CSCE 2110.003 COMPUTING Foundations II

Instructor: Curtis Chambers

Office: NTDP E260L

E-mail Address: Curtis.Chambers@unt.edu

Student Hours: See Canvas Course Page and By Appointment.

Instructor Student Hours

TA and IA Info

Instructional Teaching Assistant Details

Teaching Assistants	**Instructional Assistants**
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Course Description

Continuation of Computing Foundations I. Further introduces students to both data structures and formalisms used in computing, such as asymptotic behavior of algorithms. Data structures and formalisms used to both describe and evaluate those data structures simultaneously. Time complexity of algorithms; merge sort and heap sort; data structures for trees and graphs; elementary graph algorithms; breadth-first search; depth-first search; topological sorting; Prim's algorithm and Kruskal's algorithm.

By the end of the two-course sequence of which this course is the second 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

This course takes place in-person. Other than that, your interaction with me and with your fellow students will take place in Canvas. There are 16 weeks of content that you will move through. I will open up a new module (or update) roughly every week. I provided a peek at future materials as we digest the content labeled weekly (Week 1, Week 2, etc.).

Course Objectives

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. Demonstrate the ability to use Integrated Development Environments (IDE) and use formal debugging tools and techniques to develop C/C++ programs.
2. Demonstrate the ability to develop unit tests and testing strategies for C/C++ programs.
3. Demonstrate the ability to use code repositories for project development.
4. Use abstraction in the design and implementation of algorithms, such as sorting and searching algorithms.
5. Design and implement programming solutions to problems in C or C++.
6. Collaborate with other students in a team towards the design and development of programming solutions.
7. Use regular expressions in C/C++ programs to match patterns.
8. Use of hash tables in design of software.

Prerequisites

CSCE 1040 or CSCE 1045; Corequisite: CSCE 2100

Required Texts

Zybooks: zybooks.com; code is available at semester start

Communication

- Instructor: Curtis Chambers
- Office Hours: TBD
- Email: Curtis.Chambers@unt.edu

Always start with the instructional support staff (TA/IA) and CC me. The individual who graded you needs to be talked to first: usually an IA. If their response merits such, you may then contact your assigned TA. The TAs will escalate it to the next member in the hierarchy, eventually leading to me. As much as I would like to respond to every concern from every student, it is not feasible.

When contacting the instructor or course assistance staff (TA, IA, etc.), the following is required:

- Sent from a **UNT Provided email and/or Canvas Account**
- Sent to my work email (above) OR through Canvas (preferred).
    - TA/IA Preferred Emails will be posted on Canvas.
- Must have the Course Number AND Section (i.e., 2110.212 or 2110.002) in the Subject Line or appropriate field.
- Subject should be short and to the point.
- Body must be detailed, legible, and respectful.
- Please give at least:
    - 2 business days for a response via Canvas.
    - 3-4 business days for email.

Emails, messages, and the like that fail to remain in compliance with the above standards may impact **efficiency of communication** or (in the worst case) result in **no reply**.

Pay close attention to Canvas! Many times, I have received the same or similar message from multiple students. I will post on Canvas to address all participants in the course for what I find is a "collective concern." Towards this, I also recommend that you check the Canvas Pages for your Lecture and Recitation prior to sending an email to make sure that it hasn't been already addressed.

Course Requirements:

Course Requirements Breakdown

Attendance:	**Required** - student is responsible for all materials covered in lecture and class discussion and there will be occasional quizzes in class.
Exams:	One Final and up to 3 Assessment Exams 60% Minimum Average (Final Grade F, otherwise)
Assignments:	There will be some larger programming assignments, quizzes, exams and laboratory exercises to complete.

Grading Policy:

You must complete all tasks required on time. Late assignments will not be accepted without appropriate excused documentation. You have **1 week to dispute a grade** after it's

posted date. After receiving your grade for an assignment, you must email the grader (TA or IA) and myself (CC'd) **within 7 days** should you wish to discuss/dispute it.

