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NECMETTIN ERBAKAN UNIVERSITY FACULTY OF ENGINEERING AND ARCHITECTURE DEPARTMENT OF ENVIRONMENTAL ENGINEERING, 2024-2025 ACADEMIC YEAR COURSE CONTENTS

1ST SEMESTER							
Course Code	**Course Name**	**Prerequisite**	**Theoretical**	**Application**	**Laboratory**	**Loan**	**ECTS**
CEV101	**Mathematics-1**		**4**	**0**	**0**	**4**	**6**
Introduction, Numbers, Absolute Value, Intervals, Functions, Limits and Continuity of Functions, Differentiation and Differential of Functions, Applications of Derivatives.							
CEV103	**General Physics-1**		**2**	**0**	**1**	**2.5**	**5**
Vectors, Motion in One Dimension, Motion in Two Dimensions, Newton's Laws of Motion and Their Applications, Work, Power, Energy and Conservation of Energy, Impulse, Momentum and Collisions, Static Equilibrium of Rigid Bodies, Rotation and Angular Momentum.							
CEV105	**General Chemistry-1**		**2**	**0**	**0**	**2**	**4**
Matter and Its Properties, Atom and Structure, Periodic Table and Properties, Chemical Bonds, Chemical Compounds and Finding Compound Formulas, Chemical Reactions and Related Calculations, Aqueous Solution Reactions, Gases, Solutions and Their Properties, Chemical Equilibrium, Acids-Bases.							
CEV107	**Introduction to Environmental Engineering**		**2**	**0**	**0**	**2**	**4**
Introduction, identification and solution of environmental problems, engineering decisions, engineering calculations, mass balances and separation processes, reactions, reactors, energy flow and balances, ecosystems, water quality, water supply and treatment, wastewater treatment, air quality and control, solid wastes, hazardous wastes, noise pollution, green engineering Ethics.							
TDL101	**Turkish Language-1**		**2**	**0**	**0**	**2**	**2**
What is Language? The Birth of Languages, Language Thought Connection, Language Culture Connection, Language Society Connection, World Languages and Turkish. History of Turkish Language, Phonetics, Sound Characteristics of Turkish Words, Stress, Syllables, Structure Information, Construction Suffixes, Conjugation Suffixes, Word, A- Words According to Their Degree of Meaning B- Words According to Semantic Relations C- Word Types in Terms of Structure, Word Types, Word Groups, A- Noun Phrase, B- Adjective Phrase C- Abbreviation Groups, Ç- Title Group, D- Preposition Group, E- Linking Group, F- Exclamation Group, G- Repetitions, H- Verbs I- Number Group, I- Compound Verbs, Sentence, A- Elements of the Sentence, B- Types of Sentences, Spelling Rules.							
AIT1101	**Ataturk's Principles and History of Turkish Revolution-1**		**2**	**0**	**0**	**2**	**2**

The Purpose of Reading the History of the Turkish Revolution and Kemalism Course and the Definition of the Concepts Related to that Period (Revolution, Revolution, Reform, Evolution, Westernization, etc.), The Reasons for the Collapse of the Ottoman Empire and the Explanation of the Reasons for the Collapse of the Ottoman Empire, The Renewal Movements and Explanation of the Reform Movements Made to Prevent the Collapse of the State in the Ottoman Empire, Democratization in the Ottoman Empire and the Road to the Republic (Treaty Alliance, Tanzimat Edict, Reform Edict I. and II Constitutional Monarchy Movements), Currents of Thought in the Ottoman Empire and Its Explanation (Ottomanism, Turkism, Islamism, Westernism), The Activities of Minorities in Ottoman History, Especially the Emergence of the Armenian Question and Its Reflections to the Present Day, The Reasons for the Outbreak of the First World War and the Participation of the Ottoman State in the War, The Implementation of the Provisions of the Mudros Armistice Agreement and Its Evaluation in Terms of Threats to Turkey, The Situation of the Country in the Face of Occupations and Mustafa Kemal Pasha's Reaction, Mustafa Kemal Pasha's Idea of Landing in Samsun Beginning to Implement His Contact with the Army and Civil Administration, The First Steps Taken for the National Struggle: Amasya Circular, Erzurum and Sivas Congresses and the Place and Importance of These Congresses in the National Struggle, Establishment of the National Forces and Covenant National Organizations and the Political Formation Developments, Opening of the Grand National Assembly of Turkey and Taking Over the Administration of the War of Independence, Revolts Against the Grand National Assembly in the National Struggle (I. and II. Bozkır Zeynelabidin Rebellions, Yozgat Rebellions, Bolu and Düzce Rebellions and Others)							
YBD101	**Foreign Language-1**		**2**	**0**	**0**	**2**	**2**
Sentence Structure (Subject + Load + Object and Complements), Structures That Can Be Used as Subjects, Structures That Can Be Used as Objects, Specifiers, Tenses (Simple Present Tense, Simple Past Tense), Tenses (Present Continious Tense, Past Continious Tense), Tenses (Present Perfect Tense, Past Perfect Tense), Tenses (Simple Futute Tense, Future In The Past), Future Continious Tense, Future Perfect Tense, Noun Phrases (Noun Phrases That Start With That), Noun Phrases (Noun That Start With Clauses), Noun Sentences (Noun Sentences Beginning with Interrogative Words), Conditional Clauses.							
AYD101	**Academic Writing**		**2**	**0**	**0**	**2**	**2**
Explanation of academic writing techniques; Basic rules in academic writing; source review, literature, citation and citation; bibliography management and auxiliary software in scientific studies; Ethical principles, plagiarism and plagiarism control							
AKT101	**Academic Turkish**		**2**	**0**	**0**	**2**	**2**
Explanation of academic writing techniques; Basic rules in academic writing; source review, literature, citation and citation; Bibliography management and assistant in scientific studies Software; Ethical principles, plagiarism and plagiarism control							

