ENGR 6   **MATLAB PROGRAMMING for ENGINEERS**   Summer 2021
MW 5-10 PM   Section #8562
Room 1447

Instructor:	Andy Hulse
Email:	**chulse**@santarosa.edu
Phone:	707-799-0204 (leave msg)
Off. Hrs:	Tue 6-6:50PM and by appt.

Text: Zybooks.com, code SANTAROSAENGR6HulseSummer2021

Overview
This class is an introduction to Matlab for engineering majors: calculation, plotting, problem-solving, and programming. Prior experience in programming is not necessary.

Class Format
Summer classes are challenging; we will do our best to follow the online text. Expect most days to consist of 2-3 hours of lecture followed by in-class practice/lab time.

Grading
Projects:	40%
Homework:	20%
Quizzes:	20%
Final Exam:	20%

Homework
Homework in this class consists of completing the exercises in the online text. The text gives you immediate feedback on your mastery of the material. There may be an occasional in-class assignment, so let me know if you are not going to be in class on a given night. Homework is graded on completion, but I may deduct points for late submissions (it is always in your interest to complete).

Projects
This class has a strong lab component. There will be weekly in-class projects; students are expected to work in teams of two to complete. Projects are less defined and more open-ended than homework problems, but each student is expected to turn in three things to get full credit: code, a transcript of the test run, and a write-up. The final project (a GUI design) may take 2-3 class periods and will count as two projects.

Exams
There will be quiz every Monday. The quiz will typically consist of 2-3 questions that are similar to the in-class or text questions from the previous week. One will typically be closed book, closed notes, and the second will be a computer problem that is open-book, open notes. The worst score will be dropped. Exams are to be taken when scheduled and are required for a passing grade.

Computer Access
This is an online class. You are expected to access the IT labs via VMware or use matlab on your home computer. You may purchase a student version of Matlab for $49 (www.mathworks.com search for student).

Tentative Schedule

Jun 14/16	Ch 1-3: Intro, Operators, Variables, Scripts	Lab 1: scripts and digital IO	
Jun 21/23	Ch 4-6: 1D Arrays and simple plotting	Lab 2: plotting and analog IO	
Jun 28/30	Ch 7-9: 2D and higher Arrays, Visualization	Lab 3: Manipulating images	
Jul 5/7	Ch 10&11: Branching and Looping	Lab 4: Thermistor controller	
Jul 12/14	Ch 12-13: functions, parsing, and apps	Lab 5: TicTacToe (text based)	
Jul 19/21	Ch 14-16: structs and cells and objects	Lab 6: TicTacToe GUI	
Jul 26/28	Ch 17: GUIS and Project Time		
Aug 2/4	Project Presentations and FINAL		