Course Introduction

Foundations of Computer I (CSCE 2100)[1,2]

Course Description

Introduces students to both data structures and formalisms used in computer science, such as asymptotic behavior of algorithms. Data structures and the formalisms used to both describe and evaluate those data structures simultaneously. By the end of the two-semester sequence of which this course is the first part, each student will have a solid foundation in conceptual and formal models, efficiency, and levels of abstraction as used in the field of computer science.

Course Structure

Lecture Section: The lecture portion of this course is **100% online**. We will have a few asynchronous videos throughout the semester. Other than that, your interaction with me and your fellow students will take place through Canvas. There are 16 weeks of course content that you will work through. Since the lecture is online, completing the weekly recitation problems and quizzes will be considered participation/attendance for the lecture portion.

Recitation Section: Recitation is **in person**, and **attendance is mandatory**. Attendance will be taken during each recitation session.

Credit hours: 3

Dates: 8/17-12/11

Expected Student Outcomes

Student Outcomes are measurable achievements to be accomplished by the completion of the degree. These outcomes are evaluated as part of our ABET accreditation process.

Computer Engineering Students:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Computer Science Students:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.

2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Information Technology Students:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing-based systems.

Course Outcomes

Course Outcomes are measurable achievements to be accomplished by the completion of the course. These outcomes are evaluated as part of our ABET accreditation process.

1. Define and use the basic operations of sets, functions, and relations.
2. Define and demonstrate the basic properties of trees and graphs.
3. Use elementary graph and tree algorithms including traversals and searches.
4. Describe assertions in propositional logic form.
5. Describe simple circuits, I/O, and satisfiability using Boolean logic.
6. Use combinatorics and conditional probability in solving real-world problems.
7. Demonstrate a solid foundation in conceptual and formal models by describing loop structures in summation and/or product notation.
8. Demonstrate an introductory knowledge of finite state machines.

Prerequisites

CSCE 1040; Corequisite: CSCE 2110

Co-requisite

Recitation section associated with the course section, and attendance will be checked.

Required Text

We will be using an online textbook this semester through zyBooks. The zyBook code is: **UNTCSCE2100LiFall2026**

ZyBooks: CSCE 2100: Foundations of Computing

1. Click any zyBooks assignment link in your learning management system (Do not go to the zyBooks website and create a new account)
2. Subscribe.

A subscription is **$94**. Students may begin subscribing on Aug 03, 2026 and the cutoff to subscribe is Nov 26, 2026. Subscriptions will last until Dec 25, 2026.

Optional Reference Text

*The Foundations of Computer Science*Links to an external site., by Alfred Aho & Jeffrey Ullman

Communication

Office hours:

Instructor:

Instructor Office Hours

Name	**Time**	**Email**	**Zoom**
Dr. Li	• Tuesday: 11:40 AM–1:40 PM via Zoom and by appointment only • Wednesday: 10:35 AM–12:30 PM in person; walk-ins welcome, no appointment necessary	Yuan.Li2@unt.edu	Zoom Meeting

Instruction Support Team

Role	**Name**	**Time**	**Email**
TA	Ammisetti Sivani	• Monday: 10:00am - 12pm in person • Wednesday: 3pm-5pm via zoom	AmmisettiSivani@my.unt.edu

		• Thursday: 10am-12pm in person	
TA	Seemaparvez Shaik	• Thursday : 2PM-4PM (Online) • Friday : 1PM- 2PM (In-person)	SeemaparvezShaik@my.unt.edu
IA	Chad Reardon	• Monday: 1:00pm - 3:00pm via Zoom • Tuesday: 2:00pm - 4:00pm in person • Friday: 10:00am - 12:00pm in person	ChadReardon@my.unt.edu
IA	Tejassri Gouraapathini	• Monday: 3:00pm - 5:00pm in person • Tuesday: 4:00pm- 5:00pm in person	TejassriGouraapathini@my.unt.edu

You will be expected to regularly check university email and course announcement regularly by being aware of assignments, quizzes, and other materials. For in-depth assistance with the course content, you are expected to meet with the IA/TA prior to meeting with the instructor. For quick questions, email is preferred, and you can expect a response within 48 hours during the work week (M-F 10 am-4:30 pm, no Saturday, no Sunday). For questions requiring more elaboration or discussions not appropriate for the IA/TA, office hours are preferred. The TA/IA and instructor will not reply to messages sent through Canvas.

For a grading issue, do not post your question as a comment after we have graded an assignment, because we do not see those comments unless we revisit every graded assignment. Please email your grading issue questions.

