Course Syllabus

Course	CS/CE 1337.501
Course Title	Computer Science I
Professor	Dr. Miguel Razo
Term	Spring 2024
Meetings	5:30 PM - 6:45 PM Monday & Wednesday, GR 2.530

Professor's Contact Information

Office Phone	972-883-4240
Office Location	ECSS 3.605
Email Address	mrazo@utdallas.edu
Office Hours	Mo & We 2:30 PM - 3:30 PM
Other Information	For any question send an email to mrazo@utdallas.edu using the subject: CS/CE 1337.501

General Course Information

Pre-requisites, Co-requisites, & other restrictions

Prerequisite: CS 1336 with a grade of C or better or equivalent.

Course Description

Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. The programming language of choice is C/C++. Students will also be registered for an exam section.

Course learning objectives

After successful completion of this course, the student should have an:

1) Ability to use single and multi-dimension arrays.
2) Ability to implement linear and binary searches.
3) Ability to implement simple sorting algorithms.
4) Ability to implement structured data types.
5) Ability to define and implement a class.
6) Ability to use fundamentals of object-oriented design.

Required Texts & Materials

- 1 Semester - Codio 1-Semester Plan - ISBN: 978-1-7331872-5-1
- 2 Semesters - Codio 2 Semester Plan ISBN 978-1-73331872-8-2
- Annual - Codio Annual Plan ISBN # 978-1-7331872-1-3

- Syllabus, calendar, slides, sample programs, assignments, and online quizzes will be available in the eLearning section for the course at https://elearning.utdallas.edu and/or MS Teams.

Suggested Texts, Readings, & Materials

- Starting out with C++, From Control Structures through Objects, 9th Edition, Tony Gaddis, Ed. Addison Wesley,ISBN-13: 978-0134544847,ISBN-10: 0134544846

- Bjarne Stroustrup: "Programming: Principles and Practice using C++" Addison-Wesley 2009, ISBN 978-0321543721.
- http://www.cplusplus.com/doc/tutorial/
- http://www.learncpp.com/
- Slides @ https://utd.link/1bq

Student Resources
Students who have tested positive for COVID-19 or may have been exposed should not attend class in person and should instead follow required disclosure notifications as posted on the university's website (see "What should I do if I become sick?")

COVID-19 Resources
Comets United webpage: check frequently

FAQ: check out the FAQs and reach out to your instructor or academic advisor if answers are not included

Student Resources: a variety of resources are available to help students to obtain counseling, health care, and academic support.

Classroom Conduct Requirements Related to Public Health Measures

UT Dallas will follow the public health and safety guidelines put forth by the Centers for Disease Control and Prevention (CDC), the Texas Department of State Health Services (DSHS), and local public health agencies that are in effect at that time during the Fall 2021 semester to the extent allowed by state governance. Texas Governor Greg Abbott's Executive Order GA-38 prohibits us from mandating vaccines and face coverings for UT Dallas employees, students, and members of the public on campus. However, we strongly encourage all Comets to get vaccinated and wear face coverings as recommended by the CDC. Check the Comets United: Latest Updates webpage for the latest guidance on the University's public health measures. Comets are expected to carry out Student Safety protocols in adherence to the Comet Commitment. Unvaccinated Comets will be expected to complete the Required Daily Health Screening. Those students who do not comply will be referred to the Office of Community Standards and Conduct for disciplinary action under the Student Code of Conduct – UTSP5003.

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes. Faculty have the discretion to set an attendance policy for their in-person meetings, but the absences due to COVID-19 cannot be counted against a quarantined student.

Class Participation

Regular class participation is expected regardless of course modality. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your

feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources

The information contained in the following link lists the University's academic support resources for all students.

