

CSCE 1030 Computing Science I

Instructor: Dr. Joseph Helsing, Joseph.Helsing@unt.edu
Office Hours: 2:30pm – 3:30pm, Monday/Wednesday, NTDP F203
11:00am – 12:00pm, Tuesday/Thursday, NTDP F203
Class Room: GAB 105
Meeting Time: 10:00am - 10:50am, Monday/Wednesday/Friday

Course Description:

CSCE 1030 is the introductory course for the computer science, computer engineering and information technology degrees offered by the Department of Computer Science and Engineering. As such it introduces students to the broad discipline of computing while placing emphasis on developing students' programming skills. In addition to three 50-minute "lecture" classes per week, each student will participate in a three-hour laboratory session each week.

Required Textbook:

We will be using an online textbook this semester through zyBooks. To access the text book you will need to:

1. Sign in or create an account at learn.zybooks.com
2. Enter ZyBook code: UNTCSCE1030.003Fall2018
3. Subscribe

Optional Reference Textbook:

Problem Solving with C++, Tenth Edition, by Walter Savitch, Addison-Wesley, 2018. ISBN 978-0-13-444828-2

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.

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.

3. Describe how a computer's CPU, Main Memory, Secondary Storage and I/O work together to execute a computer program.
4. Make use of a computer system's hardware, editor(s), operating system, system software and network to build computer software and submit that software for grading.
5. Describe algorithms to perform "simple" tasks such as numeric computation, searching and sorting, choosing among several options, string manipulation, and use of pseudo-random numbers in simulation of such tasks as rolling dice.
6. Write readable, efficient and correct C/C++ programs that include programming structures such as assignment statements, selection statements, loops, arrays, pointers, console and file I/O, structures, command line arguments, both standard library and user-defined functions, and multiple header (.h) and code (.c or .cpp) files.
7. Use commonly accepted practices and tools to find and fix runtime and logical errors in software.
8. Describe a software process model that can be used to develop significant applications composed of hundreds of functions.
9. Perform the steps necessary to edit, compile, link and execute C/C++ programs.

Attendance Policy:

Lecture Section: Class attendance is regarded as an obligation as well as a privilege. All students are therefore expected to attend each class meeting. A student who misses class is still responsible to find out what was discussed and to learn the material that was covered and obtain the homework that was assigned on the missed day. The instructor is not responsible for reteaching material missed by a student who did not attend class. Therefore, each student is accountable for and will be evaluated on all material covered in this course, regardless of attendance. If there are extenuating circumstances preventing you from attending the class, please notify your instructor so that you can work together to ensure your success in learning the material.

Lab Section: Students are expected to attend and be on time for their assigned weekly lab section. Missing or being tardy to a lab may result in a zero or a lower-than-usual grade for a lab. If you anticipate being unable to attend your regular lab section with a valid excuse, you must contact your instructor *in advance* of your lab section and before the lab is closed so that an alternate lab section may be scheduled. Failure to do so may result in a zero for the lab, but please keep in mind that the lowest lab grade will be dropped. The instructor has the final say as to whether or not an absence is excused.

Submission Policy:

Students are responsible for submitting the correct assignments (i.e., uploading the proper files) for each applicable assignment submission on Canvas. Additionally, all programming assignments are expected to compile and run on the CSE machines without needing additional libraries. In certain cases, when an assignment is submitted on time, but to an incorrect assignment location (e.g., submitting Lab 04 to Lab 05 location on Canvas), the assignment may be assessed a 30% reduction penalty if the due date has passed. If you have any questions or concerns about your submission, please work with your instructor, TA, IA, or Peer Mentor to ensure the correct file(s) is/are submitted.

Make-up Work Policy:

For most situations there will be no make-up work for any assessments 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 school 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 Policy](#) for more information.

Late Work Submission:

All non-lab programming assignments will be accepted a maximum of 24 hours late at a point deduction of 50% of the total value of the assignment. Any non-lab programming assignments submitted over 24 hours late will not be accepted and will receive no credit.

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. The Code of Student Conduct can be found at <http://deanofstudents.unt.edu>.

Academic Integrity and Collaboration:

UNT policy 06.003 defines the following breaches of academic integrity:

- A. **Cheating.** The use of unauthorized assistance in an academic exercise, including but not limited to:
 - a. use of any unauthorized assistance to take exams, tests, quizzes or other assessments;
 - b. 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;
 - c. dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor;
 - d. any other act designed to give a student an unfair advantage on an academic assignment.

- B. **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:
 - a. 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.
 - b. 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.

- C. **Forgery.** Altering a score, grade or official academic university record; or forging the signature of an instructor or other student.

- D. **Fabrication.** Falsifying or inventing any information, data or research as part of an academic exercise.

- E. **Facilitating Academic Dishonesty.** Helping or assisting another in the commission of academic dishonesty.

- F. **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, due to problems in the past do not post any of your code on public code repositories. We have had instances where students completed the course, and then made their code publicly available via GitHub. Later students then discovered this code, downloaded it, and submitted it. If it is determined that code you wrote is used by another student at a future date, and that they obtained it from your repository, you will be held accountable as well for facilitating academic dishonesty.

