

**2019 CURRICULUM**  
**AGRICULTURAL ECONOMICS DEPARTMENT COURSE CONTENTS**

**1. SEMESTER**

**Botany (Compulsory - ECTS 3)**

Classification of botanical science, Cytology (cell science), Cell organelles, Nucleus, Chromosomes, Ergastic substances, Cell wall, chemical structure and differentiation, Passages, Plasmodesma, Cell shape and size, Cell division, Histology (tissue science), Intercellular spaces, Classification of tissues, Meristems, Continuous tissue, Protective tissue, Periderm, Parenchyma, Supportive tissue, Transmission tissue, Secretory tissue, Organography (organ science), Root, Stem, Leaf, Flower, Fruit and seed.

**General Chemistry (Compulsory - ECTS 3)**

Properties of matter, SI units, electron structure of atoms, periodic table, properties of atoms, chemical bonds and theories, mole concept, stoichiometry, reduction-oxidation reactions, gases, solids, liquids, kinetic theory, chemical equilibrium, acids and bases, solutions and physical properties.

**Physics (Compulsory - ECTS 4)**

Physics and measurement, vectors, motion in one dimension, motion in two dimensions, Newton's laws of motion, frictional force, dynamics of uniform circular motion, universal law of gravitation, is and energy, conservation of energy, conservation of linear momentum, collisions, static equilibrium of a rigid body, rotation of a rigid body about an axis, rotational motion, angular momentum and angular velocity, conservation of angular momentum, temperature, heat and laws of thermodynamics, kinetic theory of gases.

**Climate Information (Compulsory - ECTS 4)**

The purpose and subject of climate information; Structure of the atmosphere, atmospheric pollutions and their damages to crops, Characteristics of agricultural meteorological stations, agrometeorological observations and phenology observations, Relationship between agricultural meteorology and economy, Radiation and its properties, radiation laws, radiation balance sheet, Effects of major meteorological parameters on plants, animals and crop yields, Relationships between plant diseases and pests and meteorological parameters, Evapotranspiration and measurement methods Leaf surface, leaf index and agronomic importance; Agrometeorological forecasts, Meteorological events that negatively affect agricultural production and methods of struggle, Biological effects of light, Remote sensing and agronomic importance, Climate of greenhouses and animal shelters.

**General Economics (Compulsory - ECTS 4)**

Definition and subject of economics, basic concepts in economics, needs and properties, goods and services, utility, factors of production, income, savings, investment, economic systems, demand, supply and market, consumer balance, production theory, cost theory, perfect competition market, imperfect competition market, national income, employment and its types and money and its functions.

**Sociology of Village (Compulsory - ECTS 4)**

Branches of Sociology, Relations with other branches of science, Various views and theories explaining social events, Definition of village, village distinctions in various countries, Definition of village sociology, Examination of various universal characteristics of village societies, Historical development of Sociology and Village Sociology in the world and in Turkey, The importance of village sociology, areas of Village-Urban Differentiation, Duties of the Village, Internal relations in villages, external relations, Village-city relations, Administrative (Administrative) Structure in the Village, Duties and Powers of the Mukhtar, Optional compulsory works in the village, The place and importance of the village population in the country population, Characteristics of Village Population, Characteristics of Village Settlement, Physical, topographical, biological characteristics of rural settlement, Village Settlement Types in terms of Form (Collective, Scattered), Features, advantageous and disadvantageous aspects, Social Stratification, Social Stratification and Production Relations in Village Society, Social Mobility, Causes of social mobility, types, institutions affecting social mobility and the results of social mobility, Family as a social phenomenon, family forms, family duties, marriage, family in village society, village-urban family differences, thought, religion, value judgments, beliefs, attitudes and behaviors, basic characteristics in village society.

### **Transition to University Life (Compulsory - ECTS 1)**

Through this course, it is aimed to ensure the adaptation of first year students who have just stepped into the university to university life through scientific, artistic and cultural activities. It is aimed to gain the awareness of being a university student, to recognize and benefit from the units of the university, to participate in social and cultural activities. Within the scope of the course, the concept of "university" will be emphasized, problems and solutions that may be encountered during university life will be discussed, university administrative and academic units and rules will be introduced.

