Course Description	
Course Code	MAT 101
Course Name	CALCULUS I
Prerequisite Courses	
Language of the Course	
Course Coordinator	
Instructor(s)	
Course Assistants	
The aim of the course	The aim of the course is to teach the basic mathematical techniques used in branch courses, in addition to attaining analytical thinking.
Course Content	Basic mathematics and their applications to engineering

Weekly Course Content	
Week 1	Sets, real numbers
Week 2	Functions
Week 3	Some special functions
Week 4	Sequences and limits
Week 5	Continuous functions and properties
Week 6	Derivative concept
Week 7	Derivation methods
Week 8	Midterm exam
Week 9	Derivation methods
Week 10	High order derivatives
Week 11	The geometric meaning of derivative
Week12	Theorems of derivative
Week 13	İndefinite forms
Week 14	Graphs of functions
Week 15	Final exam.

Course Learning Outcomes	
1	Learns and applies the concept of sets
2	Defines and understands the properties of the function
3	Learns and applies the concept of limit
4	Learns and applies the concept of continuous
5	Learns and applies the concept of derivation
6	Understands indefinitions and extreme problems

Contribution of the Course to Program Qualifications		Contribution Level
01	The student will have the ability to apply analytical approach, mathematics and science knowledge in software and engineering issues.	5
02	The student will have the ability to identify, define, formulate and solve a problem in software and computer systems.	4
03	The student will have gains scientific research skills in software and engineering problems, has the ability to design a system, part or process.	3
04	The student will have the ability to use the design capability, techniques and tools required for engineering applications.	5
05	The student will have the ability to design, implement and interpret experimental work and software projects by analyzing the results.	3
06	The student will have the ability to work between disciplines and teamwork.	4
07	The student will have the ability to work in international environments and adapt to different cultures.	5
08	The student will have verbal and written communication skills in Turkish and English.	5
09	The student will have the awareness of the necessity of lifelong learning and the ability to realize it.	4
10	The student will gain knowledge of legal issues with the awareness of professional and ethical responsibility.	4
11	The student will have managerial skills (leadership, organization, time and risk management, quality awareness, efficiency, etc.).	4
12	The student will have the ability to participate in social activities, to acquire regular sports habits and to use time in the best way.	5
13	The student will have the ability to find unusual ways and produce projects.	5
14	The student will have professional self-confidence, being an entrepreneur and taking initiative.	4
15	It is sensitive about the problems of the age and looks after the national interests.	5

ECTS WORKLOAD			
	Number	**Duration (hours)**	**Number*Duration**
Face to face education	14	4	56
Out-of-class study time (pre-study, reinforcement)	14	6	84
Homeworks	0	0	0
Presentation / Seminar preparation	0	0	0
Quizzes	0	0	0
Preparation for midterm exams	1	10	10
midterm exams	1	2	2
Project (Semester assignment)	0	0	0
Lab	0	0	0
field work	0	0	0
Preparation for the final exam	1	16	16
Semester final exam	1	2	2
Research	0	0	0
TOTAL WORKLOAD			**170**
ECTS			**6**

Evaluation		
SEMESTER EVALUATION	**Number**	**Contribution Percentage**
Midterm	1	100
Quiz	0	0
Homework	0	0
SEMESTER TOTAL		**100**
Contribution rate of mid-term evaluations to success		40
Contribution rate of the final exam to success		60
GRAND TOTAL		**100**

RESOURCES	
Textbook	Prof. Dr. Mustafa Balcı, Genel Matematik 1, Balcı yayınları, 2008.
Helpful Resources	Dennis G. Zill, Warren S. Wright, Calculus, Nobel yayınnları, 2013.