

COMPUTER SCIENCE I

CSCE 1030.001 – FALL 2015

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| Instructor: | Dr. Mark A. Thompson |
| Office: | NTDP F264 |
| Telephone: | 940/369-7055 |
| E-mail Address: | Mark.Thompson2@unt.edu (include CSCE 1030.001 in subject line) |
| Class Location/Time: | NTDP B185 (Discovery Park), TuTh 1:00 – 2:20 PM |
| Office Hours: | MoWeFr 1:00 – 3:00 PM TuTh 10:30 – 11:30 AM <i>or by appointment</i> <i>Every attempt will be made to answer e-mails within 24 hours.</i> |
| Textbook: | <i>Problem Solving with C++, Ninth Edition</i> , by Walter Savitch, Addison-Wesley, 2015. ISBN 978-0-13-359174-3. |
| Prerequisites: | Completion of or concurrent enrollment in MATH 1650. |
| Blackboard | This course will use Blackboard, a Web-based course management system, to distribute course materials, communicate and collaborate online, post grades and submit assignments. You are responsible for checking the Blackboard course site regularly for class work and announcements. |

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 two 80-minute "lecture" classes per week, each student will participate in a three-hour laboratory session each week.

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.

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.

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TOPICS (subject to change)

1. Basic CPU Architecture
2. Basic Data Types
3. Program Structure and Design
4. Algorithms
5. Comments
6. Basic Compiler understanding and operation
7. Pre-processor instructions
8. Expressions, statements and operators
9. Arithmetic and logical expressions
10. Loops and conditionals and other flow control
11. Functions
12. Arrays
13. Console I/O both C style and C++ style
14. Pointers
15. File I/O both styles
16. Strings both C-Strings and String class
17. Structures and unions
18. Command Line Arguments
19. Using libraries
20. Debugging

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.

STUDENT EVALUATION OF TEACHING (SETE)

Student feedback is important and an essential part of participation in this course. The Student Evaluation of Teaching (SETE) is a requirement for all organized classes at UNT. This short survey will be made available at the end of the semester to provide you with an opportunity to evaluate how this course is taught.

SUCCEED AT UNT

UNT endeavors to offer you a high-quality education and to provide a supportive environment to help you learn and grow. And as a faculty member, I am committed to helping you be successful as a student. Here's how to succeed at UNT: (1) show up; (2) find support; (3) get advised; (4) be prepared; (5) get involved; and (6) stay focused.

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EMERGENCY NOTIFICATION & PROCEDURES

UNT uses a system called Eagle Alert to quickly notify you 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). The system sends voice messages (and text messages upon permission) to the phones of all active faculty, staff, and students. Please make certain to update your phone numbers at <http://www.my.unt.edu>. Some helpful emergency preparedness actions include: (1) know the evacuation routes and severe weather shelter areas in the buildings where your classes are held; (2) determine how you will contact family and friends if phones are temporarily unavailable; and (3) identify where you will go if you need to evacuate the Denton area suddenly. In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.

ATTENDANCE POLICY

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 re-teaching 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.

Excessive student absences may have a negative impact on a student's comprehension and learning. Since this class meets on a TuTh schedule, students with more than four (4) absences will have their participation/attendance grade lowered for each absence beyond the initial five absences. Therefore, I expect your participation and attendance in this class to receive high priority.

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 Blackboard online system, including grading information and comments, is also stored in a safe electronic environment for one year. You have a right to view your individual record; however, information about your records will not be divulged to other individuals without the proper written consent. You are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the university's policy in accordance with those mandates at the following link: <http://essc.unt.edu/registrar/ferpa.html>.

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>.

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GRADING POLICY

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

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| Attendance/Participation | 6.0% |
| Lab Programs | 15.0% |
| Quizzes | 10.0% |
| Programming Assignments | 24.0% |
| Midterm Exams 1 – 2 | 25.0% (12.5% each) |
| Comprehensive Final Exam | 20.0% |
| Total | 100.0% |

Your letter grade for the semester will be determined as follows:

A = 90 – 100 B = 80 – 89 C = 70 – 79 D = 60 – 69 F = 0 – 59

Note: You must pass BOTH the homework portion (lab programs, quizzes, and programming assignments) 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 Blackboard throughout the semester to provide an ongoing assessment of student progress, though final assessment will be measured using the weighted average above.