2ND SEMESTER							
Course Code	**Course Name**	**Prerequisite**	**Theoretical**	**Application**	**Laboratory**	**Loan**	**ECTS**
CEV100	**Mathematics-2**	CEV101 coded Mathematics-1 course to have received the continuation.	**4**	**0**	**0**	**4**	**5**
Indefinite Integral and Variable Substitution Method, Partial Integration Method, Integral Fundamental Theorem, Definite Integral, Numerical Integration, Area Calculation, Volume Calculus, Arc Length, Center of Gravity, Moment of Inertia, Trapezoids and Simpson's Method, Generalized Integrals.							
CEV102	**General Physics-2**	CEV103 coded General To have taken the continuation of the Physics-1 course.	**2**	**0**	**1**	**2.5**	**4**
Electric Charge, Electric Field, Gauss's Law, Electric Potential, Capacitance, Current and Resistance, Circuits, Magnetic Field, Current and Magnetic Field, Induction and Inductance.							
CEV104	**General Chemistry-2**	CEV105 coded General Chemistry-1 course to have received the continuation.	**2**	**0**	**2**	**3**	**5**
Weak Acids and Bases, Titration of Weak Acids and Bases, Hydrolysis Reactions, Buffer Solutions (Preparation and pH Calculations), Solubility Constant, Solubility and Precipitation of Metal Salts, Complex Formation and Effect on Precipitation/Solubility, Chemical Kinetics (Reaction Degree for 0°, 1°, 2° Degree Reactions, Half-Life and Finding Rate Constants), Chemical Kinetics (Initial Velocities Method and Applications of Velocity Analysis), Entropy and Free Energy, Organic Chemistry.							
CEV106	**Static-Strength**		**4**	**0**	**0**	**4**	**5**
Introduction and main principles, vectors, forces, statics of material points, rigid bodies, equivalent force systems, center of gravity, equilibrium of rigid bodies, plane rod internal forces in elements, cross-sectional effects, plane lattice systems, moment of inertia, internal force and stress, strain state, kinematic relations, stress-strain relations, safety stresses, principles of rod strength, cross-sectional effects, axial normal force, shear force and bending.							
TDL102	**Turkish Language-2**		**2**	**0**	**0**	**2**	**2**
Composition, Written Expression, Issues to be Followed in Essay Writing, Types of Expression, Letter, Announcement, Advertisement, Resume, Petition, Article, Essay, Criticism, Anecdote, Memoir, Travel Writing, Biography, Autobiography, Interview, Story, Novel, Theater, Fairy Tale, Poem, Report, Report, Report, Applications Related to Writing Types, Art of Speaking and Types of Speeches: What to Do for a Successful Speech, Types of Speeches (Practice). How is Scientific Research Done? (Choosing the Subject, Delimitation, Finding and Writing Sources, How to Do Scientific Research? (Choosing the Subject, Delimitation, Finding and Writing Sources, Expression Disorders.							
AIT102	**Ataturk's Principles and History of Turkish Revolution-2**		**2**	**0**	**0**	**2**	**2**
Kuva-yi Milliye, Entente States' Projects to Partition Turkey, I. İnönü War (6-10 January 1921), Second İnönü War (31 March-1 April 1921), Afyon-Eskişehir-Kütahya War, Sakarya War (23 August-13 September 1921), Great Offensive, Mudanya Armistice, Lausanne Peace Treaty, Turkish Revolution, Constitutional Movements, Political Parties After the National Struggle, Transition to the Multi-Party Era, Reactions Against the Regime, Revolution in the Field of Law, Revolution in the Field of Education, Revolutions in the Social Field, Atatürk's Principles and Revolutions.							

YBD102	**Foreign Language-2**		**2**	**0**	**0**	**2**	**2**
Active Sentence Structures, Passive Sentence Structures, Adjective Sentences, Adjective Sentences, Abbreviation of Noun and Adjective Sentences, Abbreviation of Noun and Adjective Sentences, Adverbial Sentences, Adverbial sentences, sentence conjunctions, sentence conjunctions, purpose declarative structures in sentences, tense declarative structures in sentences, cause-effect declarative structures in sentences, antonym declarative structures in sentences.							
KRP102	**Career Planning**		**1**	**0**	**0**	**1**	**2**
The Career Planning course enables students to get to know the business world, different sectors and the needs of these sectors; It aims to raise awareness in students about the importance of career planning in the process of preparation for the business world. The course aims to enable students to discover their personal competencies and understand the expectations of the business world. By providing; It helps them to develop their knowledge and skills in parallel with the requirements of the relevant sectors.							
CEV116	**Environmental Geology**		**2**	**0**	**0**	**2**	**3**
Introduction to Environmental Engineering, Earth and Its Structure, Plate Tectonics, Minerals, Rocks, Tectonic Weathering, Soil Formation, Soil and Environment, Earthquake and Environmental Effects, Landslides and Environmental Effects, Surface and Groundwater Pollution, Mining Activities and Environmental Impacts, Energy Sources and Environmental Impacts, Wastes and Environment Impacts, Medical geology and environmental health, Soil use planning and landfill site selection and geology							
CEV122	**Computer Aided Technical Drawing-1**		**1**	**2**	**0**	**2**	**3**
Introduction to General Autocad Terminology and User Interface. Starting a Drawing, Tracing on the Screen, Coordinate Tabs and Drawing Grid Settings, Executing Commands, and Entering Coordinates to Commands with Different Methods. Drawing, Circle Drawing, Correction and Deletion Commands. Viewing and Changing the Properties of Autocad Objects. Cropping from Intersection Points in Drawings, Dimensioning, Drawing Simple Shapes. Making adjustments to drawings such as color, layer, line thickness, line pattern, etc.; Rounding Operations at the Junction Points of Lines, Rotation of Objects. Typing Commands and Adjustments. Adapting the Articles to the Desired Limits. Scanning Patterns and Scales, Scanning Applications, Detailed Drawings of Structural Elements. Symmetry retrieval, copy, move commands. Dimension Settings. Strech, Array, Rotation, Fillet commands. Chamfer, trim extend, explode, offset commands. Isometric Drawing and Isometric Dimension Settings. Application in the Computer Lab. Drawing Assignment. Freehand drawing work in a computer lab.							
CEV120	**Professional Foreign Language**		**2**	**0**	**0**	**2**	**3**
Contribution to basic professional English grammar, reading, writing and speaking skills that they can use in professions they can perform within the framework of the discipline of international relations							

