ECTS COURSE INFORMATION FORM

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

Course Code	MATH 103			
Course Title in English	Mathematics for Social Sciences I			
Course Title in Turkish	Sosyal Bilimler İçin Matematik I			
Language of Instruction	English			
Type of Course	Lecture (Flipped Classroom)			
Level of Course	Undergraduate - Introductory			
Semester	Fall/Spring			
Contact Hours per Week	Lecture: 3	Recitation: 0	Lab: 0	Other: 0
Estimated Student Workload	144 hours per semester.			
Number of Credits	6 ECTS			
Grading Mode	Standard letter grade			
Pre-requisites	None			
Expected Prior Knowledge	None			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To learn the mathematical subjects that are necessary for economics and business education.			
Course Description	This course covers fundamental topics of single-variable functions and single-variable calculus. Topics include functions, graphs of functions, properties of functions, differentiation, derivatives in use, and single-variable optimization.			
Course Description in Turkish	Bu ders, tek değişkenli fonksiyonlar ve tek değişkenli cebirin temel konularını kapsar. İçerdiği konular fonksiyonlar, fonksiyonların grafikleri, fonksiyonların özellikleri, türev, türevin kullanım alanları ve tek değişkenli optimizasyon şeklindedir.			
Course Learning Outcomes and Competences	Upon successful completion of the course, the learner is expected to be able to: 1. comprehend the following mathematical subjects that are widely used in economic and business applications: functions including exponential and logarithmic functions; extreme points, elasticity, and derivatives, 2. understand the concept of functions, sketch a graph of a function by examining the characteristics of the function; 3. apply differentiation rules to compute derivatives of common classes of functions; 4. interpret the economic optimization problems and find the best mathematical ways to solve them; 5. relate the mathematical concepts with possible economical and business applications that will help to evaluate real and business life issues and giving 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, Participation
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, Participation
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, Participation
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, Participation

Prepared by and Date	Asst. Prof. Dr. Murat Öztürk, 01.09.2017	
Semester	Fall 2018-2019	
Name of Instructor	Dr. Mehmet Arslan	
Course Contents	Week	Topic
	1.	Introductory Topics (Chapter 1-3)
	2.	Functions (Sections 4.1-4.5)
	3.	Functions (Sections 4.6-4.10)
	4.	Properties of Functions (Section 5.1-5.3)
	5.	Properties of Functions (Section 5.4-5.6)
	6.	Differentiation (Section 6.1-6.4)
	7.	Differentiation (Section 6.5-6.8)
	8.	Differentiation (Section 6.9-6.11)
	9.	Review Week
	10.	Derivatives in Use (Sections 7.1-7.3)
	11.	Derivatives in Use (Sections 7.4-7.7)
	12.	Derivatives in Use (Sections 7.8-7.12)
	13.	Single-Variable Optimization (Sections 8.1-8.3)
	14.	Single-Variable Optimization (Sections 8.4-8.7)

	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 Learning)	
Homework and Projects	None	
Laboratory Work	None	
Computer Use	None	
Other Activities	Scheduled and unscheduled quizzes	
Assessment Methods	• Participation (it will be worth of 10% of the total grade) • Two midterms (it will be worth 40% of the total grade) • One final (it will be worth 50% of the final grade)	
Course Administration	Mehmet Arslan – arslanm@mef.edu.tr 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	2	3	2	98	A*(B+C+D)
Lab etc.					0	
Midterm(s)	2	10	2		24	A*(B+C+D)
Assingment, Project, Presentation					0	A*(B+C+D)
Final Examination	1	20	2		22	A*(B+C+D)
Total Workload					144	
Total Workload/25					5.76	
ECTS					**6**	