

<b>Code and Name of Course</b>	MTK 161-01-02 Abstract Mathematics I
<b>Type of Course</b>	Compulsory
<b>Credit of Course</b>	3 0 3
<b>ECTS Credit</b>	5
<b>Course Lectures</b>	Assoc.Prof. Feride Kuzucuoğlu, Assoc.Prof. Nuri Çimen
<b>Pre-requisites</b>	-
<b>Course Length</b>	1 Semester , 3 hours
<b>Course Content</b>	<ul style="list-style-type: none"> <li>• symbolic logic, methods of mathematical proof ,</li> <li>• sets and elements, algebra of sets, indexed classes of sets, power sets, product sets,</li> <li>• functions, one-to-one, onto and invertible functions, partitions,</li> <li>• relations, partially ordered sets, totally ordered sets</li> </ul>
<b>Course Objectives: (Learning outlines)</b>	<p>At the end of this course a student;</p> <ol style="list-style-type: none"> <li>I. proves basic propositions by using simple proof techniques and sybolic logic,</li> <li>II. defines basics of set theory and verify set theoretical equalities and inequalities,</li> <li>III.can define for functions whether they are 1-1, onto, invertible,</li> <li>IV. defines composition of functions and decide whether they are invertible or not,</li> <li>V. proves basic propositions about functions and able to give examples and counter examples, defines partially ordered sets and totally ordered sets, gives examples and proves basic theorems about partially ordered sets and totally ordered sets</li> </ol>
<b>References</b>	<ul style="list-style-type: none"> <li>• Orhan Özer, Doğan Çoker, Kenan Taş, Soyut Matematik, İzgiYayınevi, Ankara, 1998.</li> <li>• Other related lecture notes.</li> </ul>
<b>Main Teaching Methods</b>	Lecturing, Discussing, Recitation
<b>Assessment Methods</b>	Midterms (50%), Final (50%).
<b>Language of Course</b>	English