Universidad Carlos III de Madrid
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COURSE: Multivariate Techniques for Data Analysis		
DEGREE: Business Administration	**YEAR: 3**	**TERM: 1**

WEEKLY PLANNING

WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		Special room for session (computer classroom, audio-visual classroom…)	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS		DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	**CHAPTER 1. REVISION** of elements of statistics	X			Study of the material of CHAPTER 1	**1,5**	**6**
1	2	**Tutorial 1**: Examples and revision of basic concepts of Statistics.		X	**Computer classroom**	Study of the material of CHAPTER 1	**1,5**	
2	3	**CHAPTER 2. FUNDAMENTALS** of Statistical Software (I). Introduction to Microsoft Excel	X			Study of the material of CHAPTER 2 (I)	**1,5**	**6**
2	4	**Tutorial 2**: Introduction to Microsoft Excel		X	**Computer classroom**	Study of the material of CHAPTER 2 (I)	**1,5**	
3	5	**CHAPTER 2. FUNDAMENTALS** of Statistical Software	X			Study of the material of CHAPTER 2 (II)	**1,5**	**6**

		(II). Ranges and expressions with Excel						
3	**6**	**Tutorial 3**: Ranges and expressions with Excel		**X**	**Computer classroom**	Study of the material of CHAPTER 2 (II)	**1,5**	
4	**7**	**CHAPTER 2. FUNDAMENTALS** of Statistical Software (III). Matrices with Excel. Excel Add-Ins	X			Study of the material of CHAPTER 2 (III)	**1,5**	**6**
4	**8**	**Tutorial 4**: Matrices with Excel. Excel Add-Ins		**X**	**Computer classroom**	Study of the material of CHAPTER 2 (III)	**1,5**	
5	**9**	**CHAPTER 3. MULTIDIMENSIONAL** data (I). The data matrix. Different types of data	**X**			Study of the material of CHAPTER 3 (I)	**1,5**	**6**
5	**10**	**Tutorial 5**: Multidimensional data with Excel		**X**	**Computer classroom**	Study of the material of CHAPTER 3 (I)	**1,5**	
6	**11**	**CHAPTER 3. MULTIDIMENSIONAL** data (II). Summary statistics	**X**			Study of the material of CHAPTER 3 (II)	**1,5**	**6**
6	**12**	**Tutorial 6:** Summary statistics with Excel		**X**	**Computer classroom**	Study of the material of CHAPTER 3 (II)	**1,5**	
7	**13**	**CHAPTER 3. MULTIDIMENSIONAL** data (III). Linear combinations	**X**			Study of the material of CHAPTER 3 (III)	**1,5**	**6**
7	**14**	**Tutorial 7:** Linear combinations with Excel		**X**	**Computer classroom**	Study of the material of CHAPTER 3 (III)	**1,5**	
8	**15**	**CHAPTER 4. PRINCIPAL** components (I). Motivation and construction	**X**			Study of the material of CHAPTER 4 (I)	**1,5**	**6**
8	**16**	**Tutorial 8:** Principal components with Excel (I)		**X**	**Computer classroom**	Study of the material of CHAPTER 4 (I)	**1,5**	
9	**17**	**CHAPTER 4. PRINCIPAL** components (II). Standardized case	**X**			Study of the material of CHAPTER 4 (II)	**1,5**	**6**
9	**18**	**Tutorial 9:** Principal components with Excel (II)		**X**	**Computer classroom**	Study of the material of CHAPTER 4 (II)	**1,5**	
10	**19**	**CHAPTER 5. POPULATION** concepts and sampling. The normal distribution	**X**			Study of the material of CHAPTER 5	**1,5**	**6**

10	20	**Tutorial 10:** Introduction to simulation techniques		X	**Computer classroom**	Study of the material of CHAPTER 5	**1,5**	
11	21	**CHAPTER 6. SIMULATION** techniques (I). Univariate and multivariate normal distributions.	X			Study of the material of CHAPTER 6 (I)	**1,5**	**6**
11	22	**Tutorial 11**: Exercises and and applications of simulation with Excel (I)		X	**Computer classroom**	Study of the material of CHAPTER 6 (I)	**1,5**	
12	23	**CHAPTER 6. SIMULATION** techniques (II). Univariate and multivariate normal distributions.	X			Study of the material of CHAPTER 6 (II)	**1,5**	**6**
12	24	**Tutorial 12**: Exercises and and applications of simulation with Excel (II)		X	**Computer classroom**	Study of the material of CHAPTER 6 (II)	**1,5**	
13	25	**CHAPTER 7. CASE** analysis with real data (I)	X			Case analysis (I)	**1,5**	**6**
13	26	**Tutorial 13**: Case analysis (I)		X	**Computer classroom**	Case analysis (I)	**1,5**	
14	27	**CHAPTER 7. CASE** analysis with real data (II)	X			Case analysis (II)	**1,5**	**6**
14	28	**Tutorial 14**: Case analysis (II)		X	**Computer classroom**	Case analysis (II)	**1,5**	
						Subtotal 1	**42**	**84**
		Total 1 *(Hours of class plus student homework hours between weeks 1-14)*					**126**	

15		**Pending classes and tutorials**					12	
16		**Preparation of final assessment. Exam.**					3	9
17								
18								
						Subtotal 2	**3**	**9**
		Total 2 *(Hours of class plus student homework hours between weeks 15-18)*					**24**	

TOTAL *(Total 1 + Total 2)*	**150**