Tarih: 27 Ağustos 2025 21:49

Department of Mathematics Education / Department of Mathematics and Science Education /

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
İMEAE 207	ANALYSIS 3	2.00	0.00	0.00	2.00	3.00

Course Detail

Course Language	:	Turkish
Qualification Degree	:	Bachelor
Course Type	:	Compulsory
Preconditions	:	Not
Objectives of the Course	:	To ensure that prospective teachers construct the concept of multivariable function and develop their operational skills related to this concept, to construct the concept of topology of R, the concepts of limit and continuity, to construct the concepts of partial derivatives, to provide skills for the development of the geometric interpretation of partial derivatives, to ensure the development of operational skills related to the development of higher order derivatives and the chain rule.
Course Contents	:	This course covers the topology of IRn in multivariable functions, limit, continuity, derivative, partial derivative.
Recommended or Required Reading	:	1. Mustafa Balcı, Analiz 2, Sürat yayıncılık 2. Mustafa Balcı, Ali Ural, Çözümlü Matematik Analiz Problemleri, Cilt 2 3. Checkered Notepad
Planned Learning Activities and Teaching Methods	:	Lecture; Discussion; Question and Answer;
Recommended Optional Programme Components	:	It is not available
Course Instructors	:	Prof. Dr. Şenol Kartal
Instructor's Assistants	:	It is not available
Presentation Of Course	:	Face to face
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Course Outcomes

Upon the completion of this course a student :

1 Knows multivariable functions

2 Knows the concept of topology of R

3 Knows the concepts of limit and continuity in multivariable functions.

4 Kısmi türev kavramını ve kısmi türevin geometrik yorumunu bilir

5 Knows higher order derivatives and chain rule

Preconditions

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Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods	Course Learning Outcomes
1.Week	*The concept of a multivariable function			*1. Study the topics "Functions of several variables" between pages 125-135 in your reference book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.1 Ö.Ç.1
2.Week	*Domain and range sets of functions of several variables			*1. Study the topics "Domain and range sets of functions of several variables" between pages 136-140 in your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.1 Ö.Ç.2 Ö.Ç.1 Ö.Ç.2
3.Week	*Limits of functions of several variables			*1. Study the topics "Limits of functions of several variables" between pages 141-144 in your reference book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.3 Ö.Ç.3
4.Week	*Limits of functions of several variables			*2. Solve the questions "Limits of functions of several variables" on pages 292-296 from your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.3 Ö.Ç.3
5.Week	*Limits of functions of several variables			*2. Solve the questions "Limits of functions of several variables" between pages 296-300 in your reference book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.3 Ö.Ç.3
6.Week	*Continuity in functions of several variables			*1. Study the topics "Continuity in functions of several variables" between pages 145-149 in your reference book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.3
7.Week	*Continuity in functions of several variables			*2. Solve the "Continuity in functions of several variables" questions on pages 300-303 from your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.3 Ö.Ç.3
8.Week	*Midterm Exam					
9.Week	*The Concept of Partial Derivatives			*1. Study the "Partial derivative" topics between pages 150-152 in your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.4 Ö.Ç.4
10.Week	*Geometric interpretation of the partial derivative			*2. Solve the "partial derivative" questions on pages 303-307 in your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.4 Ö.Ç.4
11.Week	*Partial derivative calculations in multivariable functions			*1. Study the topics "Partial derivative calculation" between pages 153-155 in your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.4 Ö.Ç.4
12.Week	*Partial derivative calculations in multivariable functions			*2. Solve the "partial derivative" questions on pages 308-318 in your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.4 Ö.Ç.4
13.Week	*Chain rule for functions of several variables			*1. Study the "chain rule" topics between pages 159-170 in your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.5 Ö.Ç.5
14.Week	*Chain rule for functions of several variables			*2. Solve the "chain rule" questions on pages 320-332 in your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.5 Ö.Ç.5
15.Week	*Chain rule for functions of several variables			*1. Study the "complete differential" topics between pages 170-174 in your source book.	*Oral presentation; Discussion; Question and Answer;	Ö.Ç.5

Assesment Methods %

1 Ara Sınav : 40.000

3 Final : 60.000

ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Vize	1	1.00	1.00
Final	1	1.00	1.00
Ders Öncesi Bireysel Çalışma	14	2.00	28.00
Ara Sınav Hazırlık	7	2.00	14.00
Final Sınavı Hazırlık	7	2.00	14.00
Ödev	10	2.00	20.00
Ders Sonrası Bireysel Çalışma	14	1.00	14.00
		Total :	92.00
		Sum of Workload / 30 (Hour) :	3
		ECTS :	3.00

Program And OutcomeRelation

	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O.
L.O. 1	1	5	3	5	1	1	3	1	0	0	3	2	5	4	0	4	5	0	0	0	2	0	2	0
L.O. 2	1	5	3	5	1	1	3	1	0	0	3	2	5	4	0	4	5	0	0	0	2	0	2	0
L.O. 3	1	5	3	5	1	1	3	1	0	0	3	2	5	4	0	4	5	0	0	0	2	0	2	0
L.O. 4	1	5	3	5	1	1	3	1	0	0	3	2	5	4	0	4	5	0	0	0	2	0	2	0
L.O. 5	1	5	3	5	1	1	3	1	0	0	3	2	5	4	0	4	5	0	0	0	2	0	2	0
Avarage	1.00	5.00	3.00	5.00	1.00	1.00	3.00	1.00	0	0	3.00	2.00	5.00	4.00	0	4.00	5.00	0	0	0	2.00	0	2.00	0

Engel Durumu/Uyarlama Talebi : Engel durumuna ilişkin herhangi bir uyarlama talebinde bulunmak isteyen öğrenciler, dersin öğretim elemanı ya da Nevsehir Engelli Öğrenci Birimi ile en kısa sürede iletişime geçmelidir.