

COMPUTER SCIENCE I

CSCE 1030- Section 001

Instructor: Dr. Pradhumna Shrestha

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Office hours: MoWe 10:30AM- 11:30AM and by appointment

Class hours: TuTh 1:00PM - 2:20PM

Classroom: NTDP B185

COURSE DESCRIPTION

The objective of this course is to teach basic programming concepts. Topics such as basic introduction, variables and data types, program flow control, and reading from and writing into a file will be discussed. It is expected that, by the end of the course, the students would be able to write any complex programs using the concepts discussed throughout the semester. The high level language – C++ will be used as the platform of teaching and executing these concepts. Strong emphasis will be placed on laboratory activities that focus on program design and coding.

COURSE OUTCOMES

1. Describe how a computer's CPU, Main Memory, Secondary Storage and I/O work together to execute a computer program.
2. 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.
3. 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.
4. 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) files.
5. Use commonly accepted practices and tools to find and fix runtime and logical errors in software.
6. Describe a software process model that can be used to develop significant applications composed of hundreds of functions.
7. Perform the steps necessary to edit, compile, link and execute C/C++ programs.

RECOMMENDED TEXTBOOK

Problem Solving with C++ (9th Edition)

Walter Savitch

Pearson, 2014

ISBN-10: 0133591743

PRE-REQUISITES: MATH 1650 with a grade of C or better.

TOPICS TO BE COVERED

1. Introduction to Computer and Programming
2. Algorithms and Program Design
3. Variables
4. Data Types and Type Casting
5. Looping and Branching
6. Functions
7. Arrays and Pointers
8. Structures and Union
9. File Handling

SCHEDULE AND GRADING

- Attendance/Class participation: 5%
- Lab Assignment: 30%
- Homework and Assignment: 25%
- Exam 1 9/22: 10%
- Exam 2 11/1: 10%
- Exam 3 12/15: 20%

Notes:

ATTENDANCE POLICY

Student attendance will be recorded. Every student who misses a class is responsible to learn the materials discussed and obtain the homework assigned on the missed class. The instructor is not responsible for re-teaching the material missed by a student who did not attend the class. Absence in class and lack of participation in class discussions may result in lowering of the grades.

ASSIGNMENTS

Homework and assignments will be provided every week in the form of coding and problem solving. The coding assignments have to be submitted online via email or blackboard before specified the deadline. For assignments that have been specified as to be submitted in writing, paper submission is acceptable but an electronic submission by scanning or taking a clear picture is preferred. You will get only half of the points if you turn are late in turning in the assignments. Assignment turned a week late without instructor's approval will still be graded but receive zero points. It is expected of the students to show utmost sincerity and honesty in completing their assignments. While discussion among students is encouraged, sharing solutions and copying someone else's work is strictly prohibited. Any student engaged in such activities will get no credit for their assignment.

EXAMS I AND II/MIDTERM EXAMS

Both Exams I and II would be written exams and will include both conceptual and coding problems. The exams will cover the topics discussed up to 1 week ahead of the exam date. The students are expected to give the exams on their own and no discussions will be allowed.

EXAM III/FINAL EXAM

The final exam will be scheduled on the finals week and will have both written and coding segments. The exams will cover the topics discussed throughout the semester. The students are expected to give the exams on their own and no discussions will be allowed.

GRADING

If the students are not satisfied with their grades, they will have to schedule an appointment with the instructor at least 24 hours after receiving the grades. Classroom hours will not be used for discussing grades.

EXTRA CREDIT

The students will get an opportunity to earn extra credit by solving take-home problems. The students are expected to solve the problems on their own. Any evidence of cheating will result in zero credit and no further opportunities to earn extra credit.

ADA STATEMENT

The University of North Texas 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 you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations 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 Office of Disability Accommodation website at <http://disability.unt.edu>. You may also contact them by phone at (940) 565-4323.

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>.