

The University of Texas at El Paso

ECE 3350 – Software Design II

Spring 2024

CRN: 27051

MW: 3:00 pm – 4:20 pm

COBA 326

Professor: Patricia A. Mendoza

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Office Hours:

MW 1:30 pm-2:50 pm (before class),

Or by appointment

Textbook: C++ How to Program (10th Edition)

By Paul Deitel, Harvey Deitel

ISBN: 978-0134448237

Publisher: Pearson Education

Note: Available online from the UTEP Library.

Course Description

An introduction to Object-oriented software design including polymorphism, multi-threaded programming techniques, algorithmic complexity analysis, classes of algorithms, heuristic algorithms, and basics of database systems. Utilize the C++ programming languages in a Linux development environment using the GNU toolchain.

Prerequisite

ECE 2300 with a grade of “C” or better.

Grading

Attendance/Class Participation:	10%
Quizzes/Homework/Projects:	20%
Exam 1:	15%
Exam 2:	15%
Exam 3:	15%
Final Exam and/or Final Project:	25%

**This scale table might be modified to be able to grade some students accordingly.*

Grading Scale

A = 100% - 90%	B = 89% - 80%
C = 79% - 70%	D = 69% - 60%
F = 59% or below.	

****ECE 3350 is part of the ECE BS Upper Division classes and requires a "C" grade or better in order to fulfill the B.S. ECE degree requirement and to successfully complete the course.*

Homework

Throughout the semester, students will be assigned various homework tasks, all rooted in-class lectures and readings from the designated course book. Submission of homework is required through the Blackboard Shell platform. Clear guidelines and deadlines for these assignments will be furnished via Blackboard announcements or during class sessions.

Late homework will **NOT** be accepted. In the case of illness or an emergency, the student must notify the instructor (before class preferably) of the conflicting situation. **Validating proof of illness or emergency** will be required to accept late homework submissions.

Projects

Students might have to work on a project in the semester based on C++ programming understanding. This project is individual, and students are expected to submit unique and individual work. In programming, there are several ways to accomplish the same result, and an unrepeated/different/unique work should be submitted. For more information, please review the "Student Conduct" section of this syllabus. There will be **NO** make-up for projects. More information about the projects will be provided later.

Quizzes

There will be several quizzes throughout the semester to provide feedback about your performance and understanding in class. These quizzes might be counted as in-class activities, and these might not be previously announced. Moreover, there might be situations where Quizzes will have to be completed through Blackboard Shell. There will be **NO** make-up for quizzes.

iClicker Reef – a cloud-based student response software - might be incorporated into our class. This will help to understand what you know, give everyone a chance to participate in class, and increase

how much you learn when we are in class together. This might count as a short quiz activity or just as participation. More information about iClicker will be provided later.

Exams

There will be three **onsite exams** during the semester, which will mostly focus on lectured material and assignments. A UTEP computer laboratory might be reserved to complete these exams. Remember that our exams are individual work, and you should complete these by yourself with no other's help.

No retakes for exams will be allowed. In the case of illness or an emergency that might prevent the student from taking the exam, it is the student's responsibility to notify the instructor as soon as possible (before exam time preferably) of the situation. Validating proof of the illness or emergency will be required, and the professor will provide a new time and date for this exam.

Final Exam

The successful completion of this exam is an integral component of your class grade. The exam format, whether paper-based or computer-based, will be communicated in advance. For all computer-based exams, the use of "Respondus 4.0" software will be mandatory. Additionally, a dedicated computer laboratory may be allocated for exam administration.

It's important to note that the final exam is to be completed individually, without any external assistance. Please remember that no make-up exam will be offered for the final assessment. In the event of illness or an unforeseen emergency preventing you from taking or completing the exam, it is your responsibility to promptly inform the instructor. Valid documentation supporting the illness or emergency will be required.

Should such circumstances arise, the instructor may assign an "I" (incomplete) grade for the course until the terms for rectifying the situation have been discussed and fulfilled by the student.

Class Attendance and Participation

This course is designed to be held in person, and students are strongly encouraged to actively participate in the class sessions scheduled for Mondays and Wednesdays from 3:00 p.m. to 4:20 p.m. The class environment is intentionally interactive, and student engagement is important.

Your presence in class not only enables you to participate in quizzes and engage in meaningful discussions on course topics, which contribute to your participation and potential assignments, but you will also earn a percentage grade for your regular attendance, 10% of your total grade. Your attendance will be gauged by your presence in class and your active involvement in the course's learning activities.

iClicker Reef may be integrated into various class activities to enhance the learning experience.