3RD SEMESTER							
Course Code	**Course Name**	**Prerequisite**	**Theoretical**	**Application**	**Laboratory**	**Loan**	**ECTS**
CEV201	**Mathematics-3**	He took the continuation of the CEV100 coded Mathematics-2 course be.	**4**	**0**	**0**	**4**	**6**
Introduction to Differential Equations, Definition and Classification of Differential Equations, First Order First Order Differential Equations, Dif. Denk., Linear Dif. Equivalent Homogeneous Dif. Denk., Full Dif. Equivalent. Integral Factor, Nonlinear Differential Equations, First Order and Higher Order Differential Equations, Equations Solvable by P, Equations Solvable by X and Y, Definition of Higher Order Differential Equations, Linear Independence, Wronskian's Definition, Definition and Solutions of Homogeneous Differential Equations with Constant Coefficients, Method of Indeterminate Coefficients for Solutions of Higher Order Inhomogeneous Differential Equations, Method of Variation of Parameters, It is a differential equation with variable coefficients and a differential with a constant coefficient Equation-Reducible Cauchy-Euler Differential Equation and Legendre Differential Equation, Series Method; Basic Definitions of Series and Power Series, Power Series and Solutions of Higher Order Differential Equations with Variable Coefficients, Laplace Transforms, Engineering Applications of Differential Equations.							
CEV203	**Environmental Chemistry-1**		**3**	**0**	**0**	**3**	**5**
Chemical Analysis, Volumetric Analysis, Gravimetric Analysis, Instrumental Analysis, Sampling and Storage, Water Chemistry, pH, Acidity, Alkalinity, Hardness.							
ISGGUV1	**Occupational Health and Safety-1**		**1**	**0**	**0**	**1**	**1**
Learning the definition and history of occupational safety, Comprehending the occurrence and types of accidents, Comprehending occupational diseases and ways of protection, Ergonomics (Worker and workplace The effect of conditions on workers' health), Introduction of Protectors (Machinery and Personal Protectors) in occupational safety and understanding the need to use them, Learning the rules of first aid, specifying and understanding safety measures in case of fire and explosions, Understanding Labor Law and regulations.							
CEV207	**Environmental Microbiology[u]**		**2**	**0**	**2**	**3**	**5**
General Microbiology, Introduction and Use of Microscopy, Bacteria, Viruses, Fungi, Yeasts, Lichens, Algae, Protozoa and Other Higher Structured Animals, Enzymes, Metabolic Reactions, Energy, Growth and Death Graph of Microorganisms, Synthesis, Pathogenicity, Toxicity (Virulence), Inter-Organism Relationships, Disease Generation of Different Types of Microorganisms, Causes of Some Infectious Diseases, Calculation of the Numbers of Coliform Organisms, Applied Microbiology, Dissolved Oxygen, Biochemical Oxygen Supply, Liquid Wastes, Stream Pollution, Treatment Methods, Anaerobic Digestion Solid Waste Storage.							
CEV209	**Fluid Mechanics**		**3**	**0**	**0**	**3**	**4**
Introduction, Definition of Fluid, Basic Concepts, System of Units, Physical Properties of Fluid, Hydrostatics, Pressure Acting on Planar Surfaces, Pressure Acting on Inclined Surfaces, Pressure Acting on Cylindrical Surfaces, Propulsion Center, Hydrostatic Lift, Kinematics of Fluids, Flow Lines, Flow Pipe, Hydrodynamics, Continuity Equation, Energy Equation, Impulse-Momentum Equation, Laminar Current, Turbulent Current, Reynold's Number.							
CEV217	**Computer Aided Technical Drawing-2**		**2**	**2**	**0**	**3**	**4**

Introduction to General Autocad Terminology and User Interface. Starting a Drawing, Tracing on the Screen, Coordinate Tabs and Drawing Grid Settings, Executing Commands, and Entering Coordinates to Commands with Different Methods. Drawing, Circle Drawing, Correction and Deletion Commands. Viewing and Changing the Properties of Autocad Objects. Cropping from Intersection Points in Drawings, Dimensioning, Drawing Simple Shapes. Making adjustments to drawings such as color, layer, line thickness, line pattern, etc.; Rounding Operations at the Junction Points of Lines, Rotation of Objects. Typing Commands and Adjustments. Adapting the Articles to the Desired Limits. Scanning Patterns and Scales, Scanning Applications, Detailed Drawings of Structural Elements. Symmetry Taking, Copying, Transport Commands. Dimension Settings. Strech, Array, Rotation, Fillet commands. Chamfer, trim extend, explode, offset commands. Isometric Drawing and Isometric Dimension Settings. Application in the Computer Lab. Drawing Assignment. Freehand drawing work in a computer lab.							
CEV211	**Statistics**		**2**	**0**	**0**	**2**	**3**
Concept of Statistics, Preparation and Application of Surveys, Classification of Data, Tables and Graphs, Averages, Dispersion and Skew Measures, Distributions: Normal							
Distribution, Distributions: Binomial Distribution and Poisson Distribution, Distribution Exercises, Probability, Correlation and Regression, Correlation and Regression Exercises, Chi-Square Distribution and Chi-Square Test, Analysis of Variance.							
CEV215	**Environmental Health**		**2**	**0**	**0**	**2**	**3**
Environmental Health Concept, Definition, Subjects, Characteristics, Ecosystem, Environmental Problems and Environmental Disasters, Causes and Types of Environmental Pollution, Air Pollution and Indoor Pollution causes and types, Causes and types of water pollution, Acid rain, Greenhouse gases, Global warming, Noise pollution, Electromagnetic pollution, Visual pollution, Light pollution							
CEV109	**Information Technologies**		**2**	**0**	**0**	**2**	**3**
Definition of Computer, General Structure and Usage of Computer, Windows Operating System, MS Word, MS Excel, MS Power Point, Internet.							
BTF201	**History and Philosophy of Science**		**2**	**0**	**0**	**2**	**2**
Basic concepts related to philosophy, science and philosophy of science, basic problems of history and philosophy of science, Science, Philosophy and scientific method, Historical development of sciences and philosophy, Science in ancient times, science in Egypt and Mesopotamia. -Chinese and Hinde science. -Science in ancient Turks, science and philosophy in ancient Greece. -Hellenic Period, Hellenistic and Roman period, Science and philosophy in the Middle Ages, the birth of science in the Islamic world, science in the Islamic world, science in the Renaissance period, 17th and 18th centuries. Science in the 19th and 20th centuries. Science in the century, Science in the Republican era.							
PFE3101	**Teaching Principles and Methods**		**3**	**0**	**0**	**3**	**4**
Basic concepts related to education, Program development process - Program review, Program development process - Program review, Planning of teaching activities, Teaching Planning of activities, Teaching principles, Teaching Strategies, Learning and teaching approaches, Learning and teaching approaches, Learning and teaching approaches, Teaching Methods and Techniques, Teaching methods and techniques, Teaching methods and techniques, Teaching methods and techniques							
PFE3102	**Introduction to Education**		**3**	**0**	**0**	**3**	**4**
Basic concepts of education, the relationship and functions of education with other sciences (philosophical, social, legal, psychological, economic, political foundations of education), historical development, trends in educational science in the 21st century, research in educational science							

