** MTH 125 - Programming**

# Fall 2017

MWF 10:20 a.m. – 11:20 a.m.

Instructor: Linda Navarro

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Office Hours: MWF: 1:00 p.m. – 2:00 p.m. (other days by appointment)

Course Description:

This class is a continuation of CIS 2 and will cover intermediate level programming methods including vector and array manipulations, classes, functions, and subroutines. Applications in science, mathematics, and numerical analysis will be covered. Prerequisite: CIS 2 and MTH 5A or concurrent enrollment in MTH 5A or consent of the instructor.

Course Objectives: Upon completion of this course, the students will be able to:

1. Students will become familiar with using arrays and vectors to collect values.

2. Students will learn about common algorithms for processing arrays and vectors.

3. Students will write functions that receive and return arrays and vectors.

4. Students will be able to use two-dimensional arrays.

5. Students will be able to declare, initialize, and use pointers.

6. Students will understand the relationship between arrays and pointers.

7. Students will be able to convert between string objects and character pointers.

8. Students will become familiar with dynamic memory allocation and deallocation.

9. Students will be able to read input from files and write output to files.

10. Students will be able to convert between strings and numbers using string streams.

11. Students will be able to process command line arguments.

12. Students will understand the concepts of sequential and random access.

Required Materials:

* Horstmann (2012). *C++ for Everyone* (2nd ed.) John Wiley & Sons, Inc.
  + ISBN-13 = 978-0-470-92713-7

Grading:

Homework 15%

Labs 35%

Quizzes 20%

Final Project 30%

Grade Scale: 93% - 100% A 83% - 86% B 73% - 76% C

90% - 92% A- 80% - 82% B- 70% - 72% C-

87% - 89% B+ 77% - 79% C+ 60% - 69% D

Below 60% F

Important Policies:

**Student Credit Hour Policy –** Acredit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates not less than:

1. One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester, or the equivalent amount of work over a different amount of time; or
2. At least an equivalent amount of work as required in paragraph (1) for other academic activities, including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

**Attendance –** Because the course material builds on earlier material, your daily prepared attendance is critically important if you want to pass this class. I expect you to be in class on time, be attentive, and not leave early. If you miss a class, you are responsible for the material missed and the homework/lab assigned on that day.

**Homework/Labs** – Homework/Lab will be assigned in class. Homework/Lab will be due two classes after we finish each section and an announcement to that effect will be made when we finish each section and/or posted on Canvas.

**Quizzes** – There will be chapter quizzes through Canvas. Each quiz will be given the class after the chapter is completed.

**Late/Missed Work –** Late homework/lab will not be accepted and no missed quiz will be made up (No Exceptions). However, a low homework score will be dropped and one lab may be redone for higher grade.

**Academic Honesty** **--** Honesty is expected and dishonesty is taken seriously by me, by the Physical Sciences & Mathematics department, and by the college. Cheating, copying, and modifying others work will not be tolerated. If you are feeling the urge to cheat on an exam or an assignment, this should signal to you that there is a problem with your preparation for the course. Violations (which include helping a classmate to cheat) will result in severe penalties, so please be scrupulously honest! During exams you may not leave the classroom until you are finished with your exam (i.e. use the restroom before the exam begins). If you have any questions regarding academic honesty, please see me.

**Academic Freedom – S**tudents’ and faculty’s freedom of speech is constitutionally protected, so they are free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion – and allow the same freedom to others. See the Student Handbook for a fuller discussion.

**Disability Statement** – Mount Saint Mary’s University Los Angeles, in compliance with state and federal laws and regulations, does not discriminate on the basis of disability in administration of its education related programs and activities. We have an institutional commitment to provide equal educational opportunities for disabled students who are otherwise qualified. Students with documented disabilities must see (CHOOSE FOR YOUR CAMPUS Lisa Villa, Associate Director, Student Support Services (310) 954-4138, [lvilla@msmu.edu](mailto:jcashion@msmu.edu) OR Brandon Roberson, Director of the Doheny Student Resource Center (213) 477-2692,[broberson@msmu.edu](mailto:broberson@msmu.edu)), to make arrangements for classroom accommodations. It is the responsibility of the student to obtain accommodation letters from the director and to make arrangements for the implementation of accommodations with faculty and/or staff in advance.  Students who believe they have been subjected to discrimination on the basis of disability, or have been denied access to services or accommodations required by law, should contact the campus Disability Services Coordinator at his/her campus for resolution.  For more information regarding disability grievance procedures, go to:<https://welcome.msmu.edu/academics/learning-assistance-ISAE/Documents/DisabilityGrievanceProcedures.pdf>

Tentative Schedule

