

<b>Identification</b>	Subject	<b>ECON 865 Financial Econometrics – 3KU/6ECTS</b>
	Department	Economics and Management
	Program	Graduate
	Term	Spring Semester 2023
	Instructor	Rovshan Hajiye
	E-mail	rovshan.hajiye@khazar.org
	Classroom/hours	TBA
	Language	English
<b>Prerequisites</b>	<b>MGT 800 Applied Business Statistics</b>	
<b>Compulsory/ Elective</b>	Compulsory	
<b>Textbooks and course materials</b>	<p>1) Brooks, C. (2020) <i>Introductory econometrics for finance</i>. 4th edition. Cambridge University Press.</p> <p><b>Additional reading (might be updated):</b></p> <p>2) “Basic Econometrics”, Damodar Gujarati, Dawn Porter 5th Edition (<i>Will be provided by Instructor during the Class</i>)</p> <p>3) Studenmund, A.H. (2017) <i>Using econometrics a practical guide</i>. 7<sup>th</sup> edition. Boston: Pearson. (<i>Will be provided by Instructor during the Class</i>)</p> <p>4) Dougherty, C. (2016) <i>Introduction to econometrics</i>. 5th edition. Oxford: Oxford University Press. (<i>Will be provided by Instructor during the Class</i>)</p> <p>5) Greene, W.H. (2020) <i>Econometric analysis</i>. 8<sup>th</sup> edition. Harlow, England: Pearson. (<i>Will be provided by Instructor during the Class</i>)</p> <p>6) Introductory Econometrics: a Modern Approach, Jeffrey M. Wooldridge, (2020) 7<sup>th</sup> Edition. (JW) (<i>Will be provided by Instructor during Class</i>)</p> <p>7) Campbell, J.Y., Lo, A.W. and MacKinlay, A.C. (2011) <i>The econometrics of Financial Markets</i>. 2nd edn. New Dehli: New Age International (P) Ltd., Publ. (<i>Will be provided by Instructor during Class</i>)</p>	
<b>Course Objectives</b>	<p>The academic objective of this course is to improve and deepen students’ knowledge of econometric methodologies, tools and practices of quantitative research in order to develop elementary skills in problem definition, model building, and communication of the results of quantitative analysis. Students will be familiar with the use of spreadsheet modeling and management science software and interpretation of the output.</p>	
<b>Learning outcomes</b>	<p>The course covers the tools of financial econometrics and empirical finance, with the focus on correlation analysis, classical linear regression and advanced time-series analysis. It introduces econometric modelling of financial prices and volatility, and estimation of some risk measures. Students completing the module will be able to understand and critically appraise the use-fulness and appropriateness of alternative empirical specifications in regression analysis. The module also aims to equip students with techniques to test hypotheses in linear regression, and to help students acquire skills for future theoretical and empirical studies, including software skills. Theory: Data transformation; Detecting and solving problems of misspecification; Goodness-of-fit statistics;</p>	

	Heteroskedasticity; Autocorrelation; Hypothesis testing. Introduction to panel data models; Controlling for unobservable and fixed effects; Individual fixed effects; Common time effects; Instrumental variable estimation. Binary dependent variables. Applications: Relations among variables at both the macro and micro level will be investigated. Relation between economic activity and institutional quality. Effect of education on earnings. Causal relationship among macroeconomics variables.	
<b>Grading System</b>	<b>Methods</b>	<b>Percentage (%)</b>
	Midterm Exam	30
	Home Assignments	15
	Quizzes (2)	5
	Attendance	5
	Activity	5
	Final Exam	35
	Total	100
<b>Policy</b>	<p>- <b>Attendance Policy</b></p> <p>5 % of final grade will be given for class attendance. Students should attend all classes. The proof of reason for unavoidable absence has to be provided by student. In this case, the absence will not be resulted with grade subtraction. Students should come to the classes on time. Late arrival more than 15 minutes will be resulted as absence on the attendance sheet. In case of late arrival, student has to inform Instructor in advance.</p> <p>- <b>Class activity in this course:</b></p> <p>5% of the final grade will be given for class participation. It is required from students to contribute to the class discussion and actively participate in team works. The quality of contribution will be the main factor not the quantity of contribution.</p> <p><b>Home Assignment</b> Group Research report should comprise of the following sections:</p> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Hypothesis development</li> <li>3. Data</li> <li>4. Econometric model</li> <li>5. Estimation result and interpretations</li> <li>6. Conclusions</li> <li>7. References</li> </ol> <p>Groups shall consist of min 3 and max 4 students.</p> <p>You should hand in group report before the presentations. Presentations shall not be more than 10-14 slides and 15 minutes. More details about the assignments will be provided during the course. Besides this, after the presentations I will ask questions to each team member individually for their individual presentation grading. Correct answers will save you from losing. Additional questions may be asked if necessary. Deadline of this group research is due on 14 th week of semester.</p> <p><b>Quiz</b> Each quiz is 5% of final grade and will take 35 minutes. The first Quiz is planned to hold on the 5 th week of the semester. The second one will be</p>	

	conducted on the 11 <sup>th</sup> Week of semester. <b>Academic Dishonesty</b> Students are expected to conduct themselves in a professional manner. Academic dishonesty such as plagiarism and cheating will not be tolerated. Therefore, students are expected to be honest and ethical in their academic work. Cases of academic dishonesty will be immediately reported to the Director’s office for disciplinary action. <b>Office Hours</b> The instructor will be available to consult with students regarding class related questions regularly by appointment. Meetings with students outside office hours should be scheduled in advance by sending an e-mail to the instructor.	
<b>Tentative Schedule</b>		
Week	Topics	Textbook/Chapters
1	A Brief Overview of the Classical Linear Regression Model	Chapter 3
2	Ordinary Least Squares	Chapter 3
3	Further Development and Analysis of the Classical Linear Regression Model	Chapter 4
4	The Classical Model	Chapter 4
5	Classical Linear Regression Model Assumptions and Diagnostic Tests <b>Quiz-1</b>	Chapter 5
6	Specification: Choosing the Independent Variables	Chapter 5
7	Limited Dependent Variable Models	Chapter 12
8	<b>Midterm-exam</b> Multicollinearity	Chapter 8
9	Serial Correlation	Chapter 8
10	Heteroskedasticity	Chapter 9
11	Time-Series Models <b>Quiz-2</b>	Chapter 9
12	Dummy Dependent Variable Techniques	Chapter 7
13	Simultaneous Equations	Chapter 7
14	Forecasting	Chapter 6
15	<b>Review Class</b> Univariate Time-Series Modelling and Forecasting	Chapter 6
	<b>Final-exam</b>	