

McLennan C O M M U N I T Y C O L L E G E

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

PROGRAMMING FUNDAMENTALS II

COSC 1337 H1

DEBBIE LAMPRECHT

NOTE: This is a 16-week course.

NOTE: This is a Blended/Hybrid course.

COVID 19 Notice:

McLennan Community College is committed to providing you with every resource you need to reach your academic goals including your safety. We will continue to monitor the evolving situation with COVID 19 and adjust our safety guidelines to make sure we offer a safe environment for you and our faculty. Please make sure to consult your faculty and the MCC website at <https://www.mclennan.edu/crisis-management/coronavirus-updates/index.html> on any changes to these guidelines.

PROGRAMMING FUNDAMENTALS II

COSC 1337 H1

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 for algorithms, searching and sorting techniques, and an introduction to software engineering. Prerequisite: COSC 1336. Semester Hours 3.

Prerequisites and/or Corequisites:

Prerequisite: COSC 1336

Course Notes and Instructor Recommendations:

Instructor Information:

Instructor Name: Debbie Lamprecht

MCC E-mail: dlamprecht@mclennan.edu

Office Phone Number: (254) 299-8281

Office Location: BTB 108

Office/Teacher Conference Hours: Hours will be posted outside my office door and on Brightspace once the semester begins. Other times as arranged

Required Text & Materials:

Title: REVEL – Introduction to Programming with C++, 4th Edition

Author: Liang, Y. Daniel

Edition: 4th

Publisher: Pearson

ISBN: 9780134669854

MCC Bookstore Website: <http://www.mclennan.edu/bookstore/>

Methods of Teaching and Learning:

- A. Lab Assignments (40% of the course grade): These assignments give students an opportunity to apply the skills they will learn in the course. There are 10 - 15 lab assignments. Lab specifications are explained in the weekly lab assignments listed in the Assignment link.
- B. Lecture and tests (60% of the course grade): Lectures are used to explain the programming concepts. The specific date for each test is posted in the Course Schedule.

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Course Objectives and/or Competencies:

- A. Course Objectives: Student will be able to design, code, and use object oriented programming techniques using C++. Student employ object oriented programs to solve practical problems. Students will be introduced to software engineering and Unified Modeling.
- B. Course Competencies: Upon successful completion of this course, students will be able to:
1. Define and explain basic C++ terminology and concepts to include abstraction, polymorphism and inheritance.
 2. Understand the use of arrays and data structures in C++.
 3. Use Classes and Objects in an Object Oriented program design.
 4. Implement Inheritance, polymorphism, virtual functions, and abstract classes
 5. use static members and friend functions in projects.
 6. Use composition and aggregation in OOPS
 7. Apply deep vs shallow copy for objects
 8. Exception handling

Course Outline or Schedule:

NOTE!!! This schedule is tentative and subject to changes under extenuating circumstances. You will be notified of any change to the schedule via email and an announcement on Brightspace.

Weeks	Curriculum	Assessment
Week 1	Introduction review Codeblocks, program elements	
Week 2	Programming exercises	
Week 3	Chapter 4 – Math functions	
Week 4	Chapter 6 – Functions	
Week 5	Chapter 7 – Arrays	
Week 6	Chapter 8 – Multi-Dimensional Arrays Review for Exam 1	

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Week 7	Chapter 8 – Multi-Dimensional Arrays Exam 1	Exam 1
	Spring Break	
Week 8	Chapter 9 – Objects and classes	
Week 9	Chapter 10 – Object Oriented Thinking	
Week 10	Chapter 13 – File I/O	
Week 11	Chapter 16 – Exception Handling Review	
Week 12	Exam 2 Chapter 14 – Operator Overloading	Exam 2
Week 13	Chapter 14 – Operator Overloading	
Week 14	Chapter 15 – Inheritance / Polymorphism	
Week 15	Chapter 15 – Inheritance / Polymorphism Review for final	
Week 16	Final Exam	Final Exam

Course Grading Information:

Lab Assignments 40%

Lectures and Tests 60%

Late Work, Attendance, and Make Up Work Policies:

Attendance will be taken at each meeting. 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 lab assignment.

Late assignments will be accepted up to 3 days late, with a penalty of 10 points per day. After 3 days, the assignment will not be graded.

If an exam is missed due to an authorized absence, it must be made up within **one week** of the exam date. It is the student's responsibility to make arrangements with the instructor to make up the exam.

Student Behavioral Expectations or Conduct Policy:

To be successful in this class it is **crucial** that you as the student carry through with your responsibilities of learning and applying the material. Key to this is:

- A. reading, understanding and abiding by the Syllabus;
- B. checking MCC student email and the discussion forums daily;
- C. keeping up with the readings, complete the assigned tutorials, and taking the chapter reviews on time;
- D. studying appropriately;
- E. devoting the right amount of time to this class to be successful;
- F. being conscientious, responsible and accountable;
- G. contacting instructor with any issues; and
- H. being professional, courteous and respectful to the instructor and to each other.

*** [Click Here for the MCC Academic Integrity Statement](http://www.mclennan.edu/academic-integrity)**

(www.mclennan.edu/academic-integrity)

The link above will provide you with information about academic integrity, dishonesty, and cheating.

*** [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.

** You will need to access each link separately through your Web browser (for example: Mozilla Firefox, Chrome, Microsoft Edge or Safari) to print each link's information.*

McLennan

C O M M U N I T Y

COLLEGE

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 the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. 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 the Accommodations Coordinator. 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 Center

Title IX:

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 an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Chief of Staff for Diversity, Equity & Inclusion/Title IX) at (254) 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>.

Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

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/>

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Students may visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a Success Coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

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/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating.

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

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-Staff-Commons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

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.

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.

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.

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.