

Course Code	Course Name	(T,A,L)	Credit	ECT S	Compulsory/Elective Course
AIT101	Atatürk's Principles and the History of Turkish Revolution I	(2,0,0)	2	2	Compulsory

The reasons that prepared the collapse of the Ottoman Empire and the Turkish Revolution. Disintegration of the Ottoman Empire, Tripoli War, Balkan Wars, First World War. Armistice of Mudros. The situation of the country in the face of the occupations and the reaction of Mustafa Kemal Pasha, the departure of Mustafa Kemal Pasha to Samsun. The opening of the Turkish Grand National Assembly of the National Struggle. Treaty of sevr. The Lausanne Peace Treaty. Atatürk's Principles: Republicanism, Nationalism. Populism, Statism. Secularism, Revolutionism.

Course Code	Course Name	(T,A,L)	Credit	ECT S	Compulsory/Elective Course
AIT102	Atatürk's Principles and the History of Turkish Revolution II	(2,0,0)	2	2	Compulsory

Abolition of the Sultanate; Proclamation of the Republic; Taking the Election Decision in the First Parliament; Establishment of the People's Party; Ankara Becoming the Capital, Proclamation of the Republic and Reactions; Abolition of the Caliphate (The Emergence of the Problem of the Caliphate and the Events Preparing the Abolition of the Caliphate), Progressive Republican Party and Sheikh Said Rebellion; Law of Takrir-i Sukun; Closing the Progressive Republican Party; İzmir Assassination Attempt), Free Republican Party and Menemen Incident; An Overview of Atatürk-Inönü Separation, Revolutions and Their Goals; Revolutions in Law; 1924 Organization-ı Esasiye Law; Adoption of the Turkish Civil Code; Adoption of Other Basic Laws; Revolutions in Women's Rights, Education and Culture; The Law of Unification of Education; Adoption of the New Turkish Alphabet; New Understanding of History and Language; From Darülfünun to Istanbul University; Fine Arts, Developments in Economics; Late Ottoman Economy; Turkish Economy Congress and Its Results; Economic Activities in the First Years of the Republic; Transition to the Practice of Statism, Revolutions Made in Social Life (Modernization in Clothing: The Law on Wearing Hats; Closure of Lodges, Zawiyas and Tombs, Adoption of International Time, Calendar, Numbers, Measurements and Week Holidays; Adoption of the Law on Surnames; Developments), Turkey's Foreign Policy in Atatürk Era; Years 1919-1923; Years 1923-1930, Going to the Second World War and Turkish Foreign Policy 1931-1939, Principles of Atatürk; General Overview of Atatürk's Principles; Republicanism, Nationalism, Populism, Statism, Secularism, Revolutionism, İsmet İnönü Period (1938-1950); Domestic Policy During the Second World War; Establishment of the Democratic Party, Democratic Party Period (1950-1960); May 27 Military Intervention and National Unity Committee

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK101	Introduction To Environmental Science	(3,0,0)	3	3	Core Course

Definition of environmental education and training plans, environmental pollution, pollution of water, air and soil resources and basic concepts, noise, radioactive pollution, related organizations, environmental

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impact assessment. To be able to define environmental pollution, pollution of water, air and soil resources, noise and radioactive pollution.					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK102	Environmental Effects of Transportation	(2,2,0)	3	3	Core Course

Classification of analysis and analysis methods, classical analysis methods, classification of instrumented analysis methods, optical methods, electrometric methods, chromatographic methods, parameters and methods used in environmental applications, local analysis, UV spectrophotometry and its applications, gas chromatography and its applications, ICP spectrometry and its applications, atomic absorption spectrophotometry and applications.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK103	Ecology And Environmental Biologyi	(3,2,0)	4	4	Core Course

Definition of ecology and biology, basic concepts in ecology, natural selection and the formation of species, abiotic factors and their effects on organisms, biotic factors and their effects on organisms, population and structural features, population dynamics, community and features, ecosystem and its features, model approaches in ecosystems, major ecosystems in the world and its features, distribution of large ecosystems on earth, ecological problems of humanity and protection of nature.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK104	Environmental Chemistryi	(2,2,0)	3	3	Core Course

