**TUNCELİ VOCATİONAL SCHOOL, DEPARTMENT OF ARCHİTECTURE AND URBAN PLANNİNG**

**MAP AND CADASTRE PROGRAM COURSE CONTENTS**

**I. SEMESTER**

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **TURKISH LANGUAGE I** | **2** | **2** | **2** | **2** | **0** |
| **Course Title** Understanding that language is a product of the human mind, being able to grasp the structural features and richness of the Turkish language, being able to succeed in written expression, and being able to develop research, reading, and learning abilities. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **ATATÜRK PRINCIPLES AND HISTORY OF REFORMS I** | **2** | **2** | **2** | **2** | **0** |
| **Course Title** The purpose of studying Atatürk's Principles and the History of Reforms, and an overview of the concept of reform, examining the reasons that led to the collapse of the Ottoman Empire and paved the way for the Turkish Revolution; including the fragmentation of the Ottoman Empire, the Armistice of Mudros, the state of the country facing occupations, Mustafa Kemal Pasha's landing in Samsun, the first step for the national struggle, organization through congresses, Kuvayi Milliye (National Forces) and the National Pact, the opening of the Grand National Assembly of Turkey, the management of the War of Independence by the Grand National Assembly of Turkey, the national struggle until the Battle of Sakarya, the Sakarya Battle and the Great Offensive, from Mudanya to Lausanne, in the fields of education and culture, the national struggle, and the national struggle in social and economic fields. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **FOREIGN LANGUAGE I** | **2** | **2** | **2** | **2** | **0** |
| **Course Title** Modifiers; prepositions of place, time, movement; singular and plural nouns, countable and uncountable nouns, tenses, present tense, present perfect tense, past tense structures, modals, will, should, should not, must, must not, can, comparative structures, pronouns, personal pronouns, possessive pronouns, adjectives, affirmative sentences, negative sentences, and question sentences, conjunctions. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **OCCUPATIONAL MATHEMATICS** | **3** | **3** | **4** | **3** | **0** |
| **Course Title** Numerals, Equations and Inequalities, Functions, Trigonometry, Complex Numbers, Logarithms, Systems of Linear Equations and Matrices, Limits and Continuity, Derivatives and Applications, Integrals and Applications, Differential Equations, Statistics. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **PROFESSIONAL TRIGONOMETRY** | **3** | **3** | **4** | **3** | **0** |
| **Course Title** Unit of length measurements and conversions, Unit of angle measurements and conversions, Unit of area measurements, Trigonometric functions of acute angles, Angle function transformations, Small angle approximation, Properties of triangles, Basic relationships in triangles, Solutions of triangles, Quadrilateral shapes, Solutions of quadrilaterals, Trapezoid solutions, Circle solutions, Concept of spherical triangles, Solutions of spherical triangles. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **LAND SURVEYING I** | **5** | **4** | **6** | **3** | **2** |
| **Course Title** Topics of Cartography, Subject of Cadastre, Relationship between Map, Cadastre, and Land Registry, Basic measuring tools, Length measurement with steel tape measure, Prismatic measurement, Prismatic measurement application, Theodolite and tachymeter instruments, Horizontal angle measurement, Horizontal angle measurement application, Vertical angle measurement, Methods for measuring land parcels, Error calculations, Error calculation applications. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **BASIC LAW** | **3** | **3** | **4** | **3** | **0** |
| **Course Title** Fundamental Concepts of Law, Legal System, Definition and Types of Rights, Natural Persons, Legal Entities, Family Law, Law of Obligations, Public Officials, Protection of Human Rights. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **INFORMATION AND COMMUNICATION TECHNOLOGIES** | **3** | **2** | **3** | **2** | **1** |
| **Course Title** Internet and Web Browser, Electronic Mail Management, Newsgroups/Forums, Web-based Learning, Creating Personal Websites, E-commerce, Resume Writing in Word Processor Program, Internet and Career, Job Interview Preparation, Spreadsheet, Formulas and Functions, Graphics, Presentation Preparation, Creating Promotional Materials. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **ENVIRONMENTAL PROTECTION** | **2** | **3** | **3** | **2** | **0** |
| **Course Title** Environmental Regulation Knowledge, Risk Analysis, Waste Storage, Personal Protective Measures, International Health and Safety Warnings, Occupational Health and Safety Regulations. |

