

I. Semester

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
ATI101	Ataturk's Principles and History of Turkish Revolution I	2	0	0	2	2	2	Compulsory
<p>Concepts and Ottoman renewal. European developments, the Industrial Revolution and the French Revolution. New Ottomans, Constitutional Monarchy and Committee of Union and Progress. Constitutional Monarchy Period II, Tripoli and Balkan Wars. The causes of World War I. World War I: The division of the Ottoman Empire. Preparation period of the National Struggle. Congresses. Sivas Congress, Last Ottoman Mebusan Assembly and Misak-ı Milli. GNAT Period: Formation of fronts. Lausanne Treaty</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS101	Introduction to Geographic Information Systems	4	0	0	6	4	4	Compulsory
<p>Information system concept. The concept and definition of geographic information system. History of geographic information system. Geographic assets and GIS. Geographic information system applications. Geographic information system components. Geographic information system software. Data, data models and spatial data concept. Data acquisition techniques in geographic information system. Map projections and coordinate systems. Urban information systems. Terrain information systems. Decision support systems.</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS103	Information and Communication Technologies	1	1	0	3	2	2	Compulsory
<p>Document operations. Formatting operations. Document control. Printing. Table operations. Object operations, advanced features. Macros, customization. Workspace, data entry, formatting operations. Formulas, functions. Graphics operations, data analysis. Printing, macros, customization. Slide objects, show settings. Printing, customization. Internet concepts. Access database.</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS105	Introduction to Database	3	0	0	3	3	3	Compulsory
<p>What is a database? Basic concepts of database. Data structure in geographic information systems. Data model. Domain (Value domain). What is SQL? Data types used in SQL. Normalization (Parsing). Databases in GIS. Modeling. Spatial database structure. Spatial modeling. In which areas are databases used?</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS107	Spatial Thinking	3	0	0	3	3	3	Compulsory
<p>What is spatial thinking? The nature and functions of spatial thinking. Spatial thinking in everyday life, work and science. Learning and teaching about spatial thinking. Responding to the need for spatial thinking. Tools for thinking: The concept of a support system. Spatial thinking in national education standards. High-tech support systems for spatial thinking. Evaluation of GIS as a support system for spatial thinking. GIS as a support system for spatial thinking. Spatial thinking support for the future. Spatial thinker.</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS109	Land Management and Geographic Information Systems Applications	2	0	0	5	2	2	Compulsory

Definition of cartography, its importance in terms of geography. Maps and maps as communication tools. Historical development of cartography I: Early and Middle Ages. Historical development of cartography II: Renaissance to the present. Map projections. Classification of projections I: According to the projection surface. Classification of projections II: According to the position of the surface. Classification of projections III: According to the light source and contact. Coordinate systems, transformations. Map types, map elements (title, scale, legend, etc.). Map drawing techniques (Symbolization, generalization, exaggeration, etc.). Drawing elements, Lines, writings and numbers, symbols. Scanning and coloring techniques. Color theory and color systems. Data classification techniques.

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS111	Occupational Health and Safety	2	0	0	3	2	2	Compulsory

Development of occupational health and safety concepts and rules. Labor law. Physical risk factors. Chemical risk factors. Biological risk factors. OHS in construction works and mining workplaces. Occupational diseases. Ergonomics. Emergency plans. Work accidents. Work environment surveillance. OHS in electrical work. Personal protective equipment. Risk assessment

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
TDI101	Turkish Language I	2	0	0	2	2	2	Compulsory

Definition and features of language. Language-nation relationship. Language-culture relationship. Language families, the place of Turkish language among the world languages. Historical development of Turkish language. The current status of Turkish language, historical and contemporary examples, dialect-chive-dialect. Definition of grammar, sections, features of Turkish language. Phonetics, phonological status of Turkish, features and classification of sounds. Spelling rules of Turkish. Punctuation marks. Turkish word structure and affixes, construction and inflection affixes.