The above is to avoid “end of the semester” rush to alter grade penalties. Each student should keep track of their grades **throughout the semester**. Note that as we near the end of the semester, the time to adjust assignments gets shorter.

Each assignment will have varying requirements. **Pay very close attention** to what I am asking you to deliver in every assignment, program, and exam. Uploads may be on SVN, Canvas, GitLab, in person, or (in many cases) more than one.

Your final grade will be a weighted average according to the following:

Grading Policy Breakdowns

Items	**Total Percentage**
Individual Assignments	**10%**
Projects	**25%**
Assessment Exams	**40% (must be >60% avg.)**
Recitation/Lab	**20%**
Attendance	**5%**

Grades will be posted on Canvas throughout the semester to provide an ongoing assessment of student progress, though final assessment will be measured using the weighted average above.

Once a grade is assigned on Canvas, students have one (1) week to dispute the grade. The proper channel for grade disputes is to first go to the original grader (i.e., TA/IA) to resolve the issue (*don’t forget to include me in the email so I may monitor the exchange*). If, however, a resolution cannot be reached between the student and the grader, the student shall then go to the instructor who will have the final say on the grade.

Most assignments will be due at 11:59 PM on the specified due date to Canvas. All assignments must be completed and submitted according to their specific directives. Any

programming assignment submitted after its deadline **will not be accepted and receive a grade of 0**.

Submission Policy:

All projects are expected to be submitted on time with all the correct parts through the Canvas system. The project documentation must be created as a wiki page in GitLab, and no photographed or scanned content will be scored. Further, any content that is deemed illegible will not be scored. The program must be coded in C or C++ and contain ample comments and descriptions. All programs will be compiled and executed on the department's CSE servers, and any that fail to compile or execute on that system will receive a zero. Additionally, a README file, in .txt format, with clear instructions on how to compile and execute your program must be included.

Recitations/Labs:

Recitation assignments are meant to serve as preparatory assignments for upcoming assignments that can be completed in a relatively short amount of time. Students may complete these assignments by attending their scheduled recitation where they may receive guidance from a TA/IA on completing. **No late recitation assignments will be accepted without excused documentation**.

Exams:

By the end of the course, you must have earned **at least a 60% average from the exams**. Failure to do so will result in a **final grade of an F**, despite having a potentially passing course average. Additionally, if there are questions about posted grades, they must be discussed with the instructor **within 1 week** of the grades being posted. Afterwards, barring an exceptional circumstance, grades will not be altered.

Attendance Policy Detailed:

Attendance: Required.

Lecture Session: Required.

Should you miss class, you are responsible for the covered course material and assignments you may have missed. The instructor will not be responsible for re-teaching material missed by a student who did not attend class.

As always, if there are extenuating circumstances, please notify your instructor and course assistance staff (such as TAs and IAs) **via your UNT Email ASAP** (BEFORE the missed lecture) so that you can work together to ensure your success in learning the material. **Refer to the section "Contact Requirements" and subsection "Accommodations."**

Note that the TAs and IAs should only be notified. Do not expect a response from them outright.

Recitation Sections: **Required**

Recitation is (generally) considered optional. I, however, **require** that you attend recitation.

Recitations will be used to facilitate development of the projects for this course. As such, they are mandatory and failure to attend recitations may result in overall poor project outcomes. Further, failure to attend recitation on time will result in a student not receiving credit for the recitation. Quizzes may also occur during recitations.

Excused Absences Defined:

Students are expected to schedule routine appointments and activities so as not to conflict with class. In the event of a medical emergency or family death, etc., students must request an extension to a deadline as quickly as feasible following the event. While it is preferred that I am notified prior to the event, that cannot always be the case. Send to me (**ASAP**) a brief email from your **UNT provided email address**. You need not go into detail as to the emergency, but you should schedule with me a meeting outside of lecture at your earliest convenience. Students must be able to provide documentation that verifies the reasoning for the request. Above all else, this course is compliant with UNT Policy 06.039 "Student Attendance and Authorized Absences." Please refer to this policy for more details/information.