**II. SEMESTER**

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **TURKISH LANGUAGE II** | **2** | **2** | **2** | **2** | **0** |
| **Course Title** Being able to recognize the types of written expression in daily life, understanding the importance of punctuation in written expression, grasping the importance of accurate expression in personal and social communication, applying research, reading, and learning abilities. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **ATATÜRK PRINCIPLES AND HISTORY OF REFORMS II** | **2** | **2** | **2** | **2** | **0** |
| **Course Title** The purpose of studying Atatürk's Principles and History of Reforms, and the concept of revolution, provides a comprehensive view of the reasons leading to the collapse of the Ottoman Empire and the preparation of the Turkish Revolution; including the fragmentation of the Ottoman Empire, the Armistice of Mudros, the state of the country facing occupations, Mustafa Kemal Pasha's landing in Samsun, the first step for the national struggle, organization through congresses, Kuvayi Milliye (National Forces) and the National Pact, the opening of the Grand National Assembly of Turkey, the management of the War of Independence by the Grand National Assembly of Turkey, the national struggle until the Battle of Sakarya, the Sakarya Battle and the Great Offensive, from Mudanya to Lausanne, in the fields of education and culture, the national struggle, and the national struggle in social and economic fields. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **ENGLISH II** | **2** | **2** | **2** | **2** | **0** |
| **Course Title** With this course, students will acquire a foundation in English at the following levels:I. English grammar, II. Understanding what they hear, III. Being able to converse,IV. Understanding what they read, V. Acquiring oral and writing skills.

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| a. Future Tense, “will and be going to”: Affirmative, negative and interrogative forms, b. Time adverbs: “next, in two days, today, tomorrow, etc.” c. First Conditionals: “If …..., Subject + will” |
| a. Sentences with “too/enough, so/such”, b. Sentences with “after and before”, c. Adverbs of manner, place and time. d. Definite and Indefinite Articles: “a, an, the”. |
| a. Past Tense: Affirmative, negative and interrogative forms, b. Regular and Irregular verbs (Past Forms), c. Time adverbs: “ago, last, yesterday, etc.” |
| a. “When sentences” in Past Tense, b. Sentences with “But, and, or”, c. Second Conditionals: “If …...., Subject+would”. |
| a. Adjectives with “-ed and -ing” ending, b. Prohibition and Obligation: “should and should not” |
| a. Past Continuous Tense, “was/were + Ving”: Affirmative, negative and interrogative forms, b. Time adverbs: “ago, last, yesterday, etc.” |
| Consolidation and Revision |
| a. “While Sentences” in past continuous tense, b. Using “still, as well, too, also” in sentences. |
| a. Present Perfect Tense, “Have/has + V3”: Affirmative, negative and interrogative forms, b. Regular and Irregular verbs (Past Participle Forms), c. Time adverbs: “for, since, yet, just, already, never/ever, etc. ” |
| a. Linking words with “although, though, despite (despite of), in spite of”, b. Sentences with “As and since” |
| a. Past Perfect Tense: “Had + V3”: Affirmative, negative and interrogative forms, b. Regular and Irregular verbs (Past Participle Forms), c. Time adverbs: “before, last, ago, etc.” |
| a. Third Conditionals: “If …...., Subject+would have V3”, b. Linking words with “because of, owing to, due to, as a result of, etc.” |
| a. Tag Questions, b. Sentences with “until, afterwards, by, etc.”, c. Reported Speech |
| Consolidation and Revision |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **PROFESSIONAL CALCULATIONS** | **3** | **3** | **5** | **3** | **0** |
| **Course Title** Map Coordinate System, Basic Tasks, Basic Task Applications, Calculation of Detail Points, Area Calculations, Area Calculation Applications, Parcel Divisions, Boundary Adjustments, Transformation between Two-dimensional Coordinate Systems, Transformation Applications |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **MAP DRAWING I** | **4** | **3** | **4** | **2** | **2** |
| **Course Title** Drawing Tools, Special Symbols for Map Drawing, Map Backgrounds, Drawing of Land Parcels, Inking, Drawing of Detail Points, Drawing of Contour Lines, Scale Change in Maps and Plans, Reproduction of Maps |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **LAND SURVEYS II** | **5** | **4** | **6** | **3** | **2** |
| **Course Title** General Structure of Levels, Height Systems, Geometric Leveling, Measurement and Calculation of Geometric Leveling, Trigonometric Height Measurement, Tachometric Height Measurement and Calculation, Section Measurement and Calculations, General Structures of Electronic Instruments, Measurement Processes with Electronic Instruments, Concept of Polygon, Selection, Establishment, and Orientation of Polygon Points, Measurement of Polygon Dimensions, Open Polygon Traverses, Closed Traverse Traverses, Error Calculations in Polygon Traverses |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **CARTOGRAPHIC ACTIVITIES** | **3** | **3** | **4** | **3** | **0** |
| **Course Title** History of Cartography Science, History of Turkish Cartography, Institutions related to Cartography, Organizations related to Cartography, Procedures carried out in Cadastre Directorates, Procedures carried out in Land Registry Directorates, Professional Publications. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **COMPUTER-AIDED MAP DRAWING** | **4** | **3** | **5** | **2** | **2** |
| **Course Title** Creating maps using computer software packages. Professional software, Digitization processes, Drawing processes in standard format, Drawing maps using NetCad, Calculations, Urban planning applications in NetCad software, Infrastructure project applications in NetCad software, Longitudinal section drawing, Transverse section drawing. |

