Universidad Carlos III de Madrid

SUBJECT:	R Programming		
MASTER DEGREE: Master in Statistics for Data Science		ECTS: 3	QUARTER: 1

TIMETABLE FOR THE SUBJECT

WEEK	SESSION	DESCRIPTION OF EACH SESSION	GROUP (X mark)		Indicate if a different lecture room is needed (computer, audiovisual, etc.)	HOMEWORK PER WEEK		
			1	2		DESCRIPTION	ATTENDING HOURS	HOMEWORK Max. 7H/WEEK
1		Basics of Programming I.	x		Computer Room	The R-studio environment. Types of data (Arrays, Lists, Factors, Data Frames,...) and their operations. Control structures. Functions.	3	
2		Basics of Programming II.	x		Computer Room	Advanced data structures. Reading and storage of data.	3	
3		Data visualization.	x		Computer Room	The ggplot2 package.	3	
4		Introduction to some useful packages in R.	x		Computer Room	MASS, Caret, dplyr and data.table packages.	3	

5		Simulations.	x		Computer Room		3	
6		Parallel programming.	x		Computer Room		3	
7		Debugging, Profiling and presentation of results with Rmarkdown.	x		Computer Room		3	
8		Exam and project presentation	x		Computer Room			
TOTAL HOURS							21	