### **Mathematics I (Compulsory - ECTS 3)**

Sets, natural numbers, integers, rational numbers, real numbers, intervals, inequalities, plane and plane subsets and functions.

### **Atatürk's Principles Inc. History I (Compulsory - ECTS 2)**

Concept Information, Ottoman Empire and its Collapse, Tanzimat and Constitutional Monarchy Periods, Intellectual Movements in the Last Period of the Ottoman State, Important Military and Political Events Leading to the Disintegration of the Ottoman State, World War I, Secret Sharing Projects during the First World War and Treaties Ending the War, Mondros Armistice and Occupations, The Birth of the National Struggle Movement and National Organizations, The Birth of the National Struggle Movement and National Organizations, National Struggle Period and Mustafa Kemal Atatürk's Life, Mustafa Kemal Pasha's Exit to Samsun, Amasya Declaration and Erzurum Congress, Sivas Congress and Mustafa Kemal Pasha's Arrival in Ankara, Opening of the Last Ottoman Parliament and the Declaration of Misak-ı Milli, Grand National Assembly Period, Uprisings in the National Struggle and Kuvay-ı Milli.

### **Turkish Language I (Compulsory - ECTS 2)**

What is language? The place and importance of language in the life of a nation as a social institution; Language-culture relationship, the place of Turkish language among the world languages, the development and historical stages of Turkish language, the current status and spread areas of Turkish language, the sound structure of Turkish, spelling rules and the application of punctuation marks, general information about composition.

## **Career Planning (Compulsory - ECTS 2)**

With the Career Planning Course, students can improve themselves by internalizing career-related concepts, learning how to benefit from career centers, becoming aware of their personal characteristics, recognizing different sectors where they can work as interns, professionals or volunteers. Students get to know sectors such as public sector, private sector, academia, non-governmental organizations, comprehend the differences between sectors and see the working life in these sectors. Developing Fine Skills: Raising awareness about the importance of developing fine skills in the career process. Exploring Activities to Contribute to Career Planning: Informing students about activities outside their studies that can contribute to their careers throughout their university life. Recognition of International Exchange Programs: Raising students' awareness about the contributions of international exchange programs to personal development and academic life and their positive reflections on career plans.

## **2.SEMESTER**

### **Zoology (Compulsory - ECTS 3)**

Differences between animals and plants, sub-disciplines of zoology, scientific method, common characteristics of living things, characteristics of animal cells, cell structure, metabolism, tissues, one-celled and multicellular animals, reproduction and development, basic features of heredity, molecular explanation of heredity, protein synthesis, gene functioning, evolution rules, relations of animals with the environment, effects of living and non-living factors on animals.

### **Measurement Information (Compulsory - ECTS 4)**

Definition, scope and history of surveying knowledge, vertical descent and ascent tools, measurement of areas, scale rulers and scale, calculation of areas, changing the scale of the plan, measuring the area from drawn plans, measuring vertical distances, geometric and trigonometric height measurements, tools and miras that give horizontal observation direction, leveling instruments and parts, control and correction of leveling instruments, types of leveling, point leveling, transverse and longitudinal profile leveling, drawing of profiles, surface leveling with radial and grid of squares methods, evaluation of surface leveling measurement results and drawing of leveling curves, theodolites and their parts, control and correction of theodolites, surface leveling with theodolites

### **Agricultural Ecology (Compulsory - ECTS 4)**

General information about ecology, ecological concepts, ecosystem elements, nutrient balance, energy flow, biochemical circulation, ecosystem concept, agroecosystem concept and evolution, emergence of animal and plant culture forms, climate and soil factors and their relations with plant and animal cultivation. Environmental issues such as air, water, solid waste, natural resources are covered. All kinds of pollutants such as atmospheric pollution, pesticides, fertilizers, wastes are the subject of ecology.

