

MUNZUR UNIVERSITY						
ÇEMİŞGEZEK VOCATIONAL SCHOOL						
CONSTRUCTION TECHNOLOGY DEPARTMENT						

1st Semester Courses						
Code	Course	M/E	T Hours	P Hours	Credit	ECTS
AITG101	Atatürk's Principles and History of Reforms-I	M	2	0	2	2
MATG101	Mathematics-I	M	2	0	2	2
TRDG101	Turkish Language-I	M	2	0	2	2
YDİG101	English-I	M	2	0	2	2
BLGG101	Information Technologies-I	M	2	1	2.5	2
İNTZG101	Technical Drawing	M	3	0	3	4
İNTZG102	Building Materials	M	3	0	3	4
İNTZG103	Statics and Mechanics	M	3	0	3	4
İNTZG104	Building Technology	M	3	1	3.5	4
İNTZG105	Zoning Information	M	3	0	3	4
		Total	25	2	26	30
2nd Semester Courses						
Code	Course	M/E	T Hours	P Hours	Credit	ECTS
AITG202	Atatürk's Principles and History of Reforms-II	M	2	0	2	2
MATG202	Mathematics-II	M	2	0	2	2
TRDG202	Turkish Language-II	M	2	0	2	2
YDİG202	English-II	M	2	0	2	2
BLGG202	Information Technologies-II	M	2	1	2.5	2
İNTZG201	Strength of Materials	M	3	0	3	4
İNTZG202	Project Reading	M	3	0	3	3
İNTZG203	Occupational Health and Safety	M	3	0	3	5
İNTZG204	Quantity Surveying and Cost Estimation	M	2	0	2	3
İNTZG205	Water Supply and Transmission	M	4	0	4	5
		Total	25	1	25.5	30
3rd Semester Courses						
Code	Course	M/E	T Hours	P Hours	Credit	ECTS
İNTZG301	Transportation	M	2	0	2	2
İNTZG302	Computer-Aided Design	M	2	1	2.5	3
İNTZG303	Rehabilitation of Damaged Structures	M	3	0	3	3
İNTZG304	Surveying	M	3	1	3.5	3
İNTZG305	Soil Mechanics	M	2	1	2.5	3
İNTZG306	Structural Analysis	M	3	0	3	3
İNTZG307	Reinforced Concrete	M	4	0	4	5
İNTZG308	Steel Structures	M	2	0	2	2
Compulsory Courses Total						24
İNTSG301	Formwork Technology	E	2	0	2	2
İNTSG302	Principles of Earthquake-Resistant Building Design	E	2	0	2	2
İNTSG303	Timber and Prefabricated Buildings	E	3	0	3	3
İNTSG304	Insulation Technology	E	3	0	3	3
İNTSG305	Office and Site Organization	E	2	0	2	2
İNTSG306	Building Installation Technology	E	2	0	2	3
GÖNG101	Volunteering Activities	E	1	2	2	4
CSDG302	Entrepreneurship	E	2	0	2	3
İHDG111	Human Rights	E	2	0	2	2
KPDG111	Career Planning	E	2	0	2	3
Note: A minimum of 6 ECTS must be chosen from elective courses.		Total	42	5	44.5	51
4th Semester Courses						
Code	Course	M/E	T Hours	P Hours	Credit	ECTS
MEPG401	Vocational Education Project	M	0	36	18	24
BPDG402	Graduation Project Course	M	0	4	2	6
		Total	0	40	20	30

MUNZUR UNIVERSITY
ÇEMİŞGEZEK VOCATIONAL SCHOOL
CONSTRUCTION DEPARTMENT
COURSE CONTENTS OF CONSTRUCTION TECHNOLOGY PROGRAM