For more information see the [UNT Student Academic Integrity Policy](#).

Collaboration Policy:

Collaboration with other students is only acceptable for lab programs that are not given as part of an exam. And although you may seek assistance from your TA, peer mentors, and other students during the lab session for non-exam lab programs, you are still required to work on your own lab program and turn in your individual work to Canvas before the lab session is complete or as directed otherwise.

Individual programming assignments (i.e., homework) given outside of the lab in this course are meant to be problem-solving exercises and must be the sole work of the individual student. 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, TAs, IAs, or peer mentors.

In case the above description and in-class discussion of appropriate and inappropriate collaboration do not answer all of your questions, please meet with your instructor and look at the university Student Rights and Responsibilities web page.

Student Evaluations:

Student course evaluations are a requirement for all organized classes at UNT. The Student Perception Of Teaching (SPOT) evaluation will be made available to you at the end of the semester, providing you an opportunity to comment on how this course is taught. I am very interested in the feedback I get from students, as I work continually to improve my teaching. I consider course evaluations to be an important part of your participation in this class, and would appreciate your constructive comments and suggestions.

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/oda>. You may also contact them by phone at **940.565.4323**.

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 announcement.

| Assignments & Examinations | Overall Grade Points |
|---------------------------------------|-----------------------------|
| Participation Activities | 5% |
| Challenge Activities | 10% |
| Lab Assignments | 10% |
| Projects 1-4 | 10% |
| Midterm Exams 1-4 | 50% |
| Comprehensive Final Exam | 15% |
| Total | 100% |

Grading:

You must pass BOTH the homework portion (participation activities, lab assignments, challenge activities, and projects) AND the exam portion (midterms and final exam) with a grade of D or better in order to pass this course. Hence, an overall average greater than 60% may still result in a failing grade in some cases. 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 two (2) weeks to dispute the grade. The proper channel for grade disputes is to first go to the original grader (either the TA or IA) in an attempt to resolve the issue. 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.

Participation and Challenge Activities: The participation and challenge activities grades will be based on the timely completion of assigned Participation Activities and Challenge Activities, respectively, in the required ZyBook e-book.

Lab Assignments: Lab assignments will be assigned and completed during the assigned lab section. Unless otherwise instructed by the instructor or Lab TA, students must be present in the lab classroom and complete each component of the lab during the scheduled lab time to receive credit for the lab. Each lab assignment will be graded using the average of all lab components based on a 0/50/75/100 scale for each component. In lab components where comments are required, but are either missing or unsatisfactory will result in the next lower grade being assigned (i.e., a 75 will become a 50, etc.) for that lab component. A missed lab due to tardiness or absence may result in a grade of 0 for the missed lab. There will be no make-up labs, though the lowest lab assignment grade will be dropped.

Projects: There will be approximately four programming assignments assigned during the semester. These programming assignments will be accepted up to 24 hours late and be assessed a 50% grade reduction penalty. Programming assignments submitted more than 24 hours late will not be accepted and receive a grade of 0.

Midterm Exams: There will be four midterm examinations given in this course. These exams will be given during the assigned lab section to assess the student's programming ability. The dates of these exams will be posted on Canvas and announced in class at least one week prior to the date of the exams. A make-up exam will be given at the discretion of the instructor when a student misses an exam with an excused absence. Unexcused absences on the date of an exam may result in a grade of 0 for the missed exam, so every effort should be made to attend class on the day of a scheduled exam.

Final Exam: There will be a comprehensive final exam during the scheduled exam time on Saturday, December 8, from 8:00am to 10:00am. All students are expected to take the final exam during the scheduled time period.

Course Topic Schedule:

| Week | Topics | Assignments |
|-------------|---------------------------------------|--------------------|
| 1 | Intro to C++ | Lab 1 |
| 2 | Variables/Assignments | Lab 2 |
| 3 | Variables/Assignments | Lab 3, Project 1 |
| 4 | Branches | Midterm 1 |
| 5 | Branches, Loops | Lab 4 |
| 6 | Loops | Lab 5, Project 2 |
| 7 | Arrays | Midterm 2 |
| 8 | Arrays, Functions | Lab 6 |
| 9 | Functions | Lab 7 |
| 10 | Streams | Lab 8, Project 3 |
| 11 | Structs | Midterm 3 |
| 12 | Pointers | Lab 9 |
| 13 | Input/Output | Lab 10, Project 4 |
| 14 | Miscellaneous | Midterm 4 |
| 15 | TBD | |
| 16 | Final Exam: Saturday 8:00am – 10:00am | Final Exam |

Important Dates:

| | |
|------------------|-------------------------------|
| Aug 27 | First Class Day |
| Sept 3 | Labor Day (NO CLASS) |
| Nov 5 | Last day to drop a course |
| Nov 21 | Last day to withdraw |
| Nov 23-25 | Thanksgiving Break (NO CLASS) |
| Dec 7 | Reading Day (NO CLASS) |
| Dec 8 | Final Exam 8:00am-10:00am |