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
YDI101	Foreign Language I	2	0	0	2	2	2	Compulsory

GOING PLACES (Unit 7) Past Simple: to be. Past Simple: regular & irregular verbs. GOING PLACES (Unit 7) Uses of the past simple. The weather. Transport. IN THE NEWS (Unit 8) Past Simple: Irregular Verbs & Time Expressions. IN THE NEWS (Unit 8) Verb+ to+ infinitive. Talking about the news. Lexical Sets Collocations. HUNGRY PLANET (Unit 9) Countable & Uncountable Nouns. Quantifiers: too much/many. HUNGRY PLANET (Unit 9) Food & Drink. Talking about food. Article about Pasta. STATE OF THE ART (Unit 10) Comparative Adjectives. Going to. Personal Pronouns. STATE OF THE ART (Unit 10) Technology. Communication verbs & adjectives. Online Comments. A WORKING LIFE (Unit 11) Superlative adjectives. Will-won't. WORKING LIFE (Unit 11) Work & Jobs. Work Conditions. Hairdressers: the happiest profession. ISTMANIA (Unit 12) Review of verbs. Dreams & Ambitions. Top ten things to do before you die.

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS151	Basic Mathematics for Geographic Information Systems	2	0	0	3	2	2	Elective

Basic concepts. Sets. Numbers and number systems. Operations on numbers and number systems. Algebraic expressions. Equations and inequalities. I. and II. degree equations. Roots in second degree equations and relations between coefficients. Functions. Relation and operation. Ratio and proportion. Problems that can be solved with ratio and proportion.

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS153	Basic Statistics for Geographic Information Systems	2	0	0	3	2	2	Elective

Basic statistical concepts. Measures of central tendency. Measures of dispersion. Probability distribution models. Confidence interval estimates. Hypothesis testing. Regression and correlation. Geostatistical concepts. Spatial estimation and interpolation methods. Spatial interpolation applications.

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS155	Professional Ethics	2	0	0	3	2	2	Elective

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.

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS157	Contact	2	0	0	3	2	2	Elective

Communicating verbally. Communicating in writing. Non-verbal communication. Formal communication. Establishing informal communication. Communicating outside the organization.

II. Semester

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
ATI102	Ataturk's Principles and History of Turkish Revolution II	2	0	0	2	2	2	Compulsory
<p>Political revolutions: Abolition of the Sultanate, proclamation of the Republic, abolition of the Caliphate. Political parties and political events established during the Atatürk period and represented in the Turkish Grand National Assembly. Legal reforms and legal order. Revolutions in the field of education. Revolutions in the cultural and social field. Revolutions in the economic field. Turkish foreign policy in Atatürk period (1923-1930). Turkish foreign policy in Atatürk period (1930-1938). Atatürk's principles and complementary principles. Turkey after Atatürk.</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS102	Introduction to Geographic Information Systems Applications	1	2	0	5	2	3	Compulsory
<p>GIS, basic concepts, basic map information. Overview of ArcGIS technology. Examination of geographic data in ArcMap environment. Data display functions. Symbology, labeling and cartographic production in ArcMap. Querying and reporting of geographic data. Data entry in ArcMap. Feature creation. other tools used. ArcCatalog applications. Data transformation functions. Geodatabase functions. ArcToolbox and ModelBuilder.</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS104	Digital Photogrammetry	2	0	0	3	2	2	Compulsory
<p>Definition, scope, history, application areas, classification of photogrammetry. Projective and perspective projection geometry. Internal and external orientation elements of camera and pictures. Scale in photographs. Projective projections of point, line and plane. Coordinate systems in photogrammetry. Photogrammetric cameras. Analog and digital images. Distortion errors in cameras and mathematical models. Collinearity and coplanarity relations. Perspective distortions in images. Elimination of perspective errors in a single image. Errors caused by height differences and their elimination. Error theory of the normal state, position and height sensitivity. Planning a photo shoot. Vanishing point in images and Geometry of escape planes. Image rectification with escape point. Examples of photogrammetric applications with single image.</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS106	Database Applications	1	1	0	3	2	2	Compulsory
<p>Spatial data model. Spatial database overview. Spatial database and vector data. Spatial database and raster data. Spatial database elements. Topology in spatial database. Spatial database design. Spatial database and version management.</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS108	Remote Sensing	2	0	0	3	2	2	Compulsory
<p>Introduction to Remote Sensing. Electromagnetic Energy and Properties. Passive Sensors. Active Sensors. Platforms. Image and its Properties. Image Correction. Image Enhancement and Interpretation. Image Classification and Accuracy Determination. Relationship between GIS and Remote Sensing. Satellites and Properties. Remote Sensing Software. Remote Sensing Applications</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS110	Open Source Geographic Information Systems Applications	1	2	0	5	2	3	Compulsory
<p>Interface introduction. Basic map creation. Classification of vector data. Map construction. Creating vector data. Vector analysis. Raster data. Completing the analysis. Plugins. Online resources. QGIS Server. GRASS. Database concepts with PostgreSQL. Spatial database concepts with PostGIS.</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS112	Real Estate Valuation	2	0	0	3	2	0	Compulsory
<p>Concepts related to real estate, real estate valuation. The importance of real estate valuation. Applications requiring real estate valuation in our country. Factors affecting the value of real estate. Real estate valuation methods-Comparison direction. Real estate valuation methods. -Cost direction. Real estate valuation methods. -Revenue direction. Real estate appraisal methods.-Statistics direction. Rural area valuation. Real estate appraisal expertise. Production and interpretation of value maps. Applications related to real estate valuations (Homework control)</p>								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
STJ102	Internship	0	0	0	10	0	0	Compulsory