I. SEMESTER					
Course Name	M/E	Theory	Practice	Credit	ECTS
Atatürk's Principles and History of Reforms-I	M	2	0	2	2
Course Content: Definition of Revolution and Causes Leading to Revolution, Efforts to Save the Ottoman Empire, Tripoli War, 1st and 2nd Balkan Wars, World War I and the Collapse of the Ottoman Empire, Armistice of Mudros and the Occupation of İzmir, Mustafa Kemal's Arrival in Samsun, Preparation Period of National Struggle and Congresses, Opening of the Turkish Grand National Assembly, Rebellions against the Turkish Grand National Assembly, Treaty of Sèvres, Fronts in the National Struggle, Battles on the Western Front (1st İnönü, Kütahya-Eskişehir, Sakarya, Great Offensive), Armistice of Mudanya and Its Consequences, Treaty of Lausanne, Abolition of the Sultanate, Abolition of the Caliphate, and Proclamation of the Republic.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Mathematics-I	M	2	0	2	2
Course Content: Numbers (Natural numbers, Integers, Rational numbers, and Decimals), Exponents, Radicals, Algebraic Expressions, Identities, Factoring and Rational Expressions, Functions, First-Degree Equations, Second-Degree Equations and Inequalities, Second-Degree Functions and Their Graphs, Trigonometry, Trigonometric Expressions in Triangles, Logarithm, Solving Exponential Equations, Mathematical Dimension of Graph Drawing in Economics.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Turkish Language-I	M	2	0	2	2
Course Content: Understanding that language is a product of the human mind, Grasping the structural features and richness of the Turkish language, Understanding the historical development stages of the Turkish language, Understanding the relationship between language-culture-nation, Understanding the theories of the origin of languages, Understanding the place of Turkish among world languages, Learning general information about composition, Understanding ways to be successful in written expression, Developing research, reading, and information-gathering abilities.					
Course Name	M/E	Theory	Practice	Credit	ECTS
English-I	M	2	0	2	2
Greetings, names, and ages; Numbers; Days, months and seasons; simple tense structure. This is ..., that is ...; What time is it; Action in Progress, Who ... ?, What ... ?, Where; Talking about present habits, ideas, opinions; Propositions of time: at, on, in; Talking about schedules and calendars; Abilities and inabilities: can, can't; A family tree; Possessive Pronouns; Family members; Obligations prohibitions and lack of necessity: must, mustn't; Obligations prohibitions and lack of necessity: don't/ doesn't have to					
Course Name	M/E	Theory	Practice	Credit	ECTS
Information Technologies-I	M	2	1	2.5	2

Course Content: History of computers, Basic functions of operating systems, Types of operating systems, Network technologies, Use of the internet, External hardware and internal hardware of the computer, Peripheral components of the computer.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Technical Drawing	M	3	0	3	4
Course Content: Purpose and importance of technical drawing, Introduction and use of technical drawing tools and equipment, Writing, lines, types, and usage areas, Scales, Geometric drawings, Dimensioning, General information about perspective drawing, Extracting sections and views from given simple objects in perspective, and related applications.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Building Materials	M	3	0	3	4
Course Content: Internal structure of materials, Properties of materials (Electrical, optical, thermal, acoustic, mechanical, physical, chemical), Recognition of general properties of materials used in construction (metal, stone, soil, wood, pine, plastic, lime, plaster, cement, bituminous materials).					
Course Name	M/E	Theory	Practice	Credit	ECTS
Statics and Mechanics	M	3	0	3	4
Course Content: Vectors and vector operations, Concept and types of force, Equilibrium of intersecting forces, Free body diagram, Torque and equilibrium conditions, Equilibrium of parallel forces, Concepts of mass and weight center, Moment of inertia, Point and rigid bodies.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Building Technology	M	3	1	3.5	4
Course Content: Understanding buildings and building classes, Understanding underground works such as excavation, shoring, drainage, and foundation, Understanding above-ground works such as walls, wall types, and masonry rules, chimneys, stairs, and roofs, Understanding the application of coatings with natural and artificial materials (interior and exterior plaster, whitewash, plastic and oil paint, tiles, etc.), Understanding where and why expansion joints are used, Understanding insulation, insulation types, and insulation materials, Understanding machines used in earthworks and soil improvement methods, Performing simple excavation and transportation calculations, Comparing traditional and advanced construction methods such as in-situ reinforced concrete, prefabricated, and steel structures, Understanding temporary works such as formwork and scaffolding.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Zoning Information	M	3	0	3	4
Course Content: Zoning planning law and zoning permit, Creating a site plan according to the zoning regulations, Theoretical and practical aspects of legal regulations and case law.					

II. SEMESTER					
Course Name	M/E	Theory	Practice	Credit	ECTS
Atatürk's Principles and History of Reforms-II	M	2	0	2	2
Course Content: Political Reforms, Political Parties and Attempts for Transition to Multiparty System, Legal Reforms, Social Reforms, Economic Reforms, Turkish Foreign Policy between 1923-1938, Turkish Foreign Policy after Atatürk, Atatürk's Principles and Integrative Principles.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Mathematics-II	M	2	0	2	2
Course Content: Polynomials, Identity, Inequality, Function, Binomial Theorem, Pascal's Triangle, Second-Degree Equations, Solution Set, Roots, Parabola, Exponential Functions, Graph Drawing, Logarithm, Absolute Value, Complex Numbers.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Turkish Language-II	M	2	0	2	2
Course Content: Understanding written expression types in daily life, Learning spelling rules, Understanding the importance of punctuation in written expression, Understanding the importance of correct expression in personal and social communication, Learning about expression disorders, Understanding the writing of petitions and CVs, Applying research, reading, and information-gathering abilities.					
Course Name	M/E	Theory	Practice	Credit	ECTS
English-II	M	2	0	2	2
Simple present tense, present continuous tense, past tense, irregular verbs, future tense, present perfect tense, for..just..since.., past continuous tense, past perfect tense, future continuous tense, past perfect continuous tense, passive voice, comparative and superlatives					
Course Name	M/E	Theory	Practice	Credit	ECTS
Information Technologies-II	M	2	1	2.5	2
Course Content: Office programs and their types, Word processing programs, Calculation, tabulation, and graphing programs, Presentation preparation programs, Computer networks and the Internet, Internet browsers, Internet usage, E-mail usage, Safe internet usage.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Strength of Materials	M	3	0	3	4
Course Content: Introduction, Basic principles, Foundations of strength of materials and fundamental concepts, Centroid and moment of inertia of sections, Simple states of stress (axial force, shear force, bending), Rivet calculations, Section effect diagrams, Mechanical properties of solid bodies.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Project Reading	M	3	0	3	3
Course Content: Obtaining zoning status and interpreting information, Examining reinforced concrete projects and explaining the expressions on them, Examining parking					

