

**Content**

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
SOC161	Mathematics I	1	2	0	0	2	4

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	<p>The course objective is to give to the student basic knowledge on,</p> <ul style="list-style-type: none"><li>• Sets, operations with sets,</li><li>• Relations and functions,</li><li>• Calculations with reel numbers,</li><li>• Polynomials</li></ul> <p>• The course also aims to give to the student mathematical knowledge necessary for following up the course of statistics in second year.</p>
Content	<ol style="list-style-type: none"><li>1) Sets, operations with sets.</li><li>2) Relations and functions.</li><li>3) Calculations with real numbers, absolute value, equations and inequalities containing absolute value.</li><li>3) Integer and real power of real numbers.</li><li>4) Polynomials and factorization polynomials.</li><li>5) Quadratic equations .</li><li>6) Quadratic equations, inequalities and polynomials, sign of the quadratic polynomials.</li><li>7) Linear and quadratic functions and parabola.</li><li>8) Exponential and logarithm functions.</li></ol>
References	

## Theory Topics

Week	Weekly Contents
1	Sets, operations with sets.
2	Sets, operations with sets.
3	Relations and functions.
4	Functions.
5	Calculations with real numbers, absolute value, equations and inequalities containing absolute value.
6	Integer and real power of real numbers.
7	Polynomials and factorization of polynomials .
8	Factorization of polynomials.
9	Quadratic equations.
10	Mid-term Exam.
11	Quadratic equations, inequalities and polynomials, sign of the quadratic polynomials.
12	Quadratic equations, inequalities and polynomials, sign of the quadratic polynomials.
13	Linear and quadratic functions and parabola.
14	Exponential and logarithm functions.