



**SIİRT UNIVERSITY**  
**TECHNICAL SCIENCES VOCATIONAL SCHOOL**  
**CONSTRUCTION TECHNOLOGY PROGRAM COURSE CONTENTS**  
**2011-2012**

Name of the lesson	Code	Semester	T+A+UK	ACTS
ATATURK'S PRINCIPLES AND HISTORY OF REVOLUTION - I	TAR101	1	2+0+2	2
Concepts and Ottoman modernization. European developments, Industrial Revolution and French Revolution. New Ottomans, Constitutional Monarchy and Committee of Union and Progress. Second Constitutional Monarchy Period, Tripoli and Balkan Wars. Causes of World War I. World War I: Partition of Ottoman Empire. Preparation period of National Struggle. Congresses. Sivas Congress, Last Ottoman Chamber of Deputies and National Pact. TBMM Period: Formation of Fronts. Lausanne Treaty.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
FOREIGN LANGUAGE ENGLISH	YD101	1	4+0+4	4
Singular and plural forms of nouns, regular and irregular plurals and regular pluralization rules; Personal pronouns and the verb "to be" to form case sentences, affirmative, negative, question forms; a/an/the and singular/plural singular/plural, sign adjectives according to near/far; Possessive structure, affirmative/negative/question forms; The use of the structure expressing ability; Possessive structures, possessive questions, possessive adjectives and pronouns; Present Tense; Present Perfect Tense and adverbs of frequency, comparison of present tense and present perfect tense; Sentences in the past tense, sentences made with regular and irregular verbs; Prepositions of place, time and prepositions of motion; Comparisons with adjectives; Present Perfect Tense, comparison of this tense with the past tense.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
TECHNICAL DRAWING	İNP103	1	3+0+3	3.5
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 elevation drawings. Full sections of parts and hatching.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
MECHANICAL AND STATIC	İNP105	1	2+0+2	2
Units of measurement, scalar and vector quantities, expressed and resultant operations on forces, moment at a point, support reactions, section effects, stress and strain rate graphs, obtaining internal force capacity, torsional forces, rigidity and force matrix representation, isostatic and hyperstatic.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
BUILDING MATERIALS	İNP111	1	3+0+3	3
Definition and classification of building materials and sampling methods. Methods for determining physical, mechanical and chemical properties. Determination of concrete components and their properties. Determination of metal and wood materials and their properties. Determination of wall components, floor and roof covering materials. Classification of heat insulation materials. Classification of sound insulation materials. Classification of water insulation materials. Classification of fire insulation materials.				



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Name of the lesson	Code	Semester	T+A+UK	ACTS
MATHEMATICS - I	İNP101	1	3+1+4	4.5
<p>Sets. Numbers. Exponentials, radicals, absolute value. First degree equations with one unknown. First degree equations with two unknowns. Geometric measurements, perimeter, area and volume calculations of geometric shapes. Polynomials and factoring. Ratio, proportion, percentage, average and probability calculations. Second degree equations. Trigonometry, trigonometric relations in non-right triangles, trigonometric functions and their graphs. Coordinate system, analytic plane and graphs. Matrices. Logarithms.</p>				

Name of the lesson	Code	Semester	T+A+UK	ACTS
TURKISH LANGUAGE - I	TUR101	1	2+0+2	2
<p>Definition of language, place and importance of language as a social institution in national life, language-culture relationship, place of Turkish language among world languages, development and historical periods of Turkish language, present status of Turkish language and areas of spread, sound features of Turkish and rules related to phonetics, sound events in Turkish of Turkey, spelling rules and application, punctuation marks and application, structural features of Turkish.</p>				

