COURSE (MODULE) DESCRIPTION

Course title	Code
Applied Finance	

Staff	Department
Coordinator: Nora Marija Laurinaitytė **Other(s):**	Faculty of Economics and Business Administration

Study cycle	Course type
First (Bachelor's)	Compulsory

Form of implementation	Period of implementation	Language of instruction
Face-to-face	Fifth semester	English

Requirements for student	
Prerequisites: Statistical Theory, Theory and Practice of Econometrics, Finance	**Additional requirements (if any):**

Number of ECTS credits	Student's workload	Contact hours	Individual work
5	130	36	94

Purpose of the course and competences developed
This course provides students with methods and tools to analyse financial models, practical examples, having real-world relevance, hands-on experience of modelling and forecasting.

Learning outcomes	Teaching methods	Assessment methods
1.2 Statistically describe and interpret financial data.	Lectures and tutorials	Final exam (100%)
2.2 Estimate financial models and use them in decision making.	Lectures and tutorials	
4.2 Have the ability to communicate knowledge in the field of finance and economics to specialist and non-specialist audiences clearly and unambiguously.	Tutorials	
5.2 Have necessary learning skills to continue to study in a manner that may be largely self-directed or autonomous.	Tutorials	

Course themes	Contact / Individual work: time and assignments								
	Lectures	Tutorials	Seminars	Practical classes	Laboratory work	Practice	Contact hours	Individual work	Assignments due date
Introduction to the course. Review of definitions in statistics. Statistical properties of financial data.	3						3	6	Brooks Ch 1.1-1.4, 2.1, 2.3-2.7.
Review of econometric methods such as Ordinary Least Squares (OLS) and Maximum Likelihood (ML) estimators. Few empirical examples.	3						3	6	Brooks Ch 3.1-3.9, 3.13, 4.1-4.9, 5.1-5.15. Appendix 9.1.
Estimating and testing the Capital Asset Pricing Models (CAPM). Factor models.	3						3	6	Brooks Ch 3.10-3.12, 14.2.
Factor Analysis (FA) versus Principal Components (PC): an application to interest rates.	1	2					3	12	Brooks Appendix 4.2.
Univariate and multivariate time series modelling in finance. Testing for uncovered interest parity. Financial markets and the macroeconomy.	4	2					6	16	Brooks Ch 6.1-6.8, 7.10-7-16.
Non-stationarity in financial time series. The long-term relationships between spot and future markets. International bonds markets, purchasing power parity.	4	2					6	16	Brooks Ch 8.1-8.10.
Modelling volatility and asymmetric effects. Application to S&P returns. Estimating a time-varying hedge ratio for FTSE 100 stock index returns.	4	2					6	16	Brooks Ch 9.1-9.19, 9.23, 9.25-9.27.
Markov-switching models and autoregressive threshold models. Exchange markets.	4	2					6	16	Brooks Ch 10.1, 10.5-10.11.
Total	**26**	10					**36**	**94**	

Assessment strategy	Share in %	Time of assessment	Assessment criteria
Written exam	100%	End of autumn semester	The final exam will consist of open questions in which students have to show their analytical capabilities and knowledge. The final exam will test the material from the whole course.

Author	Published in	Title	Issue No. or Volume	Publishing house or Internet site
Required reading				
The slides as well as online resources will be made available to all students				
Brooks, C.	2019	Introductory Econometrics for Finance	Fourth edition	Cambridge University Press
Supplementary reading (text books)				
Verbeek, M.	2017	A Guide to Modern Econometrics	Fifth edition	Wiley