Course syllabus

FINANCIAL ECONOMETRICS

1. Course title (code): Financial Econometrics (MAFE314IU)

2. Number of credits: 03

3. Instructor: Dr. Nguyen Phuong Anh

4. Responsible department: Department of Mathematics

5. Prerequisite: None

6. Course Objectives:

The course aims to provide students with knowledge and skills including:

- An understanding of the techniques and applications of classical linear regression models, long-term relationship, modeling and forecasting time series.
- The effective use of an econometric software package (*R*)
- The ability to conduct empirical research in finance.

7. Course Description:

The course will provide students with an understanding and applications of basic econometric methods to characterize financial data, to estimate and test selected financial models in practice.

This course will focus on investigating the relationship between variables, modelling and forecasting time series of financial variables, as well as analyzing long-term relationship.

8. Course details:

Chapter	Content	Teaching hours		
		Lecture in class	**Lecture in Lab**	**Assignment (self-study)**
1	**Basic Statistical Concepts**	6		6
2	**Introduction to Econometrics** **Classical linear regression model**	3	3	3

3	**Multiple linear regression model** **Diagnostic Tests**	6	3	3
4	**Univariate Time Series:** modelling and forecasting AR, MA, ACF, PACF, ARMA, ARIMA models Stationarity and Unit Root Test	6	3	3
5	**Multivariate Time Series:** introduction to Vector Autoregressive model and Cointegration	3	3	3
6	**How to conduct empirical research in finance**	3		3
7	**Review and Presentation**	6		3
Total		**33**	**12**	**24**

9. Textbooks and References

1. Chris Brook, Introductory Econometrics for Finance, 4th Edition, Cambridge University Press, 2019.

2. Frank Westhoff, An introduction to Econometrics, Massachussets Institute of Technology, 2013.

3. Roman Kohzan, Financial Econometrics, Ventus Publishing ApS, 2010.

4. Stan Hurn, Vance Martin, Peter Phillips, Jun Yu, Financial Econometrics, 2014.

10. Teaching equipment

11. Grade scale: 100

12. Evaluation:

Activity	**Percentage (%)**
Assignment, Attendance, Quizzes, Participation in class, Project.	30%
Mid-term Examination	30%
Final Examination	40%

13. Consultancy offered to students

- Slides and supplementary materials will be uploaded on Blackboard or Google Drive.
- Discussions in class, by seminar, forum, or e-mail exchange.