Refer to the section "Contact Requirements" and subsection "Accommodations."

Emergencies:

By definition, emergencies cannot be planned for. Your instructor attempts to make accommodations in these instances that allow for making up missed work and completion of the course in a timely manner. Students must provide documentation that verifies the emergency.

Refer to the section "Contact Requirements" and subsection "Accommodations."

Accommodations:

THIS DOES NOT APPLY TO ODA ACCOMODATIONS. (These are processed through the ODA Offices)

First and foremost: Review UNT's policies:

- Student Attendance and Authorized Absences: https://policy.unt.edu/policy/06-039

- Code of Student Conduct: https://policy.unt.edu/policy/07-012

When finished, should you still want to request accommodations (such as make up work, re-takes, extensions, etc.) for an unavoidable impact, you must use this process:

1. Email me and your assigned TAs/IAs from your UNT email.

This is to notify us about the deadline extensions pending an excused document from the Dean of Students Offices.

2. Contact the Student Affairs Office. (When applicable)

Email: DEANOFSTUDENTS@UNT.EDU

Phone: 940-565-2648

Note that the DoS offices only *request* accommodations and do not *enforce* it. Work with them to verify the validity of the impact. Once their offices process the details with you, they should provide you with a document and/or contact me. Should you get a document, send it to me via email and keep the physical copy for your records.

I'll need these document(s) before I can provide accommodation. This process will keep us both in compliance with UNT standards, practices, policies, and procedures while being the most efficient and private method.

Lastly, each non-valid (or otherwise inappropriate/pervasive) attempts to abuse this will be reported to the appropriate parties/representatives of the university. This will also impact future attempts to request accommodations.

If you have questions, please visit me during my office hours or schedule a meeting with me.

Disability Accommodation:

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, refer to the Office of Disability Accommodation website at https://studentaffairs.unt.edu/office-disability-access/index.html. You may also contact ODA by phone at (940) 565-4323.

Academic Misconduct & Integrity

- This course follows UNT's policy for Student Academic Integrity that can be found at https://policy.unt.edu/policy/06-003 as well as the Cheating Policy for the Department of Computer Science and Engineering.
- The department, college, and university have very strict guidelines regarding academic misconduct. Students are expected to submit **their own work on all individual**
- You are allowed to discuss solutions, but **do NOT work with other students on shared program/assignment solutions**. **Do NOT use even partial program solutions from the Internet without properly citing them**. **Do NOT recycle a complete assignment**, this will result in a failing grade. The complexity of these assignments should not merit the use of external resources. Failure to remain in compliance with the guidelines is considered cheating and will be reported.
- **You will be graded on your contribution to the code**. Be honest–attribute your work. Submitting code or work that you did not solely author (without acknowledging it to the instructor) is **cheating** and will be dealt with in accordance with the department cheating policy.
- If it is determined that you have cheated, the first instance of cheating in the class will result in a grade of **ZERO (0)** on the assignment in question and referral to the department chairman and dean of engineering. The second instance of cheating in the class will result in **a grade of F** in the class, and a dismissal hearing may be initiated by the dean of engineering. (NOTE: that Instructional Support Staff can now report Academic Integrity violations as well…)
- **You need to do your own work.** Here, there should be no ambiguity at all.
- In case the above description, and in-class discussion of my views on appropriate and inappropriate collaboration does not answer all your questions, please look at the university Student Rights and Responsibilities web page.

