CSCE 4600: Introduction to Operating System

Fall 2026 – Sections 001,501

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 001 NTDP E266 Fr 1:50 PM - 3:10 PM**
  - **Section 501 NTDP FR470 Th 12:30 PM - 1:50 PM**
- **Email : bhaskar.trivedi@unt.edu**
- **Office Hours** Tuesday 2 PM - 4 PM
- **Location : NTDP E235D**

Teaching Assistant

- **Section : 001**
- **Lab/Recitation 201 : Friday, 4:10 PM - 5:00 PM ,NTDP F218**
  - **TA**
    - **Name :** Chenyang Yu
    - **Email:** chenyangyu@my.unt.edu
    - **Office Hours and Location:**
      - **In-Person:** Tuesday 4 PM - 6 PM
      - **Location:** F205
- **Section : 501**
- **Lab/Recitation 551 : Thursday, 2:00 PM - 2:50 PM ,FRLD 224**
  - **TA**
    - **Name :** Biglari Ardebili Siamak

* **Email:** SiamakBiglariArdebili@my.unt.edu
* **Office Hours and Location:**
  - **In-Person:** Thursday 3 PM - 5 PM
  - **Location:** Frisco Room 424

1. Course Description

Concepts in operating system analysis and design. General topics of process, resource and file management are presented and analyzed in the context of different system architectures and performance constraints.

2. Course Learning Outcomes

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

1. Use the principles of processes and threads for abstraction of real-world events
2. Formulate solutions for mutual exclusion and process synchronization
3. Understand the concept of deadlock to develop deadlock free systems of processes
4. Understand principles of memory and resource management
5. Identify different process scheduling paradigms and utilize them in system development
6. Develop fundamental security features to protect systems and data

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

- Required Textbook: Online textbook via **zyBooks**
- Access via Canvas (do not create a separate zyBooks account)
- Other recommended Book : Operating Systems Concepts - Essentials, 2nd Edition, by Silberschatz, Galvin, and Gagne, Wiley, 2013. ISBN 978-1-11-880492-6

5. Access of Zybook

Sign in or create an account at learn.zybooks.com

- Click any zyBooks assignment link in your learning management system (Do not go to the zyBooks website and create a new account)
- Subscribe
- A subscription is $69

6. 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 4600-your class section in the subject line.

7. Prerequisites

- CSCE 3600 : Principles of System Programming (C or better)

8. Weekly Schedule

Date	Topic	Assignments
8/18	Processes and Thread	Lab, Quiz, Participation
8/25	Processes and Thread	Lab, Quiz, Participation
9/01	Scheduling	Lab, Quiz, Participation
9/08	Process Dependencies	Lab, Quiz, Participation
9/15	Synchronization	Quiz, Participation
9/22	Synchronization	Lab, Quiz, Participation
9/29	Synchronization	Lab, Quiz, Participation

10/6	Deadlock (second class of the week)	
10/13	Midterm 1	Lab, Quiz, Participation
10/20	Physical Memory	Lab, Quiz, Participation
10/27	Virtual Memory	Lab, Quiz, Participation
11/03	Mass Storage	Lab, Quiz, Participation
11/10	Filesystems	Lab, Quiz, Participation
11/17	Security	Lab, Quiz, Participation
12/01	Comprehensive/Final Exam	Comprehensive Exam

9. Grading Breakdown

- lab attendance: 5% (2 absences allowed for a semester)
- Zybooks Practice and Challenges: 10%
- Quiz: 10%
- Homework Assignments: 10%
- Lab/Programming Assignments: 15%
- Mid Term : 20
- Final Exams: 30%

10. Grading Scale

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

11. 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.

12. 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."