

Objectives of the Course

Lecture topics covered, and sufficient mathematical foundation necessary to teach effectively. Mathematics courses of vocational subjects learned to better understand and be able to use mathematics profession.

Course Contents

In this lesson: Sets and Numbers, the basic concepts, Exponents and Radicals Numbers, Equations and Inequalities, Polynomial and Rational Inequalities, Relations and Functions, Function Graphs, topics will be covered.

Recommended or Required Reading

Main Textbook: Anadolu University, Open Education Faculty. General Mathematics. Anadolu University Press, Eskişehir. Course Materials: The textbook, lecture notes, and additional materials provided by the instructor. Recommended References (Supplementary Books): Çakıroğlu, E. (2018). General Mathematics I-II. Gazi Bookstore, Ankara. Balci, M. (2010). General Mathematics. Balci Publications, Ankara. Stewart, J. (2016). Calculus: Early Transcendentals. Cengage Learning.

Planned Learning Activities and Teaching Methods

Lectures will be conducted through explanation and problem-solving methods. Classroom discussions, question-answer sessions, and problem-solving activities will be used to encourage active student participation. Practical exercises and assignments will be given to help students reinforce their theoretical knowledge. Short quizzes and exercises related to weekly topics will be carried out. Computer-assisted teaching methods will be utilized when necessary.

Recommended Optional Programme Components

Students are expected to attend classes regularly and actively participate in in-class activities. For success in mathematics, it is important to review topics regularly, complete assignments on time, and consult the instructor when difficulties arise. To improve understanding, it is recommended that students practice problem-solving and exercises from additional resources outside of class. Since mathematical concepts are related to other courses (such as accounting, finance, and economics), students are encouraged to make connections between disciplines. Students are advised to bring essential tools such as calculators and formula sheets to class.

Presentation Of Course

The course will be delivered face-to-face. In addition to theoretical lectures, methods such as question-answer, problem-solving, practical examples, and in-class discussions will be employed. Active student participation will be encouraged, and when necessary, the course will be supported by digital learning materials and online resources.

Dersi Veren Öğretim Elemanları

Assoc. Prof. Dr. Ayhan Kuloğlu

Program Outcomes

1. Can make arithmetic operations.
2. Can solve the first-and second-order equations and inequalities
3. Can do algebraic operations, using formulas can simplify.
4. Can solve basic problems related to functions.
5. Develops mathematical problem-solving and analytical thinking skills.
6. Applies learned mathematical methods in professional fields such as accounting and taxation practices.
7. Analyzes numerical data and reaches logical and accurate conclusions.

Weekly Contents

Order	Preparation Info	Laboratory Teaching Methods	Theoretical	Practise
1	Mathematical symbols, Concept of numbers (pp. 1–7) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.	The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Mathematical symbols, Concept of numbers	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
2	Integers, Rational and Irrational Numbers (pp. 8–14) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.	The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Integers, Rational and Irrational Numbers	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
3	Real Numbers, Complex Numbers, Exponential Numbers (pp. 15–16) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Real Numbers, Complex Numbers, Exponential Numbers	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
4	Radical Numbers (pp. 17–25) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Radical Numbers	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
5	Set Theory, Representations of Sets, Comparison of Sets (pp. 26–34) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Set Theory, Representations of Sets, Comparison of Sets	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
6	Definitions of Sets and Set Operations (pp. 35–45) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Definitions of Sets and Set Operations (Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
7	Equations (Identities, Coordinate System, Linear Equations) (pp. 46–60) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Equations (Identities, Coordinate System, Linear Equations)	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
8				Midterm Exams	
9	Two-Variable Linear Equations, Inequalities (pp. 60–76) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Two-Variable Linear Equations, Inequalities	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
10	Relations and Functions (Definition, Types, Operations) (pp. 77–100) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Relations and Functions (Definition, Types, Operations)	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
11	Lines and Linear Functions (pp. 101–124) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Lines and Linear Functions	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.

