



# Çanakkale Onsekiz Mart University

Education Information System

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## Course Information

### COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Introduction to Mathematics I	FZK111	1. Semester	4 + 2	5.0	6.0

<b>Prerequisites</b>	None
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<b>Language of Instruction</b>	Turkish
<b>Course Level</b>	Bachelor's Degree (First Cycle)
<b>Course Type</b>	Compulsory
<b>Mode of delivery</b>	Face to face
<b>Course Coordinator</b>	Assist. Prof. Dr. Hasan DALGIN
<b>Instructors</b>	Assist. Prof. Dr. Hasan DALGIN
<b>Assistants</b>	
<b>Course Objectives</b>	This course aims to help students have field information at a sufficient level and be able to use it during the education process in an efficient way
<b>Course Content</b>	Real numbers and real number sets; Cartesian coordinates in plane; Functions and their graphs; Trigonometric functions; Limit; Continuity and derivative; Indefinite integral; Exponential and logarithmic functions; Inverse functions; Hyperbolic functions; Applications of derivative, Drawing graph
<b>Course Learning Outcomes</b>	1) Explain the concept of sets and Real numbers 2) Analyse the functions defined on real numbers 3) Interpret the concepts of limits, continuity, derivation of functions 4) Draw graph of a given function. 5) Analyse the applications of the derivation

### WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Concept of set, numbers	Face to face	
2. Week	Functions, define and value sets of functions	Face to face	
3. Week	Function graphs, special functions	Face to face	
4. Week	Fonksiyonların limiti, sağ ve sol limitler, limitlerde cebirsel işlemler	Face to face	
5. Week	Infinite limits, definitions of limit with epsilon-delta ; technics	Face to face	
6. Week	Continuity, properties of continues functions	Face to face	
7. Week	Definition of derivative, Rules of derivation	Face to face	

### Quick Access

### Physics

- Qualification Awarded
- Level of Qualification
- Qualification Requirements and Regulations
- Specific Admission Requirements
- Recognition of Prior Learning
- Profile of the Program
- Program Key Learning Outcomes
- Occupational Profile of Graduates
- Access to Further Studies
- Course Structure & Credits
- Exam Regulations & Assessment & Grading
- Graduation Requirements
- Mode of Study
- Programme Director(or Equivalent)
- Evaluation Questionnaire
- TYYÇ

### Course Information

- Course Information
- Weekly Course Content
- Resources
- Assessment
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

8. Week	Derivation of closed functions, Rolle theorem, Mean value theorem	Face to face	
9. Week	Midterm Exam	Written Exam	
10. Week	Inverse , exponential and logarithmic functions	Face to face	
11. Week	Inverse trigonometric , hyperbolic functions	Face to face	
12. Week	Applications of derivative: Maximum and minimum value, concavity, extreme value problems	Face to face	
13. Week	Indefinite expressions, L'Hospital Theorem, Asimptots	Face to face	
14. Week	Graph drawing	Face to face	
15. Week	General Review	Face to face	
16. Week	Final Exam	Written Exam	

## RESOURCES

Recommended Sources
Calculus: A complete Course, Robert A. Adams, Addison-Wesley, 1999
Kalkülüs, James Stewart, TÜBA, 2007

## ASSESSMENT

Measurement and Evaluation Methods and Techniques		
Midterm exam (40%), Final exam (60%)		
In-Term Studies	Quantity	Percentage
Mid Term Exam 1	1	40
<b>Total</b>	1	40
End-Term Studies	Quantity	Percentage
Final Exam	1	60
<b>Total</b>	1	60
<b>Contribution Of In-Term Studies To Overall Grade</b>		40
<b>End-Term Studies</b>		60
<b>Total</b>		100

## COURSE CATEGORY

Course Category	Percentage
Support Courses	% 100

## CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5
<u>PY1</u>	3	3	3	3	2	4
<u>PY2</u>	4	3	4	4	3	4
<u>PY3</u>	2	2	3	2	2	2
<u>PY4</u>	3	3	3	3	2	3
<u>PY5</u>	4	4	4	4	4	3
<u>PY6</u>	0	0	0	0	0	0

<u>PY7</u>	0	0	0	0	0	0
<u>PY8</u>	0	0	0	0	0	0
<u>PY9</u>	2	2	2	2	2	1
<u>PY10</u>	3	3	3	3	3	3
<u>PY11</u>	2	2	3	3	2	2
<u>PY12</u>	4	4	4	3	3	4
<u>PY13</u>	3	3	4	4	3	2
<u>PY14</u>	3	2	3	2	4	4
<u>PY15</u>	4	4	4	4	3	5

\*DK = Course's Contribution.

	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Level of contribution</b>	None	Very Low	Low	Fair	High	Very High

### ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Final Exam Preparation	1	10	10
Further Study	2	3	6
Preliminary Study	13	3	39
Class Hours (14 weeks)	14	6	84
Final Exam	1	2	2
Mid Term Exam Preparation	1	12	12
Mid Term Exam 1	1	2	2
<b>Total Workload</b>			155
<b>Total Workload / 25.5 (s)</b>			6.08
<b>ECTS Credit of the Course</b>			6