Course number: CSCI 1470.03/1470.C Computer Science I
SYLLABUS
Fall 2024
Subject to any new Texas legislative mandate changes.

COURSE INFORMATION:

Meeting times: **1470.03:** MW 2:00 pm - 3:15 pm **1470.C:** F 1:30 pm-4:00 pm
Meeting location: EIEAB 1.206 EIEAB 1.204
Course Modality: Traditional Face-to-Face

INSTRUCTOR INFORMATION:

Instructor Name: Robert Schweller
Office Location: EIEAB 3.220
E-Mail: robert.schweller@utrgv.edu
Work Phone: (956) 665-2667
Office hours: MW 9:00 am-10:30 pm, R 9:00 am-11:00 am, and by appointment.
Note: CSCI 1470.03 and CSCI 1470.C are the lecture and lab components of this course. Since your final grade will depend on lab assignments, homework assignments, exercises, and tests, this syllabus serves for both of them.

WELCOME & INTRODUCTION

COURSE DESCRIPTION, PREREQUISITES & MODE OF LEARNING

CSCI 1470 Computer Science I: An introduction to computer science. The fundamentals of a high-level programming language will be introduced. Methods of problem solving, techniques of algorithmic development and concepts of procedural and object-oriented programming will be emphasized. Societal and social issues related to computer engineering will be introduced.
• **Prerequisites**: Enrollment in or credit for CSCI/CMPE/EECE 1101, grade of "C" or better in MATH 1314/1414 or placement in a higher-level math course.

CSCI 1470 Computer Science I Laboratory: The course includes hands-on instruction and laboratory exercises in developing programs written in a high-level object-oriented programming language applying the principles taught in the CSCI 1470 lecture course.

Lectures:
The purpose of lectures is to introduce you to different concepts (from problem-solving to programming in C++). Each class will include numerous programming examples which will be posted on the class website after class. You should download these examples and modify them to ensure that you understand the topics covered.

Homework Assignments:
The purpose of the homework assignments is to develop **problem-solving** and **teamwork** skills.

Programs will be graded on correctness, efficiency, quality of design, documentation and style. Students may work in teams of size 1-4 to develop the solution for the problems. All programming assignments are expected to be the team's own work. Giving and receiving (from persons or web sites) major sections of code is considered cheating and will be dealt with on an individual basis (beginning with total loss of points followed by formal action). They are also encouraged to seek help with identifying syntax and run-time errors from student assistants (SAs), lab consultants, or the instructor during office hours. The team must submit only one solution for each assignment (any of the members can do it). All members of the team are equally responsible for the submission of that solution (if your teammates cannot submit it, then you must do it).

Lab Assignments:
The purpose of the lab assignments is to develop the students' **programming** skills by practicing with what they learn in lectures. Giving and receiving (from persons or web sites) major sections of code is considered cheating and will be dealt with on an individual basis. The students are advised to work on lab assignments as soon as they become available so on the day of the lab they can finish up and help others, or get help resolve any encountered difficulties.

Textbook and Code Analysis/Completion Exercises:
The purpose of the textbook exercises is to make the students self-assess their understanding of the foundations of the C++ programming language by completing the activities right after being introduced to a new concept. There will be textbook exercises for each chapter covered throughout the semester and their grade will count for the final grade. The students are expected to read the book **ahead** of the lectures to be better prepared to understand what will be discussed in them.
The purpose of the code analysis/completion exercises is to develop your **code analysis/completion** skills. The code analysis exercises will require the students to analyze short pieces of code in order to answer questions. The code completion exercises will require the students to fill multiple blanks to complete a piece of code. Their grade will count for the final grade. These exercises must be completed at the beginning of the lab period in the lab room and therefore they cannot be made up.

All assignments (lab and homework) must be submitted using the tool provided by Blackboard to submit assignments (sorry but no email attachments). Textbook exercises must be completed on the book's website.

Three important skills for you to develop: Problem Solving, Critical Thinking, and Analytical Reasoning/Thinking.

LEARNING OBJECTIVES/OUTCOMES FOR THE COURSE

Course Topics:
This course is an **introduction** to Computer Science and is taken as the first course for Computer Science and Computer Engineering majors and minors. It focuses on techniques of problems solving and algorithmic design and includes lab experiences in design and implementation of those algorithms in C++. Topics in C++ include:
data types, variables and assignment, interactive input/output statements, file input/output statements, selection and loop statements, functions, pointers, one- and two-dimensional arrays, simple sorting and searching algorithms, user-defined data types, structured data types, data abstraction and classes, Characters, strings and the string class.

Course Objectives:

After completing this course, the student should know:

Student Learning Outcomes	Program Student Learning Outcomes (ABET compliant)	Major Course Requirement/Major Assignment/Examination
a) How to analyze a problem and develop an appropriate algorithm to solve it.	**1.** Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.	All homework and lab assignments. All tests. All exercises.
b) How to implement algorithms by writing C++ code. c) How to compile and link that code into a working program. d) How to use testing and debugging strategies to identify and fix program faults.	**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.	All homework and lab assignments. All tests. All exercises.
e) How to recognize ethical issues related to their discipline.		
f) How to work constructively with a partner to solve problems		
g) How programming language, libraries and development environment each impact the way programs are written. h) How different algorithms meet different requirements. i) How to modularize code for clarity, testing and reuse. j) How to evaluate, use and modify existing algorithms.	**6.** Apply computer science theory and software development fundamentals to produce computing-based solutions.	All homework and lab assignments. All tests. All exercises.