Heavy metals, fuel types and their effects on the environment, greenhouse effect, greenhouse effect gases and their sources, nuclear energy and core chemistry, pesticides, volatile organic compounds and organic solvents, ozone layer and chemicals that cause depletion, air pollution and acid rain, detergents and eutrophication. T

Ders Kodu	Ders Adı	(T,A,L)	Kredi	AKTS	Zorunlu/Seçmeli Ders
CKK105	Laboratory And Measurement Techniquesi	(2,2,0)	3	4	Core Course

Rules to be followed in the laboratory, basic laboratory equipment, instrumented analysis equipment, general chemistry laboratory, analytical chemistry laboratory, water pollution and control laboratory, air pollution and control laboratory, soil pollution and control laboratory, microbiology laboratory, sampling technique, basic operations in the laboratory, analysis results evaluation.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK106	Environmental Laboratory Iı I	(2,2,0)	3	3	Core Course

Laboratory rules, introduction of laboratory equipment and materials, weighing and solution preparation, pH and pH indicators, determination of solubility and the effect of temperature on solubility, chromatographic analysis, gas chromatography-infrared spectroscopy, UV-visible spectrophotometry, working rules to be followed in microbiology laboratory, safety precautions, the introduction of devices and equipment used in the microbiology laboratory and the use of microscopes, some microscopic creatures used in water quality determination, the introduction, collection and storage techniques of benthic creatures living in our fresh water from invertebrate animals and fish living in our fresh water from vertebrate animals.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK107	Basic Information Technology Usage	(2,2,0)	3	3	Core Course

Basics, Computer hardware, Windows operating system, Word processing, Spreadsheets, Presentation preparation.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK108	Environmental Microbiology	(3,2,0)	4	4	Core Course

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
					Definition and principles of microbiology, metabolism, bacteria, viruses, protozoa, fungi, algae, soil microbiology, water microbiology, atmosphere microbiology, biochemical cycle, the importance of microorganisms in environmental applications. Biological treatment and the role of microorganisms in wastewater treatment plants. To understand basic microbiological principles and to develop solutions, methods and tools for solving environmental problems.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK110	Environmental Health	(3,0,0)	3	3	Core Course
					Environmental pollution, water pollution, water supply and disposal, water quality, water quality control, water quality measurements, sources of solid wastes and their effects on public health, waste recycling, environmental effects of industries, pollution control planning.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK112	Urban And Environment Planning	(2,0,0)	2	2	Core Course
					Introduction, definitions (urbanism, city, urbanization, plan-planning), criteria used in the evaluation of cities (population, density, infrastructure and equipment), contemporary approaches in city and environmental planning and general principles of planning, plan types and hierarchy (master plans-zoning). plans), urbanization and population movements, the characteristics of urbanization in our country, urbanization-industrialization and environmental problems, the definition of the environment in general and environmental planning approach, the importance of planning in environmental protection, the principles of industrial plant location selection.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK200	Graduation Project	(0,6,0)	3	5	Core Course

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
A well-defined current problem based on theoretical and technological research should be solved and the results presented by visual means.					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK201	Solid Waste Management	(2,2,0)	3	4	Core Course

Definition and characteristics of solid waste, analysis methods, cleaning of residential areas, collection and transportation of domestic solid waste, optimization in collection, transfer stations, storage and evaluation of solid waste, evaluation of solid waste for energy production, composting, biogas recovery and recovery methods and financing . Municipalities, urbanization and solid waste problems created by urbanization.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK203	Environmental Laboratory II	(2,2,0)	3	3	Core Course

Volumetric analysis, measured organic pollution parameters in water (Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD)). Spectrophotometric analysis of nitrite nitrogen, nitrate nitrogen, chlorine, sulfate parameters, boiling and freezing point determination, methods for separating heterogeneous mixtures, quality parameters of water) (temperature, pH, dissolved oxygen, conductivity, salinity, odor and taste analyses), adsorption of dyestuffs to activated carbon, UV-visible spectrophotometer, sampling and analysis methods for inorganic pollution parameters in water, flue gas analysis, methods of separating homogeneous mixtures, soil sampling and analysis methods.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK205	Environmental Impact Assessment	(3,0,0)	3	3	Elective

