

**GİRESUN UNIVERSITY  
KEŞAP VOCATIONAL HIGH SCHOOL  
CONSTRUCTION DEPARTMENT  
CONSTRUCTION TECHNOLOGY PROGRAM  
3+1 VOCATIONAL EDUCATION MODEL COURSE CONTENTS**

## **SEMESTER I**

## Values Education and Business Ethics

(2+0) 2

## Course Content

Value and value education, Character and character education, Religion, morality and value relation, universal and local values, Developmental periods and values, Ethics and values education in the family, Ethics and values education at school, Ethics concept and definition, Ethical responsibility and business decisions, Business The concept and scope of business ethics and business ethics, Ethics management and institutionalization in businesses, The concept and scope of work and professional ethics

## Communal Gender Equality

(2+0) 2

## Course Content

What is Gender? Different Approaches to Gender Inequalities: Liberal Approach, Marxist Approach and Post-Modernist Approach, Feminist Approaches: Equalitarian Feminism, Socialist Feminism, Radical Feminism, The Outlook of Gender Inequalities in the World and in Turkey: Gender Inequality in Production, Gender Inequality in Education, Gender Inequality in the Family Gender Inequality, Gender Inequality in Politics, Gender Equality Policies in the World and in Turkey: Equality Policies in Working Life, Equality Policies in Education and Family, Equality Policies in Politics.

## Women and Family Life

(2+0) 2

## Course Content

Evaluating gender inequality in a historical perspective. Understanding the social, political and economic causes of violence against women. Observing the effects of gender roles in education institutions. Identifying gender roles and patterns in modern societies.

## Ataturk's Principles and Revolution History-I

(2+0) 2

## Course Content

The reasons for the backwardness of the Ottoman Empire, the reform movements, the disintegration and collapse of the Ottoman Empire, the factors that prepared the War of Independence, the start of the national struggle, Atatürk's organization of the national struggle, the domestic and foreign political developments after the First World War, Turkey Information about the establishment of the Republic.

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**Turkish Language-I****(2+0) 2****Course Content**

Language and languages, theories about the birth of language, language-culture-nation relationship, World languages and the place of Turkish language among world languages, historical development and periods of Turkish language, phonetics (Turkey Turkish), morphology (structure of words) : a) nouns b) verbs c) prepositions, semantics, syntax (word groups, elements of sentences, sentence types, sentence analysis), morphological features, sentence features, spelling rules, punctuation marks.

**English-I****(2+0) 2****Course Content**

Speaking, greeting, remembering, introducing oneself, giving directions, making requests and requests, asking questions to get information, answering questions, making suggestions and answering, asking time and place and answering questions, asking and reporting amount and number, telephone conversation technique, expressions of necessity, advice, mentioning events in the past.

**Basic Information Technology Usage****(2+1) 3****Course Content**

Introduction, computer hardware, computer software. System unit, memory types, keyboard, mouse and monitor, installation and operation of the computer together with its hardware. Operating systems, Ms-Dos, Windows operating system, folders and files, creating a new folder, copying, saving and deleting etc. Topics related to Windows operating system. The use of Microsoft office programs and their place in our lives. Introduction of internet transactions. Internet research methods. Introduction and use of search engines.

**Mathematics-1****(3+0) 4****Course Content**

Logic. Numbers and basic concepts. Exponential and radical numbers. Ratio proportionality concepts. Letter Phrases. Factorization. First and second order equations. Basic Operations in Functions. Function types. Problems.

**Static and Strength****(4+0) 5****Course Content**

The use of mechanical quantities in the SI unit of measure. Arithmetic operations with scalar and vector quantities. Component and resultant calculations of force magnitude. Calculation of the moment magnitude of the force at a point. Support calculation of isostatic beams.

**Technical Drawing****(2+2) 4****Course Content**

Text, Line types and where they are used, Scales, Dimensioning, Preparing a letterhead General information about perspective drawing, Making a plan, appearance and section from simple objects with perspective in S:1/1-1/2 technique, Geometric drawings and applications related to the subject.

**Structure Information** **(3+0) 3**

**Course Content**

Houses, General information definition and purpose, preparation of the needs program, types that affect the design of the building, the effect of living things and objects on the spatial sizing, examination of the spaces that make up the house, furnishing of the spaces, orientation of the spaces, function scheme, human-environment relations, planning process, design phase, housing shelter functions, factors affecting the housing design, municipal type zoning regulation, heat-fire, shelter and parking lot regulations, which are outside the scope of the law numbered 3030 in the zoning law no. 3194.

**Construction Material and Tests** **(3+0) 3**

**Course Content**

Definition and classification of building materials, Sampling methods, methods of determining physical, mechanical and chemical properties, applying building material tests, determining concrete components and their properties, applying concrete pressure tests, determining metal and wood materials and their properties, applying reinforcing steel tensile tests, masonry determining the components, flooring and roofing materials, classification of thermal insulation materials, classification of sound insulation materials, classification of waterproofing materials, classification of fire insulation materials.