To recognize the workplace, to learn about the work done. To learn the planning and workflow of workplace practices. To examine business practices, to participate in practices and to report the work done.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
TDI102	Turkish Language II	2	0	0	2	2	2	Compulsory
Sentence information. Sentence types. Paragraph information, paragraph types, paragraph structure. Composition information. Speech-based (oral) expression types. Types of written expression. Good speech rules and examples. Official writings (resume, petition, report). Expression disorders.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
YDI102	Foreign Language II	2	0	0	2	2	2	Compulsory
Talking about clothes. Using comparative adjectives in English. Making and acting out dialogues about shopping. Talking about fashion. Describing people's physical and characteristic features. Using the phrases "to be like" and "to look like". Describing, writing and speaking about friends. Talking about tourist attractions. Using the modal verbs "can" and "can't" which means -ebilmek, -abilmek in Turkish. Analyzing listening passages and acquiring vocabulary about tourist attractions. Talking about places in the city. Use the sentence pattern "there is" and "there are" meaning "there is". Analyzing a reading text about the most popular places in the city and acquiring new vocabulary. Talking about vacation activities. Using the past tense. Analyzing a reading passage about the description of a hotel and learning new vocabulary. Talking about future plans. Using the future tense. Listening text about travel plans and doing exercises. Reading passage review about travel activities.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS150	Map Creation and Publishing	1	1	0	3	2	2	Elective
Cartographic planning process. Data selection and evaluation. Coordinate system selection. Map design elements. Qualitative and quantitative symbols. Advanced symbology techniques. Generalization. Elevation and symbology. Map design working with tags. Creating and editing annotations. Map template. Map element design. Map output operations.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS152	Geolocation Techniques	2	0	0	3	2	2	Elective
Location determination methods. GNSS working principle and GNSS satellites. Accuracy and error concepts in GNSS measurements. GNSS receiver models. GNSS measurement methods. Coordinate measurements with GNSS. GNSS applications for navigation. GNSS applications for geodetic purposes. GNSS networks in the world and in Turkey. Real-time GNSS networks. RTK-GNSS applications. Network-RTK GNSS applications. Evaluation of GNSS data. Reporting and archiving in GNSS measurements.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS154	Urban Transformation in Geographic Information Systems	2	0	0	3	2	0	Elective
Introduction: The concepts of region and regional imbalance, the relationship between the spatial distribution of activities and the concept of region. The role of investments in eliminating regional imbalance. Examples of international and national practices for the elimination of regional imbalance. Causes of regional imbalances in Turkey. Evaluation of policies for regional development in the planned period. The role of cooperatives in development. The importance of regional development in terms of country development. Regional projects for development in Turkey: Malkara, Kelkit examples. Regional development policies and projects in Turkey: GAP, DAP, DOKAP. Analysis of Southeastern Anatolia and Eastern Anatolia regions. Problems of overcrowded regions. The concept of coastal planning, the purpose of coastal planning, the necessity and importance of coastal use, basic principles of coastal use. The effects of new trends in tourism sector on national and regional development. The role of planning in mitigating the damages of natural disasters: The transformation of natural events into disasters, case studies from Turkey and the world.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS156	Energy Resources and Geographic Information Systems	2	0	0	3	2	2	Elective
The concept and types of energy. Energy resources and their relationship with geography. The use of criteria in the selection of energy types. New trends in the use of energy types. Coal. Petroleum. Natural gas. Hydraulic energy. Nuclear energy. Alternative energy sources. Wind energy. Solar energy, Geothermal energy. Turkey's energy resources and energy-related problems								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS158	Environmental Protection Studies in Geographic Information Systems	2	0	0	3	2	2	Elective
Introduction of the course, topics and activities and evaluation. Environmental regulation. Environmental								