Sources of environmental impact, effects of air, water and soil pollution, radiation, effects of solid wastes, polluting sources and receiving environment standards, legal regulations, field studies, evaluation, minimizing the impact, alternative projects, environmental impact assessment report and preparation principles.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK207	Soil Pollution and Control	(3,0,0)	3	3	Core Course

Description and structure of soil, soil pollutants and their sources, organic pollutants; pesticides, oil waste, inorganic pollutants; heavy metals, nitrogen and phosphorus pollution, radioactive material pollution, transport and transformation of pollutants in the soil, prevention and improvement of soil pollution, biological improvement techniques, physico-chemical improvement techniques, erosion types and measures. Description and structure of the soil, soil pollutants and their sources.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK209	Renewable Energy Sources	(3,0,0)	3	4	Elective

Definition of energy, energy sources, environment-energy relationship and sustainability in energy production, alternative energy sources. Importance of environment-energy relationship, teaching basic concepts and applications in clean-sustainable energy production. Ensuring the usability of basic concepts and techniques in feed-sustainable energy production for applications.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK211	Air Pollution and Control Techniques	(3,0,0)	3	4	Core Course

Causes and effects of air pollution, pollutants, pollution sources, air pollution meteorology, definition of air pollution control regulation, air pollution measurement techniques and analysis methods, particle measurements, measurement of sulfur gases, measurement of nitrogenous gases, control of air pollution according to its source and pollutant properties, air pollution, technologies used to prevent and reduce air pollution. To have information about the causes and effects of air pollution, to learn measurement techniques and analysis methods, to have information about air pollution prevention and reduction technologies.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK213	Quality and Environmental Management Systems	(3,0,0)	3	4	Elective

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
					Quality and environmental management systems and ISO 14001 definition and historical development; what is quality, what are quality policy and total quality management systems. What are the standard principles of management systems? What is the purpose of total quality management? What is ISO 14001, which organizations can receive it and what are the certification conditions. How to structure environmental management systems. How organizations obtain quality and environmental management certificates.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK215	Water Quality and Control	(2,2,0)	3	4	Core Course
					Water resources, drinking, utility and irrigation water properties, water quality parameters (physical, chemical, biological), basic principles of water quality protection, water standards, water quality analysis methods, water-related health problems, selection of treatment type according to water quality, drinking water quality and general characteristics, drinking water treatment methods.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK202	Environmental Law	(3,0,0)	3	5	Elective
					History of labor law, application area, employment contract, debts arising from employment contract, termination of employment contract, severance pay, working order.

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK204	Environmental Technologies	3,0,0)	3	4	Core Course
					methods of reducing air pollution, drinking and wastewater treatment technologies, soil pollution, sound and noise pollution, causes of environmental pollution, prevention of pollution

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK206	Water Pollution and Control Techniquesi	3,0,0)	3	4	Elective
<p>Pollutant parameters in water, measurement of pollution, domestic wastewater, industrial wastewater, mechanical treatment methods, biological treatment methods, chemical treatment methods, advanced treatment methods, natural treatment methods, treatment plant components.</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK208	Electronic and Hazardous Waste Recycling	3,0,0)	3	4	Core Course
<p>E-atık sınıflandırması problemi, mevcut e-atık yok etme yöntemleri, e-atıklardaki tehlikeli maddeler, dünyadaki e-atık yönetmelik ve kanunları, e-atık yok etme, geri dönüşüm proses ve teknolojileri, hacimce büyük e-atıkların geri dönüşüm akım şeması ve teknolojileri.</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK210	Noise and Dust Pollution Control Techniques	3,0,0)	3	4	Elective
<p>Titreşim, ses dalgası, ses kaynakları ve özellikleri, gürültü yayılımı, ölçüm teknikleri, gürültü standartları, gürültünün çevresel etkisi, gürültünün denetimi, sanayide gürültünün önlenmesi, trafik gürültüsünün kontrolü, binalarda gürültüye karşı alınacak önlemler. Endüstriyel, inşaat ve madencilik faaliyetlerinden oluşan tozların bastırılma yöntemleri ve işçi sağlığına ve iş güvenliğine etkileri.</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
CKK212	Waste Recovery Techniques	3,0,0)	3	4	Core Course