Order	PreparationInfo	Laboratory TeachingMethods	Theoretical	Practise
12	Parabola and Quadratic Functions (pp. 125–145) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.	The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Parabola and Quadratic Functions	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
13	Economic Applications of Functions (Cost, Revenue, Profit, Supply-Demand, Consumption) (pp. 146–175) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.	The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Economic Applications of Functions (Cost, Revenue, Profit, Supply-Demand, Consumption)	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
14	Exponential and Logarithmic Functions (pp. 176–188) Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.	The course will be conducted through lectures, example problem-solving, question-and-answer sessions, discussions, practical exercises, and computer-assisted teaching methods.	Exponential and Logarithmic Functions	Students will complete exercises and assignments related to the weekly topics, participate in problem-solving activities, and take short quizzes and applied studies throughout the semester.
15	General Review and Problem Solving Anadolu Üniversitesi Açıköğretim Fakültesi. Genel Matematik. Anadolu Üniversitesi Yayınları, Eskişehir.		General Review and Problem Solving	

Workload

Activities	Number	PLEASE SELECT TWO DISTINCT LANGUAGES
Vize	1	1,00
Final	1	1,00
Ders Öncesi Bireysel Çalışma	14	2,00
Ders Sonrası Bireysel Çalışma	14	2,00
Ara Sınav Hazırlık	7	2,00
Final Sınavı Hazırlık	7	2,00
Derse Katılım	14	2,00

Assesments

Activities	Weight (%)
Ara Sınav	40,00
Final	60,00

	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
L.O. 1	1	3	3		3	3		3		3		3	3
L.O. 2		3		3		4	3			3		4	3
L.O. 3	4	3		4	3		3		2	4	4		4
L.O. 4	4	4	4	3	4	4		3	4	4	3	4	4
L.O. 5	3	4	3	3	3	4		4	4	3	3	3	4
L.O. 6	4	3	3	3	4	3	4	2		3	4	3	3
L.O. 7	4	3	3		3	2	3	3		4		4	3

Table :

- P.O. 1 :** Muhasebe ve finans alanı ile ilgili yazılım ve uygulamaları kullanır.
- P.O. 2 :** Muhasebe mesleğinin temel ilkelerinin ve mesleki etik değerlerinin bilincinde, meslekte nitelikli eleman olma sorumluluğuna sahiptir.
- P.O. 3 :** Ticari hayatta kullanılan defterleri ve belgeleri mevzuata uygun usul ve esaslara göre işler.
- P.O. 4 :** Sayısal ve istatistiksel araştırma becerisi ve düşünme yeteneğine sahiptir, stratejik yaklaşım geliştirebilme becerisi ve kamu kaynaklarının etkin ve verimli kullanımını sağlar.
- P.O. 5 :** Mesleği ile ilgili mevzuatı takip eder ve temel hukuk bilgilerine sahiptir.
- P.O. 6 :** Analitik düşünme, bilişim teknolojileri başta olmak üzere işletmeciliğin çağdaş yöntem ve teknolojilerini kullanır.
- P.O. 7 :** Muhasebe ve vergi işlemlerinin işletmeler açısından önemi, kapsamı, işletmelerin finansal rasyo ve tabloları hakkında teorik bilgilere sahip olur ve bu bilgileri yorumlayabilir.
- P.O. 8 :** Muhasebe ve verginin fonksiyonlarını ve temel ilkelerini kavrayabilme yeteneğine sahip olur.
- P.O. 9 :** Alanıyla ilgili uygulamaları, gereksinimleri, yenilikleri kavrayabilme ve iş yaşamı süresince ortaya çıkabilecek problemler karşısında analitik düşünme ve çözüm üretebilme yeteneğine sahip olur.
- P.O. 10 :** Türk dilinin temel özellikleri hakkında bilgiye sahip olur.
- P.O. 11 :** Alanının gerektirdiği yazılım ve uygulamalar ile birlikte bilişim ve iletişim teknolojilerini kullanır.
- P.O. 12 :** Alanında yeterli olacak düzeyde yabancı dil bilgisine sahip olur.
- P.O. 13 :** Atatürk ilkeleri ve inkılapları konusunda bilgiye sahip olur ve Cumhuriyetin temel değerlerini benimser.
- L.O. 1 :** Aritmetik işlemleri yapabilir.
- L.O. 2 :** Birinci ve ikinci dereceden denklem ve eşitsizlikleri çözebilir.
- L.O. 3 :** Cebirsel işlemleri yapabilir, formülleri kullanarak sadeleştirme yapabilir.
- L.O. 4 :** Fonksiyonlarla ilgili temel problemleri çözebilir.
- L.O. 5 :** Matematiksel problem çözme ve analitik düşünme becerilerini geliştirir.
- L.O. 6 :** Öğrendiği matematiksel yöntemleri muhasebe ve vergi uygulamaları gibi mesleki alanlarda uygular.
- L.O. 7 :** Sayısal verileri analiz ederek mantıklı ve doğru sonuçlara ulaşır.