regulation. Risk analysis: Threats by interpreting the results of the analysis. Waste storage. Waste regulation and control. Personal protection methods. International health and safety warnings.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS160	Research Methods and Ethics	2	0	0	3	2	2	Elective
Science, research, scientific research concepts. Science and science 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. Scientific research report content. Formal structure of the research report and language use in scientific text. Interpretation and report writing. Principles of scientific publication ethics. Scientific works and their types. How to use the internet, library and documentation centers. Ethical standards, legal limitations and software. Presentation and evaluation of research reports prepared by student groups.								

III. Semester

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS201	Web Geographic Information Systems	1	2	0	4	2	3	Compulsory
Cloud computing. Cloud computing and Geographic Information Systems (GIS). Online sharing of GIS resources. Ready-to-use content management. Creating web applications using ArcGIS online. Layers, maps and applications in web GIS. Hosted feature layers and volunteered geographic information. Story maps and configurable applications. Web AppBuilder for ArcGIS. Publishing map services with ArcGIS for Server. Spatial analysis and Geoprocessing services. Mobile GIS and real-time GIS. 3D Web Scenes.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS203	Mobile Geographic Information Systems	1	2	0	4	2	3	Compulsory
What is Mobile GIS? What are mobile GIS applications? Designing a web map for data generation in mobile GIS. Individual mobile GIS (data generation). Enterprise mobile GIS (data generation). Story maps with mobile GIS. Introduction to designing applications in mobile GIS. Designing an application in mobile GIS.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS205	Remote Sensing Applications	1	2	0	4	2	3	Compulsory
Examples of basic concepts in remote sensing programs. Image fusion applications. Difference analysis applications. Controlled and uncontrolled classification examples. Three dimensional analysis and modeling applications. Topographic analysis applications. Model creation and analysis applications on the model. Coordinatization applications. Output format preparation applications for printing. Vegetation cover identification applications. Image processing and accuracy analysis applications. Color band combination applications. Classification applications. Raster and vector data conversion applications.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS207	Spatial Analysis in Geographic Information Systems	2	2	0	4	3	4	Compulsory
GIS and spatial analysis. ArcGIS 3D analysis module and its capabilities. Digital elevation models. Surface analysis and data transformations. Working with LIDAR and Terrain data. 3D modeling (ArcScene - ArcGlobe). ArcGIS Spatial analysis module and its capabilities. Distance and density analysis. Interpolation. Statistical analysis. Reclassification and registration of raster data.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS209	Geographic Database Design	1	2	0	3	2	3	Compulsory
Understanding and exploring a geodatabase. Loading and creating data. Raster data management. Maintaining data integrity using subtypes. Maintaining attribute integrity. Associating data using relationship classes. Working with attachments. Designing geodatabase topologies. Sharing a geodatabase. Designing a geographic database.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS211	Project Design and Management in Geographic Information Systems	3	0	0	3	3	3	Compulsory