LEARNING OBJECTIVES FOR CORE CURRICULUM REQUIREMENTS

This course does not satisfy any core curriculum requirement.

GRADING POLICIES

Component	**Weight**
Exams (5)	75%
Homework	10%
Zybook Exercises	5%
Labs Assignments	5%
Quizzes	5%

Your final grade will be based on the following scale:

A: 90-100 B: 80-89 C: 70-79 D: 60-69 F: 0-59

TEXTBOOK

We will use ZyBooks' **CSCI 1470: Computer Science I Spring 2024** online textbook ($64), which contains interactive examples and activities. This textbook is **required** as the interactive activities will count for your course grade. zyBook ISBN: 979-8-203-27789-3. You can get it directly from the publisher or through our bookstore.

To subscribe:
1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code: UTRGVCSCI1470SchwellerFall2024
3. Subscribe. Please enter your **UTRGV** email address when requested and enter **03** when the section is requested. If you choose an incorrect section (or no section at all) I will not be able to grade your submission.
Students may begin subscribing on Aug 12, 2024 and the cutoff to subscribe is Nov 29, 2024. Subscriptions will last until Dec 26, 2024.

TENTATIVE CALENDAR OF ACTIVITIES

(by week):

- **I/O, variables**
- **Conditionals**
- **Loops**
- **Functions**
- **Arrays**
- **Binary Search**
- **Basic Sorting**
- **Classes**
- **Stacks and Queues**
- **Dynamic Memory Allocation**
- **2D Arrays**
- **Recursion**
- **Pointers**
- **Linked Lists**
- **Fast Sorting**
- **Binary Search Trees**

COURSE POLICIES AND PROCEDURES

We value a positive and supportive learning environment, and for us to thrive together, we must recognize that our responsibilities, actions, and contributions can impact and transform our learning. The course policies listed below are created to ensure your success by fulfilling course expectations while remaining flexible to account for unexpected events.

LEARNING AND TEACHING ENVIRONMENT

I am committed to quality **teaching** and to providing you a meaningful experience in this course, but **learning** is **your** responsibility so please do your part in order to receive the maximum benefit from the course.

For this class, I expect you to:
• Complete all assignments and submit them on time (this is very important for you!).
• Read the textbook and do its activities ahead of my lectures.
• Interact respectfully with me, the course assistants, and your classmates.
• Participate in class discussions and activities.
• Remain on task and focused during class.
• Check the class webpage and class discord daily.
• Seek help immediately at the first sign that you are having trouble with the class or if you miss assignments so that you can get help.

ATTENDANCE

Students are expected to attend all scheduled classes. UTRGV's attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics, accommodation by Student Accessibility Services (SAS), observance of religious holy days, or military service.

ABSENCSES/SICK POLICY

Notify the professor beforehand if you will miss class. Check the course webpage and discord to review any missed material.

COURSE DROPS

Please consider the following information when referencing course drops. Instructor-initiated drops can have significant financial consequences for students. According to UTRGV policy, students may drop any class without penalty earning a grade of DR (drop) until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the "3-peat rule" and the "6-drop" rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

ACADEMIC INTEGRITY

Members of the UTRGV community uphold the Vaquero Honor Code's shared values of honesty, integrity and mutual respect in our interactions and relationships. In this regard, academic integrity is fundamental in our actions, as any act of dishonesty conflicts as much with academic achievement as with the values of honesty and integrity. The Writing Center is an excellent resource to assist in learning about and avoiding plagiarism in writing. Violations of academic integrity include, but are not limited to: cheating, plagiarism (including self-plagiarism), and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts (Board of Regents Rules and Regulations, STU 02-100, and UTRGV Academic Integrity Guidelines). **All violations of Academic Integrity will be reported to Student Rights and Responsibilities through Vaqueros Report It.**

STUDENT SUPPORT RESOURCES

We are committed to your personal, academic, and professional success; please know you can reach out to me for questions and/or I can help you identify the resources you need. UTRGV offers student support resources designed to contribute to your well-being and academic excellence.

Students seeking academic help in their studies can use university resources in addition to an instructor's office hours. University Resources include the Advising Center, Career Center, Counseling Center, Learning Center, and Writing Center. These centers provide services such as tutoring, writing help, counseling services, critical thinking, study skills, degree planning, and connections student employment (through Handshake and HR Student Employment). In addition, services, such as the Food Pantry are also provided. Locations are listed below.