Name of the lesson	Code	Semester	T+A+UK	ACTS
INFORMATION AND COMMUNICATION TECHNOLOGY (ELECTIVE)	İNP113	1	3+0+3	3
<p>General concepts. Operating system and file management. Google mail and Google calendar, Google document service (docs) and Google diary (blog). MS PowerPoint- Basic settings, creating presentations, text, images and tables. MS PowerPoint- Graphics and drawing objects, screen show effects, slide show and printout preparation. MS Word- First steps and basic operations in word processing. MS Word- Formatting (text, paragraph, document). MS Word- Objects (table, picture, image, chart) and printing. MS Excel- Introduction, cells and worksheets. MS Excel- Formatting, formulas and functions. MS Excel- Graphics, page setup and preparation of printouts.</p>				

Name of the lesson	Code	Semester	T+A+UK	ACTS
OCCUPATIONAL SAFETY AND HEALTH (ELECTIVE)	İNP115	1	2+0+2	2
<p>Historical Development of Occupational Health and Safety Purpose and Importance of Occupational Health and Safety Concepts in the Field of Occupational Health and Safety General Outlook of Occupational Health and Safety in Turkey Work Accidents Occupational Diseases Precautions to be Taken Against Occupational Accidents and Occupational Diseases Costs Arising from Occupational Accidents and Occupational Diseases/Basic Law Occupational Health and Safety in Laws National and International Organizations and Agreements Occupational Health and Safety Management Systems Risk Management and Assessment Personal Protective Equipment</p>				



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Name of the lesson	Code	Semester	T+A+UK	ACTS
STRENGTH	İNP107	1	2+0+2	2
Center of gravity. Moment of inertia. Tensile stress. Compressive stress. Shear stress. Uniaxial bending, section effects, m-n-t diagrams, stress-strain effects, analysis of plane and space truss systems according to the cutting and nodal methods.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
PROFESSIONAL ETHICS (ELECTIVE)	İNP117	1	2+0+2	2
To examine the concepts of ethics and morality. To examine ethical systems. To examine the factors that play a role in the formation of morality. To examine professional ethics. To examine the consequences of professional corruption and unethical behavior in professional life. To examine the concept of social responsibility.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
CONCRETE TECHNOLOGY	İNP104	2	3+1+4	4
Consistency in cement. Cement setting. Volume stability in cement. Specific gravity in cement. Strength in cement. Unit volume and specific gravity in aggregate. Sieve analysis in aggregate. Water absorption rate in aggregate. Abrasion loss in aggregate. Fine matter ratio in fine aggregate. Conducting concrete unit volume weight test. Conducting concrete consistency tests. Conducting concrete compression test. Conducting concrete core test. Using mineral admixture in concrete. Transporting and casting concrete. Maintenance of concrete, recognizing special types of concrete.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
ATATURK'S PRINCIPLES AND HISTORY OF REVOLUTION - II	TAR102	2	2+0+2	2
Political revolutions: Abolition of the sultanate, declaration of the Republic, abolition of the Caliphate. Political parties established during Atatürk's period and represented in the Turkish Grand National Assembly and political events. Legal revolution and legal order. Reforms in the field of education. Revolutions in the cultural and social fields. Revolutions in the economic field. Turkish foreign policy in the Atatürk period (1923-1930). Turkish foreign policy in the Atatürk period (1930-1938). Atatürk's principles and integrative principles. Turkey after Atatürk.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
FOREIGN LANGUAGE ENGLISH	YD102	2	4+0+4	4
Technical terms for Construction Technician. Writing technical articles in English. Translating technical articles. Technical report writing techniques in English. Letter writing techniques in English. Presentation techniques. Classroom applications.				