4TH SEMESTER							
Course Code	**Course Name**	**Prerequisite**	**Theoretical**	**Application**	**Laboratory**	**Loan**	**ECTS**
CEV200	**Environmental Chemistry-2**	Continuation of CEV203 coded Environmental Chemistry-1 course have received.	**2**	**0**	**0**	**2**	**4**
Colloid Chemistry, Iron and Manganese, Carbon Cycle, Nitrogen, Sulfate, Phosphorus and Phosphate, Dissolved Oxygen, Biochemical Oxygen Demand, Chemical Oxygen Demand, Water Solids, Oil & Grease, Volatile Acids.							
CEV202	**Environmental Chemistry Lab."**	CEV200 coded To be taking the Environmental Chemistry-2 course.	**0**	**0**	**2**	**1**	**4**
Determination of Chloride, Determination of Cr(VI) by UV-Spectrophotometer, Determination of Alkalinity, Determination of Total Hardness, Determination of dissolved oxygen in water, Determination of COD.							
CEV204	**Hydraulic**	Continuation of CEV209 coded Fluid Mechanics course have received.	**3**	**0**	**0**	**3**	**5**
Introduction to Hydraulics, Flow in Pipes, Applications on Junction and Separation of Pipes, Pipes Fed from Two Chambers, Three Chamber Problem, Pressure Pipes Network types, account flow rate in pipes, open channel hydraulics, flow types in open channels, economic cross-section concept in open channels, flow over weirs, emptying times of reservoirs.							
CEV206	**Environmental Engineering Ecology**		**2**	**0**	**0**	**2**	**4**
Basic Ecology Knowledge, Living Beings and Environment, Introduction to Ecology and Basic Definitions, Biomes, Water Biomes, The Environment We Live In, Our Resources, Natural Life, Environmental Pollution, Water Pollution, Air Pollution, Soil Pollution, Food Pollution, Noise Pollution, Radiation, Artificial Environment, Population Movements, Urbanization, Migration, Tourism, Environmental Protection models, International Initiatives to Protect the Environment.							
ISGGUV-2	**Occupational Health and Safety-2**		**1**	**0**	**0**	**1**	**1**
Occupational Safety Rules, Work Environment Surveillance, Occupational Hygiene, OHS in Laws, Protection Policies, Maintenance and Repair in Hand Tools, Lifting, OHS in Motor Vehicles, Risk Management and Evaluation, Psychosociological Risk Factors.							
CEV210	**Soil Pollution and Control**		**2**	**0**	**0**	**2**	**3**

Introduction, definition and formation of soil, general characteristics of soil, definition of soil pollution and sources of pollution, transport of pollutants in soil, chemical and physical properties of soil, investigation and study of soil pollution, cleaning of contaminated soils. Pesticides and fertilizers, wastewater, solid wastes and leachate, mining operations, industrial wastes, air pollution, radioactive wastes, petroleum and mineral oils, misuse of land, heavy metals, treatment soil pollution caused by sludge and solution proposals. Erosion and solution proposals, soil pollution caused by natural disasters and solution proposals, soil pollution problems in Turkey and in the world and solution proposals. Examination of relevant legal regulations and regulations.							
CEV212	**Materials Science**		**2**	**0**	**0**	**2**	**3**
General Introduction to Materials Science. Classification of materials. Internal Structures of Materials: Atomic Structure, Ionic Bond, Covalent Bond, Metallic Bond, Van der Waals Bond, Bond Energy. Associating These Structures with the Physical Properties of the Material. Crystalline and Amorphous Structures in Materials. Directions and Planes in Crystal Structures. Crystal Defects: Point Defects, Linear Defects, Planar Defects, Pure Metal, Solid Melt and Alloy Concepts. Diffusion: Types of Diffusion in Materials and the Importance of Diffusion. Mechanical Behavior of Materials: Tensile Test, Stress-Strain Diagrams, Brittle and Ductile Behavior, Hardness, Fatigue and Creep Concepts. Strength-Enhancing Processes in Metals: Cold and Hot Working, Alloying, Precipitation Hardening, Grain Size Reduction. Phase Diagrams: Phase							
Brief Definition of Diagrams, Eutectic Alloys and Heat Treatment Concepts. Material Production and Processing Methods, Phase Transformations. Ceramic, Polymer and Composite Structure and Properties of Materials, Production and Application Areas. Electrical, Thermal, Magnetic and Optical Properties of Materials							
CEV214	**Environmental Economics**		**2**	**0**	**0**	**2**	**3**
Economics, Macro and Micro Economics Concepts, Economic Systems, Supply-Demand and Market, Effects of Price and Income on Supply and Demand, Production and Costs, Classification of Costs, Investments and Investment Elements, Classification of Investments, Measurement of Productivity in Firms, Profitability Rate, Interest (Simple Interest, Compound Interest, Effective Interest Percentage), Present and Future Time Values, Benefit-Cost Analysis (Benefit-Cost Ratio, Net Benefit Concepts), Benefit-Cost Analysis (Back Payout Speed Concept, Comparison of Concepts), Selection of the Most Economical Project, Examination of Treatment Plant Costs, Examination of Treatment Plant Costs.							
CEV216	**Hydrology**		**2**	**0**	**0**	**2**	**3**
Hydrological Definitions and Hydrological Cycle Unit System, Properties and Importance, Physical Properties of Fluids, Meteorological Data, Evaporation and Transpiration, Precipitation, Application, infiltration, groundwater, surface runoff.							
CEV218	**Ethics in Environmental Engineering**		**2**	**0**	**0**	**2**	**3**
Introduction, Concept of Ethics, Goals and Objectives of Ethics, Education and Ethics, Ethical Justification and Justifications, Ethics and Institutions , Integrity in Engineering, Engineering Responsibility, Ethical Approaches to Dispute Resolution, Sustainable Engineering, Ethical Principles in Management, Unethical Behaviors in Management, Principles of Engineering Ethics, Ethical Scenarios,							
PFE4101	**Educational Psychology**		**3**	**0**	**0**	**3**	**4**
Psychology and its sub-branches, Educational Psychology, Developmental concepts, Principles and factors affecting development, Physical development, Basic concepts related to cognitive development, Piaget and cognitive development theory, Language and moral development, Personality development and factors affecting personality development., Theories explaining personality development, Fundamentals of learning and classics conditioning theory, operant conditioning theory and social learning theory, information processing theory, constructivist theory, brain-based learning theory, motivation and teaching							
PFE3102	**Instructional Technologies**		**2**	**0**	**0**	**2**	**3**
Program introduction and determination of course rules, Basic Concepts of Instructional Technology, Historical Development of Instructional Technology, New Trends in Learning-Teaching Approaches, Instructional Technologies as Tools and Materials, Selection, Design and Preparation of Field-Specific Teaching Materials, Selection, Design and Preparation of Field-Specific Teaching Materials, Selection, Design and Preparation of Instructional Materials, Tools and Materials Used in Teaching Environments, Evaluation of Teaching Materials							