**III. SEMESTER**

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **CADASTRE I** | **4** | **3** | **4** | **2** | **2** |
| **Course Title** General Definition of Cadastre, Technical Procedures of Cadastre, Delimitation Process, Determination, Renewal Cadastre, Measurement Procedures, Parcel Report, Forest Cadastre, Disaster Cadastre, Pasture Legislation, Underground Cadastre |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **LAND SURVEYS III** | **5** | **4** | **6** | **3** | **2** |
| **Course Title** National networks, Establishment of network points, classification, numbering, Establishment of height networks, Complementary network points, Computation of shortcut points, External-centered angle measurement, Centering elements, Ground reduction, Map projections, Projection reductions, Two-dimensional transformations, Two-dimensional transformation applications, Three-dimensional coordinate systems |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **MAP DRAWING II** | **3** | **2** | **4** | **1** | **2** |
| **Course Title** Professional software, Digitization processes, Drawing processes in standard format, Drawing maps using CAD, Calculations, Urban planning applications in CAD software, Infrastructure project applications in CAD software, Longitudinal section drawing, Transverse section drawing. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **REAL ESTATE LAW** | **3** | **3** | **4** | **3** | **0** |
| **Course Title** Property Law, Real Estate Ownership, Legal Heirs, Distribution of Inheritance, Land Registry Information System, Procedures in the Land Registry, Condominium Procedures, Easement Procedures, Pre-Expropriation Procedures, Technical Expropriation Procedures, Preparation of Expropriation Technical Files, Expropriation Sample Projects. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **APPLICATION** | **4** | **3** | **4** | **2** | **2** |
| **Course Title** The concept of application, horizontal point application, straight line application, horizontal angle application, elevation application, three-dimensional applications, island and parcel application, island and parcel application practice, horizontal curve application, horizontal curve application practice, vertical curve application, building application and TUS application, infrastructure project application, infrastructure project application practices |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **ROAD INFORMATION** | **2** | **2** | **3** | **2** | **0** |
| **Course Title** Road geometric characteristics; classification of roads, design speed, road cross-section elements, lane width, slopes, shoulders, drainage, expropriation widths, super elevation in horizontal curves, horizontal curves, super elevation runoff, widening of the platform in horizontal curves, vertical alignment, maximum grades, vertical curves, visibility distance in vertical curves, visibility distance in horizontal curves, intersections. Reconnaissance study; main considerations in route selection, types of reconnaissance, reconnaissance report and preparation, photogrammetric reconnaissance, survey, types of survey, survey studies, application, determination of lines and summits, determination of intersection points of two lines, calculation of horizontal curves and pickets, picking of curves with radial method, picking of curves with coordinate method, special cases in picketing, keeping the application logbook, securing the application line, leveling, longitudinal section leveling, transverse section leveling. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **VOLUNTEERISM** | **2** | **2** | **3** | **2** | **0** |
| **Course Title** Management and Organization Concepts, Concept of Volunteerism and Volunteer Management, Basic Volunteerism Areas, Project Development Related to Volunteer Work and Participation in Field Volunteer Work; Participation in Volunteer Work, Ethics, Moral, Religious, Traditional Values and Principles in Volunteer Work; Participation in Volunteer Work in Public Institutions, Local Governments, and Civil Society Organizations; Risk Groups in Society and Volunteerism; Migrants and Volunteerism. |

