COSC 1437.01W and 0LW
Programming Fundamentals II
COURSE SYLLABUS: Summer II 2022

INSTRUCTOR INFORMATION

Instructor:	Amy Hays M.S., Computer Science
Office Location:	Journalism Rm 212
Office Hours:	Mondays, 1 pm - 3 pm Thursdays, 1 pm - 3 pm Other times by appointment only via email
Office Phone:	(903) 886-5405
University Email Address:	amy.hays@tamuc.edu
Preferred Form of Communication:	For all emails, make sure the email the subject line reads: “COSC 1437.01W~~”.
Communication Response Time:	48 hours

TEACHING ASSISTANT

Teaching Assistant:	Junaid Mohammed
TA Email:	jmohammed3@leomail.tamuc.edu

COMPUTER LAB

Locations:	Journalism Rm. 101 & 200
Hours:	9 am to 9 pm, Monday – Friday

COURSE INFORMATION

Lecture: Online web-based through D2L

The *syllabus/schedule are subject to change.*

Class Textbook:

- C++ Programming: From Problem Analysis to Program Design 8th edition by D.S. Malik. ISBN 9781337102087 or E-book ISBN 9781337514491

You can use any textbook of your choice for reference material for this class or look up information about features of the C++ language on the internet.

For additional resources for learning C++, click on Related Web Links.
Some particularly recommended sites for compiler information, tutorials, and general information.
http://www.cprogramming.com/
http://www.cplusplus.com/
http://msdn.microsoft.com/en-us/visualc/default.aspx

Software Required
C++ compiler of your choice. For instance, Windows users might consider Bloodshed Dev-C++ or MS Visual Studio; Xcode for Mac OS users; GCC/G++ for Linux users.

A few links for free C++ compilers:

Windows:

https://visualstudio.microsoft.com/vs/express/
https://www.bloodshed.net/
http://www.codeblocks.org/
Download the MinGW-included version codeblocks-20.03mingw-nosetup.zip here: http://www.codeblocks.org/downloads/binaries
https://code.visualstudio.com/ Visual Studio Code

Mac OS:

https://developer.apple.com/xcode/ Xcode

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. Prerequisites: CSCI 151 or COSC 1436

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Student Learning Outcomes

This course is similar to an exercise class. You learn new concepts and techniques, and then, exercise these newfound skills. At the end of the class,

1. Understand the basic elements of a computer program including documentation, data declaration, and procedural operations.
2. Edit, translate, and execute a computer program.
3. Write programs to input data from the keyboard or file and output it to the console or file.
4. Apply control structures to alter the sequential flow of execution of program statements including selection and iteration structures.
5. Create user-defined functions; develop programs consisting of multiple functions, master function parameter passing, and the scope and lifetime of an identifier.
6. Define and manipulate arrays including searching, sorting, and basic operations on lists implemented as arrays.
7. Create and access structures composed of heterogeneous items.
8. Design and code a class and then develop applications that utilize user-defined classes.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Using computers, operating systems, program compilers, IDE, and Microsoft Word

Tips for Success in the Course

1) Check D2L as often as possible.
2) Read assignments and be ready for class lectures.
3) Ask if you don't understand something.
4) Get help (sooner rather than later) if you have problems:
    - lab tutors in Jour 200 or 101-102
    - the Academic Success Center also provides tutoring in the library for a wide variety of subjects
    - make friends with at least one person in class so you can compare notes or check for anything you might have missed
    - get a study group together
5) Stay caught up as much as possible.

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6) Get started on programs so that you have time to get help if you find you need some help.
7) Do your own work. Consult with others about problem-solving strategies, but code it yourself.
8) What you get out of any class depends to a very large degree on what you're willing to put into it. Get in the habit of writing little practice programs to try out new language features as we learn them. As you write more programs (even small ones), the process becomes easier, you're much more likely to remember how the language works, and you get much better at programming logic (the hardest part of computer programming).
9) Know your limits and don't over-extend yourself any more than necessary.

Instructional Methods

This course is a lecture supplemented by text and D2L. To get started with the course, go to: https://leo.tamuc.edu. You will need your CWID and password to log in to the course.