**II. SEMESTER**

**Ataturk's Principles and Revolution History-II** **(2+0) 2**

**Course Content**

Examination of the establishment of the Republic of Turkey and its political history up to the present and the structure, functioning and purposes of the republican institutions.

**Turkish Language-II** **(2+0) 2**

**Course Content**

Punctuation marks, spelling rules, definition of composition and writing techniques, ways to be successful in composition, features of expression, expression disorders, types of oral and written expression.

**English-II** **(2+0) 2**

**Course Content**



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Asking for directions, giving directions, making a choice, asking for a preference, asking how a transaction or job is done, telling, comparing, talking about the future, making predictions, describing a situation using a passive structure, situations that happened in the past but have an effect that started in the past and still continue, explaining the purpose of a job or transaction, expressing similarities and differences, asking cause and effect.

### **Concrete Technology**

**(2+1) 4**

#### **Course Content**

To be able to comprehend the raw material, formation, types and storage forms of cement. To be able to comprehend the properties of aggregate and aggregate batches to be used in concrete production. To be able to comprehend the basic properties of water to be used in concrete production and maintenance. To be able to apply the basic principles required for concrete production, transportation, placement and maintenance.

### **Computer Aided Design**

**(2+1) 3**

#### **Course Content**

Autocad program working and features, drawing screen, ways to apply autocad commands, usage settings, basic functions, methods of determining coordinates, methods of selecting objects, image controls, drawing aids, object clamping settings, basic geometric drawings, editing basic geometric drawings, layers (layers), text, dimensioning (dimstyle) blocks, attributes, external references and design center, isometric perspective drawing, calculation and analysis processes, plotting and applications related to the subjects.

### **Office and Site Organization**

**(2+1) 3**

#### **Course Content**

Project types, preparation, requirements for projects, tender procedures and contracts, establishment and organization of the construction site, work schedule, tools and machinery used in the construction site, construction site operating legislation, various agreements, public procurement law, contracts, dispersal of the construction site and supervision services.

### **Agglomerate Buildings**

**(2+1) 3**

#### **Course Content**

The structural properties and physical environment of the materials in masonry structures, the general causes of damage in masonry structures, detail inaccuracies, the reasons for their deterioration due to use, the causes of moisture, their damage and protection, the detailed protection of the system from foundation to roof.

### **Mathematics-2**

**(3+0) 4**

#### **Course Content**



Sequences and series, limit and continuity, derivatives and applications, indefinite integral, definite integral and its applications.

### **Prefabricated Structures**

**(2+1) 3**

#### **Course Content**

Definition of prefabricated building, prefabricated building and its elements, prefabricated building connection types, connection assembly details.

### **Topography**

**(2+1) 3**

#### **Course Content**

Topography definitions, scope and places of use, scale types and calculation methods, features and functions of topographic devices, length measurement methods, marking of points and lines, length measurements on handicapped and unobstructed lands, height measurement methods, geometric height measurement, leveling works, field area measurement methods, area calculation from land measurements, area calculation from coordinate values, area measurement with planimeter, adjustment and installation of devices related to topography, length and angle measurements in the field, leveling and polygon calculations, application of calculation results to the field and drawings according to topographic measurement results.

### **Structural Analysis**

**(2+1) 4**

#### **Course Content**

The subject of building statics, definition of isostatic systems, definition of carrier systems and their support, support calculations of isostatic beams, internal force calculations and drawing m,n,t diagrams, internal force calculations of isostatic plane frames and m,n,t diagrams, isostatic plane lattices rod forces calculations, internal force calculations of three-joint systems and drawing m, n, t diagrams, sizing and sizing of isostatic carrier systems.

### **Wooden Structures**

**(2+1) 3**

#### **Course Content**

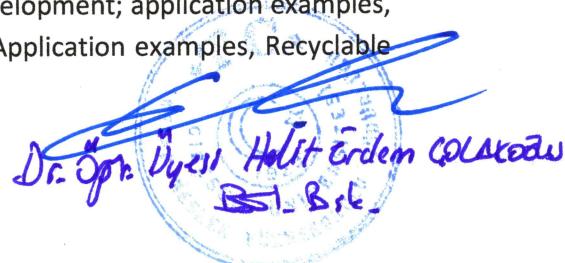
Wooden building systems; Wooden structure joining elements; Static and dynamic loads acting on wooden structures; Standards and regulations on wooden structures; Earthquake calculation methods of wooden structures.

### **Dry Construction Systems**

**(2+1) 3**

#### **Course Content**

An overview of building materials; the importance of the material in the design; Classification according to usage areas in architecture, Concrete as a structural material, reinforced concrete and its developments; Application examples, Metals as carrier system material and their development; Application examples, Wood as a carrier system material and its development; application examples, Glass as the newest carrier system material and its development; Application examples, Recyclable



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materials: principles and recycling methods, Composite carrier system materials and application examples.