5TH SEMESTER							
Course Code	**Course Name**	**Prerequisite**	**Theoretical**	**Application**	**Laboratory**	**Loan**	**ECTS**
CEV301	**Physical Basic Operations**		**4**	**0**	**0**	**4**	**5**
Analysis of unit systems to assist in unit design, solid-liquid separation processes: grids and screens, sand trap, sedimentation, filtration, flotation, gas transfer Processes: Aeration, Adsorption: Activated Carbon Adsorption, Mixing, Heat Transfer.							
CEV303	**Water Supply and Wastewater Removal**		**6**	**0**	**0**	**6**	**6**
Population estimation calculations, determination of water resources and compilation of water, water supply from groundwater, design of wells, transmission of water, reservoirs, network systems, network solutions with dead spot method, environmental health facilities. Wastewater removal plants. Importance of environmental health facilities, source and characteristics of water coming to environmental health facilities, classification of environmental health facilities. Discrete, combined and mixed system collection channels, system selection, comparison of systems. Factors affecting the selection of the canal network and the duct network. Miscellaneous information and specification records of canal networks, location, number and depth of street channels. Slope of street slopes and minimum and maximum speeds, channel length sections according to street slopes. Calculation of used water channels and flow in canals, Calculation of storm water channels. Calculation of combined system channels, operating principles of channel networks, connection pipes, chimneys. Rainwater nozzles, rainwater reservoirs, reverse siphons, full sluices, wastewater Promotion centers.							
CEV305	**Water Quality and Control**		**3**	**0**	**0**	**3**	**4**
Water quality, factors affecting the quality of water, importance of water quality parameters, creating an observation network, classification of water according to quality characteristics, sources of water pollution; natural factors, climate, geology, microbiological growth, density or temperature stratification, human-related factors, point sources, wastewater discharges, industrial discharges, harmful wastes, mine drainage, accident debris, regional sources, rainwater from agricultural areas, settlement rainwater from regions, soil development, removal of solids by burial, erosion, atmospheric depressions, pollution in surface waters, physical and chemical water analysis techniques, physical water quality parameters; temperature, color, turbidity, odor, taste, suspended solids, chemical and radiological water quality parameters; dissolved oxygen, pH, nitrogen, phosphorus, BOD, COD, TOK; undesirable substances in drinking and utility water; nitrogen species, heavy metals, phenolic substances, pesticides, disinfection by-products, hardness of water, total solids, conductivity, gases dissolved in water, radioactive properties, microbiological parameters in drinking and utility water, microorganisms, bacteria, viruses, protozoa, algae, indicator organisms, total coliform, fecal coliform, fecal streptococci, clostridium perfingens, proposed indicator organisms, dose effect assessment, treshold, total body load, time Counter-dose, synergy, Dose effect assessment, LC_{50} and LD50, bioaccumulation and bioconcentration, pollution responses, biodegradation, aerobic and anaerobic fragmentation, effect of pollution on rivers, biodegradation, effect of pollution on lakes, effect of pollution on seas, mathematical description of dissolved oxygen curve.							
CEV307	**Environmental Issues**		**2**	**0**	**0**	**2**	**2**
Ecological balance, Material cycles (carbon, azort, phosphorus, sulfur cycles), Hydrological cycle, Environmental Pollution and Its Causes, Water Pollution and Water Pollution Sources, Air Pollution and Types of Air Pollutants, Soil, Soil Structure, Soil Pollution and Its Causes, Phytoremediation techniques, Solid Wastes, Solid Waste Disposal Methods and Hazardous Wastes, Noise, Noise Sources and Control.							
CEV309	**Public and Workplace Health**		**2**	**0**	**0**	**2**	**2**
Factors Affecting Public Health, Public Health, Occupational Health, General Factors Affecting the Health of Employees, Effects of Working Environments on Occupational Health, Occupation diseases, transmission and transmission routes of infectious diseases, poisoning, health effects of air pollution, health effects of water pollution, treatment plants Health problems, health effects of noise, health effects of solid wastes, health effects from radiation and micropollutants, health effects from heavy metals.							

CEV319	**Wastewater Treatment Operation of Facilities**		**2**	**0**	**0**	**2**	**2**
Purpose and Legislation of Wastewater Treatment Plants, Wastewater Parameters, Sampling and Analysis, Operation of Pre-Treatment Units, Operation of Biological Treatment (Activated Sludge) Processes, Operation of Tertiary Treatment (Disinfection) Processes, Recovery of Treated Wastewater, Sludge Treatment (Stabilization and Dewatering), Use of Sewage Sludge in Soil, Odor Control in Wastewater Treatment Plants, Energy Management in Wastewater Treatment Plants, Equipment/Instrument Maintenance and Services, SCADA and Automation System, Occupational Health and Safety (OHS) Rules							
GNLCL	**Volunteering Activities**		**1**	**2**	**0**	**1**	**5**
General Information About Volunteering Activities, Basic Volunteering Areas, General Information About Volunteering Activities and Students' Thoughts, Volunteering Activities in Turkey, Volunteering Studies in the World, What is a Project? What is the Project Cycle? What are the Reasons for the Failure of Projects?, Project Development Related to Volunteer Work, Discussion of Student Projects, Implementation of Student Projects, Implementation of Student Projects, Implementation of Student Projects, Implementation of Student Projects, Implementation of Student Projects, Implementation of Student Projects							
CEV311	**Internship (Laboratory)**					**0**	**7**
The main areas of Environmental Engineering and Technology are Water Pollution and Control, Water and Wastewater Treatment Technologies, Air Pollution and Control, Management of Solid and Hazardous Wastes, Noise Pollution Control, Management of Industrial Wastes, Environmental Management and Environmental Impact Assessment (EIA), Occupational Health and Safety.							
CEV313	**Air Quality**		**2**	**0**	**0**	**2**	**3**
Earth and Atmosphere, Air Quality, Air Pollution Sources, Fuels, Combustion, Air Pollutants, Effects of Air Pollutants, Climate Change, Effects of Air Pollutants on Human Health, Effects of Air Pollutants on Plants, Air Quality Monitoring, Air Quality Monitoring Methods and Sampling, Climate Factors and Measurement, Prevention of air pollution.							
CEV315	**Building Technology**		**2**	**0**	**0**	**2**	**3**
Classification of Structures, Fortification Works, Soil Types, Soil Survey, Application - Rope Scaffolding, Excavation Works, Superficial Foundations, Deep Foundations, Bored Piles, Roofs, Roofing, Chimneys Dilatation Joint							
CEV317	**Geographic Information in Environmental Engineering Systems**		**2**	**0**	**0**	**2**	**3**
Introduction to Geographic Information Systems, Data Concepts in GIS, Basic Map Information, Examples of GIS Applications in Solving Environmental Problems, Overview of ArcGIS Technology, ArcMap Applications, Data Display Functions, Symbology, Tagging and Cartographic Production in ArcMap, Querying and Reporting of Geographic Data, Data Logging in ArcMap, Geographic Analysis, ArcCatalog Applications Data Transformation Functions, ArcToolBox Applications, Solid Waste Landfills GIS Application in Site Selection.							
PFE5101	**Classroom Management**		**2**	**0**	**0**	**2**	**3**
Basic concepts related to classroom management, classroom communication and interaction, definition of classroom management, different aspects of the concept of classroom management without providing discipline in the classroom and characteristics, in-class and out-of-class factors affecting the classroom environment, classroom management models, developing and implementing rules in the classroom, physically organizing the classroom, management of undesirable behaviors in the classroom, time management in the classroom, classroom organization, creating a positive classroom environment suitable for learning							

