

Department	Mathematics						
Course Title	Ancient Mathematics						
Semester	Fall	X		Spring			
Language	Turkish	X		English			
Credit	Lecture	2		Application	-		Total Credit 2
Number of ECTS Credits	3						
Course Type	Undergraduate						
Course Objectives	To give information about historical development of Mathematics.						
Course Content	Early Number Systems and Symbols, Mathematics in Early Civilizations, Mathematical Problems in ancient civilizations, The Beginnings of Greek Mathematics, Pythagorean Mathematics and The Theory of Figurative Numbers, Pythagorean Theorem and Its Many Proofs, Three Construction Problems of Antiquity, The Alexandrian School: Euclid, Euclidean Geometry and Euclid's Proof of the Pythagorean Theorem, Euclid's Number Theory and The Algorithm of Euclid, Measurement of the Earth, Diophantine Equations in Greece, India and China, Early Mathematics in India, Mathematics in the Near and Far East and The Algebra of al-Khwarizmi						
Course Prerequisites							
Instructors	Prof. Dr. Recep ŞAHİN			mail : rsahin@balikesir.edu.tr			
Assistant Instructors				mail :			
Internship	none						
Textbook and/or References	D. M. Burton, The History of Mathematics: An Introduction, McGraw-Hill Science, 2005., L. Hodgkin, A History of Mathematics: From Mesopotamia to Modernity, Oxford Univ. Press, 2005., M. Boll, Matematik Tarihi, İletişim, 2003., D. J. Struik, Kısa Matematik Tarihi, Doruk, 2002., R. Mankiewicz, Matematğin Tarihi, Güncel, 2002						
Course Structure							
Planned Learning Activities and Methods							
Course Evaluation Criteria			Course ECTS Calculation Content				
In-Term Studies	Quantity	Percentage (%)	Activities	Quantity	Duration	Total Work Load (Hour)	
Mid-terms	1	%40	Course Duration	14	2	28	
Quizzes			Hours for off-the-c.r.stud	14	4	56	
Assignment			Mid-terms	1	4	4	
Attendance			Final examination	1	4	4	
Practice			Total Work Load: 92				
Project			ECTS Credits: 3				
Final examination	1	%60					
Course Learning Outcomes	To be able to express the development of mathematics from early number systems to the invention of calculus, to be able to express computation methods, to be able to prove Pisagor's theorem by different ways, to be able to express Euclid's algorithm, to be able to state Mathematics in the Near and Far East and The Algebra of al-Khwarizmi.						

Weekly Detailed Course Contents												
Week	Topics	Study Materials	Materials									
1	Early Number Systems and Symbols											
2	Mathematics in Early Civilizations											
3	Mathematical Problems in ancient civilizations											
4	The Beginnings of Greek Mathematics											
5	Pythagorean Mathematics and The Theory of Figurative Numbers											
6	Pythagorean Theorem and Its Many Proofs											
7	Three Construction Problems of Antiquity											
8	The Alexandrian School: Euclid											
9	Euclidean Geometry and Euclid's Proof of the Pythagorean Theorem											
10	Euclid's Number Theory and The Algorithm of Euclid											
11	Measurement of the Earth											
12	Diophantine Equations in Greece , India , and China											
13	Early Mathematics in India											
14	Mathematics in the Near and Far East and The Algebra of al-Khwarizmi											
Contribution of Learning Outcomes to Programme Outcomes		5	4	5	5	4	5	5	4	4	5	5