

Syllabus

COSC 1437.02E – Programming Fundamentals II

Texas A&M University Commerce

Spring 2024

Instructor: Dr. Omar El Ariss

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Office Hours:

Day	Time
TR	3:30 pm - 5:00 pm
W (Zoom)	4:30 pm - 6:00 pm

Communication Response Time: 24 hours

(Please send a second email if you did not receive a response after 2 days)

Preferred Form of Communication: face-to-face

There are many ways to reach me. There is no substitute for face-to-face communication which often leads to more refined and focused questions resulting in your improved understanding. I strongly encourage you to take advantage of my office hours. Questions during class or immediately after class are always welcomed. Email is an easy way to ask questions outside of class but is not productive as face-to-face communication.

Meeting Time and Place

- Lecture: TR 5:00 pm - 6:15 pm, JOU 110
- Lab: R 6:30 pm - 7:45 pm, JOUR 200

This course has a separately scheduled lab section required to be enrolled: **CSCI 1437.02L**. Please make sure to enroll in and successfully complete the required lab session for this course. Every week there will be an assigned lab work.

Prerequisites

- COSC 1436 or CSCI 151

Recommended Textbooks

- No textbook is required
- All reading materials will be provided by the instructor.

Course Objectives

This is a lecture and laboratory course, and is the second course sequence to introduce computer programming. Three programming languages: Python, Java, and C++, will be taught in this class. Examples and assignments on video game development will be used throughout the semester. Students will learn computational thinking and programming through reflection on their hands-on experiences on video game implementation. This class reviews control structures and data types with emphasis on structured data types. The class will focus on the application of object-oriented programming paradigm: the definition and use of

classes along with the fundamentals of object-oriented design. The class will also introduce searching and sorting techniques, and an introduction to software engineering.

Student Learning Outcomes

Upon completion of the course, students should possess the following skills:

1. Review various data types and basic data structures of arrays and lists.
2. Comprehend data structures composed of heterogeneous items.
3. Become proficient in applying control structures to alter the sequential flow of execution of program statements.
4. Become proficient in applying library functions and creating user-defined functions.
5. Become proficient in function parameter passing, comprehend how it translates to low-level representation, and how primary storage is involved.
6. Learn object-oriented programming, and comprehend how to combine data and operations on the data into an object.
7. Comprehend multidimensional arrays or multidimensional (nested) lists.
8. Comprehend searching and sorting techniques, and learn the difference between those techniques in terms of computational resources.
9. Rewrite programs including game-driven examples originally written in structured programming into programs in object-oriented programming.

Homework Assignments

There will be several homework assignments. The purpose of the homework is to reinforce programming material that is covered in class. Programming assignments should be done individually. Make sure to start early on the programming assignments so that you have time to get help if there is a need to. There is a specific mentor for this class whose schedule is posted on D2L. Department lab tutors are also available in JOUR 200 or JOUR 101-102. In addition, the Academic Success Center also provides tutoring in the library for a wide variety of subjects.

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, chatbots, or other software that has the capacity to generate code, and textual answers. Any use of such software is not allowed, and constitutes an instance of academic dishonesty (plagiarism).

Grading

- Assignments: 40% of grade
- Lab Attendance: 10% of grade
- Midterm: 20% of grade
- Final Exam: 30% of grade

Letter grades will be determined using a standard percentage of points scale:

Letter Grade	Cut-off Score
A	90%
B	80%
C	70%
D	60%
F	Below 60%

Lab

attendance is based on whether the student have

participated in the lab exercise. (You will receive the credit as long as you work on the exercise question, even if your answer is incorrect.) The time and location of each exam will be announced at least one week before the exam. Class attendance, doing all your homework will help the borderline cases. Check your grades often. Any score may be disputed up to seven (7) days after the score is posted. After 7 days the score remains as-is.

Technology Requirements - LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

Access and Navigation

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

Communication and Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

Minimal Technical Skills Needed

Students enrolling in this course should have knowledge of computer essentials including how to interact with a graphical user interface, text editor, web browser and the use of D2L. If the use of a personal computer is preferred over university laboratory computers, it is expected that the student can download, install and configure software. No experience in computer programming is expected or required.

Methods of Instruction

We will meet 3 times every week, including 2 lectures and 1 lab session. Attendance is required for every meeting. The course will consist mainly of lectures, labs, and discussions. Important material from the text

and outside sources will be covered in class. Therefore, class attendance and good note taking are essential for success. Students are expected to contribute to each class in the form of discussion and questions. Therefore, it is necessary to do any required reading before class.

This syllabus contains an overview of what will be covered in class; for specific information, students are referred to the class web page maintained on D2L course management system. The course web page will contain lectures, assignment information and supporting material. Information on D2L will be updated frequently so it is a good idea to check it regularly. Assignments are posted on D2L and should be submitted through D2L.

Attendance

You are expected to attend every class. If you must miss a class, it is your responsibility to make up for the work that you missed. If you are going to be absent from class, please notify the instructor in advance.

Tips for Success in the Course

1. Attend every lecture as long as you are able to.
2. Work on the lab.
3. Check D2L at least twice a week.
4. Read the lecture notes before and after every lecture, and use the slides as your guideline.
5. Start your homework assignments early.
6. If you have any questions, or are having difficulties with the course material then please contact your instructor as soon as possible.

Late Submissions Policy

All work submitted electronically must be submitted by midnight of the due date. Late work will be deducted 10% for each day past the due date. Assignment will not be accepted after three days from the due date.

Make-up Policy

No individual make-up test will be permitted except in the case of a formal institutional excuse. There will be no makeup for project deliverables.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

Academic Honesty

"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student's Guide Handbook, Policies and Procedures, Conduct). It is the policy of the University, that no form of plagiarism or cheating will be tolerated. Plagiarism is defined as the deliberate use of another's work and claiming it as one's own. This means ideas as well as text or code, whether paraphrased or presented verbatim (word-for-word). Cheating is defined as obtaining unauthorized assistance on any assignment. Proper citation of sources must always be utilized thoroughly and accurately. If you are caught sharing or using other people's work in this class, you will receive a 0 grade and a warning on the first instance. A subsequent instance will result in receiving an F grade for the course, and possible disciplinary proceedings. If you are unclear about what constitutes academic dishonesty, ask.

For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

Special Needs

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: Office of Student Disability Resources and Services

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

Tentative Course Outline

Week	Content
1	Syllabus & Introduction
2	Review of Programming I concepts
3	Review of Programming I concepts
4	Review of Programming I concepts
5	Multidimensional Arrays
6	Multidimensional Arrays
7	Object Oriented Programming
8	Object Oriented Programming
9	Midterm Object Oriented Programming
10	Spring Break
11	Object Oriented Programming
12	Functions & Parameter Passing
13	Functions & Parameter Passing
14	Searching and Sorting
15	Searching and Sorting
16	Heterogeneous Items
17	Game Development (wrap up)
18	Final Exam (comprehensive)

The course outline will adapt to the actual progress of the classes and may not be accurately the same as the table above.