6TH SEMESTER							
Course Code	**Course Name**	**Prerequisite**	**Theoretical**	**Application**	**Laboratory**	**Loan**	**ECTS**
CEV300	**Basic Chemical and Biological Processes**	He has taken the continuation of the CEV301 coded Physical Basic Operations course be.	**4**	**0**	**0**	**4**	**5**
Mass Balance, Chemical Reaction Kinetics and Reactors, Balancing-Neutralization, Coagulation-Flocculation, Hardness Removal, Ion Exchange, Chemical Treatment-Chemical Precipitation-Chemical Oxidation, Disinfection, Biological Treatment, Sludge Treatment Methods, Advanced Treatment Techniques.							
CEV302	**Basic Operations Lab.ᵘ**	CEV300 coded Chemical and Biological Basic Processes course to be receiving.	**0**	**0**	**3**	**1.5**	**5**
Inlet, Sedimentation Tanks Hydraulics, 2. Species precipitation experiments, 3. Species sedimentation tests, filtration tests (deep bed filter, filterability index), aeration, adsorption, reactor applications, jar-test, ion exchange, breaking point chlorination, biological treatment, activated sludge and anaerobic treatment.							
CEV304	**Drinking Water Treatment**		**4**	**0**	**0**	**4**	**5**
Introduction to water treatment, purpose of water disposal, drinking water standards, characteristics of water resources and source selection, facility site selection, purpose and basic operations in water disposal, purge flow diagrams, deposition, effect of deposition on water quality, aeration, gas transfer, calculation and organization of aerators, rapid mixing and flocculation, mechanism of flocculation, flocculants and auxiliaries, factors affecting the efficiency of flocculation, flocculation Calculation and organization of parts, combined systems, Sedimentation, The place of sedimentation ponds in drinking water liquidation, regions and flow patterns in sedimentation basins, Basis of sedimentation, short circuits and stability, sizing principles, Filtration, the purpose of filtration and its place in water liquidation, the mechanism of filtration, comparison of slow and fast sand filters, hydraulics of filtration, Pressure diagrams in filters, dynamics of filtration, backwashing and organization of rapid sand filters, pressurized filters, upstream filters, slow sand filters, filtration sizing principles, Disinfection, disinfection methods chlorine disinfection, ozone disinfection, odor and taste control, taste and odor control methods, taste and odor removal in facilities, iron and manganese removal, removal methods (aeration, holding, filtration, chemical oxidation, flocculation, precipitation, ion exchange), hardness removal (water softening process), hardness removal methods (lime-soda procedure, treatment with sodium hydroxide, softening with sodium phosphate, with ion exchange hardness removal), ion exchange, cation and anion exchangers, aggressive properties and stabilization of waters.							
CEV306	**Water Supply and Wastewater Removal of YIUᵘ**	Continuation of CEV303 coded Water Supply and Wastewater Removal course have received.	**1**	**2**	**0**	**2**	**5**
The scope of the course is the supply of drinking water to the settlement center, which is known to the population values for the past, the transmission of the supplied water from the source to the settlement center, the distribution of this water to the city, the separate system sewerage network project of the settlement and the removal of the stormwater by making the stormwater project. In the course content, introduction of residential area, population and flow calculations, sizing of water intake structures, project design of the transmission line, sizing of the reservoir, project design of the distribution network, creation of sewerage project network account plan and spreadsheet, creation of rainwater area ephemera, rainwater project Making the account plan and creating the account table, drawing the profiles of wastewater and stormwater channels, determining the location of the wastewater treatment plant on the general situation plan and transmitting the wastewater to the treatment plant.							

CEV308	**Measurement Information**		**2**	**0**	**0**	**2**	**2**
Units of Measurement, Scales, Errors, Simple Measuring Instruments and Simple Measurements, Simple Intake Methods, Area Calculations, Volume Calculations, Height Measurements (Leveling).							
ELD302	**Critical Thinking**		**2**	**0**	**0**	**2**	**2**
Topics related to informal logic such as the concept of logical inference, philosophical discussion patterns and general criteria, logical fallacies, and the analysis of philosophical arguments in texts.							
CEV310	**Quality Management Systems and Accreditation**		**2**	**0**	**0**	**2**	**2**
Basic Definitions (Quality, accreditation, conformity assessment, conformity assessment body, metrology, measurement standard, traceability, repeatability, reproducibility, reference material, certified reference material, calibration, proficiency test, etc.), International Dimension of Accreditation (Importance of accreditation in trade, legal field, voluntary field, developments necessitating the accreditation system, structuring in the European Union, structuring in the world, structuring in Turkey, Europe Accreditation Association, International Laboratory Accreditation Association, International Organization for Standardization), Laboratory Accreditation Criteria; Competence of Testing and Calibration Laboratories General Requirements for (Basic document for Testing and Calibration Laboratories; TS EN ISO / IEC 17025, EA Guide Documents, Operation of Quality Management System), Method validation, Measurement uncertainty calculation, PT and LAC tests, Laboratory Accreditation Audit (Accreditation process), Scope of Accreditation in Environmental Laboratories.							
CEV312	**Urban Environment**		**2**	**0**	**0**	**2**	**2**
Urbanization, History of Urbanization, Reasons for the Establishment of Settlements, Establishment Places of Settlements, Settlement Stages, Rural and Urban Settlements, Factors affecting sustainable urban development and shaping the city, Settlement typologies, ecological city design and planning process, city and regional planning principles, Principles of Environmentally Sensitive Planning; Healthy Cities, Planning and Stages, Density, Population and Building Density, KAKS, TAKS, Building Zoning Schemes, Adjacent, Block, Discrete Layouts and Urban Environment Relations, Urban Zones (Zoning) and Urban Environment Relations, Principles of Environmentally Sensitive Design of Residential Areas, City Center and Center Grading, EKOMIA, Urban Reinforcement and Reinforcement Areas, Commercial Areas, Transportation, Parking, Green Areas, Parks, Children's Gardens, Educational and Cultural Facility Areas, Site Selection and Distribution, Ecological Regulation Principles of Urban Facilities, Urban Economy and Problems, Production and Presentation Theory, Consumption and Demand Theory, Economic Markets and Ecological Urban Planning Relations, Social Rules and Rules of Law, Relations between Sources of Law and Urban Environmental Resources, Basic Principles of Building and Zoning, Legal Rules Applied to Immovable Properties, the relationship between these rules and the urban environment, the place of environmentally sensitive planning within the Property Right, Community Interest and Zoning Law, the Zoning Plan and Related Institutions, Laws and Regulations Related to Building and Building Order, Discussing the effects of environmental pollution on the city in a close urban environment with students and the importance of environmental planning in the prevention of environmental pollution and establishing its relationship with urban planning							
CEV314	**Soil Mechanics**		**2**	**0**	**0**	**2**	**3**
Soil Problems in Civil Engineering, Soil Index Properties, Soil Classification, Soil Structure, Permeability and Measurement, Darcy's Law, Two-Dimensional Stable Current, Infiltration and Flow Networks, Soil Compaction, Stress Analysis, Consolidation							
CEV316	**Environmental Modeling**		**2**	**0**	**0**	**2**	**3**
What is Modeling?, Sustainable Development, Environmental Management, Solving Environmental Problems, System Characterization, Model Types, Mathematical Modeling, Simulation, Optimization, Transporting Pollutants in Fluid Media, Flux, Fick's Law, Conservation of Momentum, Conservation of Energy, Conservation of Mass, Types of Pollutant Sources.							
CEV318	**Interdisciplinary Studies in Engineering**		**2**	**0**	**0**	**2**	**3**
Literature review, methodology, findings and results on a specific subject prepared according to the thesis format and presented to the department, the study prepared in poster format							

