

Program	09TT- Engineering in Telecommunication Technologies and Services
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Course number and name	
Number	95000077
Name	Computation and Visualization Tools Herramientas para la Computación y Visualización
Semester	Y2-S3 / Y2-S4

Credits and contact hours	
ECTS Credits	4.5
Contact hours	45

Coordinator's name	Juan Santos Suárez
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Specific course information		
Description of course content		
Introduction to MATLAB programming and problem solving. Symbolic computation, differential equations, data fitting.		
List of topics to be covered		
Basic of MATLAB programming Finite precision arithmetic Problems, algorithms and conditioning Computational algebra Differential equations Data fitting		
Prerequisites or co-requisites		
None		
Course category in the program		
<input type="checkbox"/> R (required)	<input checked="" type="checkbox"/> X E (elective)	<input type="checkbox"/> SE (selective elective)

Specific goals for the course	
Specific outcomes of instruction	
RA1: introduction to basic computer architecture RA2: to get used with declarative programming with MATLAB RA3: i/o advanced techniques RA4: Algorithm programming and debugging RA5: problems with finite arithmetic, computational algebra, ODEs and data fitting	

Student outcomes addressed by the course
CG1-CG13, CEB1, CEB2, CECT2

Bibliography and supplemental materials
MATLAB for Engineers, Holly Moore, Pearson International Edition Instructor notes

Teaching methodology			
X lectures	_X_ problem solving sessions	__ collaborative actions	_X_ laboratory sessions
Other:			