CSCE 2610: Assembly Language and Computer Organization

Fall 2026 – Sections 002

College of Computing and Computer Engineering
Department of Computer Science
As the instructor of this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.
–Bhaskar Trivedi

Instructor Information

- **Instructor:**Bhaskar Trivedi
- **Class Location and Time :**
  - **Section 002 NTDP B155 Tu 12:15 PM - 1:35 PM**
- **Email : bhaskar.trivedi@unt.edu**
- **Office Hours** Monday Tuesday 2PM - 4 PM
- **Location : NTDP E235D**

Teaching Assistant

- **Section : 002**
- **Lab/Recitation 204 : Thursday, 9:40 AM -10:30 AM ,NTDP F243**
- **Lab/Recitation 205 : Thursday, 2:00 PM – 2:50 PM, NTDP F243**
- **Lab/Recitation 207 : Friday, 12:55 PM – 1:45 PM, NTDP F236**
  - **TA**
    - **Name :** Yanbo Dai
    - **Email:** YanboDai@my.unt.edu
    - **Office Hours and Location:**
      - **In-Person:** Thursday 11 AM - 12 noon
      - **In-Person:** Friday 1:50 PM - 2:50 PM
      - **Location:** E247A
  - **IA**
    - **Name :** Tharun Kumar Reddy Narapureddy

* **Email:** TharunKumarReddyNarapureddy@my.unt.edu
* **Office Hours and Location:**
  - **In-Person:** Thursday from 1:00–2:00 PM
  - **Location:** E247 -F

1. Course Description

Principles of computer systems organization, instruction sets, assembly language programming, computer arithmetic, data and control paths, and introduction to memory hierarchy.

2. Course Learning Outcomes

By the end of this course, students will be able to:

1. Understand the role of the different classes and components in a computer system and the interface between software and hardware in a computer system..
2. Apply metrics to evaluate performance of a computer system using clock rate and clock cycles per instruction (CPI). Understand the different aspects of execution times reported when program complete their execution.
3. Understand instruction set choices and write assembly language programs for simple C code and codes that include procedures.
4. Perform integer and floating-point calculations using computer arithmetic algorithms
5. Perform integer and floating-point calculations using computer arithmetic algorithms
6. Describe the requirement of memory hierarchy and evaluate the performance of different cache organizations.

3. Expected Student Outcomes

Computer Science Students

- Analyze complex computing problems and identify solutions.
- Design, implement, and evaluate computing-based solutions.
- Apply computer science theory and software development fundamentals.

Computer Engineering Students

- Identify and solve complex engineering problems.
- Acquire and apply new knowledge using appropriate learning strategies.

Information Technology Students

- Analyze computing problems and user needs.
- Design and evaluate computing-based systems.

4. Course Materials

- Computer Organization and Design: The Hardware Software Interface: ARM Edition by Patterson and Hennessy, Morgan Kaufmann, ISBN-13: 978-0128017333.

5. Course Communication

This course will use the Canvas learning management system (LMS) to distribute course materials, communicate and collaborate online, post grades, and submit assignments. You are responsible for regularly checking the Canvas course site for class work and announcements. You may find the Online Communication Tips (https://clear.unt.edu/Online Communication Tips) helpful. If you have questions about the course or material in general, you can attend your instructor's office hours or use your UNT e-mail address to e-mail your instructor directly at the e-mail address listed above with CSCE 2610-002 in the subject line.

6. Prerequisites

- CSCE 2100: Foundations of Computing (C or better)
- EENG 2710: Digital Logic Design

7. Weekly Schedule

Date	Topic	Assignments
8/18	Computer Abstractions and Technology	Lab, Quiz, Participation
8/25	Computer Abstractions and Technology	Lab, Quiz, Participation
9/01	Instruction set	Lab, Quiz, Participation
9/08	Instruction set	Lab, Quiz, Participation
9/15	Instruction set	Quiz, Participation
9/22	Instruction set	Lab, Quiz, Participation
9/29	Arithmetic for Computers	Lab, Quiz, Participation
10/6	Arithmetic for Computers (second class of the week)	
10/13	Midterm 1	Lab, Quiz, Participation
10/20	Processor design	Lab, Quiz, Participation

10/27	Processor design	Lab, Quiz, Participation
11/03	Processor design	Lab, Quiz, Participation
11/10	Memory Hierarchy	Lab, Quiz, Participation
11/17	Memory Hierarchy	Lab, Quiz, Participation
12/01	Comprehensive/Final Exam	Comprehensive Exam

8. Grading Breakdown

- lab attendance: 5% (2 absences allowed for a semester)
- In-Class Activity 10%
- Programming/Lab Assignments: 25%
- Homework Assignment: 15%
- Midterm Exam: 20%
- Comprehensive/Final Exam: 25%

9. Grading Scale

- A: $90 - 100\%$
- B: $80 < 90\%$
- C: $70 < 79\%$
- D: $60 < 69\%$
- F: below 60%

10. Course Policies

AI Policy

AI-generated submissions are not allowed without explicit instructor permission. Unauthorized use of AI tools will be treated as plagiarism.

Make-Up Exams

No make-up exams will be scheduled for any reason in most situations, and there will be no make-up work for any assessment in this course. In the event of an emergency absence (illness, etc.) proper documents should be provided for consideration.

Late Work Policy

There will be a 4-point penalty for each hour of late submission. For example:

- $0.0001 - 1$ hour late: -4 points
- $1.0001 - 2$ hours late: -8 points
- so on

Academic Integrity

All submitted work must be original. Any form of cheating or plagiarism will result in disciplinary action, which can include a score of 0 to -100 for the assignment, a final grade of F of the course, and a referral to the Office of Academic Integrity.

Attendance

Students are responsible for all material covered during absences. Lab attendance is mandatory unless excused in advance. Absence from class or recitation is permitted only in cases of emergency, including medical emergencies or participation in officially recognized university events. In all such cases, valid supporting documentation is required. Situations such as a flat tire, an engine failure in the car, or personal planning—among others—do not qualify as emergencies and will not be considered valid reasons for absence.

11. Accessibility

Students who require accommodations must register with the Office of Disability Access (ODA) and provide documentation to the instructor early in the semester.

Honor Code

"I commit myself to honor, integrity, and responsibility as a student representing the University of North Texas community."