**IV. SEMESTER**

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **LAND MANAGEMENT** | **4** | **3** | **5** | **2** | **2** |
| **Course Title** Zoning Legislation, Definitions Related to Zoning, Optional Zoning Applications, Mandatory Zoning Applications, Zoning Law Legislation, Land Arrangement, Land Improvement Zoning Legislation and Applications, Land Consolidation Applications, Coastal Legislation Applications, Licensed Surveying Offices and TUS Applications. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **LAND SURVEYS IV** | **5** | **4** | **6** | **3** | **2** |
| **Course Title** GNSS Measurement Methods, Coordinate Measurements with GNSS, GNSS Applications, Underground Measurements, Hydrographic Measurements, Deformation Measurements, Industrial Measurements, Utilization of Maps, Interpretation of Maps, Concept of Direction and Navigation. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **CADASTRE II** | **4** | **3** | **4** | **2** | **2** |
| **Course Title** Sample map plan, Showing the parcel on-site, Consolidation operations, Change of property type operations, Establishment of easement rights, Correction operations in cadastre, Separation operations, Road acquisition, Road abandonment, Parcelization, Boundary maps, Expropriation maps, Control of expropriation maps. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **MAP MAKING** | **4** | **3** | **5** | **2** | **2** |
| **Course Title** To carry out pre-preparation and planning, to conduct point establishment operations, to perform measurement operations, to carry out calculation operations, to conduct drawing operations, to file documents, to create archives. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **GEOGRAPHIC INFORMATION SYSTEMS** | **2** | **2** | **3** | **2** | **0** |
| **Course Title** Geographic Information Systems (GIS), Data for GIS purposes, GIS database, GIS hardware, GIS software, Data analysis, GIS statistics and reporting, Dynamic GIS maps, GIS subsystems, GIS applications. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **QUALITY ASSURANCE AND STANDARDS** | **2** | **2** | **2** | **2** | **0** |
| **Course Title** Quality Concept, Standard and Standardization, 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 Charts, Statistical Distributions. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **ENTREPRENEURSHIP** | **2** | **2** | **3** | **2** | **0** |
| **Course Title** 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 Business Plans; Management, Marketing, Finance, and Production Plans in Business Plans; Entrepreneurship Stories; Case Studies in Entrepreneurship. |

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| **COURSE TITLE** | **HOURS** | **CREDIT** | **ECTS CREDIT** | **THEORETICAL**  | **PRACTICAL** |
| **RESEARCH METHODS AND TECHNIQUES** | **2** | **2** | **2** | **2** | **0** |
| **Course Title** Selecting Research Topics, Conducting Literature Review, Evaluating Research Findings, Transforming Research Findings into Reports, Preparing for Presentation, Conducting Presentation, Presentation Critique |