Withdrawal and Dropping the class

Not submitting assignments and/or presenting quizzes/tests does not constitute official withdrawal, and the professor might **not** drop you from the class. Make sure to talk to the professor if you stopped attending classes and/or completing assignments/quizzes/tests, and you need to be dropped from the course. If a student stops accessing/reviewing materials and/or completing assignments and/or taking tests, the student will receive a grade based on work completed.

Students may drop the class and receive a WC before March 28th, 2024. After this date, the professor might still be able to drop the student only in cases of medical or family emergencies, but the student will need to contact the professor to make this request and must provide documentation.

If you feel that you are unable to complete the course successfully, please contact your advisor at the Engineering EDGE Center. If you cannot complete this course for whatever reason, please contact me, otherwise, you are at risk of receiving an “F” in the course.

Make-up Work

Make-up work will be given only in the case of a documented emergency. Note that make-up work may be in a different format than the original work, may require more intensive preparation, and may be graded with penalty points. If you miss an assignment and the reason is not considered excusable, you will receive a zero. It is therefore important to reach out to me—in advance if possible—and explain with proper documentation why you missed a given course requirement. Once a deadline has been established for make-up work, no further extensions or exceptions will be granted.

Technology Requirements

This course content will be complemented by Blackboard Learning Management System (LMS). Ensure your UTEP e-mail account is working and that you have access to the Web. Mozilla Firefox and Google Chrome are the most supported browsers for Blackboard. Other browsers may cause complications with the LMS. When having technical difficulties, update your browser, clear your cache, or try switching to another browser.

You will need to have access to a computer/laptop, a webcam, and a microphone for completing online work and/or tests. Make sure to have access to any campus computer lab and/or check that your computer hardware and software are up-to-date and able to access all parts of the course.

Technology Support offers cost-free equipment checkout program for enrolled students. You can check out Laptop, a Wi-Fi hotspot, webcam even for a semester. For more information, please go to https://www.utep.edu/technologysupport/TSCenter/TSC_EQ_LaptopsTablets.html.

You might also need access to UTEP VPN (Virtual Private Network) in order to remotely connect to the campus network and access on-campus resources. For more information about VPN services go to https://www.utep.edu/technologysupport/ServiceCatalog/NET_VPNGlobalProtect.html.

If you encounter technical difficulties beyond your scope of troubleshooting, please contact the Help Desk at helpdesk@utep.edu or at 915-747-HELP (4357) as they are trained specifically in assisting with the technological needs of students.

Test Proctoring Software – Online and PC exams

In case of online and/or PC exams, course assessments (exams) will make use of the LockDown Browser and Respondus Monitor inside Blackboard to promote academic integrity. You are encouraged to learn more about how to use these programs before the first test.

For online exams, make sure to review the following guidelines:

- The assessments will only be available at the times identified on the course calendar and/or the date/times provided by your professor.
- A reliable Internet connection is essential to completing the exam. If you must go to a location to take the exam (such as the library), be sure to follow their requirements.

- You will have only one attempt to take the test, but if the window closes, you will be able to come back and continue your test where you left off. However, the time limit to complete the test will not be paused and once this has elapsed, answers will be saved, and no changes can be made. In case of any difficulty, it is your responsibility to notify your professor immediately. Check the make-up section for more information.
 - Respondus Lockdown Browser requires that all internet tabs are closed prior to the start of the test.
 - Respondus Monitor requires a webcam and microphone.
 - You will be required to show the webcam your student ID prior to the start of the test.
 - Your face should be completely visible during the test. Blocking the camera will disable the test.
 - Notes and/or textbook materials might be permitted during the test. However, Respondus Monitor still requires you to take a video of your surrounding area (desk, chair, walls, etc.).
 - You should not have conversations with other people and/or leave and return to the area during the test.

In any case, on-site or online exams are individual work, and these should be completed by yourself with no other's help. For more information, please review the "Student Conduct" section of this syllabus.

UTEP E-mail Account and Blackboard

Students will need to have his/her UTEP email account and Blackboard account ready at the beginning of the semester. Online assignments/quizzes/tests will be provided through Blackboard Shell and/or email, and it is the student's responsibility to have these accounts ready. **NO emails from personal email accounts will be accepted.** All emails for this class will require "**ECE 3350 Spring 2024**" in the *subject field*.