Attendance/Participation: Attendance/Participation grades will be based on attendance and contribution to in-class discussions. Disruptive behavior and absences deemed excessive will result in a lower attendance/participation grade.

Lab Programs: Lab programs will be assigned with most components completed during the assigned lab section. Each lab will be graded using the average of all lab components based on a 0/50/100 scale for each component. There will be no make-up lab programs. However, the lowest lab program grade will be dropped.

Quizzes: Quizzes will be given at the beginning of each laboratory session. A missed quiz due to tardiness or absence may result in a grade of 0 for the missed quiz. There will be no make-up quizzes. However, the lowest quiz grade will be dropped.

Programming Assignments: There will be approximately six non-lab 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”. Partial credit will be given for programs that compile, but are not complete. Starting early on programming assignments is strongly encouraged as students typically have great difficulty in completing their programming assignments in one night the day before they are due. Instructions for submitting programming assignments will be made available for each project.

Midterm Exams: There will be two midterm examinations given in this course. Each exam will consist of a coding portion that will be given during the assigned lab section and a “paper” portion given during the lecture period. The dates of these exams will be posted on Blackboard 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 on Thursday, December 10, 2015, from 11:00 AM to 1:00 PM. As with the midterms, a coding portion will be given during the assigned lab section. All students are expected to take the final exam during the scheduled time period.

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ACADEMIC DISHONESTY

This course follows the Department of Computer Science and Engineering *Cheating Policy*. Specifically, students caught cheating or plagiarizing will receive a “0” for that particular assignment or exam. Additionally, the incident may be reported to the Dean of Students, who may impose further penalty.

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 Blackboard before the lab session is complete or as directed otherwise.

Individual programming assignments 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. If you are having trouble with an assignment, please consult with your instructor, TAs, or peer mentors.

A sophisticated program will be used to compare your work to the work of all other students (including students in past classes, if appropriate). If it is determined that you have cheated, the first instance of cheating in the class will result in a grade of ZERO on the assignment or exam in question and referral to the department chairperson 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.

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

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TENTATIVE CLASS SCHEDULE *(subject to change):*

| Week | Date | Material Covered | Remarks |
|-------------|---------------------------|-------------------------|---------------------|
| 1 | 8/24 – 8/28 | Intro, Chapter 1 | L1 |
| 2 | 8/31 – 9/4 | Chapters 1 & 2 | L2, Q1, P1 |
| 3 | 9/7 – 9/11 | Chapter 2 | L3, Q2 |
| 4 | 9/14 – 9/18 | Chapter 3 | L4, Q3, P2 |
| 5 | 9/21 – 9/25 | Chapter 3, Review | Exam 1 |
| 6 | 9/28 – 10/2 | Chapter 4 | L5, Q4, P3 |
| 7 | 10/5 – 10/9 | Chapters 4 & 5 | L6, Q5, |
| 8 | 10/12 – 10/16 | Chapter 5 | L7, Q6, P4 |
| 9 | 10/19 – 10/23 | Chapter 6 | L8, Q7 |
| 10 | 10/26 – 10/30 | Chapter 6, Review | Exam 2 |
| 11 | 11/2 – 11/6 | Chapter 7 | L9, Q8, P5 |
| 12 | 11/9 – 11/13 | Chapters 7 & 8 | L10, Q9 |
| 13 | 11/16 – 11/20 | Chapter 8 | L11, Q10, P6 |
| 14 | 11/23 – 11/27 | Chapter 9 | <i>Thanksgiving</i> |
| 15 | 11/30 – 12/4 | Chapters 9 & 10 | FE-LAB |
| 16 | 12/10 Thu 11:00 – 1:00 | Final Exam | |

IMPORTANT DATES

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| Aug 24 | First Class Day |
| Sep 7 | Labor Day (no classes) |
| Oct 2 | Last day to drop a course with a grade of W for courses a student is not passing. |
| Nov 2 | Last day to drop a course with a grade of W or WF. |
| Nov 26 - 29 | Thanksgiving Break (no classes) |
| Dec 3 | Last Class Day |
| Dec 4 | Reading Day (no classes) |
| Dec 9 | Final Exam |