

COURSE: Research techniques for prediction

DEGREE: Bachelor's Degree in Management and Technology

YEAR:

TERM:

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	TEACHING (mark X)		SPECIAL ROOM FOR SESSION (computer classroom, audio-visual classroom...)	WEEKLY PROGRAMMING FOR STUDENT		
			L E C T U R E S	S E M I N A R S		DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. Estim. 6.5h)
1	1	Introduction to time series	x			Study of Sections 1.1 to 1.3. Search for examples of time series	1,5	6,5
	2	Introduction to software for time series analysis		x		Use of software for time series analysis	1,5	
2	3	Decomposition of time series (2.1 to 2.3)	x			Study of Sections 2.1 to 2.3	1,5	6,5
	4	Time series decomposition exercises		x		Resolution of exercises	1,5	
3	5	Decomposition of time series (2.3 to 2.5)	x			Study of Sections 2.3 to 2.5	1,5	6,5
	6	Time series decomposition exercises		x		Resolution of exercises	1,5	
4	7	Exponential smoothing techniques (2.6)	x			Study of Section 2.6	1,5	6,5
	8	Lab 1 - Descriptive analysis, decomposition and exponential smoothing techniques		x		Laboratory assignment & Group tutorial	1,5	
5	9	ARIMA models (3.1 to 3.4)	x			Study of Sections 3.1 to 3.4	1,5	6,5
	10	Exercises of ARIMA models		x		Resolution of exercises	1,5	
6	11	ARIMA models (3.5 to 3.6)	x			Study of Sections 3.5 to 3.6	1,5	6,5
	12	Exercises of ARIMA models		x		Resolution of exercises	1,5	
7	13	Seasonal ARIMA models (3.7)	x			Study of Section 3.7	1,5	6,5
	14	Exercises of seasonal ARIMA models		x		Resolution of exercises	1,5	
8	15	Prediction with ARIMA models (3.8)	x			Study of Section 3.8	1,5	6,5
	16	Lab 2 - Estimation, selection and prediction with ARIMA models		x		Laboratory assignment	1,5	
9	17	Advanced prediction methods (4.1 to 4.2)	x			Study of Sections 4.1 to 4.2	1,5	6,5
	18	Exercises of VAR models and dynamic regression		x		Resolution of exercises	1,5	
10	19	Advanced prediction methods (4.3)	x			Study of Section 4.3	1,5	6,5
	20	Exercises of dynamic factor models		x		Resolution of exercises	1,5	
11	21	Advanced prediction methods (4.4)	x			Study of Section 4.4	1,5	6,5
	22	Lab 3 - Use of advanced prediction methods		x		Laboratory assignment	1,5	
12	23	Conditional heteroscedasticity models (5.1 to 5.3)	x			Study of Sections 5.1 to 5.3	1,5	6,5
	24	Exercises of conditional heteroscedasticity models		x		Resolution of exercises	1,5	
13	25	Conditional heteroscedasticity models (5.1 to 5.3)	x			Study of Sections 5.1 to 5.3	1,5	6,5
	26	Lab 4 - Estimation, selection and prediction with GARCH models		x		Laboratory assignment	1,5	
14	27	Review class and preparation for evaluations	x			Exam preparation & Group tutorial	1,5	6,5
	28	Defense of the prediction project		x		Presentation and defense of the prediction project	1,5	
Subtotal 1							42	91
Total 1 (Hours of class plus student homework)							133	
15	Tutorials, handing in, etc						3,6	-
16								
17	Assessment						3	10
18								
Subtotal 2							6,6	10
Total 2 (Hours of class plus student homework)							17	