

CSCE 4210/5250

Instructors

Curtis Chambers
(Curtis.Chambers@unt.edu)

Office: See Canvas Course Page

Office Hours:

See Canvas Course Page

And By Appointment.

Office: See Canvas Course Page

Class Times

Lecture

Mo 11:00 AM - 12:50 PM

NTDP F204 (LARC LAB)

08/18/2025 - 12/12/2025

Office Hours: See Canvas Course Page and By Appointment.

Textbook

This class does not have a textbook. Lecture notes and source code will be provided.

Teaching/Instructional Assistants

See Canvas Course Page

Office Hours:

See Canvas Course Page

Canvas

This course will be using Canvas to distribute course materials, post grades, and submit assignments. Check regularly to course work and announcements.

Course Description

Introduction to game programming, including real-time, event-driven, and multimedia programming techniques. Graphics, sound and input programming. Students learn how to program a billboard game in 3D with constrained camera motion.

Prerequisite(s): CSCE 2110 with a grade of C or better.

Required Technology

Access to a Windows 10-11 Gaming PC is mandatory. Prior experience with Visual C++, DirectX12, and Git are useful but not required.

Course Outcomes

Course outcomes are measurable achievements to be accomplished by the completion of a course. These outcomes are evaluated as part of our ABET accreditation process. By the end of this course,

students will:

1. Be familiar with Windows programming.
2. Be able to use Visual C++.
3. Be able to use the Microsoft DirectX 12 SDK and DirectX12.
4. Be able to program a 2D, 2.5D, or 3D game.
5. Be able to work in a team with other programmers using Subversion.
6. Be able to code a major part of a game.

Attendance Policy

Attendance during lectures is encouraged. Attendance will not be taken after the mandatory period. You are responsible for all material covered during lectures.

Lecture Attendance will be tracked to provide extra credit for the LAB ASSIGNMENTS.

Lecture Session

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** 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

Recitations will be held in NTDP F204 (LARC LAB). The first week of Recitations are not held.

There will be 6 recitations during each of which you will perform a short programming task. Completion of the task during the lab session in which it is assigned will earn you one point. Completion during the following lab session will earn you half a point. **You will lose a letter grade for every two points missed. [TODO Discuss later]**

Recitations will be used to facilitate development of the project 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 will occur during recitations.

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.**

Accommodations

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

Should you want me to provide accommodations (such as make up work) for an unavoidable absence or 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 absence pending an excused document from the Dean of Students Offices.

2. Contact the Student Affairs Office

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 excused absence or 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.

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

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.
- **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 are responsible for the information covered in class, **whether you attend class or not**. Individualized lectures **will not be given**. Please check with other class members for any notes that might have been missed during an absence. Attendance won't always be taken in lecture and your attendance is strongly recommended to improve your opportunity to meet course objectives.
- 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>.

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**. In certain cases, when an assignment is verified to be completed on time, but either was submitted to an incorrect assignment location or a wrong assignment was submitted instead, the assignment may be accepted. Verification of completion time stamp for assignments will be done **using the LARC machines and CSE Servers/Services**, so please make sure to save your work on these departmental servers to ensure that your work can be accepted.

If you have any questions or concerns about your submission, please work with your instructor or TA/IA to ensure the correct file(s) is/are submitted.

Excused Absences Defined

Students are expected to schedule routine appointments and activities so as not to conflict with attending class. However, some absences cannot be prevented. In the event of a medical emergency or family death, etc., students must request an excused absence 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 excused absence. 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.”

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 <http://www.unt.edu/oda>. You may also contact ODA by phone at (940) 565-4323.

Academic Integrity

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.

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.

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/or class announcements.

Tentative Lecture Schedule (subject to change)

See Canvas Course Page.

Week	Lecture	Recitations
1	Introduction	Closed
2	Game Design	
3	Labor Day (no lecture)	
4	Tools	Lab 1, Lab 2
5	Pitch Presentation	
6	The Code Base	Lab 3
7	2D Games	
8	2.5D Games	
9		Lab 4
10	Milestone 1	
11		Lab 5
12	Milestone 2	
13		Lab 6
14	Milestone 3: Finished Game	

Grading Policy

Grades will depend on the quality of your group's game and the size and significance of your code. Other factors that can reduce that grade are performance on the recitations, proper use of the revision control system, contribution to the pitch and milestone, and the final group interview.

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 **within 7 days** should you wish to discuss/dispute it. I recommend that you email me and CC the TA and Grader.

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. Grades will be posted on Canvas throughout the semester to provide an ongoing assessment of student progress.

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.

All assignments must be completed and submitted according to their specific directives.

Area	Percentage of Final Grade
Laboratory Assignments (x5)	10% (about 2% each)

Pitch Presentation	5%
Revision Control and Milestones	5%
Your Game	75%
Group Interview	5%

Final Project (Your Game) Grading Rubric

A 0 - 4 Point Average (0 = F; 4 = A) between:

1. **Completeness** - Represented by how much of a complete game (start to finish) does your game represent.
2. **Play-ability** - Representative of the "Socks Knocked Off" rubric.
3. **Tech Points** - A Tech Point is awarded for each feature in your game that I did not cover in lecture/assignments.

1. Graduate Students (CSCE 5250)

1. You must have at least 1 Tech Point per Graduate Student. Your contribution and execution of this Tech Point is also graded on a 4 Point Scale.

2. Undergraduate Students (CSCE 4210)

1. Simply having a Tech Point present will automatically give you a score of 4 in this category for the entire group. You only need one Tech Point present for the group.
2. Graduate Students are responsible for their individual Tech Points and are USUALLY in a separate development branch on GitLab, so it does not impact your final submission.

NOTE: -1 Penalties are applicable (See Canvas Assignment for Details).

Suggestions

- “A” students typically write >5000 lines of code.

- “B” students typically write >2000 lines of code.
- Remember that you’re submitting your work via GitLab.

Contacting Requirements

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

- Sent from a **UNT Provided** Email
- Must have the Course Number AND Section (i.e., 2110.212) 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 24 hours for a response, prior to any follow up 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**.