

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

WACO, TEXAS

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## **COURSE SYLLABUS**

**AND**

## **INSTRUCTOR PLAN**

### **PROGRAMMING FUNDAMENTALS I**

**COSC 1336 87**

**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/cris-management/coronavirus-updates/index.html> on any changes to these guidelines.

# PROGRAMMING FUNDAMENTALS I

COSC 1336 87

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## **Course Description:**

Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays and the mechanics of running, testing, and debugging. This course assumes computer literacy. Semester Hours 3.

## **Prerequisites and/or Corequisites:**

None

## **Course Notes and Instructor Recommendations:**

Students should use their MCC email to avoid having the email caught in the MCC filter. Be sure to put **COSC 1336 87** in the subject for any email. **The student is responsible for checking the MCC email and Brightspace every day.**

## **Instructor Information:**

Instructor Name: Debbie Lamprecht

MCC E-mail: [dlamprecht@mclennan.edu](mailto:dlamprecht@mclennan.edu)

Office Phone Number: 254-299-8281

Office Location: BTB 108

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

\*\*\*To contact me by email, please include **COSC 1336 87** in the subject line. This will tell me what class you are in.

## **Required Text & Materials:**

MindTap Programming, 1 term (4 months) Instant Access for Farrell's Programming Logic and Design

Author: Joyce Farrell

Edition: 9<sup>th</sup> Edition

Publisher: Cengage

ISBN: 978-1-337-27461-6

Additional items:

C++ developmental software (Open Source)- Will be supplied to the student in class.

Minimum of 4 GB USB Drive (Flash Drive) if desired.

We will be utilizing CodeBlocks for entering C++ code for Windows based machine and XCODE for Mac OS to create your programs. Use Pencil or Word for flowcharting or any other

flowcharting software. These can be downloaded and installed on your own computer.

**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 learn in the course. Lab specifications are as explained in the weekly lab assignments listed in the Assignment link. If there are two different dates, the date on Brightspace is the one to go by. All assignments must be submitted through Brightspace. **Do not** email me your assignments.
- B. Lecture and tests (60% of the course grade): Lectures are used to explain the programming concepts. There will be videos explaining each chapter. There will be a quiz over each chapter. The quiz will be in MindTap. There will be two major tests during the semester, and the final. The specific date for each test is posted in the Course Schedule under the Syllabus tab. You will be expected to write a program on the test and provide flowchart or pseudocode. For the online class, all of your tests are online, and you will not need to be proctored for the exams. There is a time limit for each exam. If you need to take a proctored exam, you can come in to the BTB room 103.

**Course Objectives and/or Competencies:**

- A. Course Objectives: The course will teach the student the fundamental concepts of programming using logic and structured problem solving and design techniques. Structured flowcharting, pseudo code and hierarchy charts will be emphasized. The student will learn sufficient commands to work with simple programming problems and analyze more advanced programs. This is a programming logic, not a programming language course and thinking skills will be emphasized. At the end of the course, the student will be able to break large, computer-oriented problems into smaller parts and design algorithms for those parts, creating a cohesive structured solution. Creative, critical and analytical thinking skills will be practiced.
- B. Course Competencies: Upon successful completion of this course, the student will be able to use modular, structured programming techniques to develop correct and well-designed logic for common business programs. The student will be trained in the use of program development tools including: algorithms, flowcharts, pseudo code, hierarchy charts, decision tables and I/O layouts. Students will learn the concepts for data types, variable name usage, various control structures, looping, counting and accumulating, formatting, control breaking, functions, arrays, batch and interactive file updating, and basic data structures used in structured programs.

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Specific Competencies Related to Content: Upon successful completion of the course, the student will be able to:

1. Effectively use basic computer programming vocabulary.
2. Solve problems by analyzing them, reducing them to logical units and creating solutions using a modular approach.
3. Create documentation to describe the logic of a program, including flowcharts, pseudo code, hierarchy charts, and other selected charting techniques; and explain the functions of these various forms of documentation.
4. List and carry out the steps of designing and implementing a computer program (problem definition and analysis, logic planning, code development, testing and debugging, implementing and documentation).
5. Design program flowcharts; produce pseudo code; create hierarchy charts; code, test, and evaluate logic implemented in a high level language; and produce a documentation package.
6. Analyze solutions and documentation, and create structured solutions to problems.
7. Explain the advantages of structured design and coding concepts.
8. Illustrate the three basic logic structures (sequence, selection, and iteration) using flowcharts, and pseudo code, and a high level language.
9. Explain common business programming logic (report printing with headings, control breaks and totals, input validation, error handling, counting, accumulating, file matching, end of file logic, updating, tables, and others).
10. Interpret, modify and complete program flowchart.
11. Apply rules of structured, modular programming logic and design.
12. Complete individual assignments on schedule, and collaborate on exercises in small groups.
13. Understand basic data structures to include arrays