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Name of the lesson	Code	Semester	T+A+UK	ACTS
BUILDING STATICS II	İNŞ128	2	3+0+3	4
Isostatic beams. Isostatic plane frames. Isostatic plane truss systems. Three-hinged systems. Giving information about Gerber beams, hyperstatic systems and dynamic loads.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
COMPUTER AIDED DRAWING	İNP106	2	2+1+3	3.5
Package program installation. CAD program commands. CAD program drawing settings, toolbars. Determining drawing subject. Drawings. Control. Final operations. Delivery.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
ROAD CONSTRUCTION	İNP108	2	2+1+3	3
Transportation systems. Highway standards. Highway route. Horizontal curves. Vertical curves. Cross and longitudinal sectioning and superelevation calculation. Map and land observations. Filling and cutting works. Engineering structures. Route earthworks. Road superstructure materials. BSK asphalt coatings. Concrete coating. Examination of technical specifications.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
MATHEMATICS - II	İNP102	2	3+1+4	4.5
Elementary trigonometry. Trigonometric functions. Matrices. Systems of equations. Limit. Continuity. Derivative. Graphs of functions. Integration. Calculation of area, volume and center of gravity of integrals. Series and sequences.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
TURKISH LANGUAGE - II	TUR102	2	2+0+2	2
Sentence information. Paragraph information, paragraph types, paragraph structure. Composition information. Types of speech-based (oral) expression. Types of written expression. Rules and examples of good speaking. Official writings (resume, petition, report). Expression disorders.				



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Name of the lesson	Code	Semester	T+A+UK	ACTS
DAMAGE DETECTION IN STRUCTURES (ELECTIVE)	İNP114	2	2+1+3	3
Damage Types in Non-Bearing Elements in Reinforced Concrete Structures / Damage Types in Bearing Structure Elements and Damage Status of the Structure / Repair and Strengthening, earthquake damages				

Name of the lesson	Code	Semester	T+A+UK	ACTS
LAND MEASUREMENTS	İNP201	3	2+1+3	3.5
Land surveying techniques. Leveling works. Electronic land surveying instruments. Drawing longitudinal sections. Drawing cross sections. Planned measurements.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
WATER SUPPLY AND TRANSMISSION	İNP203	3	3+0+3	3
Introduction. Water resources. Water resources studies. Population estimation methods. Water demand. Water supply methods. Water transmission. Free surface transmission lines. Pressurized transmission lines. Reservoirs. Network systems.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
REINFORCED CONCRETE	İNP205	3	3+1+4	5
Concrete and reinforced concrete. Behavior of reinforced concrete. Basic principles for reinforced concrete calculations. Concept of structural safety. Elements under axial force. Elements under simple bending. Elements under combined bending. Stairs and shell elements. Elements under shearing. Floors and working methods and calculations. Solving application examples according to the final earthquake code.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
STEEL STRUCTURES	İNP207	3	2+1+3	3
Types of connections in steel structures. Details of steel structure manufacturing and assembly stages. Tension bars in steel structures. Compression bars in steel structures. Solving application examples according to the regulation on final steel structures.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
GROUND MECHANICS - I	İNP211	3	2+1+3	3.5
Introduction to soil mechanics. Analysis of soil mechanics problems. Index properties of soils. Classification of soils. Ground water. Permeability of soils. Water flows in soil. Compaction. Applications.				



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Name of the lesson	Code	Semester	T+A+UK	ACTS
BUILDING INSTALLATION	İNP213	3	2+0+2	2
Waste water installations and used materials. Clean water installations and used materials. Materials used in building electrical installations. Building central system heating installation materials. Application solutions of air conditioning installations.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
COMMUNICATION	İNP209	3	2+0+2	2
Verbal communication. Written communication. Non-verbal communication. Formal communication. Informal communication. External communication.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
RESEARCH METHODS AND TECHNIQUES (ELECTIVE)	İNP215	3	1+1+2	2
Science, research, scientific research concepts. Science and scientific ethics. The concept of research ethics and violations of research ethics, basic principles of research ethics. Scientific misconceptions, violations of publication ethics, authorship rights problems. Types of scientific research, problem statement, hypothesis, theory. Content of scientific research report. Formal structure of research report and use of language in scientific text. Interpretation and report writing. Principles of scientific publication ethics. Scientific works and their types. Ways of using internet, library and documentation centers. Ethical standards, legal limitations and software. Presentation and evaluation of research reports prepared by student groups.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
BUSINESS ADMINISTRATION - I (ELECTIVE)	İNP217	3	2+0+2	3
Basic Concepts Related to Business Administration, Objectives of Business Administration – Internal and External Environment, Classification of Business Administrations, Feasibility Process, Business Size and Capacity, Selection of Establishment Location, Management, Production – R&D, Marketing, Financing, Human Resources Management, Development of Business Administration.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
FIRST AID (ELECTIVE)	İNP219	3	2+0+2	2
Trauma, Convulsions and tetanus, Bleeding (Haemorrhagic-Hypovolemic Shock), Anaphylaxis and anaphylactic shock, Acute poisoning, Drowning and electric shock, Heat-sunstroke and frostbite, Poisonous animal bites and insect bites, fracture, dislocation, sprain, burn, foreign body sting.				



