



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

Programming Fundamentals III

COSC - 2336 - B001

JOSHUA SULLWOLD

NOTE: This is a 16-week course.

NOTE: This is a Blended/Hybrid course.

PROGRAMMING FUNDAMENTALS III

COSC 2336 B001

Course Description:

Presents further application of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis. Prerequisite: COSC 1337. Semester Hours 3.

Prerequisites and/or Corequisites:

COSC 1337

Course Notes and Instructor Recommendations:

Students should always use their MCC email to communicate with instructor. **The student is responsible for checking their MCC email and Brightspace every day.**

Instructor Information:

Instructor Name: Joshua Sullwold

MCC Email: jsullwold@mclennan.edu

Office Phone Number: 254 299 8281

Office Location: BT 108

Office/Teacher Conference Hours: See Brightspace for Faculty Schedule

Instructor Correspondence Information: Emails are returned within 24 hours of receipt except when received over the weekend or during holidays. Those will be returned the first business day the College is open.

Required Text & Materials:

Title: Introduction to Programming with C++, 6th Edition

Author: Liang, Y. Daniel

Edition: 5th

Publisher: Pearson

ISBN: 9780137454181

MCC Bookstore Website: [MCC Bookstore](#)

Methods of Teaching and Learning:

- A. **Lab Assignments (60%):** These assignments are designed to provide students with hands-on experience and the opportunity to apply the skills they are acquiring

through the course. Specific guidelines and expectations for each lab are detailed in the weekly lab assignments, which can be found in the Assignment link.

- B. **Lecture and Tests (40%):** The lectures in this course serve as a platform to explain and discuss fundamental programming concepts. To assess understanding and retention of this material, students will take tests throughout the semester. The specific dates for each test are posted in the Course Schedule on Brightspace.

Course Objectives and/or Competencies:

During this course, students will:

- Define and articulate key concepts in data structures and algorithm analysis and design.
- Develop, compile, link, run, and debug C++ programs within a C++ development environment.
- Recognize and employ various programming data types and structures, including user-defined simple data types, namespaces, and enumerated constants.
- Master the use of single and multi-dimensional arrays and vectors in programming.
- Apply advanced object-oriented design principles, encompassing classes, data abstraction, inheritance, and operator overloading.
- Comprehend and implement recursive functions and algorithms.
- Select and apply appropriate sorting and search techniques in various contexts.
- Understand pointers and effectively manage dynamic memory allocation in C++.
- Implement and manipulate advanced data structures, including linked lists, stacks, queues, binary trees, general trees, graphs, and networks.

Course Attendance/Participation Guidelines:

If a student is not in attendance in accordance with the policies/guidelines of the class as outlined in the course syllabus as of the course census date, faculty are required to drop students from their class roster prior to certifying the respective class roster. A student's financial aid will be re-evaluated accordingly and the student will only receive funding for those courses attended as of the course census date.

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This course will be conducted as a "face-to-face hybrid" class. This format means there is one weekly, regular class meeting students will be required to attend in-person. Class attendance will be taken during each regular meeting session.

If a student fails to attend face-to-face class sessions for more than 25% of the class meetings prior to the 60% point of the term, the instructor will be required to withdraw the student from the course. Should a student miss more than 25% of the class meetings past the 60% point of the term, the instructor will NOT withdraw the student for any reason. The student will earn be assigned the grade earned for the course.

Absences are excused in accordance with MCC policy which includes absences caused by (1) authorized participation in official College functions, (2) personal illness, (3) an illness or a death in the immediate family, (4) Pregnant or Parenting Protections under Title IX and/or Texas State Education Code Chapter 51, Subchapter Z, Section 51.982 or (5) any excused absences as outlined in Section IV of the MCC Class Attendance policy.

Course Outline or Schedule:

NOTE!!! The instructor reserves the right to change course policies, deadlines, assignments, or exams at their discretion with the proper notice.