[1] Students who enroll and require assistive tech should use a high verbosity/punctuation, character-reading setting as well as any plugin libraries to better read the special characters involved.

[2] Students with accessibility needs should contact the instructor about Respondus.

Course Activities & Assessments

Activities

- zyBook reading (10%)
- Recitation (20%)

Assessments

- Quizzes (10%)
- Exam 1 and Exam 2 (30%)
- Exam 3 (30%)

Grading

- A: 90-100% (Outstanding, excellent work. The student performs well above the minimum criteria.)
- B: 80-89% (Good, impressive work. The student performs above the minimum criteria.)
- C: 70-79% (Solid, college-level work. The student meets the criteria of the assignment.)
- D: 60-69% (Below average work. The student fails to meet the minimum criteria.)
- F: 59% and below (Sub-par work. The student fails to complete the assignment.)

Grade-related Policies

Submission

All assignments must be submitted on time through the Canvas system with all required components, and students are responsible for ensuring that the correct files are uploaded for each assignment. In certain cases, if an assignment is submitted on time to an incorrect assignment location (e.g., submitting Homework 03 to the Homework 02 Dropbox on Canvas), if the wrong files are submitted, or if the submission is incomplete or missing

required components, the assignment will not be accepted and will receive a grade of 0 once the due date has passed or once the solutions have been posted or discussed during class. If you have any questions or concerns about your submission, please work with your TA or IA to ensure that the correct file(s) and all required materials are submitted.

Exams: Exam days are already posted and are considered fixed.

Missed exams: Exams cannot be missed. We do not have make-up exams.

Quizzes and Reading Assignments: Quizzes and Reading Assignments have a strict, hard deadline of Friday at 11:59 PM. Unlike Practice Problems, quizzes do not have an automatic late-submission period and will close permanently at the deadline.

Recitation: There are 9 Recitation Problems. You need to solve the problems given and submit your answers by the end of the class time. Please do not work on course assignments the day before they are due. Getting sick the day before their due date, it will not give you an extension. **WE DO NOT ACCEPT ASSIGNMENT SUBMISSIONS VIA EMAIL.**

Late Work

All coursework must be submitted electronically via Canvas ONLY. Late submissions will incur penalties as follows: a 50% penalty for late submissions within 0-23 hours, a 75% penalty for submissions within 24-48 hours, and no acceptance of work beyond 48 hours. According to department policy, we are unable to accept submissions via email. Furthermore, submissions will not be accepted once solutions have been posted. All holidays and weekends will be counted as calendar days. All work turned in after the deadline will receive a grade of zero unless the student has a university-excused absence Links to an external site.and provides documentation with 48 hours of the missed deadline.

Make-up Work

For most situations there will be no make-up work for any assessment in this course. However, in the event of an unavoidable absence for one of the reasons below, email me as soon as possible so we can work out a solution. The following events are grounds for make-up work: being a participant in a conference in which you are presenting; being in an athletic or other UNT associated event in which you are an active participant; a family emergency; a severe illness; military duty; or in certain cases and with some restrictions a religious event. Additionally, in the case of a missed assignment due to illness, make-up work will only be allowed by providing the instructor with a physical copy of a signed doctor's note. See the UNT Attendance PolicyLinks to an external site. for more information.

Reasonable Makeup Policy:

To apply for a makeup exam, assignment, or quiz due to medical reasons, you must adhere to the following policy:

Doctor's Note Requirements:

- The doctor's note must be issued by a recognized U.S. medical facility, such as the UNT Student Health and Wellness Center, urgent care, emergency room, or hospital.
- The note must include the following details:
    1. The name and title of the medical facility.
    2. The doctor's name and professional title (e.g., DO, MD).
    3. Your full name.
    4. Specific information explaining why the doctor recommends an adjustment to your academic schedule.
    5. The doctor's signature.

Submission Deadlines:

- For Exams: The doctor's note must be submitted at least 5 days before the exam. For example, if the Midterm Exam is scheduled for 07/29/24, the doctor's note must be submitted between 07/25/24 and 07/29/24.
- For Practices: The doctor's note must be submitted within the period from 5 days before the due date to 5 days after the due date. For example, if an assignment or quiz is due on 07/29/24, you must submit the doctor's note between 07/25/24 and 08/03/24.

Failure to submit the doctor's note within the specified timeframes will result in the forfeiture of the opportunity to make up the missed work. Please note that only medical reasons are considered valid for makeup requests; personal reasons will not be accepted.