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
<p>Katı atık, madeni ve bitkisel atık yağlar, ambalaj atıkları, atık pil ve akümülatörler, elektronik atıklar, hurda atıklar, endüstriyel atıklar, geri kazanım ve geri dönüşümün çevresel önemi, geri kazanım ve geri dönüşümün ekonomik önemi, geri kazanım ve geri dönüşüm teknolojileri, fiziksel geri dönüşüm yöntemleri, kimyasal geri dönüşüm yöntemleri, piro/hidrometalurjik geri dönüşüm yöntemleri, Türkiye’de değerlendirilebilir atıklar için sürdürülebilir bir geri kazanım sisteminin geliştirme yöntemleri, Çeşitli atık türlerinin geri kazanımı ve dönüşümü hakkında bilgi sahibi olma, geri dönüşüm yöntemlerinin öğrenilmesi, Türkiye için değerlendirilebilir atıkların incelenmesi.</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
ING101	English I	(3,0,0)	3	4	Compulsory
<p>Introducing yourself, giving personal info, talking about objects, talking about family, describing and talking about buildings and furniture, talking about schedules, talking about routines, ability, asking for and giving directions, talking about food and quantities.</p>					
<p>Note: This course is offered by the departments in which the medium of instruction is Turkish.</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory /Elective Course
ING102	English II	(3,0,0)	3	4	Compulsory
<p>Explaining a recipe, ordering food and making requests, comparing things/people/places, talking about now, making suggestions and arrangements, talking about past, giving advice, talking about the future, checking into a hotel.</p>					
<p>Note: This course is offered by the departments in which the medium of instruction is Turkish.</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
MAT103	Mathematics I	(3,0,0)	3	4	Compulsory
<p>Functions, limits and continuity. Derivatives. Mean value theorem. Sketching graphs. Definite integrals, infinite integrals (antiderivatives). Logarithmic, exponential, trigonometric and inverse trigonometric functions and their derivatives. L’Hospital’s rule. Techniques of integration. Applications of the definite integral, improper integrals.</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
MAT104	Mathematics II	(3,0,0)	3	4	Compulsory
<p>Plane and polar co-ordinates, area in polar co-ordinates, arc length of curves. Limit, continuity and differentiability of function of several variables, extreme values, method of Lagrange multipliers. Double integral, triple integral with applications. Line integrals, Green’s theorem. Sequences, infinite series, power series, Taylor’s series. Complex numbers</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
TUR101	Turkish I: Written Expression	(2,0,0)	2	2	Compulsory
<p>Reading passages related to the chapter; grammar studies; vocabulary and translation activities; listening activities; debates on current issues related to the department (Repetition of tenses, Internet history, Health and medicine, passive frameworks, Social issues, Environmental issues, Repetition of modals, Law and punishment, repetition of adjective phrases, Language and Literature, Repetition of noun phrases.</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
TUR102	Turkish II: Oral Expression	(2,0,0)	2	2	Compulsory
<p>Spelling, punctuation and composition (punctuation marks, other signs), Spelling, spelling rules (capital letters, spelling of numbers, spelling of abbreviations, spelling of quoted words), Composition (purpose of composition, method of writing composition), plan in composition, introduction, development, result, Expression features, clarity in expression, simplicity in expression, clarity and sincerity in expression, Expression disorders (using synonyms in sentences), Misuse of idioms, Expression styles (explanation, story, concise expression, description, satire, portrait, proof, speech, Verbal expression types (daily and impromptu speech, prepared speech, panel discussion, debate, panel), Written expression types (letter, telegram, greeting, invitation, literary letter), business letters, official letter, petition, report, report, decision, advertisement, conversation, criticism, memoir, travel writing, interview, survey, autobiography, biography, novel, story, fairy tale, fable, theatre, tragedy,drama ,scenario) .</p>					

Course Code	Course Name	(T,A,L)	Credit	ECTS	Compulsory/Elective Course
TMD101	Technical Drawing I	(1,2,0)	2	4	Core Course
<p>Introduction to technical drawing. Drawing instruments and their uses, inscriptions, lines, geometry of straight lines, drawing to scale. dimensions. Development of surfaces, shape definition, selection of views, projecting of views. Pictorial drawing, diametrical trimetric projection. Isometric projection, oblique projection. perspective drawing section.</p>					