regulations, Examining shelter regulations, Examining fire escape regulations, Examining architectural projects and explaining the expressions on them, Learning about construction supervision applications and regulations.

Course Name	M/E	Theory	Practice	Credit	ECTS
Occupational Health and Safety	M	3	0	3	5

Course Content: Providing information about occupational health and safety issues encountered on construction sites, General information and comparison about occupational safety in Turkey and the world, Providing information about the occurrence of occupational accidents, Learning about the prevention of occupational accidents and the protection of worker health.

Course Name	M/E	Theory	Practice	Credit	ECTS
Quantity Surveying and Cost Estimation	M	2	0	2	3

Course Content: Types of unit prices, scope, and calculation of unit prices, Quantity surveying and cost estimation, Performing quantity surveying from projects or manufacturing, Preparing cost estimates from quantities, Using green book, attachment book, and survey book information to manually or using a cost calculation program, preparing the progress payments of a project, Temporary and final acceptance procedures, Actions to be taken in case of deficiencies or defects.

Course Name	M/E	Theory	Practice	Credit	ECTS
Water Supply and Transmission	M	4	0	4	5

Course Content: Drinking water, Irrigation water, Water in energy production, Water demand, Flow rate of water resources, Surface and groundwater, Water transmission.

III. SEMESTER					
Course Name	M/E	Theory	Practice	Credit	ECTS
Transportation	M	2	0	2	2
Course Content: Basic concepts and terms; Arrangement of urban roads; Elements that should be present on the road; Determining the characteristics of the soil to be used in the road substructure, rehabilitation, laying, and compaction methods and necessary tests and experiments related to them, Basic information about the characteristics, types, and construction techniques of the superstructure, Damage caused by water to the road substructure and superstructure, and methods to remove water from the road, Methods to remove surface water that may reach the road, Basic principles to learn about the defects occurring in the road superstructure and their causes, and solutions.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Computer-Aided Design	M	2	1	2.5	3
Course Content: Drawing architectural projects and reinforced concrete elements of a structure using the CAD system, Drawing prepared projects.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Rehabilitation of Damaged Structures	M	3	0	3	3
Course Content: Causes of building damages, Damage detection, Surveying, Non-destructive testing, Destructive testing, Strengthening of structures, Preliminary preparation in the damaged area, Material procurement, Scaffolding and platform, Repair and strengthening.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Surveying	M	3	1	3.5	3
Course Content: Definition and importance of surveying, Explanation and field application of surveying terms, Scales, Determination of lines in the field, Measurement of lengths in the field, Methods and tools for vertical alignment and vertical descending in the field, Measurement and transfer of small land pieces onto paper, Area calculations, Leveling works, Extraction of longitudinal and cross-sections, Calculation of area and volume in sections, Recognition and measurement with levels and theodolites.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Soil Mechanics	M	2	1	2.5	3
Course Content: Formation of soils and some information about soils, Definition and determination of basic physical properties of soils, Soil classifications, Formation of water in soils and degrees of saturation, Soil permeability, Soil compaction.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Structural Analysis	M	3	0	3	3
Course Content: Types of supports, Definition and types of beams, Static calculations of isostatic beams, Frames, External influences, Equilibrium equations, Section effects, Calculation of systems according to static loads, Calculation of displacements in isostatic systems, Calculation of hyperstatic systems, Force method, Cross method.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Reinforced Concrete	M	4	0	4	5