Student Responsibilities

1) Make-up examinations for exams will not be given without valid documents. If you have a compelling and documented reason for not being able to attend the exam, you must make alternative arrangements before the examination. Grades will not be curved for the course, and you will receive the grade that you earn through your performance on the assignments, exams, projects, and bonus questions. There will be no individual exceptions to the grading policy, and, therefore grades of a C or F are possible.
2) No late work will be accepted except under special extenuating circumstances when prior arrangements have been made with the instructor.
3) Grades will be posted within one week after the assignment due date.
4) You are responsible to check your grades after each assignment. Please report any error or inconsistency to the instructor within 7 days if possible.
5) All assignments must be submitted using D2L.
6) All students are requested to access their university e-mail accounts regularly. You may be contacted when important matters arise. If you have any questions about the course or need assistance, please contact the instructor and/or the TA in person during office hours or by e-mail at any time.

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

Assessments

Basis for Evaluation:

Lab Assignments	60%
Quizzes	40%

Notes:

A. Assignments/Labs:

Each week there would be an assignment and/or lab that should be solved independently and tightly related to the class materials and topics. Submissions are always expected to be finished in a good shape by deadlines. All assignments must be formally submitted to the assignment folder. Email or any other formats of submissions do not count and will not be graded. If you have difficulty accessing D2L temporarily, you can email me your assignment as proof of on-time submission. However, you still need to upload it to the assignment folder as soon as the issue is resolved to receive credit.

B. Attendance

For the online course, students should make an effort to listen to the recorded lecture. Students are required to keep up with class materials and announcements made during lectures or via emails, including changes to due dates or assignments. Attendance will be evaluated based on the submission of assignments and labs.

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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 the 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

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 late work. 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

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

You should do your own work on exams and assignments. Copying another student's work is not acceptable. Any indication of cheating or plagiarism on an exam/assignment will result in an automatic 0 (zero) for the exam/assignment for all students involved. Yet, based on cheating and plagiarism activity in any section of the class, the instructor holds the right to give the grade of F to the identified student(s) for the section. Regarding codes in assignments, you may be required to explain the code you submitted. In case of discursive explanation, the instructor holds the right to lower your grade. No makeup exams or assignments unless documents explaining the emergency are provided.

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.

Late Policies

Credit will be given for ONLY those exams, quizzes, and assignments turned in no later than the deadline as announced by the instructor of this class unless prior arrangement has been made with the instructor.

Late assignments can gain partial credit upon the following policy. As per University requirements, assignments submitted within 7 days after the deadline can receive up to 20% deduction, assignments submitted between 8-14 days after the deadline can receive up to 50% deduction.

- **No assignments will be accepted two weeks after the assigned due date**
- **No assignment will be accepted after the term end day**
- Exceptions to this policy will only be made in extraordinary circumstances. Please let me know your circumstances.

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

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

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TAMUC Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 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

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

Graduate Student Academic Dishonesty 13.99.99.R0.10

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.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:

Student Disability Services
Texas A&M University-Commerce
Director: Alexis Duggan
Waters Library - Room 162
Phone (903) 886-5150
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: https://www.tamuc.edu/student-disability-services

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.

COURSE OUTLINE / CALENDAR

Week of	Topic
7/11	Introduction to software development, Design Steps, Compiler Setup, and debugging settings. Introduction to variables and data types, input/output operators in main functions. Decision making, string comparison, nested control structures, logical operators, == vs =
7/18	Loop Control - 1: For, while, do-while loops, infinite loops. Random number generator. Loop Control - 2: Details on loop control, break, and continue keywords. File Operations: text files, binary files. How to read from and write into files.
7/25	Functions: Modular programming, pass by reference, pass by value, memory allocation details of functions, Data Types Memory Size, Scope of variables, static variables, function overloading, predefined (system) functions, default arguments. Single dimension arrays, array applications: Search in sorted and unsorted data.
8/1	Multiple dimension arrays, initialization, search in 2D arrays, row/column operations, Structs, memory status of structs, arrays in structs, and functions with structs. Structs, structs in structs, sorting structs, sorting structs in an array.
8/8	Pointers data type, pointers with structs, pointers as an array variable, pointer arithmetic Classes - 1: Introduction to classes, objects, membership, access operators Classes - 2: Inheritance, Static and dynamic function overloading, polymorphism

Note: The right to modify the presentation order of materials is reserved. Course progress will be based on feedback and suggestion from students. We would cover the course materials, so if we slow in some topics, we must accelerate elsewhere.

HAVE A HAPPY AND SUCCESSFUL SESSION

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