



Universidad
Politécnica
de Cartagena | Campus
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Internacional

TITLE

**PROGRAMING IN MATLAB.
DEVELOPMENT OF GRAPHICAL
INTERFACES.**

Transversal Activities of Doctorate

Universidad Politécnica de Cartagena

Academic year: 2016-2017

1. General course information					
Name	Juan Carlos Trillo Moya				
Level	Doctorate				
Code	300001012				
University	Universidad Politécnica de Cartagena				
Language	Spanish or English under request.				
ECTS	1	hours / ECTS	10	Total hours	30

2. Lecture data			
Lecturer in charge	Juan Carlos Trillo Moya		
Department	Applied Mathematics and Statistics		
Knowledge area	Applied Mathematics		
Office location	Building of Naval Engineering, 2 ^o floor, office 2.02		
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Office hours	Tuesday 10:00-12:00 Tuesday 16:30-18:00 Wednesday 16:30-19:00		

3. Course objectives
<p>The goal of this course is to get acquainted with the programming in Matlab and the development of graphical interfaces in order to help the potential user, who does not necessarily knows Matlab, running the programs. At the same time a better way of presenting our programs and making them more attractive is provided.</p>

4. Theory programme
<ol style="list-style-type: none"> 1. Basics on Matlab programming. 2. Design of graphical interfaces. The guide command. 3. Special optional components in an interface: push button, toggle button, radio button, check box, edit tex, static text, slider, list box, pop-up menu, panel, button group, menu item, table, axes. 4. Connection between the graphical interface and the main program. 5. Some examples and applications.

5. Practical programme

We are going to apply the theoretical concepts to implement some graphical interfaces with a clear and particular application in mind. Basically we are going to follow the steps:

1. Implementation of the main program, which in fact addresses the real problem we want to solve.
2. Design of the graphical interface at an almost purely artistic level, but always keeping in mind its later usability.
3. Connection of each component of the graphical interface with its corresponding matlab code and particular desired functionality.
4. Running the implemented graphical interface.

6. Hours distribution

Activity	Location	Student work	Hours
Theory programme	Informatic rooms	Attend class	4
		Homework: study of the theory contents	5
Practice	Informatic rooms	Attend class	6
		Homework:	14
Tutoring	Virtual	Virtual ...	
			30