Presenting and defending in front of the faculty members and members of the department							
CEV320	**Small-Scale Wastewater Treatment Plants**		**2**	**0**	**0**	**2**	**3**
Design Principles of Small Scale Wastewater Treatment Plants, Selection of Site and Process Type, Preparation of Feasibility and Process Calculations Report, Layout Plan and Hydraulic Profile, Equipment Selection Criteria, Preparation of Application Projects, Project Approval Procedures, Tender Documents and Tender Procedures, Construction Supervision Principles, Preparation of Progress Payments, Tests and Commissioning Studies, Preparation of As-Built Projects, Provisional Acceptance Procedures, Final Acceptance Procedures							
TKNBAG	**Technology Addiction**		**2**	**0**	**0**	**2**	**2**
Discussion of the concept of dependency; Types of Addiction and Related Theories; Smartphone Addiction-Internet Addiction; Addiction to Community Life and Individual Life Effect; Technology Addiction and the Relationship between Daily Life and Quality of Life; Technology Addiction, Youth and Family; Effects and Consequences of Technology-Internet Addiction; Technology What are the Mechanisms to Prevent Addiction and Ways of Coping; Digital Privacy and Cybersecurity							
PFE6101	**Measurement and Evaluation in Education**		**3**	**0**	**0**	**3**	**4**
The place and importance of measurement and evaluation in education, basic concepts related to measurement and evaluation, the qualities required to be found in measurement tools (reliability, validity, usefulness), measurement tools and features used in education, tools based on traditional approaches (written exams, short-answer exams, true-false type tests, multiple-choice tests, matching tests, oral polls, homework), tools for getting to know the student in a multifaceted way (observation, interview, performance evaluation, student product file, research papers, research projects, peer evaluation, self-assessment, attitude scales), basic statistical operations on measurement results, evaluation of learning outcomes, grading, developing measurement tools related to the field.							

7TH SEMESTER							
Course Code	**Course Name**	**Prerequisite**	**Theoretical**	**Application**	**Laboratory**	**Loan**	**ECTS**
CEV401	**Solid Wastes and Control**		**4**	**0**	**0**	**4**	**4**
Solid wastes, importance and definitions, Collection of solid wastes, Separation of solid wastes, Reuse and recovery of solid wastes, Recycling of solid wastes, Storage of solid wastes: types of landfills, Storage of solid wastes: types of storage, Composting of solid wastes, Use of compost, Incineration of solid wastes, Incineration methods, Prolysis and other disposal methods, Control of animal wastes, Comparison of solid waste disposal methods.							
CEV403	**Wastewater Treatment**		**4**	**0**	**0**	**4**	**5**
An Overview of Wastewater Engineering, Components of Wastewater, Calculation Principles of Domestic Wastewater Flow Rates and Loads, Process Analysis and Selection, Examples from Domestic Wastewater Treatment Plants in Turkey, Grates and Screens, Sand Traps, Flow Control Equipment (Parshall Weir), Sedimentation Ponds, Wastewater Promotion, Fundamentals of Biological Treatment, Suspension Growth Biological Treatment Processes, Activated Sludge Process, Oxidation Trench, Sequential Batch Reactors (SBR), Package Treatment Systems, Stabilization Ponds (Lagoons), Connected Growth Biological Treatment Processes, Drip Filters, Biodiscs (RBC), Advanced Wastewater Treatment, Disinfection Processes, Sewage Sludge Control.							
CEV405	**Drinking Water Treatment**	CEV304 Coded Drinking Water Treatment Course to have received the continuation.	**1**	**2**	**0**	**2**	**5**
Evaluation of water quality and targeted treatment rates and determination of alternating flow schemes, calculation of minimum, average and project flow rates, Dimensioning and drawing of the ventilation unit, Sizing and drawing of fast and slow mixing units, Sizing and drawing of settling units, Filtration Sizing and drawing of units, Sizing and drawing of ion exchange units, Sizing and drawing of chlorination units, Making hydraulic calculations, hydraulic profile, general layout and site plan dimensioning and drawing.							
CEV407	**Air Pollution and Control[u]**		**3**	**0**	**1**	**3.5**	**4**
Definition, types, effects and sources of air pollution, air pollution legislation, meteorology, smoke behavior and dispersion, chimneys and air pollution control, air Polluting Sources, Pollutant and Source Inventory, Particulate Matter (Dust) Control, General Principles in the Control of Gases and Vapors, Control of Sulfur Oxides (Desulfurization), Nitrogen Oxides and Control Methods, Air Pollution from Vehicles, Odor Problem and Control.							
CEV409	**Entrepreneurship Culture**		**1**	**0**	**0**	**1**	**1**
The Concept of Entrepreneurship and the Scope of Entrepreneurship, Historical Development and Basic Dimensions of Entrepreneurship, Fundamentals of Entrepreneurial Thinking, Management and Management, Passion for Entrepreneurship, Formation of Entrepreneurship Culture, Motivational Factors in the Formation of Entrepreneurship Culture, Types and Characteristics of Entrepreneurship, Basic of Entrepreneurship functions, Obstacles and Constraints in Entrepreneurship, Stages of Business Establishment Process of Entrepreneurs, Women Entrepreneurship, Theoretical Foundations of Entrepreneurship Culture in Turkey and the Place of SMEs, Entrepreneurship Problems and Solutions in Turkey, Future of Entrepreneurship Culture.							
CEV411	**Internship (Office)**					**0**	**7**
Main areas of Environmental Engineering and Technology, Water Pollution and Control, Water and Wastewater Treatment Technologies, Air Pollution and Control, Solid and Hazardous Wastes Its management is in the form of Noise Pollution Control, Industrial Waste Management, Environmental Management and Environmental Impact Assessment (EIA), Occupational Health and Safety.							

