



COSC 1437 01W, 1LW Programming Fundamentals II

COURSE SYLLABUS: Summer II 2024

INSTRUCTOR INFORMATION

Instructor: Kathiravan Natarajan

Office Location: JOUR 209

Office Hours: Thursday 9 AM to 5 PM

Office Phone: N/A

Office Fax: N/A

University Email Address: Kathiravan.Natarajan@tamuc.edu

Preferred Form of Communication: Email with the subject prefix COSC 1437.01W

Communication Response Time: 1 day to 3 days

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required

Introduction to C++ Programming and Data Structures, 5th edition

Author: Y Daniel Liang

Edition: 5TH

Published Date: 2022

ISBN: 9780137454181

Publisher: PEARSON

Course contents will be shared on the course web page. A textbook is beneficial but not mandatory.

Software Required

MS Visual Studio Community Edition – Available for free. The instructor will send a video of installation instructions and respective link to download the free community versions.

Optional Texts or Materials

Course materials should suffice in achieving the educational goals of this course.

The syllabus/schedule are subject to change.

Course Description

This course comprehensively reviews control structures and data types, focusing on structured data types. It emphasizes the object-oriented programming paradigm, detailing the definition and use of classes and the core principles of object-oriented design. The curriculum includes an introduction to software engineering principles, alongside basic algorithm analysis, and common searching and sorting techniques. Prerequisites for this course are CSCI 151 or COSC 1436.

Student Learning Outcomes (Should be measurable; observable; use action verbs)

1. Explore various data types and fundamental data structures such as arrays and lists.
2. Understand data structures that consist of diverse elements.
3. Develop expertise in utilizing control structures to modify the sequential flow of program statements.
4. Master the application of library functions and the creation of user-defined functions.
5. Proficiently grasp function parameter passing, understanding its translation to low-level representation and its involvement with primary storage.
6. Acquire knowledge of object-oriented programming, and comprehend the integration of data and operations on the data into an object.
7. Gain a deep understanding of multidimensional arrays or nested lists.
8. Comprehend searching and sorting techniques, discerning the differences between these methods in terms of computational resources.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Utilizing computers, operating systems, programming compilers, integrated development environments (IDEs), and Microsoft Word.

Instructional Methods

1. Course materials such as slides and video recordings of the weekly lectures will be posted in D2L.
2. Weekly Zoom meetings will be conducted on Fridays at 4 PM for an hour. This meeting will be utilized for clarifying additional student questions

The syllabus/schedule are subject to change.

Student Responsibilities or Tips for Success in the Course

- Since this is a short semester, students are highly encouraged to check emails and D2L updates.
- Keep up-to-date with the weekly quizzes and lab assignments
- Practice the programming syntaxes discussed in the video lectures while pausing the video
- Highly advised to take notes while watching video lectures
- Complete the homework on time
- Reach out to instruction for any questions and clarifications

GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Total points corresponding to the final letter grades

A = 451- 500 Points

B = 401- 450 Points

C = 351- 400 Points

D = 301- 350 Points

F = 300 & > Points

Weights of the assessments in the calculation of the final letter grade.

Example:

Weekly Quizzes	40%
Lab assignments	40%
Final Exam	20%
TOTAL	100%

The syllabus/schedule are subject to change.

Assessments

Since this is an online course, the weekly quizzes, lab assignments, and the final exam will be conducted and assessed online. Weekly quizzes, lab assignments, and the final exam will be due at the end of the class week.

For example, if the class week starts on 07/10, the quiz and assignments should be completed on or before 07/17, at 11:59 PM. This will be followed throughout the end of the semester to avoid any conflicts in the submission deadlines.

The final exam will be available from 08/04/2024 to 08/06/2024.

Submitting and completing lab assignments and weekly quizzes on time will prevent point deductions from the final score.

Weekly quizzes:

1. All the quizzes are weighted equally
2. Will be in the format of multiple choices, multi-select, and True/False
3. Questions will be based on the concepts that are covered in the respective week

Lab assignments:

1. All assignments carry equal weight.
2. Assignments will involve writing code snippets and solving problems using programming concepts covered in class.
3. Individual questions within an assignment will be assigned different points based on their complexity. The point value for each question will be provided within the assignment instructions.

Final Exam:

1. Will be conducted in the final week of the semester
2. Will be in the same format as the weekly quizzes
3. Will cover all the topics covered throughout the semester

Late Submissions:

1. A week late submission will result in a deduction of 50% from your assignment score for that respective assignment
2. The above will be considered only under extreme conditions such as students experiencing health issues/family issues.
3. All other late submissions will automatically default to 0 to the respective assignment even if it is a minute late.

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:

The syllabus/schedule are subject to change.

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

LMS Browser Support:

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

Zoom Video Conferencing Tool

https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

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>

Interaction with Instructor Statement

1. Reach out via email with the course name as the subject line
2. Weekly Zoom meetings will help in interacting with the instructor
3. Instructor can schedule Zoom meetings with students based on the student's needs and be available to meet in person during office hours on an appointment basis.

The syllabus/schedule are subject to change.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

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.

University Specific Procedures

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).
<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>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedures 13.99.99.R0.01](#)
<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>
<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

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

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

The syllabus/schedule are subject to change.

[Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

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

Students with Disabilities-- ADA Statement

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

Velma K. Waters Library Rm 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/>

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](#)

The syllabus/schedule are subject to change.

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.

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

AI use policy [Draft 2, May 25, 2023]

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

The syllabus/schedule are subject to change.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty

Department or Accrediting Agency Required Content

The syllabus/schedule are subject to change.

COURSE OUTLINE / CALENDAR

Week	CONTENT	Chapters
W1 (07/10)	Overview of computers and programming languages, MS Visual Studio C++ installation, Elementary Programming, Selections, Mathematical functions, Characters, and Strings in C++ <i>(Quiz 1, Lab assignment 1)</i>	1 – 4
W2 (07/17)	Loops, Functions, single and multidimensional arrays in C++ <i>(Quiz 2, Lab assignment 2)</i>	5 – 8
W3 (07/24)	Object-oriented programming in C++, data structures such as linked lists, stack, and queue), searching and sorting algorithms in C++ <i>(Quiz 3, Lab assignment 3)</i>	9, 10, 14, 15
W4 (07/31)	File I/O, Pointers <i>(Final exam, Lab assignment 4)</i>	11, 13

The syllabus/schedule are subject to change.