

FIRAT UNIVERSITY
ELAZIG ORGANIZED INDUSTRIAL ZONE VOCATIONAL SCHOOL
BUILDING INSPECTION PROGRAM
(2018-2019 Curriculum)

1ST CLASS 1ST SEMESTER

D.CODE	COURSE NAME	T	P	Cr	C/E	ECTS
AIT101	Ataturk's Principles and Revolution History -I	2	0	2	C	2
TRD109	Turkish Language-I	2	0	2	C	2
YDI107	Foreign Language -I	2	0	2	C	2
MAT101	Mathematics-I	3	0	3	C	4
OYD101	Mechanical and Static	3	0	3	C	4
OYD103	Technical Drawing	2	2	3	C	4
OYD105	Building Materials	3	0	3	C	3
OYD107	Building Technology	2	0	2	C	2
OYD109	Occupational Health and Safety	2	0	2	C	2
OYD111	Project Study and Implementation	2	0	2	C	2
OYD113	Construction Site Organization	2	0	2	C	3
	TOTAL	25	2	26		30

Abbreviations: T = Theoretical Course Hours; P = Practice Course Hours; Cr = Course Credit; C = Compulsory Course; E = Elective Course; ECTS = European Credit Transfer System

1ST CLASS 2ND SEMESTER

D.CODE	COURSE NAME	T	P	Cr	C/E	ECTS
AIT102	Ataturk's Principles and Revolution History - II	2	0	2	C	2
TRD110	Turkish Language-II	2	0	2	C	2
YDI108	Foreign Language-II	2	0	2	C	2
MAT102	Mathematics -II	3	0	3	C	3
OYD102	Concrete Technology and Experiments	3	1	4	C	4
OYD104	Building Statics	2	1	3	C	3
OYD106	Building Inspection	2	0	2	C	3
OYD108	Resistance	2	0	2	C	3
OYD110	Damage to Structures	3	1	4	C	4
	Elective	2	0	2	E	2
	Elective	2	0	2	E	2
	TOTAL	25	3	28		30
OYD112	Research Methods and Techniques	2	0	2	E	2
OYD114	Quality Assurance System	2	0	2	E	2
OYD116	Entrepreneurship	2	0	2	E	2
OYD118	Local Governments	2	0	2	E	2
OYD120	Building Elements	2	0	2	E	2

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2ND CLASS 3RD SEMESTER

D.CODE	COURSE NAME	T	P	Cr	C/E	ECTS
OYD201	Reinforced concrete	2	1	3	C	3
OYD203	Repair in Buildings	2	0	2	C	2
OYD205	Soil Mechanics	2	0	2	C	2
OYD207	Steel Structures	2	0	2	C	2
OYD209	Computer Aided Design	2	1	3	C	3
OYD211	Internship Evaluation	0	2	1	C	6
OYD 213	Professional Practice Training-I	0	16	8	C	8
	Elective	2	0	2	E	2
	Elective	2	0	2	E	2
	TOTAL	14	20	25		30
OYD215	Foundation Construction	2	0	2	E	2
OYD217	Water Transmission and Sewerage	2	0	2	E	2
OYD219	Urban Conservation and Renewal	2	0	2	E	2
OYD221	Experiment and Report Editing	2	0	2	E	2
OYD223	Professional Foreign Language	2	0	2	E	2

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2ND CLASS 4TH SEMESTER

D.CODE	COURSE NAME	T	P	Cr	C/E	ECTS
OYD202	Building Inspection Applications	2	1	3	C	4
OYD204	Quantity Surveying and Exploration Works	2	1	3	C	4
OYD206	Measurement Information	2	1	3	C	3
OYD208	Zoning Information	2	0	2	C	2
OYD210	Scaffolding Formwork Works	2	0	2	C	2
OYD212	Building Laboratory	2	1	3	C	3
OYD 214	Professional Practice Training-II	0	16	8	C	8
	Elective	2	0	2	E	2
	Elective	2	0	2	E	2
	TOTAL	16	20	28		30
OYD216	Transportation	2	0	2	E	2
OYD218	Business Management	2	0	2	E	2
OYD220	Insulation in Buildings	2	0	2	E	2
OYD222	Construction Accounting	2	0	2	E	2
OYD224	Earthquake Resistant Building Design	2	0	2	E	2
OYD226	Project Reading	2	0	2	E	2