1. Course Schedule

| Week | Reading | Assignments |
|-------------|--|--|
| Week 1 | Chapter 9 – Object & Classes Chapter 10 – Object-Oriented Programming | Syllabus Quiz |
| Week 2 | | Lab 1 – Simple Library System |
| Week 3 | | Exam 1 |
| Week 4 | Chapter 11 – Pointers & Dynamic Memory Management | |
| Week 5 | Practice Lab – Student Registration | Lab 2 – Dynamic Memory Management & Pointers |
| Week 6 | Templates, Vectors, & Stacks | |

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| Week 7 | Practice Lab – Templates, Vectors, & Stacks | |
| Week 8 | | Lab 3 – Stack Implementation |
| Week 9 | | Exam 2 |
| Week 10 | Chapter 17 – Recursion | Bonus – Recursion Practice Lab |
| Week 11 | Recursion Practice Lab | |
| Week 12 | Chapter 19 – Sorting | |
| Week 13 | More Sorting | |
| Week 14 | Chapter 20 – Link Lists, Queues, & Priority Queues | |
| Week 15 | | Exam 3 Lab 4 – Bubble Sort |
| Week 16 | | Finsih Final Lab & Exam |

***See Brightspace for details on each assignment including due dates and times.**

Important Fall Campus Holidays:

- Labor Day – September 2
- Thanksgiving Break – November 26 – November 30

View important college dates here: [MCC Calendar](#)

Course Grading Information:

The grade will be calculated by taking an average of each of the labs and assignments (60%), and exam grades (40%). The average of each section is added to the total to determine your final grade for the course. Students will earn grades based upon performance level of assigned material.

All coursework must be submitted through Brightspace. Grades for coursework will be recorded and maintained in Brightspace. Grades and assignment feedback will be officially documented no later than two weeks following the due date. Should you have

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any questions regarding grades or feedback you have received, please contact the instructor immediately through office hours, email, or other official methods detailed in Brightspace.

The penalty for violation of academic honesty is removal from the course with a grade of F and an incident report to college administration. Cheating is when someone other than you completes your assignments. Plagiarism is when someone copies information from an external source and presents it as original work (including the use of AI).

Grade Composition:

Labs & Assignments 60%

Unit Exams 40%

Grading Scale:

90-100 A

80-89 B

80-79 C

60-69 D

0-60 F

Late Work and Make Up Work Policies:

Students will be permitted to make up class work and assignments missed due to absences caused by (1) authorized participation in official College functions, (2) personal illness, or (3) an illness or a death in the immediate family. It is the instructor's prerogative whether a student may make up work missed due to absences for other reasons. It is the student's responsibility to inform the instructor of the reason for an absence and to do so in a timely fashion. Moreover, it is the student's responsibility to keep up with missed material. Finally, due dates will not be modified by absences. Due dates will be clearly shown on each assignment.

Students will be allowed to submit their assignments within 48 hours of the original due date without penalty. Following the grace period, late assignments will incur a 10% penalty for each day the assignment is late. Late assignments exceeding 7 days past the original due date will no longer be excepted unless circumstances included within exceptional circumstances occur (see below for more details on exemptions).

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Students should plan ahead in the event of a scheduled absence from class by informing the instructor at least one week in advance and agree on an assignment completion plan. Should unplanned absences due to exceptional circumstances occur, students should catch up immediately on missed assignments. Students should communicate with their instructor immediately and will have the number of days late plus one to turn in make-up work.

Exceptional circumstances include severe illness, family emergencies, or other exceptional circumstances may warrant an extension without penalty, at the instructor's discretion. Documentation may be required upon request by the instructor.

Students must email the instructor or speak with them in-person as soon as possible before the assignment is due, clearly stating the reason for the delay and providing supporting documentation if possible. The instructor will respond within 48 hours, granting or denying extensions or exceptions and outlining and revised expectations if applicable.

Student Behavioral Expectations or Conduct Policy:

Students are required to adhere to the General Conduct Policy in the Highlander Guide. Students are expected to maintain an attitude which respect their fellow learners and the instructor through regular attendance, and an attitude seeking to take full advantage of the education opportunity.

All students will be treated as adults, which means you are ultimately responsible for your education. To be successful in this course it is crucial that you as the student carry through with your responsibilities of learning and applying the material.

Keys to being successful in this class are:

- Read and follow the Syllabus.
- Check MCC student email regularly.
- Stay updated on course material including readings, assignments, and chapter quizzes.
- Study appropriately.
- Be responsible and accountable.