### **History and Deontology of Agriculture (Compulsory - ECTS 4)**

Transition from Ashardan in Human Life, Transition from Family Economy to World Economy, Stages of Utilization of Soil, Agriculture in Ancient Civilizations, Agriculture in Our Recent History

Agriculture, Effects of Industrial Revolution on Agriculture, 1929-1930 World Economic Crisis and its Effects on Turkish Agriculture, Atatürk and Agriculture, Agricultural Sector in the Republican Period in Turkey, Definition of Agricultural Engineering, Scope and Related Legislation, Professional Organizations of Agricultural Engineers, Concept of Ethics, Classification of Ethics and Ethical Theories, Agricultural Ethics, Sustainable Agriculture and Input Use, Food Safety and Security, Soil and Water Pollution, Ethical Aspects of Biotechnology, Status of Agricultural Workers, Animal Rights, Scientific Research Ethics in Agriculture.

#### **Micro Economics (Compulsory - ECTS 4)**

Consumer Theory, Demand Theory, Production Theory, Cost Theory, Perfect Competition Market Equilibrium and Price Formation, Perfect Competition Market and Firm Equilibrium, Monopoly Market, Monopolistic Competition Market, Oligopoly Market, Production Factor Demand, Labor Market, Interest, Rent, Profit Formation, General Equilibrium and Welfare Theory, Market Failures and Discussion

#### **Rural Development (Compulsory - ECTS 4)**

What is rural development? Basic concepts in rural development. Basic characteristics of rural areas. Relationships between rural development and other branches of science. Relations between rural development and agricultural development, rural industry, agricultural policy and development economics, Determination of study areas and study subjects in rural development, Basic features of rural development policies and practices, Potential identification and inventory studies in rural development, Problem analysis techniques in rural development studies, priority setting, risk analysis and solution approaches, Community dynamics in rural development, women's dimension and gender balanced development, Development of human resources in rural development, Participation in rural development, participatory approaches and implementation techniques, Changes in the field of rural development in the world and in the European Union, Discussion of rural development policies, practices and results in Turkey, Project development for rural development and basic concepts and elements to be considered in project development.

#### **Digital Literacy (Compulsory - ECTS 3)**

The concept of digital transformation in higher education, the roles and skills expected to be undertaken by lecturers in higher education in digital transformation, recognizing some of the new learning approaches, digital environments suitable for new learning approaches, various types and characteristics of interaction in digital environments, basic skills related to communication design in digital environments.

#### **Mathematics - II (Compulsory - ECTS 3)**

Inductive functions; one-to-one and overlapping functions, increasing and decreasing functions, absolute value function, exact value function, composite function, exponential and logarithmic functions, trigonometric functions and inverse trigonometric functions. Limits and continuity; limits of functions, continuous functions and their properties. Derivative: definition and basic properties of derivative, higher order derivatives.

#### **Atatürk's Principles of Inc. History - II (Compulsory - ECTS 2)**

Kuva-yı Milli, Entente States' Turkey Sharing Projects, I. İnönü War, II. İnönü War, Great Offensive, Mudanya Armistice, Turkish Revolution, Constitutional Movements, Political Parties after the National Struggle, Transition to Multi-Party Period, Reactions Against the

Regime, Revolutions in the Field of Law, Revolutions in the Field of Education,  
Revolutions in the Social Field,

Atatürk Era Foreign Policy, 1930-1938 Period Turkish Foreign Policy, Atatürk's Principles and Revolutions, Atatürk's Economic Policy, 1930-1938 Period General Situation.

### **Turkish Language - II (Compulsory - ECTS 2)**

Basic features of oral language and oral communication. Oral expression; basic features of speaking skill (using natural language and body language); basic principles of a good speech; basic features of a good speaker (emphasis, intonation, pause; diction, etc.). Unprepared and prepared speech; stages of prepared speech (selection and limitation of the subject; determination of purpose, point of view, main and side thoughts, planning, writing the text; presentation of the speech). Types of speeches: (mutual conversations, interviews, introducing oneself, answering questions, celebrating an important event such as New Year, birth, holiday, etc., radio and television speeches, participating as a speaker in different cultural and artistic programs, etc.). Making unprepared speeches on different topics, working on speech samples and oral expression practices, correcting language and expression mistakes in speeches.

