

Nom del Màster	<b>International Master in Economic Analysis.</b>	Mòdul	<b>Economic Models</b>
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## DADES ESPECÍFIQUES DEL MÒDUL

<b>Objectius Formatius del Mòdul</b>	<p>After the successful completion of the module the student will be able to:</p> <ol style="list-style-type: none"> <li>1. Have a comprehensive view of the statistical and mathematical foundations of econometrics and its use in applied research in economics.</li> <li>2. Have a sound understanding of the linear regression model, including estimation and inference under different model specifications.</li> <li>3. Acquire a good overview of the basic methods of modern econometrics.</li> <li>4. Determine optimal insurance and investment decisions for different types of individuals.</li> <li>5. Identify opportunities for financial arbitrage in simple scenarios.</li> <li>6. Construct replicating portfolios for derivative securities, and make predictions on equilibrium financial asset prices under several scenarios.</li> </ol>	
<b>Competències específiques del Mòdul</b>	<b>Competència</b>	<b>Descripció</b>
	<ol style="list-style-type: none"> <li>1. Scientific area</li> <li>2. Interpersonal area</li> <li>3. Self-learning area</li> <li>4. Technological area</li> </ol>	<p>Ability to solve complex theoretical models and interpretation of results; ability to prove formal statements, analyze complex sets of data, solving shortcomings in data available.</p> <p>Cooperation, leadership in task assignment and follow up.</p> <p>Choosing data exploitation strategy, interpretative skills.</p> <p>Programming in several econometrics packages.</p>
<b>Estructura i Continguts del Mòdul</b>	<p>BLOCK 1: Econometrics:</p> <ol style="list-style-type: none"> <li>1. Introduction: Economic and Econometric models</li> <li>2. The classical linear regression model: estimation</li> <li>3. Restrictions and hypothesis testing in linear regression</li> </ol>	

	<p>models</p> <ol style="list-style-type: none"> <li>4. Data problems, specification errors and stochastic regressors</li> <li>5. Regression models with nonspherical disturbances</li> <li>6. The Generalized Method of Moments</li> <li>7. Multivariate models: exogeneity and simultaneity</li> <li>8. Discrete choice models</li> <li>9. Regression models with time series data: an introduction</li> </ol> <p><i>BLOCK 2: Economics under Uncertainty and Introduction to Financial Economics:</i></p> <ol style="list-style-type: none"> <li>1. Probability basics. Preferences under uncertainty. Stochastic dominance</li> <li>2. The risk-return trade-off</li> <li>3. Valuation by arbitrage</li> <li>4. Utility in portfolio choice</li> <li>5. Valuation in equilibrium</li> </ol>
<p><b>Metodologia docent</b></p>	<p>Students are expected to be able to discuss the concepts presented in class and solve problems at home that will be analyzed in the sessions with the teaching assistant.</p> <p>Assignments will be regularly distributed, graded and discussed in class. The assignments will target both the improvement of theoretical skills and the ability of applying the econometric tools covered. The completion of the assignments will usually involve the use of some econometric package.</p>
<p><b>Avaluació</b></p>	<p>The Final Grade will be based upon the grades on the assignments (20%), midterm (20%) and final exam (60%).</p>

**Bibliografia bàsica i  
enllaços web mes  
importants**

*BLOCK 1:*

1. Creel, M.(2006), *Graduate Econometrics Lecture Notes*. Department of Economics and Economic History. Open source textbook: (<http://pareto.uab.es/mcreel/Econometrics/econometrics.pdf> )
2. Davidson,R.&MacKinnon, J.G (2004) *Econometric Theory and Methods*. Oxford University Press.
3. Green, W.G. (2003), *Econometric Analysis*. 5th edition. Prentice-Hall.
4. Hayashi, F.(2000), *Econometrics*. Princeton University Press.
5. Kennedy, P.(2003), *A Guide to Econometrics*. Fifth edition. Blackwell Publishing Co.

*BLOCK 2:*

1. Andreu Mas-Colell, Michael D. Whinston, and Jerry R. Green [MWG,1995], “Microeconomic Theory”, Oxford. Basic reference for microeconomics which includes decision under uncertainty and equilibrium results.
2. Chi-fu Huang and Robert H. Litzenberger [HL, 1998]“Foundations for Financial Economics”, North-Holland. A classic financial economics textbook.
3. Christian Gollier [G 2001] “The Economics of Risk and Time”, MIT Press. A graduate textbook on decision under uncertainty.