What is project and project management? Spatial thinking. Spatial thinking in geographic information systems. Modeling the world. Project design in GIS. Project management and objectives in GIS. Project design in GIS methodology. Decision making in GIS projects.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS213	Sectoral Applications in Geographic Information Systems	3	0	0	2	3	3	Compulsory
GIS and Sectoral Requirements. GIS Components and Data Structures. Characteristics of Spatial Data and Basic Concepts. Decision Support Processes with GIS. GIS in Infrastructure Planning. GIS in Agriculture and Rural Development. Environmental Management and Monitoring of Natural Resources. Disaster Management and Risk Analysis. GIS Applications in Energy Sector. GIS in Transportation and Logistics Sector. Health Geography. GIS in Insurance Services. Urban Planning and Smart City Applications								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS251	Disaster Management Applications in Geographic Information Systems	1	1	0	3	2	2	Elective
Definition of disaster. Types and causes of disaster. Disaster management. Disaster management and GIS. Flood and GIS. Disaster management and GIS applications I: Flood Risk Analysis. Earthquake and GIS. Disaster management and GIS applications II: Earthquake Risk Analysis. Landslide and GIS. Disaster management and GIS applications III: Landslide Risk Analysis.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS253	Urban Information Systems	2	0	0	3	2	2	Elective
Urban information. Concepts related to KBS. Urban information and spatial data. Usage and application areas of KBS. KBS data, sources and quality. Data preparation. Spatial data analysis in KBS. Data management. KBS industry and KBS software organizations. KBS on the Internet. Data visualization in KBS. KBS case studies.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS255	Quality Assurance and Standards	2	0	0	3	2	2	Elective
Quality concept. Standard and standardization. The 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.								

IV. Semester

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS202	Vocational Education in Business	5	20		30	15	25	Elective
Monitoring workplace orientation. Discussing possible project topics with students. Exchange of information about workplace project opportunities with the workplace advisor Workplace visit and determination of the project topic. Preparation of the academic advisor visit report. Evaluation of the project management plan. Evaluation of the sector consultant report. Evaluation of the student interim report. Coordination meeting of the applied workplace training program. Workplace visit. Preparation of sector advisor and academic advisor evaluation forms. Preparation of academic advisor visit report. Reporting the results. Organizing project presentations.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS250	Cartography	2	0	0	5	2	2	Elective
Definition of cartography, its importance in terms of geography. Maps and maps as communication tools. Historical development of cartography I: Early and Middle Ages. Historical development of cartography II: Renaissance to the present. Map projections. Classification of projections I: According to the projection surface. Classification of projections II: According to the position of the surface. Classification of projections III: According to the light source and contact. Coordinate systems, transformations. Map types, map elements (title, scale, legend, etc.). Map drawing techniques (Symbolization, generalization, exaggeration, etc.). Drawing elements, Lines, writings and numbers, symbols. Scanning and coloring techniques. Color theory and color systems. Data classification techniques.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS252	Geographic Information Systems	5	0	0	5	5	5	Elective