### **3. SEMESTER**

#### **Soil Knowledge (Compulsory - ECTS 4)**

Definition of soil, Phases of soil, Soil formation processes and factors, Soil classification, Physical, Chemical and Biological properties of soil, Plant nutrition, Fertilizers and fertilization, Soil conservation and Soils of Turkey.

#### **Plant Protection (Compulsory - ECTS 4)**

Phytopathology: History, development, definition and classification of phytopathology and plant diseases. General information about non-parasitic (unfavorable meteorological factors, airborne waste materials, unfavorable soil factors) and parasitic (fungi, viruses, bacteria, weeds, phytoplasma, spiroplasma) disease agents. Methods of controlling these disease agents. Information about some diseases and some important weeds which are very important for our country.

Entomology: Major animal groups of agricultural importance, external and internal structure systems of insects, development and diapause in insects, classification of insects, some important pests in our country and control methods used against them.

#### **Agricultural Machinery (Compulsory - ECTS 4)**

Power sources in agriculture, internal combustion engines, engine terminology, working principles of engines, engine fuels and oils, fuel systems in engines, lubrication and cooling systems in engines, transmission systems in engines, tillage tools and machines, sowing and planting machines, fertilizing machines, agricultural war machines, harvesting machines, bale and silage machines, threshing machines.

#### **Agricultural Structures and Irrigation (Compulsory - ECTS 4)**

Introduction to cultural technique, Planning of rural settlement and business location, Environmental conditions in agricultural structures, Agricultural business structures and planning principles, The importance and necessity of irrigation, Water-Yield Relations, Turkey's soil and water resources potential and sufficiency, Soil-Water-Plant

relations, Infiltration, Evapotranspiration, Effective rainfall, Irrigation efficiencies, Irrigation interval and irrigation water quantity, Irrigation methods.

### **Statistics (Compulsory - ECTS 4)**

Basic Concepts, Descriptive Statistics (Frequency tables, Figures and graphs), Location and Distribution Measures, Probabilities, Population Distributions, Sampling Plans and Sample Distributions, Confidence Limits, Hypothesis Tests, Non-parametric Tests, Regression and Correlation.

### **Technical Drawing (Compulsory - ECTS 4)**

The purpose and importance of technical drawing, Introduction of tools and equipment used in drawing, Explanation of the sequence of operations to be applied when drawing technical drawings; Teaching the use of tools and equipment such as pencils, compass sets, squares, T-rulers, drawing tables and templates, Sizes and folding of drawing papers, standard writing, line types, rules to be applied when drawing pictures, writing area and writing process, making titles, learning various types of lines, examples of correct use of lines, Geometric drawings, Obtaining views, Perspective drawing, Section drawing, Dimensions and dimensioning.

### **Macro Economics (Compulsory - ECTS 4)**

Definition and elements of macroeconomics, An Overview of Macroeconomic Analysis, Introduction to Determination of Aggregate Demand, Macro Consumption Theories and Investment, Money Market, Aggregate Demand, Aggregate Supply, Economic Policy, International Economic Relations, Balance of Payments Analysis, International Monetary Relations, Inflation and Unemployment, Budget Deficit, Deficit Financing, Borrowing, Money Supply and Inflation, Economic Growth, Fluctuations in Growth Rate, Borrowing in Developing Countries, Debt Crisis and Debt Management, Macroeconomic Schools.

### **Foreign Language I (Compulsory - ECTS 2)**

Personal pronouns, Verb "to be", Have/has got, There is/are, Present progressive tense, Adjectives Quantity, Simple present tense, Modals, Comparatives and superlatives.