Turnaround Time

TA/IA aim to return graded work to you within one week of the due date. When this is not possible, they will send an announcement to the class.

Grade Disputes

Students are responsible for reviewing their grades and raising any concerns within a maximum of 5 calendar days after the grades are announced. Grades will be posted on Canvas throughout the semester to provide continuous feedback on student progress, typically within 10-15 calendar days after an assignment is due. If a student wishes to dispute a grade, the concern should be directed first to the original grader (i.e., the TA or IA) within 5 calendar days of the grade being posted. Should the issue remain unresolved between the student and the grader, the matter will be escalated to the instructor, whose decision on the grade will be final. After 5 calendar days or once the solutions have been posted, grades will not be changed except under exceptional circumstances.

Please note that discussions regarding final letter grades will only be accommodated during a designated time frame (2 hours), and this process will not adhere to the general grading dispute policy outlined above.

Extra Credit

Extra credit is optional. Bonus points may be added at the end of the semester based on the participation rate in SPOT evaluations.

Policies

Attendance

Lecture section: Since this is an online class, participation in weekly Recitation problems and quizzes is considered attendance in the course.

Recitation section: Attendance is mandatory and will be checked.

Content Responsibility

Students are responsible for all content presented during lecture, in the videos, and required readings from the textbook. While attendance will not be taken during the lecture, you will be expected to know and understand the requisite topics and concepts. If you are confused or unsure about anything, please ask your instructor.

Students are responsible for accessing course materials, reviewing assignment requirements, and confirming that all files and links open correctly well before the assignment deadline. Waiting until the last few hours before the due date to access content, begin an assignment, or verify submission functionality is not considered a valid reason for requesting an extension or reopening an assignment.

Technical issues such as unsupported file formats, inability to open content at the last minute, internet connectivity problems, device malfunctions, or missed uploads will not qualify for deadline extensions unless the issue is caused by an official university

system outage and is properly documented. Students are strongly encouraged to start assignments early and verify successful submission in Canvas before the deadline.

Cheating

Plagiarism

Plagiarism of any kind will automatically result in a grade of F for the course. Academic Integrity Standards in this course are consistent with UNT policy: STUDENT STANDARDS OF ACADEMIC INTEGRITY (18.1.16), or other related/existing polices. The work that you turn in to be graded, including any underlying ideas, must be your own individual work. Usage of unauthorized material and sources, or depending on any unauthorized assistance, to answer homework problems, tests questions, writing reports, or carrying any type of assignment, etc., without the permission of the instructor, or without complete and accurate and complete attribution/citations of the source, when applicable, is viewed as an academic misconduct. If you have any doubts if you have specific questions, feel free to ask the instructor.

Academic Integrity and Collaboration:

UNT policy 06.003 defines the following breaches of academic integrity:

1. **"Cheating"** means the use of unauthorized assistance in an academic exercise, including but not limited to:

- use of any unauthorized assistance to take exams, tests, quizzes or other assessments;
- use of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;
- use, without permission, of tests, notes, or other academic materials belonging to instructors, staff members, or other students of the University;
- dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor;
- any other act designed to give a student an unfair advantage on an academic assignment.
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2. **Fabrication**. "Fabrication" means falsifying or inventing any information, data, or research outside of a defined academic exercise.

3. **Facilitating Academic Dishonesty**. "Facilitating academic dishonesty" means helping or assisting another in the commission of academic dishonesty.
4. **Forgery**. "Forgery" means intentionally falsifying or altering a score, grade, or official academic University record or the signature of another.
5. **Plagiarism**. "Plagiarism" means use of another's thoughts or words without proper attribution in any academic exercise, regardless of the student's intent, including but not limited to:

- the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgement, or citation, or
- the knowing or negligent unacknowledged use of materials prepared by another person or by an agency engaged in selling term papers or other academic materials.

6. **Sabotage**. "Sabotage" means acting to prevent others from completing their work or willfully disrupting the academic work of others

Cheating of any sort will not be tolerated in this course. Failure to adhere to these strict standards will be cause for disciplinary action that could be as severe as expulsion from the university. If it is determined a student cheated on any assignment in this course, they will receive an F for their final course grade and an academic integrity report will be filed with the Office of Academic Integrity. Further, UNT is now maintaining a database recording any acts of academic dishonesty that is available to employers.

For more information see the UNT Student Academic Integrity PolicyLinks to an external site..