**Twin Transformation** (2+0) 3

**Course Content**

Twin transformation and its historical development, digitalization, sustainability, digital transformation, green transformation, twin transformation, twin transformation applications.

**III. SEMESTER**

**Architectural Project** (2+2) 4

**Course Content**

Drawing a sample building project with autocad program, starting from the normal floor. Ground floor plan. Basement floor plan. Roof plan. Sections, views. Implementation of dimensioning and text writing commands. Creation of qualifying tags and drawing of a site plan.

**Transportation Project** (2+2) 4

**Course Content**

Route determination and creation of a transport project in a transport project.

**Reinforced Concrete Project** (2+2) 3

**Course Content**

Dimensioning and static calculation of the entire structure will be explained using a selected package program.

**Road Superstructure** (2+2) 4

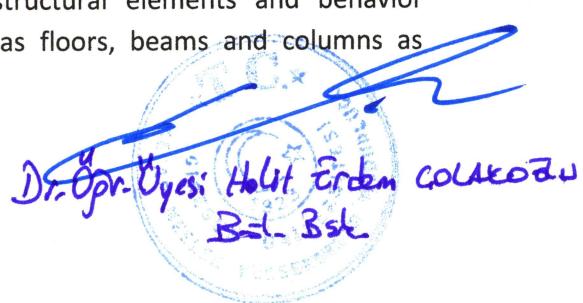
**Course Content**

Highway transportation systems, determining terrain conditions and extracting terrain cross-sections using contour maps, general definitions related to highway elements, content of the Highway Directorate's technical specifications for roads, highway classes, and highway geometric standards.

**Reinforced Concrete** (2+1) 3

**Course Content**

To be able to comprehend the behavior principles of reinforced concrete and reinforced concrete materials. To be able to comprehend reinforced concrete structural elements and behavior principles. Being able to form the most used elements such as floors, beams and columns as



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reinforced concrete. To be able to recognize the basis. To be able to comprehend the basic types. To be able to comprehend the basic selection principles. To be able to apply basic detail drawings.

**Damaged Structures****(2+0) 2****Course Content**

Introducing the damage in the buildings and teaching the damage types and determining the repair and strengthening methods to be applied.

**Hydrology and Hydraulic****(2+0) 2****Course Content**

Definition and importance of hydrology, pressure and calculation principles of water, Bernoulli and continuity equations and application areas, flows in pipes and open channels

**Occupational Health and Safety****(3+0) 3****Course Content**

Basic concepts, elements that threaten safety in the environment, occupational accidents and their causes, elements that threaten safety in buildings, workplace safety, occupational diseases and precautions, fire and protection, actions to be taken in occupational accidents, excavations and excavation safety, lifting and transportation rules, first aid rules on employment law and insurance.

**Quantity and Progress Payment****(2+1) 4****Course Content**

Quantification of concrete, formwork, reinforcement of the relevant parts of a building, exploration works and preparation of progress payment.

**Basic Construction****(3+0) 3****Course Content**

Soil structure and soil bearing capacity, soil stresses, settlements, foundations, soil tests, open excavations, shallow foundations, deep foundations, sheet pile shears, retaining walls construction and design principles.

**Structure Technology****(3+0) 3****Course Content**

Understanding the structure, definition and classification, classification of soils, soil studies, bearing capacity of the soil, shear strength, application of the plan to the ground (application), excavation works, fortification works, drainage, soil improvement methods, retaining walls, dilatation joints

**Highway Information****Course Content**

Highway transportation systems, determination of the land situation on the leveling curved map and sectioning of the land, general definitions about the highway elements, the content of the road technical specifications of the general directorate of highways, highway classes and highway geometric standards.

**Soil Mechanics**

**(2+1) 3**

**Course Content**

Soil formation and composition, phase relations, classification of soils, weight-volume relations, water and permeability in soils, flow networks, stress concept, consolidation theory.

**Occupational English**

**(2+0) 2**

**Course Content**

Basic terms and definitions related to the construction industry, reading and understanding construction catalogs and parts, preparing a resume

**IV. SEMESTER**

**Internship**

**(0+2) 5**

**Workplace Education**

**(5+0) 11**

**Course Content**

Vocational training legislation and practices, Individuals in the workplace, Basic career concepts, Career Management, Individual career planning and development practices, Resume Preparation Techniques, Interview Techniques, Case Study Solutions, Effective Presentation Techniques, Current Issues in Vocational Training

**Workplace Application**

**(0+33) 14**

**Course Content**

Presentation of course content – Introduction to the 3+1 model, determination of the organization where students will undertake their practical training, and allocation of students, On-site examination and implementation of relevant processes