## **4. SEMESTER**

### **Field Crops (Compulsory - ECTS 4)**

The subject and historical development of field agriculture, the structure of agriculture in the world and in our country, agricultural production in the world and in our country, classification of field crops, ecology, seed, field farming systems, tillage, fallow, sowing, crop rotation, fertilization, nitrogen fixation, irrigation, weeds and their control, harvesting, breeding of field crops; cereals, industrial crops, edible grain legume and forage crops cultivation.

### **Horticulture (Compulsory - ECTS 4)**

Classification of horticultural crops, the value of Turkey in terms of horticulture, biological characteristics of horticultural crops, ecological requirements of horticultural crops, physiological characteristics of horticultural crops, propagation of horticultural crops, fruit, vegetable garden and vineyard establishment, annual maintenance works.

### **General Animal Science (Compulsory - ECTS 4)**

Definition and importance of animal husbandry. Animal husbandry and problems in Turkey. Dairy cattle, beef cattle, sheep breeding, goat breeding, beekeeping, animal reproduction.

### **Food Science and Technology (Compulsory - ECTS 4)**

Composition of Foods, Cereal Technology, Vegetable Oil Technology, Meat and Meat Products Technology, Milk and Dairy Products Technology, Fruit and Vegetable Processing and Evaluation Technique, Fermentation Technology, Tea Processing Technique, Sugar Technology.

### **Occupational Health and Safety (Compulsory - ECTS 4)**

The concept and rules of occupational health and safety, historical development of occupational health and safety, the status of occupational health and safety in Turkey and the world, occupational health and safety culture, occupational health and safety legislation, occupational health and safety management systems, hazard, risk, risk management, ergonomics, risk factors, occupational hygiene.

### **Agricultural Economics (Compulsory - ECTS 4)**

Definition and Scope of Agricultural Economics, Agricultural Activities and Characteristics, The Place of Agriculture in Turkish Economy, Agricultural Production Factors, Classification of Agricultural Land, Misuse of Agricultural Land, Division of Labor and Work Efficiency in Agriculture, Agricultural Worker and Classification, Wage and Classification in Agriculture, Some Basic Concepts in Agricultural Economics, Physical Relations (Input Output, Product Relationship), Production Related Cost and Income Concepts, Application of Economic Principles in Making Decisions Related to Production, The Concept of Agricultural Business and Classification of Agricultural Enterprises (According to Size, Legal and Field of Activity), Characteristics of Agricultural Enterprises and Different Aspects of Other Enterprises, Capital Structure in Agricultural Enterprises and Analysis of Annual Activity Results (Gross Revenue, Operating Expenses, Pure Revenue, Agricultural Income, Gross Production Value and Gross Profit).

### **Turkish Economy (Compulsory - ECTS 4)**

Turkey's natural and demographic structure, its place in the world economy, the general functioning of the Turkish economy, economic policies before and after the planned period, national income, growth and income distribution in Turkey, the place of SEEs in the economy in Turkey, the privatization of SEEs, monetary and stability policies in Turkey, Turkey-EU relations, balance of payments and problems, the country's national income and distribution, economic sectors and development status, employment status, investment, production, foreign trade, etc. analysis of the Turkish economy with economic indicators.

### **Foreign Language II (Compulsory - ECTS 2)**

Future tense, Future progressive tense, Was/were, Simple past tense, Present Perfect tense, Past Perfect Tense, Relative Clauses, Passive voice.

## **5. SEMESTER**



**Analysis and Planning of Agricultural Enterprises (Compulsory - ECTS 5)**

Definition and basic principles of business management, internal and external factors affecting management, production resources (labor, capital, land and entrepreneurship), measures of success in enterprises, definition and subject of business planning, importance and benefits of planned work, data collection for planning, planning methods (improved budget, program planning and linear programming methods), calculation of the most profitable product compositions and the lowest cost compound feeds.

