

CSCE 2100: Foundations of Computing
COURSE SYLLABUS, Spring 2025
Department of Computer Science and Engineering
University of North Texas

Instructor

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Office: Discovery Park E250G

Office Hours: Tuesdays 2:30pm to 4:30pm

Office hours are for Spring 2025 only from January 14 to April 29, 2025.

Teaching Assistants:

CSCE 2100 - 1 - Foundations of Computing		
Name	Email	Office Hours
Akiharu Esashi	AkiharuEsashi@my.unt.edu	Check Canvas
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CSCE 2100 - 3 - Foundations of Computing		
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Kandadai Srinivasa Sriram	sriramkandadai@my.unt.edu	Check Canvas
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Course Description:

Conceptual and formal models, efficiency and levels of abstraction as used in the field of computing, big-Oh notation, combinatorics and conditional probability, basic operations of sets, functions, relations, trees and graphs, regular expressions, deterministic finite automata and non-deterministic finite automata to describe patterns in strings.

Expected 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.

Course Structure

In-person Lecture Sections:

2100.001, Time: MoWe 8:00AM - 9:20AM, Location: BLB 090

2100.003, Time: MoWe 4:00PM - 5:20PM, Location: LIFE A106

In-person Recitation Sections:

2100.202, Mo 12:30PM - 1:20PM, Room: NTDP F210

2100.204, Fr 9:30AM - 10:20AM, Room: NTDP F210

2100.206, Th 10:30AM - 11:20AM, Room: NTDP F243

2100.208, Mo 12:30PM - 1:20PM, Room: NTDP F243

2100.209, Tu 10:00AM - 11:20AM, Room: NTDP F222

2100.210, Tu 10:30AM - 11:20AM, Room: NTDP F236

Credit hours: 3

Dates: Jan 13 to May 9, 2025

Communication Expectations: You will be expected to regularly check university email and attend class regularly. When you miss a class, you are expected to check the course calendar shortly after class to be aware of assignments, quizzes, and other materials. Questions not answered in class are best asked before or after class. For in-depth assistance with the course content, you are expected to meet with the GA/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 9am-4:30pm, no Saturday, no Sunday). For questions requiring more elaboration or discussions not appropriate for the GA/TA, office hours are preferred.

Tentative topics

1. Abstraction
2. Sets
3. Relations
4. Graphs
5. Trees
6. Propositional Logic
7. Boolean Algebra
8. Automata
9. Combinatorics
10. Series

Syllabus Revisions:

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

Materials

All materials (readings, videos, tutorials, quizzes, and assignments) will be accessible online and posted on the course Canvas site on the respective class day at the latest.

REQUIRED TEXTBOOK

Our textbook is an electronic book

ZyBooks: CSCE 2100: Foundations of Computing

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code: UNTCSCE2100QuevedoSpring2025
3. Subscribe

Once Canvas shell is available

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

A subscription is \$89. Students may begin subscribing on Dec 30, 2024, and the cutoff to subscribe is Apr 21, 2025. Subscriptions will last until May 19, 2025.

Technical Requirements and Skills

Minimum Technology Requirements

- Computers are **required for some exams and in-class activities**
 - **In-class exams (if any):** You will need to bring a laptop on exam days. These will be done individually on your computer in class. You will be expected to connect to the UNT wireless network.
 - Quizzes and exams will use the Canvas quiz system
 - [Canvas Technical Requirements \(https://clear.unt.edu/supported-technologies/canvas/requirements\)](https://clear.unt.edu/supported-technologies/canvas/requirements)
- Computers are **required during class**
 - There will be occasional in-class activities along with lectures that are not required, but may help in understanding and applying the material
 - Students will be expected to open Google Colab and other software as needed and indicated in class.

Course Requirements

Readings, Quizzes, and Exams

In-Class Activities (online-discussions, quizzes): These activities are meant to focus students on the important aspects of the readings or lectures. We do not have make-up in-class activities. You can miss one in-class activity without affecting your final grade.

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

Missed exams: Exams cannot be missed without prior arrangements or later documented proof of extenuating circumstances. We do not have make-up exams.

Recitation Section: Attendance is mandatory and will be checked. Students are expected to attend and be on time for their assigned weekly recitation section for the respective section. If you anticipate being unable to attend your regular recitation section with a valid excuse, please contact your instructor in advance of your recitation section to see if an alternate lab section is available that may be scheduled. Students are expected to attend lectures and recitations regularly and to abide by the attendance policy established for the course. Any student who misses a class over two absences without informing the instructor of valid reasons, and obtaining approval, will lose the chance for the bonus credit.