Abbreviations: T = Theoretical Course Hours; P = Practice Course Hours; Cr = Course Credit; C = Compulsory Course; E = Elective Course; ECTS = European Credit Transfer System

Content of All Courses in the Program

AIT101 Atatürk's Principles and History of Turkish Revolution I 2 0 2 C 2

The purpose of studying the Atatürk principles and the History of Revolution course and the concept of revolution, a collective look at the reasons that prepared the collapse of the Ottoman Empire and the Turkish Revolution; the disintegration of the Ottoman Empire, the Armistice of Mondros, the situation of the country against the occupations and Mustafa Kemal Pasha's arrival in Samsun, the first step for the national struggle, organization through congresses, the National Forces and the National Pact, the opening of the Turkish Grand National Assembly, the Turkish Grand National Assembly taking over the administration of the War of Independence, the national struggle until the Sakarya Victory, the Sakarya War and the Great Offensive, from Mudanya to Lausanne, the national struggle in the fields of education and culture, the national struggle in the social and economic fields.

TRD109 Turkish Language I 2 0 2 C 2

To be able to comprehend that language is a product of the human mind, to comprehend the structural features and richness of the Turkish language, to comprehend the ways to be successful in written expression, to develop the skills of research, reading and information.

YDİ107 English I 2 0 2 C 2

Determiners; prepositions: place, time, movement; singular and plural nouns, countable and uncountable nouns, tenses, present tense, present tense, past tense structures, modals, will, should, should not, must, must not, can, comparative structures, pronouns, personal pronouns, possessive pronouns, adjectives, positive sentences, negative sentences and interrogative sentences, conjunctions.

MAT101 Mathematics-I 3 0 3 C 4

Sets, numbers, modular arithmetic, the concept of algebra, the concept of polynomial and operations with polynomials, the concepts of ratio and proportion and their applications, equations, inequalities, basic operations on functions, types of functions, parabola and its graph, piecewise linear function and its graph, absolute value function and its graph, exponential functions, logarithms.

OYD101 Mechanics and Statics 3 0 3 C 4

Subjects of mechanics, subjects of statics, distributed forces and load-bearing systems.

OYD103 Technical Drawing 2 2 3 C 4

Fundamentals of technical drawing, Scale drawing, Dimensioning, Geometric drawings, Projection of the plane, Projection of geometric objects, Intersection of planes, Perspective of simple parts, Basic view drawings.

OYD105 Building Materials 3 0 3 C 3

Definition and classification of building materials and sampling methods, methods for determining physical, mechanical and chemical properties, concrete components and properties, metal and wood materials and properties, wall components, flooring and roofing materials; heat, sound, water and fire insulation materials and their classification.

OYD107 Building Technology 2 0 2 C 2

Classification of buildings and structures, underground works, above ground works, coating works.

OYD 109 Occupational Health and Safety 2 0 2 C 2

First Aid Training, First Aid Supplies, Ensuring Personal Safety, Ensuring Employee Safety, Ensuring Workplace Safety

OYD111 Project Study and Implementation 2 0 2 C 2

Project topic, needs analysis and work schedule, resource research, project execution, project presentation, project filing, delivery of projects.

OYD113 Construction Site Organization 2 0 2 C 3

Site setup, work schedule, site production preparation, production teams, application work, excavation work, site books, office work, production control, progress payment preparation, provisional and final acceptance.

AİT102 Atatürk's Principles and History of Turkish Revolution-II 2 0 2 C 2

The war of independence, the Sakarya war, the Great Offensive, Republicanism and the Caliphate from Mudanya to Lausanne, the period of calm and democracy, nationalism, the principle of secularism, Turkey's agenda.

TRD110 Turkish Language -II 2 0 2 C 2

To be able to recognize the types of written expression in daily life, to understand the importance of punctuation in written expression, to understand the importance of correct expression in personal and social communication, to be able to apply research, reading and information skills.

YDİ108 English -II 2 0 2 C 2

Tenses, present, present, past, future tenses, modals; might, could, can, must, may; adverbs, place, direction, purpose, adverbs of manner; adjectives, order of adjectives, comparison, structures indicating superlatives; passive voice, passive voice in present, present, present, past, future tenses, conditional clauses, adjective phrases, transfer sentences, verb structures, to, -ing, noun phrases, adverbial phrases, comparative structures.