### **Agricultural Marketing (Compulsory - ECTS 4)**

Definition of agricultural marketing, historical development and definition of marketing approaches, development of marketing in terms of business, definition of marketing understanding, micro and macro environmental factors affecting agricultural marketing, strategic planning and marketing management process, agricultural marketing information system and marketing research, consumer and industrial market characteristics of agricultural products, market segmentation and target market selection, agricultural marketing elements of product, price, promotion and distribution.

### **Agricultural Accounting (Compulsory - ECTS 5)**

Definition and subject of accounting, agricultural business records (physical and financial records), keeping agricultural accounting records, simple accounting and double-sided recording methods, analysis of agricultural accounting records, application of simple accounting and uniform accounting system in agricultural and agriculture-based industrial enterprises.

### **Agricultural Policy (Compulsory - ECTS 4)**

Definition of agricultural policy, objectives and tools of agricultural policy, agricultural policy makers, international agricultural policy makers, agricultural support system, organizations involved in agricultural support, sources of financing agricultural support, agricultural price and marketing policies, social policies in agriculture, structural policies, trade policies, incentives and subsidies to protect agriculture, agricultural policies applied in other countries (EU, USA etc.).

### **Risk Management and Insurance in Agriculture (Elective - ECTS 3)**

Risk management tools and insurance practices in agriculture, measurement of risks, agricultural insurance practices and their characteristics in developed and developing countries, insurance mathematics, loss assessment techniques and organization, reinsurance and government support systems, insurance organization.

### **Agricultural Economics Statistics (Elective - ECTS 3)**

Introduction to statistics (Definition of statistics, basic statistical concepts), Data collection (Data characteristics, data measurement levels, data sources, data collection by questionnaire), Data organization and presentation (Frequency distribution, histogram, polygon, diagram, statistical maps), Descriptive statistics (measures of central tendency, measures of dispersion, measures of position), Probability, Random Variables and Probability Distributions, Analytical Statistics I (sampling and sampling distribution), Analytical Statistics II (estimation, point estimation, interval estimation, properties of estimation), Analytical Statistics III (hypothesis testing and test distributions), Analytical Statistics IV (parametric tests, difference tests, association tests), Analytical Statistics VI (nonparametric

difference and relationship tests), Analytical statistics VII (Measurement of relationships between random variables, correlation), Analytical statistics VIII (Measurement of cause and effect relationships between random variables, regression), Index numbers and applications in Agricultural Economics.

### **Computer Use in Agricultural Economics (Elective - ECTS 3)**

Basic concepts of information and communication technology, effective use of Microsoft Word, Excel, Powerpoint programs needed before writing a thesis in Agricultural Economics, other presentation programs, use of SPSS program.

### **European Union and Turkish Agriculture (Elective - ECTS 3)**

The birth and development of the European Union, the units of the European Union, Turkey and European agriculture will be discussed comparatively during the accession phase to the European Union. The common agricultural policies of the European Union, the policies applied in Turkey and European agriculture will be discussed comparatively. The difficulties that Turkish agriculture will face in the integration of EU countries and the rules to be followed.

### **Academic Turkish (Elective - ECTS 2)**

Developing academic reading and writing skills of foreign students, Characteristics of academic language, objective and subjective expression, academic concepts and terms, structure and analysis of academic texts, academic text preparation practices.

### **Professional Foreign Language I (Elective - ECTS 3)**

Terms used in the field of Agricultural Economics and following the texts on the subject.

### **General Viticulture (Elective - ECTS 3)**

The place of grapevine in systematics, the situation of viticulture in the world and in our country, morphology of grapevine, propagation, cultivation systems, cultural practices in viticulture, grape preservation.

### **Horticulture Production Technique (Elective - ECTS 3)**

Practical training is given on fruit, vegetable and vineyard cultivation and breeding.

### **Feeds and Animal Nutrition (Elective - ECTS 3)**

Poultry feeding, Dairy cow feeding, Beef cattle feeding, Sheep feeding, Goat feeding, Protein metabolism, Silo feed and ensiling technique, Determination of energy values in feeds, Roughages and technology, Feed additives, Ration preparation.