Course Content: Sizing of reinforced concrete beams, columns, slabs, and foundations by the load-carrying capacity method in accordance with the Reinforced Concrete and Earthquake Regulations, Selection and design of reinforcement, Main topics of the course.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Steel Structures	M	2	0	2	2
Course Content: Basic information about steel, Basic principles of load calculation in steel structures, Basic methods used in joining steel elements, Basic calculation principles and usage of tension rods, Basic calculation principles and usage of compression rods.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Formwork Technology	E	2	0	2	2
Course Content: Gaining knowledge about traditional formwork, Learning formwork elements, Gaining knowledge about modern formwork, Gaining knowledge about tunnel formwork, Gaining knowledge about sliding and climbing formwork, Gaining knowledge about special formwork, Recognition of heavy concrete formwork, Gaining knowledge about work scaffolds and formwork scaffolds.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Principles of Earthquake-Resistant Building Design	E	2	0	2	2
Course Content: Earthquakes, Effects of earthquakes on structures, Dynamic properties of structures, Effects of earthquakes on reinforced concrete structures, Effects of earthquakes on composite structures, Design principles of structural systems against earthquakes, Design of columns, Design of beams, Column-beam connections, Seismic walls and slabs.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Timber and Prefabricated Buildings	E	3	0	3	3
Course Content: Gaining knowledge about timber and timber-based materials and prefabricated buildings, Learning the drawbacks of timber, Gaining knowledge about cutting and shaping tools, Gaining knowledge about timber work machines, Gaining knowledge about timber and prefabricated buildings, Gaining knowledge about basic beam, column, slab, and stair formworks.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Insulation Technology	E	3	0	3	3
Course Content: Water and moisture insulation, Fire insulation, Heat insulation, Sound insulation, Learning the stages and classes of materials used in installation insulation, Selection of materials to be used, Usage areas, Technical properties of materials.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Office and Site Organization	E	2	0	2	2
Course Content: Criteria for selecting the construction site, Sections of the construction project, Establishment of the construction site, Work program, Preparation for production at the construction site, Production teams, Layout works, Excavation works, Site notebooks, Office works, Production control, Preparation of progress payments, Temporary and final acceptance.					
Course Name	M/E	Theory	Practice	Credit	ECTS

Building Installation Technology	E	2	0	2	3
Course Content: Applications and materials for waste and clean water installation in the building, Applications of interior electrical installation in the building, Applications of central heating system installation in the building, Ensuring the control of materials and materials.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Volunteering Activities	E	1	2	2	4
Course Content: Management and organization concepts; Volunteering concept and volunteer management; Basic volunteer areas (Disaster and emergency, environment, education and culture, sports, health and social services, etc.); Project development related to volunteer activities and participation in volunteer activities in the field; Ethical, moral, religious, traditional values and principles in volunteer activities; Participation in volunteer activities in public institutions, local governments, and non-governmental organizations (NGOs); Risk groups in the society and volunteering; Immigrants and volunteering.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Entrepreneurship	E	2	0	2	3
Course Content: Concepts related to entrepreneurship; Importance and development of entrepreneurship; Characteristics of entrepreneurs; Internal and external entrepreneurship; Motivation in entrepreneurship; Creativity and innovation in entrepreneurship; Protection of inventions, brands, and designs; Business ideas in entrepreneurship; Preparation and documentation of a business plan; Management, marketing, finance, and production plans within the business plan; Entrepreneurship stories.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Human Rights	E	2	0	2	2
Course Content: Basic concepts related to human rights, Knowledge of basic concepts related to human rights, citizenship, and democracy, Understanding the historical development of human rights, Understanding the process of internationalization of human rights, Understanding how human rights are protected at national and international levels, Understanding the importance of human rights and citizenship education.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Career Planning	E	2	0	2	3
Course Content: This course includes concepts of career, career planning, relationship of career planning with vocational guidance, individual career development, types of resumes and preparation of resumes, job interviews, career planning process, evaluation of the Turkish education system in line with career planning, applicability of career planning in schools I, applicability of career planning in schools II, lifelong career planning I, lifelong career planning II, subject repetition and feedback.					

IV. SEMESTER

Course Name	M/E	Theory	Practice	Credit	ECTS
Vocational Education Project	M	0	36	18	24
Course Content: Throughout the 4th semester, students will receive workplace training in the relevant sector. The aim is to gain experience and expertise in the field in which practical training is provided. To consolidate the theoretical knowledge and experience gained by students studying in vocational schools within the regions of vocational and technical education during their education period, to develop the skills and experience gained theoretically, to provide them with the opportunity to recognize the responsibilities, relationships, organization, and production process at the workplaces where they will work, and to recognize new technologies.					
Course Name	M/E	Theory	Practice	Credit	ECTS
Graduation Project Course	M	0	4	2	6
Course Content: Determination of the project topic. Performing design and necessary calculations. Preparing theoretical, experimental, and/or computer-based graduation projects to train students on selected topics related to production. Preparing complete and detailed drawings of the determined project. Creating process plans. Preparing the parts of the project for manufacturing.					