ANKARA YILDIRIM BEYAZIT UNIVERSITY – DEPARTMENT OF ECONOMICS
COURSE SYLLABUS

Course Code	Course Title	Course Type	ECTS Credits	Prerequisite Information	Date of Preparation
ECON205	Mathematics for Economists	Compulsory	6	-	-

Instructor of the Course & E-Mail Address	Dr. Ayşe Nur Şahinler aysenursahinler@aybu.edu.tr
Office Hours & Office Room	B366-Thursday 12.00-14.00
Course Content and Objectives	The aim of this course is to help students understand and apply essential mathematical concepts relevant to economic theory, teaching the skills required for problem solving and decision making in economic contexts. Students will develop proficiency in calculus and linear algebra, enabling them to formulate and analyze economic models effectively. The course includes lectures, teaching sessions, and opportunities for regular self-study, equipping students with the skills necessary for effective problem solving and decision making in economic contexts.
Textbook(s)	*Mathematics for Economists*, Carl P. Simon, Lawrence E. Blume, W. W. Norton & Company, 1st Edition, 1994 (*Textbook*)
Teaching Methods and Techniques	Interactive lectures with problem solving and discussions on mathematical approaches to economic analysis.

Course Learning Outcomes	1	To use and apply fundamental mathematics knowledge in economic problems
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Program Outcomes Contributed by the Course	**Program Outcomes (PO)**	
	P5	Ability to apply mathematical analysis tools to economic problems

Contribution of the Course to Field Instruction	

Topics Covered in the Course	1. Week	Introduction
	2. Week	One Variable Calculus II (Functions, Derivatives)
	3. Week	One Variable Calculus III (Maxima and Minima)
	4. Week	One Variable Calculus IV (Chain Rule)
	5. Week	One Variable Calculus IV (Exponentials and Logarithm)
	6. Week	Linear Algebra I (Systems of Linear Equations)
	7. Week	Linear Algebra II (Matrix)
	8. Week	Midterm Week
	9. Week	Linear Algebra III (Determinants)
	10. Week	Calculus of Several Variables I (Partial & Total Derivative)
	11. Week	Unconstrained Optimization (Chapter 16)
	12. Week	Unconstrained Optimization (Chapter 17)
	13. Week	Constrained Optimization (Chapter 18)
	14. Week	Unconstrained Optimization (Chapter 19)
	15. Week	Final exam

Course Evaluation Criteria	In-Term Studies	Quantity	Percentage %	
	Mid-terms	1	%60	
	Quizzes		%	
	Assignments		%	
	Attendance		%	
	Practice		%	
	Project		%	
	Final examination	1	%60	
	Total	**2**	**100%**	

Disability Policy	If you have a documented disability (e.g., visual, hearing, or physical impairment, etc.) that may influence your performance in this course, it is recommended to meet with the Engelsiz AYBU (https://aybu.edu.tr/engelsiz/content_list-327-yildirim-beyazit-universitesi-engelsiz-universite-birimi-yonergesi.html) to arrange for reasonable conditions (such as accommodation, etc.) to ensure an equitable opportunity to meet all the requirements of this course. You may also contact the local authority of the Faculty of Political Science. You should communicate your needs to the course instructor as soon as possible to ensure that any course needs concerning exams, lecture materials, etc. are met.