Identification	**Subject (code, title, credits)**	ECON 450 Econometrics – 3KU/6ECTS credits
	Department	Economics and Management
	Program (undergraduate, graduate)	Undergraduate
	Term	Fall, 2017
	Instructor	Abdulla Alikhanov
	E-mail:	abdulla.alikhan@gmail.com
	Phone:	
	Classroom/hours	41, Mehseti street, Room 301NB Saturday 15:20-18:30
	Office hours	by appointment
Prerequisites	BSA 215 Statistical Methods for Economics and Business	
Language	English	
Compulsory/Elective	Compulsory	
Required textbooks and course materials	Text book: • D. Anderson, D. Sweeney, T. Williams, J. Camm, J. Cochran, "Statistics for Business & Economics", 13th Edition (or earlier editions: 12-e 2014), South-Western College Publication. 2016. Suggested Readings: • D. N. Gujarati, D. C. Porter, "Basic econometrics - International edition" 5th edition, McGraw-Hill Education, 2010. • Jeffrey M. Wooldrigde, "Introductory Econometrics: A Modern Approach", 5th edition, Publisher: Cengage Learning, 2012.	
Course website	-	
Course outline	• This course provides an introduction to the econometric techniques used to analyze data sets in business, economics, finance and statistical theories. It builds on simple and multiple linear regression models. The focus is on understanding how to apply statistical and econometrics tools to the analysis of business and economic applications. The class will cover various topics related with regression analysis, estimation, economic indicators, and surveys. The topics covered in this course include least squares analyses; properties of least squares estimators; statistical inference in simple and multiple regression; regression with dummy variables. • Statistical software, mainly Excel, will be used to provide the results and interpret and comment on these results. • Particular emphasis in class will be on thinking about the data that is needed to address relevant questions, the challenges in conducting empirical and business data analysis.	
Course objectives	To provide students with rigorous training in econometric theory and applications.	
Learning outcomes		

	Upon successful completion of this course, the students should be able to: ▪ Use the simple and multiple regression model to study the relationships between variables. ▪ Understand estimation issues and their implications. ▪ Analyze data and have demonstrated ability to collect data to undertake a financial testing. ▪ Have demonstrated ability to estimate variables in time-series models. ▪ Select appropriate data and communicate the results of the empirical analysis. ▪ Be able to understand relevant empirical and business research.

Teaching methods	**Lecture**		x
	Group discussion		x
	Experiential exercise		x
	Case analysis		x
	Simulation		
	Course paper		x
	Others		
Evaluation	**Methods**	**Date/deadlines**	**Percentage (%)**
	Midterm Exam	04.11.17	30
	Case studies		
	Class Attendance		5
	Activity		5
	Quizzes (2)	14.10.17 25.11.17	10
	Team Project	23.12.17	15
	Presentation/Group Discussion		
	Final Exam (comprehensive)		35
	Others		
	Total		100

Evaluation Criteria	*Activity:* Activity evaluation score is equally based on the participation of students in classes and his/her active learning behaviors during lectures (taking notes, asking questions, answering lecturer's questions etc.). A student who participate all the classes but stay fully inactive during lectures is not able to get full point. Class activity provides the opportunity to practice speaking and persuasive skills. In the same time, comments that are vague, repetitive, unrelated to the current topic, disrespectful of others, or without sufficient foundation will be evaluated negatively. What matters is the quality of one's contributions to the class discussion, not the number of times one speaks *Attendance:* More than 2 (two) absences will lower your attendance grade. For each additional absence, you will lose 25% of your grade Students who miss more than 25% of classes shall fail the course. This means that if you miss approximately 7 classes, you automatically fail the course, regardless of how you perform on exams. The objectives of the module is will be met with interactive lecturing of theoretical points. Lectures will be conducted via presentations from textbook. The practical skills of the students will be enhanced by demonstrative application of discussed concepts and then by group tasks.

Group project: Students will be assigned with one group assignment having 20% weight in total points. The assignment will be about running a multivariate regression analysis to (dis)prove various business applications and economic theories and, their relevancy. Results will be presented both via presentations and report. The report should be handed in prior to the presentations.

Group Research report should comprise of the following sections:

1. Introduction
2. Hypothesis development
3. Data
4. Econometric model
5. Estimation result and interpretations
6. Conclusions
7. References

Groups shall consist of min 3 and max 4 students.

You should hand in group report before the presentations. Presentations shall not be more than 10-14 slides. More details about the assignments will provided during the course.

Rational of losing points is following: A student who chooses an incorrect model and specifies it incorrectly and interprets results incorrectly which results in incorrect conclusions and does not justify these decisions, shall lose 100% of assignment points. Lost points are additive. If you incur two separate mistakes in one assignment, their lost points will be added and deducted from 100%. The resulting percentage will be multiplied by the assignment weight to arrive at the assignment grade. 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.

Tentative Schedule

Week	Date/Day (tentative)	Topics	Textbook
1	16.09.17	Syllabus + Introduction to Econometrics	Supplementary slides
2	23.09.17	Revision of statistic concepts	Chapters 1-10
3	30.09.17	Simple regression model: the basics of OLS Computer session: introduction, descriptive stats and available datasets	Chapter 14 (14.1-4)
4	07.10.17	Simple regression: testing hypotheses and residual analysis	Chapter 14 (14.5-9)
5	14.10.17	Multiple regression models and OLS assumptions **Quiz 1**	Chapter 15.1-3
6	21.10.17	Multiple regression models and Multicollinearity problem	Chapter 15.4-5

7	28.10.17	Multiple Regression analysis: The problem of estimation Computer session: regressions, multicollinearity, and residual analysis	Chapter 15 (15.6 and 8)
8	04.11.17	**Midterm exam (multiple choice and open questions)**	
9	11.11.17	Dummy variables (chapter 15.7) Different functional forms (chapter 15.9) Computer session: data manipulation, functional forms, dummy variables	Chapter 15.7-15.9
10	18.11.17	Model building	Chapter 17
11	25.11.17	Time series econometrics I **Quiz 2**	Chapter 17 chapter 17.1-3)
12	02.12.17	Time series econometrics II and Heteroscedasticity problem Computer session: time series analysis	Chapter 17 (chapter 17.4-6)
13	09.12.17	Economic indicators and index numbers (chapter 20)	Chapter 20
14	16.12.17	Experimental design / Survey techniques I	Chapter 22
15	23.12.17	Presentations of Group Assignment (20%) Final revision	Group presentations
16	Final Exam	**Final exam (multiple choice and open questions)**	

This schedule is tentative.