



Syllabus

TXE6324: Computer Application in Textiles

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Class Meeting: Sunday 11:30 AM– 1:00 PM; Monday 2:20 -3:40 PM
Room: 3013 & Computer Lab (Department Library)

Level: Undergraduate (Third Year in Textile Engineering)

Objectives:

- Learn the principles of programming a graphical user interface (GUI)
- Develop the required skills to convert calculation problems into software written programs
- Build a master educational program that contains the basic topics of the studied courses in Textile Engineering

Prerequisites: Computer Applications 1&2, Basic knowledge in Matlab

Textbook (Required):

- Matlab user's guide, MathWorks Product Documentation, www.mathworks.com/help/techdoc

Grading System:

Homework and Quizzes	20 %
In-class discussions & attendance	10 %
Mid-term exam	30 %
Project	<u>40 %</u>
Final Exam	100 %

Grading Scale:

85 % ≤ Excellent	
75 % ≤ Very Good	< 85 %
65 % ≤ Good	< 75 %
55 % ≤ Accepted	< 65 %
Failed	< 55 %

Homework: Some problems will be assigned to cover the material of each session and they will be due at the beginning of the next meeting. Late submission for homework will not be allowed and partial credit might be applied at this situation. Collaborative work is welcome but students should write their partner's name on the submitted solution. Occasionally, selected assigned problems will be collected for grading.

Quizzes: Unannounced in-class quizzes based on the completed homework (No make-ups for these quizzes)

Communication: Office hours for the instructor will be announced. You may contact the instructor by email at anytime. It's your responsibility to watch your email account for messages from the instructor which may contain vital information regarding the class.

Accessibility Policy: Students who need special accommodations should make an appointment to see the instructor in the first week of the class. A reasonable accommodation will be provided for persons defined as having a disability.

Academic Honesty: All submitted work during the class should be an original work of the student. The used references should be cited clearly on the student's work. The use of references should be responsible and no copy-paste will be allowed. Violation of these rules will result in the application of the proper legal actions against the student according to the policies of the university.



Course Contents:

Week	Topic	Reading
1	Class orientation and introduction	GS, CH1
2, 3	Matlab review	GS, CH2, 3, 4
4	Object oriented programming (OOP), classes, callbacks	OOP, CH1,2
5, 6	Developing graphical user interface (GUI)	GUI, CH1, 2, 3
7	Programming and coding for GUI	GUI, CH6, 7
8, 9	Programming the elements of GUI	GUI, CH8
10	Making multiple GUIs working together	GUI, CH9
11	Statistical functions in Matlab	STAT, CH3
12 - 15	Practical problems and models in textile characterization	

GS: Matlab's Getting started

OOP: Matlab's user guide on: Object-Oriented Programming

GUI: Matlab's user guide on: Creating Graphical User Interfaces

STAT: Matlab's user guide on: Statistics Toolbox