Special Notes on the use of AI Tools and work performed by Others

Students taking this course implicitly agree to uphold the UNT honor code:

"I commit myself to honor, integrity, and responsibility as a student representing the University of North Texas community. I understand and pledge to uphold academic integrity as set forth by UNT Student Academic Integrity PolicyLinks to an external site., 06.003. I affirm that the work I submit will always be my own, and the support I provide and receive will always be honorable."

It is highly important that you are familiar with the University's academic integrity policy and the CSE department's guidelines on academic integrity:

UNT Academic Integrity Policy (PDF)Links to an external site.

CSE Academic Integrity GuidelinesLinks to an external site.

Academic Integrity Guidance on GenAI

Prohibited Use

In this course, the use of GenAI tools is not permissible. No matter the approach, any attempt to represent GenAI output as a student's own work will be considered fabrication, cheating, and/or academic dishonesty as determined on a case-by-case basis.

In this course, I want you to engage deeply with the materials and develop your own critical thinking and writing skills. For this reason, the use of Generative AI (GenAI) tools like [e.g., Claude, ChatGPT, Gemini, GitHub CoPilot, Cody, Ghostwrite and others] is not permitted. While these tools can be helpful in some contexts, they do not align with our goal of fostering the development of your independent thinking. Using GenAI to complete any part of an assignment, exam, or coursework will be considered a violation of academic integrity, as it prevents the development of your own skills, and will be addressed according to the Student Academic Integrity policyLinks to an external site..

Additionally, tools like [e.g. Grammarly, spellcheck, predictive text, speech-to-text, and translation tools] are not allowed as they blur authorship and misrepresent your independent work. All work must be your own.

ODA

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time; however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Office of Disability Accommodation website at http://www.unt.edu/odaLinks to an external site.. You may also contact them by phone at ***940.565.4323***.

Collaboration

For each exam and quiz, all work is expected to be your own and no collaboration is allowed.

Assessments

For each graded exam and quiz, you will be required to use Lockdown Browser with a webcam. You are not allowed to use your cell phones for any reason during an exam or quiz. For exams, a note sheet will be allowed, and the specifics of this will be discussed during the exam review.

Syllabus/Policy Revisions

The syllabus and policies may be modified as the course progresses should the instructor deem it necessary. Notice of changes to the syllabus or policies shall be made through Canvas and/or in-class announcements.

Technology Requirements

- Computers are **required for this class**
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        - **You must have access to a computer system with access to the Internet and capable of installing software and running Lockdown Browser. Chromebooks are not appropriate for an online class because you can't perform software installations.**
        - Quizzes and exams use the Canvas quiz system
            - Canvas Technical Requirements (https://clear.unt.edu/supported-technologies/canvas/requirements)
- Fall 2026 Schedule

Fall 2026 Schedule

Week	Course Topic	Recitation Schedule
Week 1 (8/17-8/21)	Introduction and 01: Abstraction	**First Week No Recitation**
Week 2 (8/24-8/28)	02: Sets	Recitation 1: Abstraction
Week 3 (8/31-9/4)	03: Binary Relations	Recitation 2: Sets
Week 4 (9/7-9/11)	04: Graphs	Recitation 3: Binary Relations

Week 5 (9/14-9/18)	04: Graphs and Exam 1 Review	Recitation 4: Graphs
Week 6 (9/21-9/25)	**Exam 1 (Exam Week No Recitation)**	**Exam Week No Recitation**
Week 7 (9/28-10/2)	05: Trees	Recitation 5: Trees
Week 8 (10/5-10/9)	06: Propositional Logic	Recitation 6: Propositional Logi 1
Week 9 (10/12-10/16)	06: Propositional Logic	Recitation 6: Propositional Logi 2
Week 10 (10/19-10/23)	07: Boolean Algebra and Exam 2 Review	Recitation 7: Boolean Algebra
Week 11 (10/26-10/30)	**Exam 2 (Exam Week No Recitation)**	**Exam Week No Recitation**
Week 12 (11/2-11/6)	08: Automata theory	Recitation 8: Automata theory
Week 13 (11/9-11/13)	09: Combinatorics	Recitation 9: Combinatorics
Week 14 (11/16-11/20)	10: Series and Instructions and Exam 3 Review	Recitation 10: Series and Instructions
Week 15 (11/23-11/27)	**Fall Break No Class and No Recitation**	**Fall Break No Class and No Recitation**
Week 16 (11/30-12/4)	**Exam 3 (Exam Week No Recitation)**	**Exam Week No Recitation**