CS 151L-502 Spring 2021

Instructor: Nancy McLendon **Email: nmclendon@unm.edu**

Office Hours: Remotely Monday and Wednesday, 9 am - 11 am, or as individually arranged

Class: Remote Arranged. See Coursework section below.

COURSE DESCRIPTION: CS 151L - Computer Programming Fundamentals for Non-Majors An introduction to the art of computing. This course is not intended for Computer Science majors or minors. The objective of the course is to develop an understanding of the relationship between computing and problem solving, using MATLAB as a programming language, and to master basic programming skills. 3 credit hours.

COURSE MATERIALS: Notebook, pencil/pen, internet connection, UNM Net ID.

There is no required text.

Grading Scale

A	90 – 100%	> **180** pts	CR	Credit 70 – 100%
B	80 – 89%	> **160** pts	NC	No Credit < 70%
C	70–79%	> **140** pts		
D	60–69%	> **120** pts		
F	< 59%			

20 Programming Assignments @5 points ea	**100 pts**
Cumulative Mid-Term @30 points	**30 pts**
Cumulative Final @ 70 points	**70 pts**
TOTAL POSSIBLE POINTS	**200 pts**

NO extra credit work will be available.

IMPORTANT DATES (https://registrar.unm.edu/semester-deadline-dates/spring-2021.html):

Last date to drop without a grade and with tuition refund:
February 5, 2021

Spring Break: March 14-21, 2021

Mid-Term Exam: Week of March 22

Final Exam: Week of May 10

COURSE WEB PAGE:

To access the course web page:

- From the basic UNM course management tool at :
  https://learn.unm.edu
  You will have to have a UNM Net ID to access this page. If you do not already know your UNM Net ID, visit:
  https://netid.unm.edu/new-netid-registration/index.html
- Select **CS -151-L-502**
- From the drop down menu on the left, select **Course Information.**

The Course Information web page is designed to contain all the information you need to access the course material, assignments, and the final examination for the course. It also contains the files you will need for doing various assignments, and a copy of this syllabus.

The material is organized by topic, with each topic covering approximately one week. Each topic area includes:

- informational material to be read/watched
- one or more programming assignments covering concepts for that topic area

You must complete and submit (electronically as a MATLAB file in the appropriate folder in Learn) each programming assignment listed on the course web site no later than 5 pm on Saturday of the week in which it is assigned. This deadline is automatically enforced by Learn.

This course is currently being revised to be appropriate for remote learning, so not all modules will be online at the start of the semester, but new modules will be posted as soon as they are available.

You may work ahead through the material on the course web site and submit assignments to be graded early, but the final exam will not be available until the announced date/time during the week of May 10.

COURSEWORK:

- Course material for each week of class will be available on the course web site (see above). You can read the course notes posted and/or listen to the lecture.
- Each week after the first week, two programming tasks will be assigned to practice the material for that week. Those programming assignments are due by 5 pm Saturday of the week that they are assigned. No late assignments will be accepted; however, a total of 23 programming assignments are available, of which you must submit only 20, so you can skip 3 programming assignments without penalty.
- The final will be cumulative and will consist entirely of programming tasks based on the tasks that were assigned weekly during the course. It will be open book, open note, open computer/internet. It will be made available for download from the class web site at a date/time to be announced later, and it must be turned in, electronically, within 2 hours of the time at which it is made available.

UNM EMAIL/BLACK BOARD LEARN ACCESS: All UNM-Valencia students will need a UNM Net ID which can be created by going to: http://it.unm.edu/accounts/. UNM Net ID will give you access to Blackboard Learn, which presents the course web site, as well as to UNM Email.

SUPPORT SERVICES: The Learning Center offers free tutoring at no cost to the student. For best results, schedule appointments for tutoring. Students who miss tutoring appointments may be denied future appointments. https://valencia.unm.edu/campus-resources/the-learning-center/learning-center.html

TITLE IX: Any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity (oeo.unm.edu). For more information on the campus policy regarding sexual misconduct, see: https://policy.unm.edu/university-policies/2000/2740.html

DISABILITY STATEMENT: If you have a documented disability, the Equal Access Services office will provide me with a letter outlining your accommodations. I will then discuss the available accommodations with you to determine the best learning environment. If you feel that you need accommodations, but have not documented your disability, please contact Jeanne Lujan, the coordinator for Equal Access Services at 925-8910 or jmlujan@unm.edu

UNM's Policy on Academic Honesty: Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, including dismissal, against any student who is found responsible for academic dishonesty. Any student who has been judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. Academic dishonesty includes, but is not limited to, dishonesty in Assignment zes, tests or assignments, claiming credit for work not done or done by others; hindering the academic work of other students; and misrepresenting academic or professional qualifications within or outside the University.

STUDENT LEARNING OBJECTIVES/OUTCOMES:

By the end of this course, a successful MATLAB student will be able to

- Apply standard computer programming vocabulary and practices including:
  - Correct formatting rules in writing programming code
  - Mathematical operators
  - Relational and conditional operators
  - Looping

    - Arrays
    - User functions
    - Debugging
    - Coding comments
- Solve selected problems in engineering, math, science, and other fields
- Manipulate data sets
- Create quality MATLAB graphs
- Solve selected mathematical problems symbolically
- Produce functional MATLAB GUIs
- Simulate selected physical problems

COURSE SCHEDULE

Note that topics, assignments, and dates may require unexpected adjustments.

Week #	Week Beginning	Topics	Assignments
1	1/18	Introduction, Programming Basics	Assignment T (basics) Assignment 1 (scripting)
2	1/25	Variables, Operations, I/O	Assignment 2 (Live scripting)
3	2/1	Matrices	Assignment 3 (matrices, graphing)
4	2/8	Matrix Manipulation	Assignment 4A (matrices) Assignment 4B (graphics, matrices)
5	2/15	Functions	Assignment 5A (functions) Assignment 5B(functions)
6	2/22	Conditionals, Tables	Assignment 6A (conditionals) Assignment 6B (conditionals, tables)
7	3/1	Table Operations	Assignment 7A (tables) Assignment 7B (tables)
8	3/8	Loops, Debugging	Assignment 8A (loops) Assignment 8B (debugging)
	3/15	No Class - Spring Break	
9	3/22	Mid-Term Exam **A Mid-Term Exam will be posted at 10 am Monday. You will not be able to download it earlier than that time, and will be due no later than one hour after you download it. You may use any course materials (notes, graded assignments, etc.) to help you with the mid-term exam.**	**MidTerm Exam**
10	3/29	Equations, Plotting	Assignment 9A (equations, plotting) Assignment 9B (equations, plotting)
11	4/5	Symbolics & Solutions, Linear Equations	Assignment 10A (linear equations) Assignment 10B (linear equations)
12	4/12	Trigonometry and Calculus	Assignment 11A (trig/calculus) Assignment 11B (trig/calculus)
13	4/19	Differential Equations	Assignment 12A (diff equations) Assignment 12B (diff equations)
14	4/26	GUIs, Simulations & Tools	Assignment 13A (Simulations)

			Assignment 13B (Simulations)
15	5/3	Review for final	**Review 1**
16	5/10	**A Final Exam will be posted at a time To Be Announced. It may be downloaded no earlier than that time, and will be due no later than one hour after you download it. You may use any course materials (notes, graded assignments, etc.) to help you with the final exam.**	**Final Exam**