

Loyola University Maryland
Department of Mathematics and Statistics
MATH 301 (Programming in Mathematics) – SPRING 2020

MWF 9:00AM-9:50AM, KH 318

Instructor: Dr. Prince Chidyagwai

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Office Hours: (MWF 10:00 - 11:00 AM, MW 2:00 - 3:00 PM and 4:00-5:00PM) or by appointment

Textbook: *There is no text for the course. I will provide notes on the course website*

Requisites: *Prerequisite* - CS151 (Computer Science through Programming), *Corequisite* - MA301 (Introduction to Linear Algebra)

Course Description:

The course will cover the basics of MATLAB programming through the investigation of various mathematical topics, including functions, conditional statements, loops and plotting.

Course Objectives:

1. Learn the fundamentals of programming in MATLAB and develop problem solving skills using MATLAB
2. Be able to use MATLAB's builtin routines and write your own routines in MATLAB
3. Be able to understand control statements (if/then/else statements) and loop structures in programming

Topics: We will cover the following topics: *Matlab development environment, scalars and vectors and arrays in Matlab, Matlab functions, Conditional statements, Loops, Matlab debugging and profiling, structures and calculus in Matlab, vectorized code, string manipulations, in Matlab, file input and output.*

Grading: Quizzes - 10%, Homework - 40%, Projects - 50% Final grades will be determined according to the following scale:

93-100: A	90-92: A-	87-89: B+
83-86: B	80-82: B-	77-79: C+
73-76: C	70-72: C-	67-69: D+
60-66: D	0-59: F	

Class participation and improving performance on the exams will be considered when assigning borderline grades.

Homework: Homework will be assigned almost weekly in class and posted also posted on the course website. Answers without any justifications will not receive full credit. All work must include a detailed solutions to questions asked and all codes used for the assignment.

Quizzes: There will be a few in class quizzes (both programming and theoretical), announcements will be made in class and posted on the course website.

Projects: There will be 2 projects during the semester and a final project due on Friday May 1 at noon.

Academic Integrity and Standards of Conduct: The guidelines of academic integrity and standards of conduct are presented in the Undergraduate catalogue. The Loyola University Honor Code states that all students of the Loyola community have been equally entrusted by their peers to conduct themselves honestly on all academic assignments. In this class you may discuss homework assignments with your peers on assigned homework. However, you should write up your own codes. The submission of solutions found online is **plagiarism**. A first offense will result in a zero for the assignment and a second offense will result in a grade of F for the course. You may not consult your notes or on-line source for quizzes. You may not discuss projects with your classmates, you are welcome to see me if you have any questions. Please refer to the Community Standards Handbook for more information and further clarification of the honor code standards, type of violations, adjudication process, and sanctions that may be imposed for violations.

Classroom Conduct: Learning requires attention and focus in an environment free of disruption. Loyola’s code of conduct handbook defines disruptive behavior as “behavior which is disruptive to the living and learning of individuals inside and outside the classroom or of the University community or which disregards the rights of others”. Although silent, the use of technology for extracurricular purposes during class is highly disruptive to the instructor and classmates. It is rude, disrespectful, and distracts from learning. It interferes with access to an appropriate educational environment. In addition, numerous experimental studies have shown that personal technology use during class are casually related to poor performance in courses. As such, **this course has a strict ban on cellphones.**

Extra Help: Do not hesitate to come to my office during office hours or by appointment to discuss a homework problem or any aspect of the course.

Important Dates:

Add/Drop Deadline Thursday, January 16
Withdrawal Deadline Friday, March 27

Student Athletes: Please provide me with your athletic travel letters indicating when you will not be able to make it to class due to athletic commitments. You will be required to make up any assignments or exams that you miss.

Learning Disabilities: Any student with a disability documented with the Disability Support Service Office (DSS) requiring accommodations in this course is encouraged to contact me as soon as possible. If you have a disability that has not yet been documented, please contact the DSS Office (410-617-2602) for assistance.