Course assignments. There are several course assignments. You need to solve the problems given and submit your answers by or preferably before the due date. Please do not work on course assignments the day before they are due. Getting sick the day before the due date, it will not give you an extension. However, most course assignments have a 3-day emergency penalty free extension labeled as "Available Until" in Canvas. The emergency time extension should be used only to complete an assignment submission and NOT to start working on the assignment. There are no further extensions after the emergency extension. **WE DO NOT ACCEPT ASSIGNMENTS SUBMISSIONS BY EMAIL.**

GRADING

Your course grade will be determined by a combination of the following:

- ZyBook Activities: 11%
- Assignments: 11%
- Recitation Participation (exercises): 11 %
- Quizzes: 12%
- Exams: 55%
 - Exam 1: 15 %
 - Exam 2: 20 %
 - Final Exam: 20 %

Total 100%

Grading Scale: A \geq 90, B=80-89.9, C=70-79.9, D=60-69.9, F=0-59.9 %.

Extra Credit Options

Extra credit is optional. You do not have to participate in them to get an A in the course. These not-mandatory activities cannot be substituted or make-up. They are optional. However, you must qualify to participate in extra credit options.

To qualify for extra credit, you should not have incurred any of the penalties indicated in the next section.

- **Being on-time**: 0 points <80%, 1 point= 80%-89.9%, 1.5 points 90%-99.9, 2 points=100% (points applied on final grade)
- **Physical attendance** 0 points <80%, 1 point= 80%-89.9%, 1.5 points 90%-99.9, 2 points=100% (points applied on Exam 3)
- **Early submissions** up 5% as indicated in assignment/exam. This means submitting before the due date.
- **Others indicated in class**. These depend on the assignment.

Penalties

Incurring any of the following penalties disqualifies you to receive any extra credit.

1. **Cheating**: Cheating on tests and programs will be dealt with very severely. You must make a diligent effort to prevent other students from seeing your test answers. Keep your paper covered and do not let your eyes wander during tests. You should not receive or give help to others while taking an exam. We also monitor responses to course assignments generated by AI resources such as ChatGPT.

First offense of Receiving or giving help while taking an exam= -25% deducted from grade

Second offense of Receiving or giving help while taking an exam= 0% in the exam. The exam will not be graded.

One or more incidents of cheating in exam= 0% in Exam

Cheating on a second exam= F in the course

2. **Plagiarism**: Plagiarism is a form of cheating. Copying someone else's program, changing a few lines, and turning it in as your own is plagiarism; thus, this is cheating. Each student writes his or her own programs. You should not receive or give help to others on any program that goes beyond help in deciphering syntax errors. **First time penalty = 0% in assignment, second time penalty=F in the course.**
3. Inappropriate multiple requests of changing a grade for any of the following statements or something similar: (1) Being in probation, (2) last semester, (3) core course, (4) financial situation, (5) Being sick, (6) suspended from the university, (7) family issues, (8) others.

Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course.

Expectations

1. **Examination Policy**: Some exams will be on the computer using the Canvas quiz system. You need to bring a laptop on the appropriate exam days. Quizzes and exams must be taken in the classroom unless special accommodation has been provided through the Office of Disability Accommodation (ODA). Other accommodation must be given by prior arrangement with the instructor, otherwise documentation proving an extenuating circumstance will have to be provided after

the missed exam. Time will be limited, and all work will be individual. Exams will focus on the most recent material but are expected to be cumulative in scope.

2. **Technical errors during exams:** If during an online quiz or exam there is a technical error which affects your ability to complete the assignment, you are immediately to let the quiz or exam proctor know and the instructor will discuss ways to allow you to resume the test without giving an unfair advantage. In the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide appropriate accommodation based on the situation. Students should immediately report any problems to the instructor.
3. Each student will be responsible for completing the assigned reading, exercises and attending classes.
4. **Attendance and in-class activities:** You are expected to attend lectures and to complete all readings. Most classes have in-class activities which need to be completed in class. In-class activities are not for homework. You can eliminate one-in class activity. There is no need to let the instructor know you have missed a class; however, you are responsible for keeping up with the material covered in the class if you are not present. We do not have excused absences or permission to be absent. If a class is missed, you are expected to proactively reach out to classmates, the TA, or the instructor if there are any questions. **There will be a sign-in sheet to record attendance for class analytics and administration.**
5. If you miss a class, you are still responsible for knowing everything that took place. Your absence does not change the due date of an assignment.
6. Generally, late submission of any class work is not allowed. However, in the rare case that a course assignment has the option as indicated in class of late submission, it will have a reduction of points 20 % per day. Nevertheless, we do not have any course assignments planned to be submitted late.
7. **Grading Issues:** Once a grade has been posted for a course assignment, grading issues need to be addressed with graders first. Do not contact the instructor unless the grading issue is not solved by graders. Additionally, we only have one week after a grade has been posted to address grading errors or any other issues. We cannot correct grades that have been posted on canvas for longer than one week.
8. Topics or discussions unrelated to class, suggestions about the logistic of the course are all welcome outside class but are considered disruptive during class and will affect negatively your “class contribution” grade and may impact at the discretion of the instructor your final grade.
9. If you use laptops and other electronic devices, they should be used to enhance your class engagement level.
10. Cellular Telephones and Pagers in Class and Lab: Along with your instructors, many students find these both distracting and rude. As a courtesy to all involved, please either turn off your cellular telephone or pager or disable the ring tone during lecture and lab. If you must use the phone, please leave the classroom or lab and go to a place that will not interrupt others.

