ECTS COURSE INFORMATION FORM

School/Faculty/Institute	**Faculty of Economics, Administrative and Social Sciences**	
Program	**B.A. in Economics**	**Required**

Course Code	ECON 205			
Course Title in English	Mathematics for Economists			
Course Title in Turkish	Ekonomistler için Matematik			
Language of Instruction	English			
Type of Course	Lecture (Flipped Classroom)			
Level of Course	Undergraduate - Introductory			
Semester	Fall/Spring/Summer			
Contact Hours per Week	Lecture: 3	Recitation: 0	Lab: 0	Other: 0
Estimated Student Workload	135 hours per semester.			
Number of Credits	5 ECTS			
Grading Mode	Standard letter grade			
Pre-requisites	MATH 104			
Expected Prior Knowledge	Knowledge of basic mathematical concepts and tools			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To learn the fundamental mathematical subjects that are necessary for economics education.			
Course Description	This course covers topics of optimization and linear algebra. Topics include constrained optimization, matrix and vector algebra, determinants, and linear programming.			
Course Description in Turkish	Bu ders, optimizasyon ve lineer cebirin bazı konularını kapsar. İçerdiği konular sınırlı optimizasyon, matris ve vektör, determinant ve lineer programlama şeklindedir.			
Course Learning Outcomes and Competences	Upon successful completion of the course, the learner is expected to be able to: 1. apply and interpret the Lagrange Multiplier Method in problems of constrained optimization; 2. comprehend the concept of matrix and vector algebra, and apply methods like Gaussian elimination; 3. understand the concepts of determinant, and inverse matrix; 4. relate mathematical concepts with possible economical and business applications that will help to evaluate real and business life issues and to give managerial decisions.			

Relation to Program Outcomes and Competences: N=None S=Supportive H=Highly Related		
Program Outcomes and Competences	**Level**	**Assessed by**
	N/S/H	Exam, Project, HW, Lab, Presentation, etc.
1. Has a broad understanding of economics with a deep exposure to other social sciences and mathematics.	H	Quizzes, Exams
2. Demonstrates knowledge and skills in understanding the interactions of different areas of economics.	N	
3. Displays a sound comprehension of microeconomic and macroeconomic theory.	N	
4. Applies economic concepts to solve complex problems and enhance decision-making capability.	N	
5. Uses quantitative techniques to analyze different economic systems.	S	Quizzes, Exams
6. Applies theoretical knowledge to analyze issues regarding Turkish and global economies.	N	
7. Demonstrates proficiency in statistical tools and mainstream software programs to process and evaluate economic data.	N	
8. Behaves according to scientific and ethical values at all stages of economic analysis: data collection, interpretation and dissemination of findings.	N	
9. Uses written and spoken English effectively (at least CEFR B2 level) to exchange scientific information.	S	Quizzes, Exams
10. Exhibits individual and professional ethical behavior and social responsibility.	N	
11. Displays learning skills necessary for further study with a high degree of autonomy	S	Quizzes, Exams

Prepared by and Date	Asst. Prof. Dr. Murat Öztürk, 01.09.2017	
Semester	Fall 2018-2019	
Name of Instructor	Deniz Nebioğlu	
Course Contents	Week	Topic
	1.	Introductory Topics (Sections 3.4-3.7)
	2.	Introductory Topics (Sections 14.1-14.4 Review)
	3.	Constrained Optimization (Sections 14.5-14.6)
	4.	Constrained Optimization (Section 14.7-14.8)
	5.	Constrained Optimization (Section 14.9-14.10)
	6.	Matrix and Vector Algebra (Section 15.1-15.3)
	7.	Matrix and Vector Algebra (Section 15.4-15.6)
	8.	Matrix and Vector Algebra (Section 15.7-15.9)
	9.	Review Week
	10.	Determinants and Inverse Matrices (Sections 16.1-16.3)
	11.	Determinants and Inverse Matrices (Sections 16.4-16.6)
	12.	Determinants and Inverse Matrices (Sections 16.7-16.9)
	13.	Linear Programming (Sections 17.1-17.3)
	14.	Linear Programming (Sections 17.4-17.5)
	15.	Final Examination Period
	16.	Final Examination Period
Required/Recommended Readings	Required Reading: Essential Mathematics for Economic Analysis, 4th Edition by Knut Sydsaeter, Peter Hammond and Arne Strom, Published by Pearson, 2012.	
Teaching Methods	Lectures (Flipped Classroom)	
Homework and Projects	None	
Laboratory Work	None	
Computer Use	None	

Other Activities	Scheduled and unscheduled quizzes
Assessment Methods	• Quizzes (they will be worth of 20% of the total grade) • One midterm (it will be worth 30% of the total grade) • One final (it will be worth 50% of the final grade)
Course Administration	More detailed information about the course, like office hours, can be found in the course manual. Attendance is not required, but strictly advised. The grade of the final exam will be counted for the exams that you missed upon the faculty's approval of your excuse. Mathematics is best learned by practice. The students are expected to be open-minded and eager to try and fail. Academic Dishonesty and Plagiarism: YOK Regulation **IMPORTANT**: To be able to enter the final exam you need at least 20% success rate from pre-final assessment methods.

ECTS Student Workload Estimation

Activity	No/Weeks	Hours			Calculation	Explanation
	No/Weeks per Semester (A)	Preparing for the Activity (B)	Spent in the Activity Itself (C)	Completing the Activity Requirements (D)		
Lecture	14	4	3	1	112	A*(B+C+D)
Lab etc.					0	
Midterm(s)	1	5	2		7	A*(B+C+D)
Assingment, Project, Presentation, Quizzes	4	1			4	A*(B+C+D)
Final Examination	1	10	2		12	A*(B+C+D)
Total Workload					135	
Total Workload/25					5.4	
ECTS					**5**	