DEREE COLLEGE SYLLABUS FOR: FN 3437 FINANCIAL ECONOMETRICS I	
(Previously FN 3237 Applied Financial Econometrics) (Updated Fall 2021)	**UK LEVEL: 5** **UK CREDITS: 15** **US CREDITS: 3/1/3**
PREREQUISITES:	EC1000 Principles of Microeconomics EC1101 Principles of Macroeconomics MA 1008 College Algebra MA 2021 Applied Statistics
CATALOG DESCRIPTION:	Basic econometrics for the finance area. The economics and econometrics of financial assets and markets, empirical tests of asset-pricing models, univariate and multivariate models, and volatility models will be presented and applied.
RATIONALE:	Given the importance of quantitative analysis in economics and finance, this course develops students' ability to quantify and evaluate economic and finance theories using empirical examples. The course focuses on economic intuition and practical applications of several econometric methods that are widely employed in economics and financial research. Thus, the course will combine theory and practice in an effort to provide the student with the necessary tools and knowledge to apply to real-world situations.
LEARNING OUTCOMES:	After taking this course, students should be able to: 1. Draw inferences from the properties of data. 2. Estimate the regression model, apply diagnostic tests and test hypotheses regarding the estimated parameters. 3. Demonstrate knowledge of univariate and multivariate modelling methodologies and use them for forecasting purposes. 4. Explain the concept of cointegration and error-correction mechanism, interpret the results of cointegration tests and estimate error-correction models. 5. Estimate autoregressive conditional heteroskedastic (ARCH) specifications and some of its variants.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: ➢ In-class exercises and examples to illustrate basic concepts. ➢ In-class discussion of journal articles in order to expand exposure on course content beyond the textbook and generate discussion. ➢ Laboratory practice sessions ➢ Office Hours: Students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material. ➢ Use of Blackboard learning platform, where instructors post lecture notes, assignment instruction, timely

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<tr><td></td><td>announcements, as well as additional resources
➢ Use of the Simulated Trading Room for data collection and analysis</td></tr>
<tr><td>ASSESSMENT:</td><td>Summative:
<table><tr><td>1st assessment: Three assignments of equal weight each (600 – 800 words each)</td><td>60%</td></tr><tr><td>2nd assessment: In-class written examination (Two-hour, closed book)</td><td>40%</td></tr></table>
Formative:
<table><tr><td>Practice problem sets</td><td>0%</td></tr><tr><td>Journal Articles</td><td>0%</td></tr></table>
The three assignments test Learning Outcomes 1, 2, 3, 4, and 5.

The final assessment tests Learning Outcomes 1, 2, 3, and 4.

The formative assignments and articles prepare students for the examinations and ensure that students are actively engaged during the term.

Both summative and formative assignments make use of statistical software (e.g. Eviews, STATA).

The final grade for this module will be determined by averaging all summative assessment grades, based on the predetermined weights for each assessment. If students pass the comprehensive assessment that tests all Learning Outcomes for this module and the average grade for the module is 40 or higher, students are not required to resit any failed assessments.</td></tr>
<tr><td>INDICATIVE READING:</td><td>REQUIRED READING:

Brooks, C. (2019). Introductory Econometrics for Finance. Cambridge University Press, 4th edition.

Other library sources, including journal articles accessible through the Library, as assigned by the instructor.

RECOMMENDED READING:

Hurn, Stan, Vance L. Martin, Jun Yu, and Peter C.B. Phillips (2020). Financial Econometric Modeling. Oxford University Press.</td></tr>
<tr><td>INDICATIVE MATERIAL:
(e.g. audiovisual, digital material, etc.)</td><td>REQUIRED MATERIAL: N/A

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<tr><td>COMMUNICATION REQUIREMENTS:</td><td>Use of appropriate academic conventions as applicable in oral and written communications.</td></tr>
<tr><td>SOFTWARE REQUIREMENTS:</td><td>Excel, Word, financial databases, econometric software (e.g. Eviews, Stata)</td></tr>
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WWW RESOURCES:	www.ft.com www.bloomberg.com www.finance.yahoo.com
INDICATIVE CONTENT:	1. Data analysis and descriptive statistics 2. Simple regression analysis 3. Multiple regression and assumptions violations 4. Univariate modelling techniques (AR, MA, ARMA, ES) 4. Multivariate modelling techniques (VAR, VEC) 5. Stationarity, cointegration and causality relationships 6. Volatility and correlation modelling