11. Course Schedule

Week	Monday	Wednesday
1.	1/13: Class 1	1/15: Class 2
2.	1/20: MLK	1/22: Class 3
3.	1/27 Class 4	1/29: Class 5
4.	2/3: Class 6	2/5: Class 7
5.	2/10: Class 8	2/12: Class 9
6.	2/17: Class 10	2/19: Class 11, Exam 1
7.	2/24: Class 12	2/26: Class 13
8.	3/3: Class 14	3/5: Class 15
9.	3/10: Spring Break	3/12: Spring Break
10.	3/17: Class 16	3/19: Class 17
11.	3/24: Class 18	3/26: Class 19
12.	3/31: Class 20	4/2: Class 21, Exam 2
13.	4/7: Class 22	4/9: Class 23
14.	4/14: Class 24	4/16: Class 25
15.	4/21: Class 26	4/23: Class 27
16.	4/28: Class 28	4/30: Pre-Final Day

Final Exams

CSCE 2100-1, Monday 5/5/25 7:30am-9:30am

CSCE 2100-3, Saturday 5/3/25 12:30pm-2:30pm

Tentative Course Schedule per week:

- 1 Intro; Abstraction & Data Models
- 2 Abstraction & Data Models; Sets
- 3 Relations
- 4 Relations
- 5 Graphs
- 6 Graphs; Trees; Exam 1
- 7 Trees
- 8 Propositional Logic
- 10 Propositional Logic
- 11 Propositional Logic
- 12 Boolean Logic; Exam 2
- 13 Automata Theory
- 14 Combinatorics and Counting
- 15 Summation and Series
- 16 Series

UNT Policies

Academic Integrity Policy

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA Policy

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodation at any time; however, ODA notices of 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 accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website (<https://disability.unt.edu/>).

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums,

including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's Code of Student Conduct (<https://deanofstudents.unt.edu/conduct>) to learn more.

Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail Eagle Connect (<https://it.unt.edu/eagleconnect>).

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website (<http://spot.unt.edu/>) or email spot@unt.edu.

Getting Help

Technical Assistance

UIT Help Desk (<http://www.unt.edu/helpdesk/index.htm>)

Email: helpdesk@unt.edu

Phone: 940-565-2324

In Person: Sage Hall, Room 130

Walk-In Availability: 8am-9pm

Telephone Availability:

- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm
- Saturday: 9am-5pm

Laptop Checkout: 8am-7pm

Student Support Services

- Registrar (<https://registrar.unt.edu/registration>)
- Financial Aid (<https://financialaid.unt.edu/>)
- Student Legal Services (<https://studentaffairs.unt.edu/student-legal-services>)
- Career Center (<https://studentaffairs.unt.edu/career-center>)
- Multicultural Center (<https://edo.unt.edu/multicultural-center>)
- Counseling and Testing Services (<https://studentaffairs.unt.edu/counseling-and-testing-services>)

- Student Affairs Care Team (<https://studentaffairs.unt.edu/care>)
- Student Health and Wellness Center (<https://studentaffairs.unt.edu/student-health-and-wellness-center>)
- Pride Alliance (<https://edo.unt.edu/pridealliance>)
- Academic Support Services
- Academic Resource Center (<https://clear.unt.edu/canvas/student-resources>)
- Academic Success Center (<https://success.unt.edu/asc>)
- UNT Libraries (<https://library.unt.edu/>)
- Writing Lab (<http://writingcenter.unt.edu/>)
- MathLab (<https://math.unt.edu/mathlab>)