

Course Title	Introduction to Econometrics				
Course Code	ACF 311				
Course Type	Compulsory				
Level	Undergraduate				
Year / Semester	Year 3 / Semester 5				
Teacher's Name	ARISTIDIS SAMITAS/GEORGE ANAYIOTOS/POLINA ELLINA				
ECTS	6	Lectures / week	2	Laboratories / week	1
Course Purpose and Objectives	<p>This course provides students with the basic knowledge of statistics and econometrics that are essential tools in finance and economics. Students should be able to understand and apply the econometric tools to analyze financial and economic phenomena. Topics include the statistical foundations of econometrics, linear regression model, and the importance of satisfying the model's assumptions. A further examination of the violation of the model's assumptions will show the consequences on the estimation process. Students learn how to use a statistical software (STATA) to estimate regression coefficients.</p>				
Learning Outcomes	<p>Upon successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> ▪ Recognize the importance of statistics and econometrics in financial and economic phenomena. ▪ Use statistical analysis and regression models to estimate financial and economic parameters. ▪ Understand the linear regression model and identify any violation of econometric assumptions such as heteroscedasticity. ▪ Implement statistical analysis using a statistical software. ▪ Enhance critical thinking by explaining financial problems using econometric methods. 				
Prerequisites	MAT 201, MAT 202		Required	NONE	
Course Content	<ul style="list-style-type: none"> ▪ Brief review of statistics ▪ Introduction <p>What is econometrics, the structure of Economic data</p> <ul style="list-style-type: none"> ▪ The simple linear regression model <p>Estimating the coefficients of the ordinary least square (OLS), assumptions of OLS, regression analysis using a statistical software package</p>				

	<ul style="list-style-type: none"> ▪ Hypothesis Testing ▪ Multicollinearity ▪ Serial Correlation ▪ Heteroscedasticity <p>What is heteroscedasticity, testing for heteroscedasticity</p> <p>Time series models</p>								
<p>Teaching Methodology</p>	<p>This course will be delivered as a combination of interactive lectures, handouts, in-class problem-solving exercises and practice in compute laboratory using an econometric software that students will apply statistical and econometric tools and methods to economic and financial problems.</p>								
<p>Bibliography</p>	<ul style="list-style-type: none"> ▪ Introductory Econometrics: A Modern Approach Jeffrey Wooldridge South-Western Cengage Learning 5th edition 2013 ▪ Introduction to Econometrics James H. Stock and Mark W. Watson Prentice Hall 3rd edition 2015 ▪ Econometric Analysis William H. Greene Prentice Hall 5th edition 2003 ▪ Introductory Econometrics for Finance Brooks Chris Cambridge University Press 4th edition 2019 ▪ Stata Guide to Accompany Introductory Econometrics for Finance (October 1, 2019). Brooks, Chris. Introductory Econometrics for Finance. Schopohl, Lisa and Wichmann, Robert and Brooks, Chris Cambridge University Press 2019 								
<p>Assessment</p>	<table border="0"> <tr> <td>Participation</td> <td>10%</td> </tr> <tr> <td>Midterm Exam</td> <td>30%</td> </tr> <tr> <td>Homework</td> <td>20%</td> </tr> <tr> <td>Final Exam</td> <td>40%</td> </tr> </table>	Participation	10%	Midterm Exam	30%	Homework	20%	Final Exam	40%
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Language	English
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