Computer Programming for Engineers: MATLAB
Academic Term: SUMMER 2021 (B)
COP2271 LAB
Class Periods:
Tuesday, Thursday: 2:00 – 4:45PM

Instructor's Information

Name:	Dr. Saira Anwar (Pronouns: she/her/hers; Honorific: Dr./Prof.)
Email:	sairaanwar@ufl.edu
Office Hours:	FRIDAY: 10:30 – 11:30AM Zoom Links are provided at Canvas page. Please look in "Start Here" module on Canvas **For any other day or time:** Please schedule an appointment 　　1. use canvas site to make an appointment request or email me 　　2. include your course section number in email
Office:	NSC 317

Teaching Assistants/Peer Mentors/Supervised Teaching Students Information:
Please contact them through the Canvas page. Check out the 'Start Here' module on Canvas.

Name:	Ishan Agrawal	Benjamin Arnold
Email:	ishan.agrawal@ufl.edu	arnoldb1@ufl.edu
Office Hrs	TBD	TBD

Course Information
Course Description
The laboratory is a one credit course which provides additional practice for those students who are/have been enrolled in COP2271 lecture. Students will work on a variety of problems not seen in lecture to reinforce MATLAB programming topics.

Course Pre-Requisites / Co-Requisites
Prereq: MAC 2312 / Coreq: COP2271

Course Objectives
The main objective of this course is to provide a foundation in programming for engineering problem solving using the MATLAB software package. Students will develop the skills analyze and break down an engineering program and solve it algorithmically using MATLAB. After this course, students will have an understanding of various programming constructs and how they can be used to solve a computational problem.

Professional Component (ABET):
This course uses several programming assignments that teach students how to effectively develop programming solutions to engineering problems. Students will develop the skills to analyze a given engineering/mathematical question and pose it is a software solution.

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	High
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	High
3. An ability to communicate effectively with a range of audiences	Low

4.	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	Medium
5.	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	
6.	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7.	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	High

*Coverage is given as high, medium, or low. An empty box indicates that this outcome is not covered or assessed in the course.

Required Textbooks and Software
- We will use the Canvas course site (https://elearning.ufl.edu) **EXTENSIVELY** to post course material. It will be every student's responsibility to be familiar with the material posted on the course web site.
- MATLAB Student Version (any recent version should be fine)
  You may consider using UFApps to access a number of popular software applications for "free" including MATLAB at: http://info.apps.ufl.edu/ ; MATLAB is also available for purchase and download at: http://www.mathworks.com/academia/student_version/index.html

Recommended Materials
- Title: MATLAB: A Practical Introduction to Programming and Problem Solving
- Author: Stormy Attaway
- Publication date and edition: August 6, 2016, 4th Edition
- ISBN-13: 978-0128045251
(earlier editions will suffice too)

Course Schedule
Week 01 (06/28 – 07/02):	No Lab
	Scratch
Week 02 (07/05 – 07/09):	MATLAB interface, user input and output, variables, operators
	Flow control: if statement
Week 03 (07/12 – 07/16):	While loops, break, continue
	For loops
Week 04 (07/19 – 07/23):	Game simulation
	Matrices and vectors (arrays)
Week 05 (07/26 – 07/30):	Strings and ciphers
	Pixels and image manipulation
Week 06 (08/02 – 08/06):	Image thresholding
	Image deciphering

Attendance Policy
- Weekly online classes will be held synchronously via zoom.
- Furthermore, attendance will be taken at the beginning of the lab and all students must be present for their attendance to count and to receive the credit for the lab assignment.
- **Each student is allowed to drop 1 laboratory grade, no questions asked.**
- Each week in lab, students will complete activities related to the current class topic which must be turned in before leaving lab that day.
- There is no outside work required for the lab.
- Please note attendance is a large portion of your lab grade.
- **As in all courses, any unauthorized recording of the lab and unauthorized sharing of recorded materials is prohibited.**

Make-Up Policy

Makeups for lab are not normally allowed. If you cannot attend a lab, you must contact the instructor well in advance. Submitting lab activities late will result in a zero. Arrangements will be made for students on a case by case basis for excused reasons. It is the student's responsibility to honor and respect the given deadlines posted on Canvas (https://elearning.ufl.edu).

Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade
Lab Assignments (12)	100 each	100%

Grading Policy

Percent	Grade	Grade Points
92.0 - 100	A	4.00
90.0 - 91.9	A-	3.67
88.0 - 89.9	B+	3.33
82.0 - 87.9	B	3.00
80.0 – 81.9	B-	2.67
76.7 - 79.9	C+	2.33
73.4 - 76.6	C	2.00
70.0 – 73.3	C-	1.67
66.7 - 69.9	D+	1.33
63.4 – 66.6	D	1.00
60.0 – 63.3	D-	0.67
0 - 59.9	E	0.00

Note: A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better).

More information on UF grading policy may be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Online Course Recording

Our class sessions may be audio visually recorded for DRC students and for enrolled students who are unable to attend. These recordings will only be shared with authorized students or who have requested the recordings. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

F2F Course Policy in Response to COVID-19

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.

- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.

- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.

- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.

- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.

- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies

Policies

Academic Dishonesty
- Sharing or copying of code through any medium such as email, text, snapchat etc., and plagiarism, in addition to other dishonest behaviors, are all considered to be academic dishonesty. No information regarding the labs may be shared by students except for a discussion at a conceptual level.
- Collaboration (helping out others at a conceptual level through discussions) is encouraged in the course. It is encouraged that students discuss their solutions and help other students during labs. However, these discussions should happen at conceptual level. Also, instructor and peer mentors will also be present to help and answer the questions. It is important to note that all these activities solutions must be developed by students themselves during the given time. However, looking at any piece of your peer's code, sharing files, searching for solutions found online, or using someone else to code your solution, or solutions provided by friends who are not enrolled in the current section of the course are strictly prohibited and is counted as plagiarism.
- Any unauthorized use of external material (e.g., online websites solutions, solutions provided by friends who are not enrolled in the current section of the course) will be treated as plagiarism.
- Any student found to have violated these rules, whether a provider or receiver of an unauthorized help, will be given a zero on that assignment and will be reported to the Honor Court. If you aren't clear on what constitutes plagiarism, ask the course instructional team.
- It is important to note that academic dishonesty rules apply to both the student who acquired the solution, and to the student who allowed/provided another student the solution. All students are required to take reasonable car to prevent another student from examining their solution (unless otherwise allowed) and that student does examine your solution.
- **We strongly encourage you to visit the course instructional team office hours whenever you have doubts.**

Students Requiring Accommodations
Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation
Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://gatorevals.aa.ufl.edu/. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://gatorevals.aa.ufl.edu/public-results/.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment.""

The Honor Code (https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment
The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:
• Your academic advisor or Graduate Program Coordinator
• Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
• Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
• Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use
All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy
There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://registrar.ufl.edu/ferpa.html

Campus Resources:

Health and Wellness

U Matter, We Care:
Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence
If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)
Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Academic Resources

E-learning technical suppor*t*, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
https://teachingcenter.ufl.edu/.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
https://writing.ufl.edu/writing-studio/.

Student Complaints Campus*:* https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints*:* http://www.distance.ufl.edu/student-complaint-process.