

COURSE: ECONOMETRICS II

	WEEKLY PLANNING												
WEEK	SESSION	DESCRIPTION	_	OUPS ark X)	Special room for sesión (computer classroom,	r							
			LECTUR ES	SEMINARS	audio- visual ARS classroom) DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)						
		9 <sup>th</sup> Sept											
		TIME SERIES ECONOMETRICS IN BUSINESS.											
		PROPERTIES OF THE TIME SERIES AND THE											
1	1	STATISTICAL FRAMEWORK FOR THEIR STUDY.				Formulate examples of application of econometric models in the firm of material covered in lecture. Develop examples of econometric model	1,5						
		<ul> <li>Applications of econometrics to</li> </ul>				applications to business in the student's workbook. These examples should							
		business.	x			cover both structural applications and forecast and new data evaluation.		2					

		Time series in business.						
		<ul> <li>Random samples. Features of business time series data.</li> </ul>						
		• 12 <sup>th</sup> Sept						-
		• Evolution of the local means of business time series.					1,5	
1	2	<ul> <li>Stationary fluctuations aroundlocal means level of Business time series. The classical time series decomposition: trend, seasonality, cycles and short term</li> </ul>						
		noise.		x		Obtain data with trends, plot them and comment them.		
		<ul> <li>16<sup>th</sup> Sept</li> <li>Time series trend representation using deterministic structures.</li> </ul>						
2	3	Representation of time series seasonality using deterministic structures					1,5	
			x			Obtain data with trend ans seasonality, plot and comment them.		
2	4	19th Sept <mark>Computer sesión 1</mark>		x	INF1	Estimation of deterministic trends and seasonality.	1,5	2
3	5	<ul> <li>23<sup>RD</sup> SEPT</li> <li>Unit root stochastic structures for</li> </ul>					1,5	
		trends . Unit root stochastic structures for	x			Study the material seen in the lecture	_,~	

		seasonality.						
		<ul> <li>Data transformations to eliminate deterministic and stochastic trends and seasonality.</li> </ul>						
		26 <sup>th</sup> Sept						
3	6	<ul> <li>Level data, growth rates (GR) and annual growth rates (AGR).</li> <li>Prototype models for trend and seasonality.</li> <li>Stationary deviations from the trend-seasonal evolutionary path.</li> </ul>		x		Study of material covered in lecture 5. Choose two different stochastic trend and seasonality structures for level data. Derive the trend and seasonality of the growth rates (GR) and annual growth rates (AGR). Discuss the properties of these rates. All results will be included in the student's workbook.	1,5	
4	7	<ul> <li>30<sup>th</sup> Sept</li> <li>Random variables and stochastic processes.</li> <li>Stationary stochastic processes.</li> <li>The white noise process.</li> <li>Temporal dependence in stationary stochastic processes.</li> <li>The autocorrelation function (ACF.)</li> </ul>	x			Study the material covered in the lecture	1,5	
4	8	3 <sup>rd</sup> Oct Computer session 2:Estimation of first and second	<u>x</u>	x	INF2	Study of material covered in lecture 8. Compute sample correlograms of chosen	1,5	

		order moments of stationary variables.				series. Test hypotheses for sample correlograms and interpret your results. All results will be included in the student's		
						workbook.		
		7 <sup>th</sup> Oct						
5	9	The AR(1) model. The ARI(1,1) model.					1,5	
			~			Study the material equared in the lecture		
		10th Oct	х			Study the material covered in the lecture		
5	10	Computer session 3 on correlograms and estimation					1,5	
		of AR models. 14th Oct		x	INF3	Apply it to the series of the project		
		The AR(p) and the ARI(p,1) models.						
6	11	Guide to select the autoregressive order					1,5	
		p.						
		Parsimonious long lags.						
			х			Study the material covered in the lecture		
6	12	17th Oct					1,5	
		Modelling from general to specific.		х		Apply it to the series of the project	-/-	
		21st Oct Testing unit roots: ADF test.						
_		Testing unit roots. ADT test.						
7	13	Testing seasonal unit roots.					1,5	
		24th Oct	Х			Study the material covered in the lecture		
		Computer session 4: Validation of						
7	14	univariate models.					1,5	
				х	INF4	Apply it to the series of the project		
8	15	28th Oct	х			Study the material covered in the lecture	1,5	

		Dependency and causality between						
		economic time series.						
		VAR models.						
		Recursive VAR models.						
8	16	31st Oct Computer session 5: Estimation and validation of univariate modesls and testing causality.		x	INF5	Apply it to the series of the project.	1,5	
		4th Nov Dynamic multiple regression model.						
9	17	Examples.					1,5	
		Building a single-equation dynamic econometric model.						
		746 Мали	х			Study the material covered in the lecture		
9	18	7th Nov Models relating non-stationary variables.					1,5	
				x		Apply it to the project		
10	19	11th Nov Cointegration.	x			Study the material covered in the lecture	1,5	
		14th Nov	~					
10	20	Computer session 6 <mark>:dynamic regression models</mark>					1,5	
		18th Nov		x	INF6	Apply it to the project		
11	21	Models relating non-stationary variables.					1,5	
	~ ~	Cointegration.	x				1,5	
11	22	21st NOV Presentation of projects		x			1,5	
12	23	25th NOV	x				1,5	

		Examples of cointegrated models.						
		Spurious regression.						
12	24	28th Presentaion of projects		x			1,5	
13	25	2nd Dec Multiplier analysis.	x			Study the material covered in the lecture	1,5	
13	26	5th DEC Computer session 7:cointegration		x	INF7	Apply it to the project	1,5	
14	27	9th Dec Summary of the whole course. Main points.	x				1,5	
14	28	12Dec Examples and applications.		x			1,5	
						Subtotal 1	42	
<b>Total 1</b> (Hours of class plus student homework hours between week 1-14)								

15		Tutorials, handing in, etc							
16									
17		Assessment						3	
18									
	Subtotal 2							3	
<b>Total 2</b> (Hours of class plus student homework hours between week 15-18)									