MAT102 Mathematics - II 3 0 3 C 3

Integral, area and volume calculations with the help of integral, center of gravity calculations with the help of integral, differential equations, solutions of differential equations, errors and types of errors, solutions of linear equation systems, curve fitting methods, interpolation techniques.

OYD102 Concrete Technology and Experiments 3 1 4 C 4

Consistency, setting, volume stability, specific gravity, strength and related tests of cement, unit volume of aggregate, specific gravity, sieve analysis, water absorption rate, abrasion loss and related tests, fine matter ratio in fine aggregate, unit volume weight test of concrete, concrete consistency tests, concrete pressure test, concrete core test, use of mineral admixtures in concrete.

OYD104 Building Statics 2 1 3 C 3

Isostatic beams, isostatic plane frames, isostatic plane truss systems, three-hinged systems, hydrostatic pressure, hydrostatic force, point of action of hydrostatic force.

OYD 106 Building Inspection 2 0 2 C 3

Fundamentals of Building Control, Directives and laws.

OYD108 Strength 2 0 2 C 3

Center of gravity, moment of inertia, tensile stress, compressive stress, shear stress, uniaxial bending.

OYD110 Damage to Structures 3 1 4 C 4

Types of damage to structures and their classification

OYD112 Research Methods and Techniques 2 0 2 E 2

Selection of research topics, conducting source research, evaluating research results, converting research results into a report, preparing for presentation and presentation.

OYD114 Quality Assurance System 2 0 2 E 2

The concept of quality, standard and standardization, the importance of standards in production and service sectors, management quality and standards, environmental standards, quality management system models, strategic management, participation in management, process management system, resource management system, Efqm excellence model, quality control in production, inspection and sampling, total quality control, control diagrams, statistical distributions.

OYD116 Entrepreneurship 2 0 2 E 2

Concepts of Enterprise and Entrepreneurship, Feasibility Analysis, Planning, Implementation.

OYD118 Local Governments 2 0 2 E 2

The concept of local governments, the nature of local governments, their importance, their relations with democracy, local governments and autonomy, breadth of authority, locality in service. The reasons for the existence of local governments, their relations with the central government, division of duties and income, optimum service areas. The historical development of local governments in Turkey, reform studies carried out in recent years.

OYD120 Building Elements 2 0 2 E 2

Definition of building structural elements. Foundation, column, curtain, beam, floor concepts, types, functions. Information on which element should be preferred under which conditions.

OYD201 Reinforced Concrete 2 1 C 3

Definition and properties of reinforced concrete, load-bearing system and reinforced concrete structural elements. Static calculations of floor, floor design, static calculations of beams, beam design, static calculations of columns, column design, foundation loads, foundation design.

OYD203 Repair in Buildings 2 0 2 C 2

Repair methods for damages in buildings

OYD205 Soil Mechanics 2 0 2 C 2

Geotechnical information and soil information

OYD 207 Steel Structures 2 0 2 C 2

Fundamentals, loads and loading in steel structures, connection devices, tension and compression bars.

OYD209 Computer Aided Design 2 1 3 C 3

Package program installation, CAD program commands, CAD program drawing settings, toolbars, basic computer operations, detail drawings, dimensioning commands, scanning, final operations, printing operations.

OYD211 Internship Evaluation 0 2 1 C 6

Evaluation and presentation of internship notebooks.

OYD213 Professional Practice Training-I 0 16 8 C 8

The program includes 14 weeks of workplace training, 2 working days a week, in a workplace related to the program. Introduction to industrial areas, demonstration of production stages, observation of working conditions of suitable companies, sharing of work experiences, introduction of industrial companies.

OYD215 Foundation construction 2 0 2 E 2

Soil investigation. Investigation methods. Shallow foundations, Single foundations, and other types of foundations. Settlements of foundations. Reinforced concrete, static calculations and drawings of foundations.

OYD217 Water Transmission and Sewerage 2 0 2 E 2

Characteristics of drinking water, supply, transmission, purification, storage, distribution of water, collection, purification and distribution of wastewater.