## **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.**

FALL 2022 Class Schedule				
Online				<b>COSC 1336 87</b>
Week #	Due Date	MindTap	Assignments	Exam
2	8/31/2022	Orientation and Introduction; Purchase textbook	Introduce Yourself Program 0 - Example; Create in CodeBlocks and Submit	
3	9/7/2022	Chapter 1 Overview	Flowchart Lab 1 & Lab 2 Pseudocode	

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4	9/14/2022	Chapter 2 - Elements	Flowchart Lab 3 and Pseudocode	
5	9/21/2022	Developing programs	Programs 1, 2, 3, 4 MindTap Exercises Chapter 2	
6	9/28/2022	Chapter 3 - Structures	Programs 5, 6, 7 MindTap Exercises Chapter 3	
7	10/5/2022	Exam 1 Start Chapter 4 - Decisions		Exam 1
8	10/12/2022	Chapter 4 – Decisions	MindTap Exercises – Chapter 4 Programs 8, 9	
9	10/19/2022	Chapter 5 Looping		
10	10/26/2022	Chapter 5 - Continued Start Review for Exam 2	MindTap Exercises – Chapter 5 Programs 10, 11	
11	11/2/2022	Exam 2 – Due 3/23 Start Chapter 6 - Arrays		Exam 2
12	11/9/2022	Chapter 6 – Arrays	MindTap-Chapter 6 Programs 12, 13	
13	11/16/2022	Chapter 7 - File Handling	MindTap – Chapter 7 Program 14	
14	11/23/2022	Chapter 9 - Modularization	MindTap - Chapter 9 Program 15	
15	11/30/2022	Chapter 10 - Object Oriented Programming Start Review for Final Exam	MindTap – Chapter 10 Program 16	
16	12/5/2022	Final Exam – Due by 11:00 p.m.		Final Exam

## **Course Grading Information:**

Lab Assignments                      40%

These assignments include all of the flowcharting and pseudocode assignments, the programming assignments and any assignments from MindTap.

Tests    60%

Chapter MindTap test scores for each chapter will be averaged and that average will be included with the other tests during the semester. The test average will be made up of the average of the MindTap tests, two tests during the semester and the final.

**Late Work, Attendance, 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.

Work will **not** be accepted more than 3 days after the due date except for authorized absences. There will be a penalty of 10 points for each day the work is late. Any test missed for an authorized absence must be made up within **one week** of the test date. The student is responsible for knowing that a test was missed, and setting up a time to take it within a week.

**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 Brightspace daily;
- C. keeping up with the readings, complete the assigned tutorials, and taking the chapter review tests 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 in a timely manner; and
- H. being professional, courteous and respectful to the instructor and to each other.

\* [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 guidelines specific to this course.

Last day to drop with a W is 10/25/2022. **If a student wants to drop the class for any reason and at any point in semester, it is his or her responsibility to contact the instructor in order to do so. The student must email the instructor with name and student id so that the instructor can process a drop for the registrar.** IF YOU DO NOT CONTACT INSTRUCTOR YOU WILL NOT BE DROPPED AND WILL RECEIVE THE GRADE YOU EARNED AT END OF SEMESTER.



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## 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](http://www.mclennan.edu/disability).

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

[disabilities@mclennan.edu](mailto: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](mailto: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/](http://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](mailto: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](https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf).

**MCC Academic Integrity Statement:**

Go to [www.mclennan.edu/academic-integrity](http://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. For more information about your student email account, go to [www.mclennan.edu/student-email](http://www.mclennan.edu/student-email).

**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](mailto: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](https://support.microsoft.com/en-us/office/set-up-an-outlook-account-in-the-ios-mail-app-b2de2161-cc1d-49ef-9ef9-81acd1c8e234?ui=en-us&rs=en-us&ad=us) (<https://support.microsoft.com/en-us/office/set-up-an-outlook-account-in-the-ios-mail-app-b2de2161-cc1d-49ef-9ef9-81acd1c8e234?ui=en-us&rs=en-us&ad=us>)
- [Email Setup for Androids](https://support.microsoft.com/en-us/office/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c?ui=en-us&rs=en-us&ad=us) (<https://support.microsoft.com/en-us/office/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c?ui=en-us&rs=en-us&ad=us>)

**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 Cheat Sheet](#) or email [helpdesk@mclennan.edu](mailto: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.