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- Devote appropriate time to this course to complete all necessary material.
- Contact instructor with any questions, issues, or concerns.
- Be professional, and respectful to fellow learners and the instructor.

[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)

(<https://www.mclennan.edu/highlander-guide/policies.html>)

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

06/24/2025



ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact Accommodations (Disability Services) as soon as possible to begin the steps for requesting accommodations. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by Accommodations (Disability Services). For additional information, please visit www.mclennan.edu/disability

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu (254)299-8122
Room 319, Student Services

Title IX:

Title IX of the Education Amendments of 1972 is a Federal civil rights law that prohibits discrimination on the basis of sex in educational programs and activities that receive Federal funds. We care about your safety and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report a Title IX incident are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling, Dr. Claudette Jackson, (Accommodations/Title IX) at (254) 299-8465.

Additionally, Title IX provides rights and protections for pregnant and newly parenting students which can include educational accommodations such as excused absences

and the opportunity to make up assignments and tests. Lactation spaces are also available on campus. Please email titleix@mclennan.edu for more information.

MCC employees are mandatory reporters and must report incidents immediately to the Title IX Coordinator. Faculty and Staff may email titleix@mclennan.edu to submit a report.

Individuals may also contact the MCC Police Department at (254) 299-8911 or the MCC Student Counseling Center at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student may report sexual harassment anonymously by visiting <https://www.lighthouse-services.com>

Visit McLennan's Title IX webpage at <https://www.mclennan.edu/titleix/> to learn more about Title IX protections, reporting, and resources.

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to <https://calendly.com/paulannespantry-mcc/15min>.

Academic Support and Tutoring is here to help students with all their course-related needs. Specializing in one-on-one tutoring, developing study skills, and effectively writing essays. Academic Support and Tutoring can be found in the Library and main floor of the Learning Commons. This service is available to students in person or through Zoom. You can contact the Academic Support and Tutoring team via Zoom or email (ast@mclennan.edu) by going to our website (<https://www.mclennan.edu/academic-support-and-tutoring/>)

Success Coaching Services is here for you.

We know life can be overwhelming sometimes—and that challenges outside the classroom can impact your success inside it. That's why our Success Coaches provide personalized support to help you navigate it all.

Success Coaching is available to every MCC student, no matter where you're starting from. Whether you're looking for direction, need quick advice, or just want someone to talk to, our coaches are here to listen, celebrate your strengths, and help you move forward with confidence. At Success Coaching Services, your voice is heard, your goals matter, and your future is our focus.

To learn more or schedule an appointment, visit www.mclennan.edu/successcoaching, call 254-299-8226, or email success@mclennan.edu.

College personnel also recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources and other essential resources, we encourage you to contact the CREW - Campus Resources Education Web by calling 254-299-8561 or emailing crew@mclennan.edu.

Success Coaching Services, the CREW, and Paulanne's Pantry are located on the second floor of the Student Services building in Success Coaching Services, suite 249.

The Student Counseling Center offers confidential mental health counseling to currently enrolled students at no charge. Counselors are trained to help students with problems related to personal, social, and emotional concerns. Sessions focus on short-term goals in order to facilitate students college success and adjustment. This service is available to students in person or through Zoom.

Make an appointment to meet with a counselor by visiting the center in the Wellness & Fitness building, room 101, calling 254-299-8210, or emailing counseling@mclennan.edu.

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html>

MCC Academic Integrity Statement:

Please view our [Academic Integrity statement](#) for more information about academic integrity, dishonesty, and cheating. The unauthorized use of artificial intelligence (AI) for classwork can be a violation of the College's General Conduct Policy. Whether AI is authorized in a course and the parameters in which AI can be used in a course will be outlined by each instructor.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

For online and blended/hybrid courses, students must have access to a reliable computer and internet. For more information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system go to: <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-StaffCommons/requirements.html>

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails. For more information about your student email account, go to www.mclennan.edu/studentemail.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication

method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- [Email Setup for iPhones and iPads](#)
- [Email Setup for Androids](#)

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

For more helpful information about technology at MCC, go to [MCC's Tech Support](#) or email helpdesk@mclennan.edu.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.