

## **CONSTRUCTION TECHNOLOGIES PROGRAMME**

### **1<sup>st</sup> SEMESTER**

#### **BLT101 COMPUTER TECHNOLOGIES-I**

Examination of methods and techniques to access information and acquisition of skills to use them. Basic concepts of information technology such as computer information, data processing, technological development, professional concepts and applications, current software applications (Windows, Word, Excel, Power Point)

#### **İSG111 MATHEMATICS**

Basic mathematical concepts related to profession will be processed.

#### **TURK101 TURKISH LANGUAGE-I**

Definition of language, place and significance of language in nations life, relation of language and culture, place of Turkish language among world languages, development of Turkish language, sounds and their classification, phonetic features and rules, syllable, spelling rules and application, punctuation marks and their applications, derivational affixes and functions, forms of word usage, practices in literary texts.

#### **TCT101 HISTORY OF TURKISH REPUBLIC-I**

The reasons leading to the collapse of the Ottoman Empire, the efforts to stop the collapse and the quest for reform, the reasons leading to World War I, the participation in the war and its consequences, the Armistice of Mudros, the Societies, the beginning of the National Struggle.

#### **İSG113 OCCUPATIONAL HEALTH AND SAFETY**

Basic concepts of occupational health and safety, risk factors and varieties, surveillance of environment, Causes of occupational accidents and diseases, preventive measures and occupational safety culture

#### **İNT101 STATICS**

Units of measurement, Scaler and vectoral quantities, Component and resultants of forces, The moment at a point, Support reactions

#### **İNT103 CONSTRUCTION MATERIALS**

Introduction of construction materials of all kinds including insulation material

### **INT105 TECHNICAL DRAWING**

Introduction of drawing tools, equipments, standard paper sizes and sheet layout, Letters, figures, line types and thicknesses, concept of scale, simple geometric drawings, projection and plan, section, appearance concepts and types, measuring techniques at various scales, Simple perspective rules and expression techniques

### **INT107 BUSINESS ADMINISTRATION**

Details of three props of managements, learning organization, innovation and entrepreneurship.

### **ING 101-FOREIGN LANGUAGE – I**

Students will be able to understand English, use it effectively, and compare basic grammar rules of English. Through this course, students can interpret simple dialogue in English and use the new structure and words they have learned in their daily lives.

## **2<sup>nd</sup> SEMESTER**

### **BLT102 COMPUTER TECHNOLOGIES-II**

Examination of methods and techniques to access information and acquisition of skills to use them. Basic concepts of information technology such as computer information, data processing, technological development, professional concepts and applications, current software applications (Windows, Word, Excel, Power Point)

### **ING102 FOREIGN LANGUAGE – II**

Students will be able to understand and interpret simple dialogues in English, use basic grammar rules effectively, use new structure and words they will have learned in their daily lives.

### **INT110 INTERNSHIP-I**

Students complete internship training in public or private sector organizations working in an engineer's office and/or jobsite.

### **MYO104 DISASTER CULTURE**

Kinds of disasters, Disaster and practices for surviving, things to do before, during and after a disaster, search and rescue activities, field coordination system, the disaster planning.

### **TCT102 HISTORY OF TURKISH REPUBLIC-II**

Information on the concept of revolution, preparation, action, reformation stages of the Turkish Revolution as well as basic principles and characteristics of the Turkish Revolution, domestic and foreign policy of Turkey after the period of Atatürk.

### **İNT102 STRENGTH OF MATERIALS**

Introduction of Strength, Center of Gravity, Moment of Inertia, Stress and Strain, Axial Normal Force, Shear Force, Simple Bending, Torsion, Buckling, Fracture Theories.

### **İNT104 STRUCTURAL ANALYSIS**

Classification of structural systems, isostatic beams, isostatic planar frames, isostatic planar truss systems, systems with three joints

### **İNT106 COMPUTER AIDED DRAWING**

Application methods of two dimensional technical drawings using Computer Aided Design-CAD programs; transferring raster image data such as photographs and drawings to vectoral drawing context, using raster and vectoral data together; printing methods in proper scales.

### **İNT112 BUILDING REPAIR AND URBAN TRANSFORMATION**

The processes necessary for the detection of damaged structures, finding repair solutions according to defects, application of urban transformation methods in case of severe damages.