CEV413	**Noise Pollution and Control**		**2**	**0**	**0**	**2**	**3**
Basic concepts about sound and noise and its physical properties, Noise sources and types, Environmental noise, Noise measurement, Propagation of Noise, Effects on Human Health, Noise control techniques, examination of the relevant legislation.							
CEV415	**Weather Analysis and Forecasting Technique**		**2**	**0**	**0**	**2**	**3**
Introduction, Determination of Monitoring Objectives, Priority Air Pollutants, Air Quality Monitoring Methodologies, Passive Samplers for Gaseous Pollutants, Active Samplers, Automatic Analyzers, Remote Sensors, Bioindicators, Passive Sampling Methodologies, Quality Reliability / Quality in Sampler Based Monitoring Networks Control.							
CEV417	**Control of Sewage Sludge**		**2**	**0**	**0**	**2**	**3**
Sewage Sludge Definition, Properties and Sludge Sources, Calculation of the Amount of Sewage Sludge, Flow Charts in the Processing of Sewage Sludge, Sewage Sludge Pumping and Conveying, Pre-Treatments, Thickening of Sludge, Sludge Stabilization, Sludge Conditioning Process, Dewatering of Sludge, Final Disposal Methods, Disposal of Sewage Sludge in the Field, Legal Legislation on Sewage Sludge Disposal							
CEV419	**Hazardous Waste Management**		**2**	**0**	**0**	**2**	**3**
Identification, sources, classification and effects of hazardous and hazardous wastes, Toxicity and risk assessment of hazardous and hazardous wastes, Hazardous and harmful wastes transportation and storage, Physical, chemical and biological treatment methods of hazardous and harmful wastes, Examination of relevant legislation,							
CEV421	**Renewable Energy Sources**		**2**	**0**	**0**	**2**	**3**
Renewable energy sources; Solar energy systems; Wind energy systems; Hydropower; Biomass; Wave energy; Geothermal energy; Hydrogen energy.							
PFE7101	**Guidance and Special Education/*Guidance and Special Education***	**3**	**0**	**0**	**0**	**3**	**4**
CEVOEP101	**Cooperative Education Course 1/*Joint Education Program 1***	**0**	**0**	**0**	**0**	**0**	**30**

8TH SEMESTER							
Course Code	**Course Name**	**Prerequisite**	**Theoretical**	**Application**	**Laboratory**	**Loan**	**ECTS**
CEV400	**Industrial Contamination Control**		**3**	**0**	**0**	**3**	**4**
Industrial contamination definitions, process profile, classification on the basis of contamination, sampling, contamination profile, information retrieval from industries, industrial wastewater management, discharge standards, pre-treatment practices, common treatment, control and inspection, industrial structure and related environmental legislation in Turkey and examination of exemplary industries.							
CEV402	**Wastewater Treatment**	CEV403 coded Wastewater Treatment course to have received the continuation.	**1**	**2**	**0**	**2**	**5**
Flow calculation, suggestion of wastewater treatment plant flow chart to provide discharge standards, sizing and drawing of physical treatment units, sizing and drawing of biological treatment unit (Activated Sludge, Stabilization pool, natural treatment), final sedimentation pond sizing and drawing, determination and dimensioning of flow chart for the control of sewage sludge, sizing and drawing of sludge disposal units, hydraulic calculations, hydraulic profile, piping, general layout Drawings.							
CEV404	**Environmental Engineering Applications** [4]		**3**	**3**	**0**	**4.5**	**7**
Determining the subject of study, Planning the experiment/theory study, Resource research, Organizing the source scan, Creating the test conditions , Experimental/theoretical Conducting studies, Evaluation of the findings obtained, Thesis writing, Presentation preparation.							
CEV406	**Environmental Impact Assessment**		**2**	**0**	**0**	**2**	**4**
Providing information about the definition of EIA, the concept and history of EIA, Understanding the importance of EIA in the concept of environmental management, Obtaining information about the reasons and stages of the implementation of the EIA regulation, Gaining the ability to examine and apply the EIA regulation, Gaining the ability to prepare an EIA evaluation report, Gaining the ability to prepare a project introduction file, Technical and administrative to be followed during the preparation of the EIA report and project introduction files. Providing information about the steps, Gaining research skills during the preparation of the EIA report, Providing the necessary materials during the preparation of the EIA report, Interdisciplinary team To gain the ability to work, to obtain information about the reasons and stages of the implementation of the Qualification Communiqué,							
CEV408	**Environmental Law**		**2**	**0**	**0**	**2**	**3**
General Definitions of Law, Concept of Person and Rights in Law, Environmental Legislation, Environmental Law, Other Laws Related to the Environment, Regulations and Regulations Related to the Environment, Environmental Legislation Practices in Turkey, Environmental Legislation Practices in Central Administration and Local Governments, Environmental Law and Examination of Environmental Problems							
CEV410	**Marine Pollution and Control**		**2**	**0**	**0**	**2**	**4**
Marine ecosystem, physical-chemical properties of seawater, causes of marine pollution, marine discharge systems, coastal water quality standards, dilution calculations, hydraulic design of discharge lines, hydrodynamic loads affecting discharge lines, structural design of discharge lines, thermal discharges, brine discharges, environmental of marine discharges							

Effects.							
CEV412	**Air Pollution Modeling**		**2**	**0**	**0**	**2**	**3**
Introduction to Air Pollution Modeling, Basic Concepts and Definitions of Air Pollution, Modeling Approach in Air Pollution Determinations and Modeling Phase Problems That Can Be Encountered, Artificial Neural Networks, Fuzzy Logic, Introduction of EPA, ISCST3 Models and Sample Air Pollution Modeling Studies Related to These Models.							
CEV414	**Environmental Analysis Techniques**		**2**	**0**	**0**	**2**	**3**
To be able to define the usage area of the laboratory in environmental engineering and to list the rules and safety practices to be followed in the laboratory, To be able to outline the working principles of the analyzers used in the laboratory within the scope of environmental engineering, To be able to make solution preparation calculations and solution preparation function at the desired concentration from solid and liquid substances, To be able to apply the parameters used to reveal water quality in environmental engineering. and analysis To be able to perceive the necessity of using accurate and sensitive methods in laboratory applications.							
CEV416	**Anaerobic Treatment**		**2**	**0**	**0**	**2**	**3**
Introduction to anaerobic treatment. Advantages, disadvantages, biochemistry and microbiology of anaerobic treatment. Environmental factors. Inhibition and control in anaerobic treatment. Anaerobic treatment kinetics and modeling. Process monitoring and control: Anaerobic suspended and surface growth processes. High-speed anaerobic reactors. Bicarbonate Alkalinity. Toxicity. Sulfur production. Application of anaerobic treatment to industrial wastewater.							
CEV418	**Biological Nutrient Removal**		**2**	**0**	**0**	**2**	**3**
Types of nitrogen - Effects of nitrogen - Sources of nitrogen - Stoichiometry and kinetics of the nitrification process - Modeling of the nitrification process - Design of nitrification - Stoichiometry and kinetics of the denitrification process - Modeling of the denitrification process - Design of denitrification - Nitrification and denitrification systems Modeling approaches - Process configurations for biological nutrient removal - Design of single mud systems							
CEVOEP201	**Cooperative Education Program Course 2**		**0**	**0**	**0**	**0**	**30**
PFE8101	**Special Education Methods**		**3**	**0**	**0**	**3**	**4**
PFE8102	**Teaching Practice**		**1**	**8**	**0**	**5**	**10**