do not give your friends access to your account or your computer system.
5. Do not leave thumb drives around a laboratory where others might access them.
3. The penalties for knowingly permitting your work to be copied are the same as the penalties for copying someone else’s work.

Upon the first documented occurrence of collaborative work, I will report the academic misconduct to the Campus Judicial Coordinator. The procedure to be followed is documented in the University of Oklahoma Academic Misconduct Code. In the unlikely event that I elect to admonish the student, the appeals process is described at [http://integrity.ou.edu/summary_of_the_process.html](http://integrity.ou.edu/summary_of_the_process.html)

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

**Adjustments for Pregnancy/Childbirth Related Issues:** Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact me as soon as possible to discuss. Generally, modifications will be made where medically necessary and similar in scope to accommodations based on temporary disability. Please see [www.ou.edu/content/eoo/pregnancyfaqs.html](http://www.ou.edu/content/eoo/pregnancyfaqs.html) for commonly asked questions.

**Title IX Resources:** For any concerns regarding gender-based discrimination, sexual harassment, sexual misconduct, stalking, or intimate partner violence, the University offers a variety of resources, including advocates on-call 24.7, counseling services, mutual no contact orders, scheduling adjustments and disciplinary sanctions against the perpetrator. Please contact the Sexual Misconduct Office 405-325-2215 (8-5) or the Sexual Assault Response Team 405-615-0013 (24.7) to learn more or to report an incident.

**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.