Please see http://go.utdallas.edu/academic-support-resources.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please review the catalog sections regarding the credit/no credit or pass/fail grading option and withdrawal from class.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

Assignments & Academic Calendar

*The schedule is **tentative** and **subject** to change.*

Week	Topic	Reading
1-6	Syllabus review, course requirements, & introduction to computers and programming (C++) and equivalent C code	Ch. 1 & 2
	Expressions and Interactivity	Ch. 3
	Making Decisions Loops and Files	Ch. 4 Ch. 5
	Functions	Ch.6
	Arrays	Ch. 7, Sections 7.1 to 7.10
	Searching and Sorting Arrays Review!	Ch. 8
	Exam 1(February 21)	Ch. 1-8
7	Pointers	Ch. 9
8&9	Characters, C-Strings, and the string class Structured Data	Ch. 10 Ch. 11, Sections 11.1-11.10
10 & 11	Introduction to Classes	Ch. 13
	Review	
	Exam 2(April 3)	
12	More about Classes	Ch. 14, Sections 14.1, 14.3 and 14.4
13	Inheritance, Polymorphism, and Pure Virtual Functions	Ch. 15, Sections 15.1-15.7
14	Linked Lists and STL	Ch. 17 (STL) Ch. 18 (Linked List)
15	Review!	
	Exam 3(May 1)	

Homework Assignments:

There will be regularly assigned reading and homework problems. Reading assignments should be done before the class lecture. Homework problems will require the student to spend time programming a computer outside of class. It includes a test/sample scenario to demonstrate the correct operation of the assigned tasks.

Course Tools:

- ***C++ Compiler:*** *All of the programs we write this semester will be in C++. It is not essential that you use a particular C++ compiler. However, it is essential that your programs can be compiled and run by the TA's on their systems. Few options will be provided through eLearning, for example, every student has access to a free student version of Microsoft's Visual C++ compiler, and there are some free downloadable compilers available as well.*
- **Connectivity Issues:** *For help with issues regarding connectivity, UTD maintains a 24/7 IT help desk. You can contact them to document the problem:* http://www.utdallas.edu/ir/helpdesk/
- ***Tutoring:*** *For programming assistance in CS1337, a tutoring lab will be maintained. The schedule usually comes out a couple of weeks after the semester begins. Once the tutoring schedule for this semester has been released, an announcement will be posted on eLearning. In addition, it is part of the TA's job to help you, so please feel free to engage with him/her at any time. And, of course, I'll be happy to help as well.*

This semester, we will be using codio platform to submit and auto-grade the assignments and most activities. Your submissions will be tested against several testcases, similar to ZyLab platform you might have used in

CS 1136/1336 courses. You will be promoted to purchase a license ($40 fee) as part of the first assignment/activity we will do on that platform.

Course Policies

Grading (credit) Criteria	Homework Assignments 20% Exam 1 10% Exam 2 15% Exam 3 25% In-Class Activities/Assignments 15% Project 15%		
Exam dates	Exam 1(February/21), Exam 2(April/3), Exam 3(May/1) All exams will be online using the codio platform and/or eLearning, during class time the day of the exam @ assigned classroom. Do not search on the Web for a solution to a problem.		
In-Class Activities	The activity will be defined during class and must be completed during class time.		
Reviewing Grades	Students have one week after the results of an assignment or exam is graded to request a review/correction of their grade. A review can result in the lowering of a grade.		
Make-up Exams	There will be no make-up exams unless previously requested and approved by the instructor		
Extra Credit	Extra credit assigments will not be given to individual students.		
Late Work	Each programming assignment will include a due date and time. No late submissions are accepted.		
Grade Information	I do curve only the final grade, but just a little. It won't take you from F to C. Do not count on this to pass the class. Do the best you can.	A+ >= 97 97 > A >= 94 94 > A- >= 90 90 > B+ >= 87 87 > B >= 84 84 > B- >= 80 80 > C+ >= 77	77 > C >= 74 74 > C- >= 70 70 > D+ >= 67 67 > D >= 64 64 > D- >= 60 60 > F

These descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.