### **İNT114 DESIGN PRINCIPLES OF EARTHQUAKE RESISTANT STRUCTURES**

Soil survey, Classification of Soils, Drilling Methods, Foundations&Foundations Types, Retaining Walls, Earthquake Code Analysis.

### **TURK102-TURKISH LANGUAGE-II**

Definition of language, the place and prominence in the life of the nation, language and culture relation, the place of Turkish Language among the world languages, development of Turkish Language, sounds and classification, audio features, phonetic rules, syllable, bookmarking rules and application, punctuation marks and its application, construction supplements and functions, forms of word usage, practices in literary texts

### **3<sup>rd</sup> SEMESTER**

#### **İNG201 VOCATIONAL ENGLISH-I**

To teach students professional English in construction applications and building terminology.

#### **MYO203 EMOTIONAL INTELLIGENCE**

The concept of Emotional Intelligence and its importance in professional and social life.

#### **İNT201 REINFORCED CONCRETE**

Definition and History of Reinforced Concrete, General Information about Concrete and Steel, Static Calculations of Columns, Column Design, Design, Types and Static Calculations of Beams, Slabs and Foundations.

#### **İNT203 SOIL MECHANICS**

Soil properties in terms of strength, ground behaviors and conditions during soil work

#### **İNT205 CONSTRUCTION OF HIGHWAY**

Properties of Highway, Highway Design Principles.

#### **İNT207 WATER SUPPLY AND TRANSMISSION**

Properties of drinking and utility water, population forecasting methods, underground waters, pipe hydraulic, conduction lines network account, drinking water wells, disposal of waste water.

#### **İNT209 RESEARCH TECHNIQUES**

Selection of research topic, reviewing the literature and classifying the results, interpretation of research results, reporting, techniques of making presentations.

#### **İNT211 QUALITY ASSURANCE STANDARTS**

Concept of Quality, Concept and Results of Poor Quality, History of Quality, Circle of Quality, Quality Management Matrix, ISO 9001, 6 Sigma

#### **İNT213 ENVIRONMENTAL PROTECTION**

Construction waste management, methods and criteria used to determine environmental impacts, pollutant resources, air pollution, identification hazardous wastes, classification hazardous wastes, fundamentals of conservation of natural water resorces, environmental impact assessment regulations and its applications.

## **4<sup>th</sup> SEMESTER**

### **İNG202 VOCATIONAL ENGLISH-II**

To teach students professional English in construction applications and building terminology, transportation terminology, ground terminology, water structures terminology.

### **MYO204 KNOWLEDGE RENEWAL**

Concept and Application of Knowledge, Knowledge Exchange, Knowledge Economy, Industry 4.0, Legal, Social and Academic Developments in the Field.

### **İSG212 PREPARATION FOR VERTICAL TRANSFER EXAMINATION**

The vertical transition exam covers current topics.

### **İSG214 ENTREPRENEURSHIPS**

Entrepreneurship and its Importance, Entrepreneur and Characteristics of Successful Entrepreneur, Creativity and Innovation in Entrepreneurship, Conversion of a Business Idea into the Project and Investment, Entrepreneurship in the World, Developments in the Entrepreneurship and Suggestions to the Young Entrepreneurs, Environmental Factors and Industry Analysis in Business Plan Preparation, Marketing Plan, Production Plan, Management Plan, Finance Plan and Risk Analysis.

### **İNT214 INTERNSHIP-II**

Students complete internship training in public or private sector organizations working in an engineer's office and/or jobsite.

### **İNT202 CONSTRUCTION METRICS AND COST**

Methods of surveying the construction and calculating the final cost.

### **İNT204 SITE ORGANIZATION**

Establishment of job site, purchase of materials at the jobsite, planning of work schedule, closing of construction site.

### **İNT206 FOUNDATION ENGINEERING**

Foundation types, shallow foundations, dimensioning of foundations

### **INT208 STEEL STRUCTURES**

Properties of steel, loads taken into consideration in steel constructions, calculation of safety stress, rivets, bulks and welded joints, tension and pressure bars

### **INT210 CONCRETE TECHNOLOGY**

Properties of various concrete types of and selection of proper concrete type

### **INT212 COMPUTER AIDED DESIGN**

Reading and transferring the architectural project to the computer, designing the loadbearing structural system according to TS500 and earthquake regulations and using related computer programs to solve the static project.