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Name of the lesson	Code	Semester	T+A+UK	ACTS
WASTE WATERS	İNP202	4	2+0+2	2
To identify sources of pollution. To work to raise environmental awareness in society. The concept of wastewater. To remove wastewater. To build storage and treatment facilities.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
COMPUTER AIDED DESIGN	İNP222	4	2+1+3	0
Design subject. Package program installation. Running the package program. Data collection. Data entry. Analysis and model creation. Use of CAD software based on the finite element method. Program outputs and data interpretation.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
PROFESSIONAL PRACTICES	İNP206	4	3+1+4	5
Concrete applications. Wall applications. Floor, wall and facade covering applications. Ground applications. Foundation applications. Laboratory work.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
PROJECT STUDY AND IMPLEMENTATION	İNP208	4	2+1+3	3.5
Project topic. Needs analysis and work schedule. Resource research. Project execution. Project presentation. Project filing and submission.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
CONSTRUCTION SITE ORGANIZATION	İNP210	4	2+1+3	3
Construction site setup. Work schedule. Preparation of production on site. Production teams. Application work. Excavation work. Construction site books. Office work. Preparation of progress payment. Temporary and final acceptance. Tender laws. Applications.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
BUILDING QUANTITY AND COST	İNP212	4	3+1+4	5
What is quantity surveying? Definition. Plan quotation calculation. Quantity surveying. Unit price calculation. Approximate cost calculations. Tender commissions. General, technical and special specifications. Tender files. Public Procurement Law (KİK) offer files. Tender contracts.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
GROUND MECHANICS - II	İNP214	4	2+1+3	3



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Vertical stresses in soil. Lateral stresses in soil. Compression, consolidation and settlement of soils. Stress-strain behavior and shear strength of soils. Improvement of soil properties. Special topics in soil mechanics.

Name of the lesson	Code	Semester	T+A+UK	ACTS
BUSINESS ADMINISTRATION-II (ELECTIVE)	İNP216	4	2+0+2	2
Planning. Organizing. Directing. Coordinating. Supervising. Ensuring job analysis. Planning human resources. Finding employee candidates. Selecting employees. Providing orientation training. Evaluating employee performance. Ensuring employee training. Career planning. Job evaluation. Compensation. Planning production. Organizing for production. Capacity and stock planning. Determining target market. Product development. Determining pricing policies. Determining promotion policies. Determining distribution policies. Managing customer relations. Managing income and expense accounts. Managing payables and receivables. Managing assets. Managing resources.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
BUILDING REPAIR AND STRENGTHENING (ELECTIVE)	İNP220	4	2+0+2	2
Damage assessment and evaluation. Types of earthquake damage. Gathering information on earthquake damage. Non-destructive testing. Destructive testing. Repair and strengthening materials. Strengthening of structural system elements. Strengthening of structural system with new elements. Examination of reinforcement projects. Corrosion damage and repair. Damage assessment and strengthening of masonry structures.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
QUALITY ASSURANCE AND STANDARDS (ELECTIVE)	İNP218	4	2+0+2	2
Concept of quality. Standard and standardization. Importance of standard in production and service sector. 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.				

Name of the lesson	Code	Semester	T+A+UK	ACTS
INDUSTRY-BASED TRAINING (INTERNSHIP)	STJ201	4	0+0+0	2
To get to know the workplace, to learn about the work done. To learn the planning and workflow of workplace practices. To examine work practices, to participate in practices and to report on the work done.				