Center Name	E-mail	Brownsville Campus	Edinburg Campus
Advising Center	AcademicAdvising@utrgv.edu	BMAIN 1.400 (956) 665-7120	EITTB 1.000 (956) 665-7120
Career Center	CareerCenter@utrgv.edu	BINAB 1.105 (956) 882-5627	ESTAC 2.101 (956) 665-2243
Counseling Center	Counseling@utrgv.edu Mental Health Counseling and Related Services List	BSTUN 2.10 (956) 882-3897	EUCTR 109 (956) 665-2574
Food Pantry	FoodPantry@utrgv.edu	BCAVL 101 & 102 (956) 882-7126	EUCTR 114 (956) 665-3663
Learning Center	LearningCenter@utrgv.edu	BMSLC 2.118 (956) 882-8208	ELCTR 100 (956) 665-2585
University Library	circulation@utrgv.edu www.utrgv.edu/library	BLIBR (956) 882-8221	ELIBR (956) 665-2005
Writing Center	WC@utrgv.edu	BLIBR 3.206 (956) 882-7065	ESTAC 3.119 (956) 665-2538

Financial Need

Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Student Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (956) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Blackboard Support

If you need assistance with course technology at any time, please contact the Center for Online Learning and Teaching Technology (COLTT).

Campus:	Brownsville	Edinburg
Location	Casa Bella (BCASA) 613	Marialice Shary Shivers (EMASS) 3.142
Phone	(956)-882-6792	(956)-665-5327
Toll Free	**1-(866)-654-4555**	
Support Tickets	Submit a Support Case via our Ask COLTT Portal	

Online Support	Chat with a Support Specialist online.
24/7 Support	Need Blackboard assistance after hours? You can call our main office numbers, (956)-882-6792 or (956)-665-5327, to speak with a support representative.

UNIVERSITY POLICY STATEMENTS

We care about creating a safe and supportive learning environment for all students. The University policy statements below are intended to create transparency for your rights and responsibilities as students. We each contribute to ensuring a safe and positive environment through our actions and conduct, and students are encouraged to advocate for their needs.

STUDENT ACCESSIBILITY SERVICES

Student Accessibility Services staff can be contacted at either campus to learn about and explore accessibility services.

Campus:	**Brownsville**	**Edinburg**
Location:	Music and Learning Center (BMSLC, 1.107)	University Center (EUCTR, 108)
Phone:	phone (956) 882-7374	phone (956) 665-7005
e-mail	ability@utrgv.edu	

STUDENTS WITH DISABILITIES

Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive reasonable academic accommodations should contact **Student Accessibility Services (SAS)** for additional information. In order for accommodation requests to be considered for approval, the student must apply using the mySAS portal and is responsible for providing sufficient documentation of the disability to SAS. Students are required to participate in an interactive discussion, or an intake appointment, with SAS staff. Accommodations may be requested at any time but are not retroactive, meaning they are valid once approved by SAS. Please contact SAS early in the semester/module for guidance. Students who experience a broken bone, severe injury, or undergo surgery may also be eligible for temporary accommodations.

PREGNANCY, PREGNANCY-RELATED, AND PARENTING ACCOMODATIONS

Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting should submit the request using the form found at Pregnancy and Parenting | UTRGV.

For questions about campus support services or public benefit programs for students who are pregnant, or parenting contact the Parenting Liaison officer in the Dean of Students Office.

Edinburg: UCTR rm. 325 Phone: 956.665.2260

Brownsville: BCAVL rm. 209 Email: dos@utrgv.edu

SEXUAL MISCONDUCT AND MANDATORY REPORTING

In accordance with UT System regulations, your instructor is a "Responsible Employee" for reporting purposes under Title IX regulations and so must report to the Office of Institutional Equity & Diversity (OIED@utrgv.edu) any instance, occurring during a student's time in college, of sexual misconduct, which includes sexual assault, stalking, dating violence, domestic violence, and sexual harassment, about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect that is free from sexual misconduct, discrimination, and all forms of violence. If students, faculty, or staff would like confidential assistance, or have questions, they can contact OAVP (Office for Advocacy & Violence Prevention) at (956) 665-8287, (956) 882-8282, or OAVP@utrgv.edu.

DEAN OF STUDENTS

The Dean of Students office assists students when they experience a challenge with an administrative process, unexpected situation, such as an illness, accident, or family situation, and aids in resolving complaints. Additionally, the office facilitates student academic related requests for religious accommodations, support students formerly in foster care, helps to advocate on behalf of students and inform them about their rights and responsibilities, and serves as a resource and support for faculty and campus departments.

VAQUEROS REPORT IT allows students, staff, and faculty a way to report concern about the well-being of a student, seek assistance in resolving a complaint, or report allegations of behaviors contrary to community standards or campus policies. The dean of students can be reached by email (dos@utrgv.edu), phone (956-665-2260), or by visiting one of the following office locations: cavalry (bcavl) 204 or university center (euctr 323).

MANDATORY COURSE EVALUATION PERIOD

Students have the opportunity to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu). Course evaluations are used by the instructor to better understand the student experience in the course, which can inform revisions of the course to ensure student success. Additionally, course evaluations are also used by the instructor for annual performance review and promotion applications, teaching award applications, among others. For these reasons, your feedback, reflections, and insights on your experience in the course are invaluable to ensure student success and a quality education for all. You will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades.

Online evaluations will be available on or about:

Fall 2024 Regular Term Novemer 13 – December 4, 2024