	Graduation Project							
Determination of the study area for the project. Supply and digitization of data. Processing of data in GIS environment. Integration of verbal data and establishment of tabular relationships. Analyzing the data. Creation and presentation of project final products. Project presentations								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS254	Spatial Analysis in Transportation Systems	2	2	0	5	3	4	Elective
Course Introduction and Basic Concepts. Introduction to Geographic Information Systems (GIS). Spatial Data in Transportation Systems. Basic Spatial Analysis Methods I. Basic Spatial Analysis Methods II. Site Selection and Accessibility in Transportation Systems. Spatial Statistics and Hotspot Analysis. Spatial Analysis in Traffic Management. Spatial Analysis in Public Transportation Planning. Urban Mobility and Transportation Networks. Spatial Analysis in Emergency and Disaster Management. Spatial Analysis Tools and Software. Overall Evaluation and Discussion								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS256	Decision Support Applications in Geographic Information Systems	2	2	0	5	3	4	Elective
GIS Based Decision Support Systems. Spatial Decision Making Processes and Decision Types. Multiple Criteria Decision Making Methods I: AHP. Multicriteria Decision Making Methods II: TOPSIS. Conformity Analysis and Spatial Layering Techniques. Risk and Sensitivity Analysis Applications. Data Quality and Uncertainty in Decision Support Models. GIS Based Decision Support Applications for Disaster Management. Urban Planning and Spatial Decision Support Systems. GIS Supported Decision Processes in Agriculture and Natural Resource Management. Sustainability and Environmental Management Applications. Sample Applications.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS258	Programming in Geographic Information Systems	1	1	0	5	2	2	Elective
Running scripts in Python. Defining data. Automating scripts with lists. Working with selections. Working with cursors. Working with geometry objects. Sharing scripts. Debugging scripts and handling runtime errors. Automating map production. Add-in logic with ArcGIS for Desktop. Program development, desktop add-in, program development climate, desktop add-in creation. ArcObject API, Visual Studio usage. Interactive interaction with maps, image exchange, data queries, commo box, add-in deployment, add-in security, code integrity.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS260	Unmanned Aerial Vehicle (UAV) Technologies	1	1	0	5	2	2	Elective
History and historical development of UAVs. Introduction of UAV types. Aircraft, flight dynamics and flight principles. Air law and responsibilities. Meteorology knowledge. ATC procedures. Aviation freesiology. UAV structural components and aerodynamics. Gimbal and payload (camera etc.) docking. Navigation and operation. Controllable systems and propulsion systems. Warnings, precautions, preparation, organization and arrangements.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS262	Community Service Practices	1	2	0	5	2	3	Elective
Review of concepts related to society. The importance of community service practices. Determining the current problems of the society, discussing in which areas related to the society can be worked within the scope of this course. Preparing new projects to produce solutions for current problems of society. Community service practices today: Public institutions and non-governmental organizations. The importance of participating in scientific activities such as panels, conferences, congresses, symposiums as an audience, speaker or organizer. Volunteering in various projects within the framework of social responsibility. Gaining basic knowledge and skills for the implementation of community service work in schools. Students taking part in a social project using their knowledge and experience. Project information: General information about reporting.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS264	3D Modeling	1	1	0	5	2	2	Elective
Esri CityEngine user interface. Project management. Map layers. Shapes. Road networks. Static models. Rule-based modeling. Data import. Geographic coordinatization. Export of data. Attribute mapping. Interactive facade editing. Web and 3D.								
Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS266	Geographic Information Systems in Forestry Applications	1	1	0	5	2	2	Elective
Preparation of forest maps. Forest database design. Drawing (digitization) and update operations. Data transformation functions and data transfer. Querying and reporting of geographic data. Using time								

information. Creating infrastructure for spatial analysis. Identification of potential fire areas. 3-dimensional image acquisition. Geoprocessing tools in Forest Engineering. Transferring data to ArcGIS Explorer and Google Earth. Network analysis in Forest Engineering. Hydrology, LIDAR and NDVI applications in Forest Engineering.

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS268	Entrepreneurship	2	0	0	5	2	2	Elective

Conceptual framework, approaches, functions, process of entrepreneurship. Entrepreneurship culture. Local and international context of entrepreneurship. Entrepreneurship ethics.

Course Code	Course Name	T	U	L	ECTS	K	Clock	Type.
GIS270	Spatial Data Standards and Infrastructure	2	0	0	5	2	2	Elective

Definition of spatial data standards. The importance of spatial data standards. The necessity of spatial data standards in our country. Application areas of spatial data standards. The role of standards in spatial data quality. Interoperability concept and structures. INSPIRE Standards and its application. OGC Standards. Application of OGC Standards. ISO Standards. ISO Standards Implementation. W3C Standards. W3C Standards Implementation