Students with Disabilities, Accommodations or Support Services

Center for Accommodations and Support Services (CASS) Policy: If you have or believe you have a disability that may impact your ability to succeed in a class, whether it be online or face-to-face, you may wish to contact the Center for Accommodations and Support Services (CASS) to show documentation of a disability or to register for services. Students who have been designated as disabled must reactivate their standing with the CASS yearly. Students who become pregnant may also request reasonable accommodations, in accordance with state and federal laws and regulations and University policy. Accommodations that constitute undue hardship are not reasonable. If you feel that you may have a disability requiring accommodations and/or modifications, contact CASS at cass@utep.edu, or call at 747-5148, or go to CASS AIM portal to request accommodations online: <https://www.utep.edu/student-affairs/cass/>.

COVID-19 Precautions

To prevent the spread of COVID-19 in the community, UTEP offers students free, on-campus testing in the UTEP Student Health and Wellness Center located in Union Building East, first floor.

If you test positive for COVID-19, wear a mask for up to 10 days. If symptoms are moderate or severe, seek medical attention and follow the medical provider's guidance on self-isolation. Is the student's responsibility to notify the professor if this situation occurs. Please refer to the "Makeup Work" and "Class Attendance and Participation" sections in this syllabus.

Student Conduct – Scholastic Integrity

As an entity of The University of Texas at El Paso, the Department of Electrical and Computer Engineering is committed to the development of its students and to the promotion of personal integrity and self-responsibility. The assumption that a student's work is a fair representation of the student's ability to perform forms the basis for departmental and institutional quality. All students within the Department are expected to observe appropriate standards of conduct.

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as one's own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#) for possible disciplinary action. To learn more, please visit [HOOP: Student Conduct and Discipline](#).

Guidance on Artificial Intelligence – AI Prohibited

Use of AI technologies or automated tools, particularly generative AI such as ChatGPT or DALL-E, is not allowed for assignments in this class. Each student is expected to use critical and creative thinking skills to complete tasks and not rely on computer-generated ideas. Any direct use of AI-generated materials submitted as your own work will be treated as plagiarism and reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#).

Plagiarism Detecting Software

Some of your coursework and assessments may be submitted to SafeAssign, a plagiarism-detecting software. SafeAssign is used to review assignment submissions for originality and will help you learn how to properly attribute sources rather than paraphrase.

Course Resources

UTEP provides a variety of student services and support. Please visit https://www.utep.edu/advising/student_resources/student-success-resource-hub.html for a listing of campus resources.

Course Topics

- C++ Basics
- Object-Oriented Design
- Classes and Objects
- Inheritance and Polymorphism
- C++ Function and Class Templates: Iterators
- Standard Template Library
- Function Pointers, Regular Expressions, and Lambda Functions
- Advanced Data Structures: Graphs
- Multi-Processor Architectures and Classes of Parallelism
- Multithreaded Programming with P-Threads
- Race Conditions in Multithreaded Programs
- Thread Synchronization Using Mutual Exclusion Semaphores

Syllabus Change Policy

Except for changes that substantially affect the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.

Important Spring 2024 Dates

- **Jan 8th** – Financial Aid Disbursed
- **Jan 15th** – Dr. Martin Luther King, Jr. Holiday – **University Closed**
- **Jan 16th** – Spring 2024 classes begin
- **Jan 16th-19th** – Late Registration (Fees are incurred)
- **Jan 31st** – Spring Census Day
 - Note: This is the last day to register for classes. Payments are due by 5:00 p.m.
- **Feb 1st and 2nd** – Spring Career Fair – Thomas Rivera Conference Center
- **Feb 12th – 20th Day**
 - Note: Students who were given a payment deadline extension will be dropped at 5:00 p.m. if payment arrangements have not been made.
- **Feb 16th** – Graduation application deadline for degree conferral
- **March** – Advising Season starts for Spring 2024
- **March 11th - 15th** – Spring Break
- **March 28th – Spring Drop/Withdrawal Deadline**
 - Note: Student-initiated drops are permitted after this date, but the student is not guaranteed a grade of W. The faculty member of record will issue a grade of either W or F.
- **March 29th** – Cesar Chavez Holiday - **No classes**; Spring Study Day
- **Apr 12th** – Deadline to submit candidates' names for commencement program
- **May 2nd** – Spring – Last day of classes
- **May 3rd** – Dead day
- **May 6th – 10th** - Spring Final Exams
- **May 6th – Monday** – ECE 3350 Final Exam – **On-Site** – Time: 1:00 pm – 3:45 pm
- **May 11th – 12th** - Spring Commencement
- **May 15th** – Grades are Due
- **May 16th** – Grades are posted to students' records. Students are notified of grades and academic standing