OYD219 Urban Protection and Renewal 2 0 2 E 2

The concept of urban protection, definition and legislation of conservation development plan. Examination of urban protection examples. Law on the protection of cultural and natural assets in Turkey, Examination of the structures of relevant institutions.

OYD221 Experiment and Report Preparation 2 0 2 E 2

Defining the concept of experimental work, Grouping construction experiments, Organizing the stages of experimentation, Reporting the results of experiments.

OYD223 Vocational Foreign Language 2 0 2 E 2

Being able to understand what one listens to on topics related to the profession. Being able to speak a foreign language in business life using the right words and expressions, with correct pronunciation, emphasis and intonation.

OYD202 Building Inspection Applications 2 1 3 C 4

Varieties and applications in building inspection

OYD204 Quantity Surveying and Exploration Works 2 1 3 C 4

Material and labor prices, price analysis, unit prices, preparation of progress payments, preparation of quantity takeoffs and surveys of a multi-storey reinforced concrete frame or masonry building manually or using a program.

OYD206 Measurement Information 2 1 3 C 3

Units of measurement and scales, measurement errors, linear measurement, height measurement, angular measurement.

OYD208 Zoning Information 2 0 2 C 2

Zoning law

OYD210 Scaffolding Formwork 2 0 2 C 2

Types of scaffolding and formwork used.

OYD212 Construction Laboratory 2 1 3 C 3

To provide knowledge and skills on testing the chemical (Acids, bases and salts), physical (Unit weight, density, porosity, compactness, water absorption, capillarity, permeability, degree of saturation, volume change), mechanical (Tensile, pressure, impact, bending, buckling, torsion, shear, shear and rupture), technological (Abrasion, hardness, fatigue, creep, fracture) properties of building materials, evaluating the results and preparing reports. Review of building materials, technology and experimental construction as a basis, material loading systems and loading principles, load application methods, loads on frames (cages), load distribution, safety checks, strain measurement systems, measuring the volume of an object by immersion in water, rotation and twisting movements, calibration, measurement of soil (soil) properties. Building test techniques, laboratory tests applied to building materials, test methods and calculations, evaluation of test results.

OYD214 Professional Practice Training-II 0 16 8 C 8

The program includes 14 weeks of workplace training, 2 working days a week, in a workplace related to the program. Introduction to industrial areas, demonstration of production stages, observation of working conditions of suitable companies, sharing of work experiences, introduction of industrial companies.

OYD216 Transportation 2 0 2 E 2

Zero polygon drawing, horizontal curve and base point determination, horizontal curve calculations, superstructure design, longitudinal section drawing, vertical curve base determination, vertical curve calculations, superstructure design, cross-section calculations and drawings, volume table, bruckner diagram, earthworks calculation, preparation of project file, usage of computer software related to calculations and drawings.

OYD218 Business Management 2 0 2 E 2

Basic concepts of business and management, their purposes and relations with the environment, classification of businesses, establishment purposes, size and capacity, business functions, functioning of organizations.

OYD220 Insulation in Buildings 2 0 2 E 2

Glass wool, sheathing, exterior insulation systems, elastomeric rubber, EPS, XPS, polymer-based, cement-based insulation materials, waterproofing, roof insulation materials, physical and mechanical properties, market unit price analyses, application and usage principles and production technologies .

OYD222 Construction Accounting 2 0 2 E 2

Carrying out construction company establishment transactions, creating a construction company

account plan, determining commitment costs, accounting for commitment transactions, determining special (build-sell) construction costs, accounting for special (build-sell) construction transactions.

OYD224 Earthquake Resistant Structure Design 2 0 2 E 2

What is Earthquake, Definition, Characteristics, Formation, Earthquake in Turkey, Physical Characteristics of Earthquake, Turkish Earthquake Code, Mode Combination Method, Earthquake Calculation with Equivalent Earthquake Load, Time History Calculation Method, Dimensioning of Basic Structural Elements, Torsion, Masonry Structures and their behavior, Tsunami and its effects.

OYD226 Project Reading 2 0 2 E 2

Zoning preparations and plan studies, Architectural project review, Application criteria in architectural designs, Application processes of architectural projects, Reinforced concrete project review, Foundation applications, Column application projects, Column beam connection details, Formwork application projects, Column beam connection details, Reinforced concrete details review, Projects, application site review.