

Vocational School / Construction Technology
2024 - 2025 Academic Year
VOCATIONAL MATHEMATICS
Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
VOCATIONAL MATHEMATICS	İNŞ1260950	Spring Semester	3+0	3	4
Prerequisites Courses					
Recommended Elective Courses	Mathematics I				
Language of Instruction	Turkish				
Course Level	Short Cycle (Associate's Degree)				
Course Type	Required				
Course Coordinator	Lect. Hatice ÇAY				
Name of Lecturer(s)	Lect. Hatice ÇAY				
Assistant(s)					
Aim	The aim of this course is to explain fundamental math contents, methods, techniques and show how to use these methods in solving certain types of problems which might possibly be encountered in many branches of science.				
Course Content	This course contains; Basic concepts- Number Digits, Division Divisibility - Prime Numbers - GCD, Factorial - Rational Numbers, Factorisation - Equations, Simple Inequalities - Absolute Value, Exponents - Rooted Numbers, Ratio - Proportion - Problems, Midterm Exam, Sets - Operation - Modular Arithmetic - Function, Permutation - Combination - Probability, Numerical Logic, Numerical Logic Problems, Geometric Concepts, Final exam.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
1. Understands and explains numbers.			12, 16, 6, 9	A, D, E, G	
2. Solves rational numbers and absolute value.			12, 16, 6, 9	A, D, E, G	
3. Calculate functions.			12, 16, 6, 9	A, D, E, G	
4. Solves systems of equations			12, 16, 6, 9	A, D, E, G	
5. Understands and solves problems			12, 16, 6, 9	A, D, E, G	
6. Identifies and solves new generation questions.			12, 16, 6, 9	A, D, E, G	
7. Understands and solves geometric concepts.			12, 16, 6, 9	A, D, E, G	
Teaching Methods	12: Problem Solving Method, 16: Question - Answer Technique, 6: Experiential Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, D: Oral Exam, E: Homework, G: Quiz				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Basic concepts- Number Digits				
2	Division Divisibility - Prime Numbers - GCD				
3	Factorial - Rational Numbers				
4	Factorisation - Equations				
5	Simple Inequalities - Absolute Value				
6	Exponents - Rooted Numbers				
7	Ratio - Proportion - Problems				
8	Midterm Exam				
9	Sets - Operation - Modular Arithmetic - Function				
10	Permutation - Combination - Probability				
11	Numerical Logic				
12	Numerical Logic Problems				
13	Geometric Concepts				
14	Final exam				
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources
Mahmut KARTAL, Yalçın KARAGÖZ, Zafer KARTAL, "Temel Matematik Cilt 2", Nobel Akademik Yayıncılık, 3.Baskı, ISBN:978-605-133-952-8