- You should not work with other students on shared program solutions or use program solutions found on the Internet.
- Specifically, you should **never copy someone else's solution or code**, and **never let a classmate examine your code**.
- A sophisticated program will be used to compare your work to the work of all other students (including students in past classes).
- If you are having trouble with an assignment, please consult with your instructor or course assistance staff (TAs, IAs, Graders, etc.).
- Failure to adhere to these strict standards may be cause for disciplinary action even leading to expulsion from the University.
- Each student should adhere to the university's student code of conduct. The Code of Student Conduct can be found at http://deanofstudents.unt.edu.

Below I have taken out two paragraphs from UNT Policy 06.003 Student Academic Integrity.

"UNT promotes the integrity of learning processed and embraces the core values of trust and honesty. Academic integrity is based on educational principles and procedures that protect the rights of all participants in the educational process and validate the legitimacy of degrees awarded by the university. In the investigation and resolution of allegations of student academic dishonesty, the university's actions are intended to be corrective, educationally sound, fundamentally fair, and based on reliable evidence."

"Students are expected to conduct themselves in a manner consistent with the university's status as an institution of higher education. In the class setting, students shall follow their instructors' directions and observe all academic requirements published in course syllabi and other course materials. A student is responsible for responding to an academic dishonesty report issued by an instructor or other university official. If a student fails to respond after proper attempt at notification, the university may take appropriate academic actions in the absence of the student."

UNT policy 06.003 defines the following breaches of academic integrity:

1. **Cheating**. The use of unauthorized assistance in an academic exercise, including but not limited to:
    1. use of any unauthorized assistance to take exams, tests, quizzes or other assessments;

2. usage of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; usage without permission, of tests, notes, or other academic materials belonging to instructors, staff members, or other students of the university;
3. dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor;
4. any other act designed to give a student an unfair advantage on an academic assignment.

2. **Plagiarism**. 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:
    1. 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.
    2. 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.
3. **Forgery**. Altering a score, grade or official academic university record; or forging the signature of an instructor or other student.
4. **Fabrication**. Falsifying or inventing any information, data or research as part of an academic exercise.
5. **Facilitating Academic Dishonesty**. Helping or assisting another in the commission of academic dishonesty.
6. **Sabotage**. 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. All submissions must be your own original work. Taking information or code from the internet or other students is considered a breach of academic integrity. 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. Additionally, because these are group projects, if one group

member is caught cheating the consequences of their actions will extend to the group (as a whole). It is the responsibility of all group members to ensure that when they put their names on their submission as a whole and submit it, the submission does not contain any instances of cheating. Failure to report known instances of cheating within a group will be deemed facilitation of academic dishonesty and reported as such. For more information see the UNT Student Academic Integrity Policy.

Generative AI:

Unless you are given written permission to use Generative AI (i.e., ChatGPT), do not use these tools in your work. To do otherwise will be considered a violation of Academic Integrity and will be handled as such. Please note that it is much easier for your instructors and the support staff to run models that will detect the use of such as well.

Collaboration Policy:

For each project submission, all work is expected to be your own. While you should be working with your group members, you are not to collaborate with other groups for projects, provide solutions to other groups, search for solutions on the internet, or purchase solutions. Doing so will be deemed a breach of academic integrity. However, for any non-graded, practice assignments students are encouraged to work together to solve problems.

Student Responsibilities:

Students are responsible for submitting the **correct assignments** for each applicable assignment submission. Submissions should include the **correct files** and submitted **prior to the deadline**. Late material will NOT be accepted or assessed. Programming assignments MUST compile to receive any credit.

Academic Freedom and Academic Responsibility:

Refer to UNT Policy 06.035

Academic freedom and academic responsibility give vitality to the UNT and its mission. As such, the academic freedom to be able to freely consider or investigate important, and, perhaps, controversial questions are essential to the education of students and advancement of knowledge. Faculty have the academic responsibility to subject their knowledge and postulates to rigorous review by peers who are experts in the relevant subject material, to have a firm foundation of their postulates in the most relevant and suitable available evidence, and to work with one another to provide the best education possible for our students.

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 class announcements.