### **Creation in the Language of Sciences (Elective - ECTS 3)**

Interdisciplinary evaluation of physics and metaphysics together in understanding human and universe, evolution and creation.

### **Healthy Living, Spiritual Care and Value (Elective - ECTS 3)**

Lifelong sports philosophy, Effects of sedentary life and regular exercise on the organism, Weight control and balanced nutrition, Health psychology, Stress management, Conflict management, Time management and techniques, self-care and values education.

## **6.SEMESTER**

### **Agricultural Valuation and Expertise (Compulsory - ECTS 4)**

Definition and subject of appraisal, appraisal criteria, appraisal methods (synthetic and analytical methods), economic goods subject to appraisal, determination of the value of land and agricultural enterprises operated by the owner, tenant and sharecropper according to synthetic and analytical methods, calculation of the value of orchards and vineyards, appraisal legislation, expert witness, expert witness legislation, selection of expert witness, expert witness in expropriation and loss and damage assessment, expert witness in agricultural insurance, preparation of expert report.

### **Entrepreneurship (Elective - ECTS 3)**

Definition and characteristics of entrepreneurship, creativity and innovation, venture financing, business plan, entrepreneurship and economic development, entrepreneurship in Turkey, general profile of Turkish entrepreneurship, international entrepreneurship.

### **Natural Resources and Environmental Economics (Elective - ECTS 3)**

Definition and scope of Natural Resources and Environmental Economics: natural resources, content of environmental economics, methods used in the valuation of environmental goods, externalities, endogeneity, environmental taxes, subsidies.

### **Agriculture Based Industry Management (Elective - AKRS 3)**

Economic structure and working areas of agriculture-based industry, characteristics of companies that evaluate or sell agricultural products, differences from other companies and legal forms, management in agriculture-based industrial companies, historical approach in management process, necessary conditions for good management, management functions

### **Communication and Presentation Techniques (Elective - ECTS 3)**

Introduction to presentation techniques. Presentation planning: Aims and objectives of the presentation. Presentation planning: Tools and space arrangements. Preparing a presentation: Gathering, organizing and transcribing information. Making a plan. Determining the visual support tools to be used. Translating the written presentation text into speech. Rehearsing the presentation. Preparing a presentation: What to know about preparing a presentation with Powerpoint. Preparing a presentation: What to know about preparing a presentation with Powerpoint. Making the presentation. Communication elements of the presentation-1: Getting to know ourselves. Verbal and non-verbal communication. Body language. Making the presentation. Communication elements of the presentation-2: Getting to know the audience. Listening, asking questions, answering questions, summarizing, feedback, evaluation. Presentation evaluation criteria. Student presentation studies, Student presentation studies, Student presentation studies.

### **Volunteering Work (Elective - ECTS 3)**

Management and Organization Concepts, Volunteering Concept and Volunteer Management, Basic Volunteering, Participation in Volunteer Work in Public Institutions and Local Governments and Non-Governmental Organizations, Risk Groups and Volunteering in Society, Immigrants and Volunteering.

### **Environmental Awareness (Elective - ECTS 3)**

To give basic information about the environment and environmental pollution elements, to prevent environmental pollution and to create awareness of social responsibility in this context.

### **Professional Foreign Language II (Elective - ECTS 3)**

In this course, students will gain the ability to translate from English academic articles and current publications published in their own fields and in the field of agriculture as a whole. They will also utilize professional web resources to improve their English speaking and listening skills.

### **Fruit Growing Technique (Elective - ECTS 3)**

Propagation methods of fruit trees, generative and vegetative propagation, propagation by seed, cuttings, root shoots, dipping, grafting, tissue culture, cultivation of seedlings in temperate climate fruit species and establishment of gardens, selection of garden location, Considerations in selection, planting forms, planting seedlings, pruning of fruit trees, pruning technique, training forms, goblet, pyramid, pinnacle branched, different pinnacle, thin spindle-shaped pruning, crop pruning, pruning of different fruit species.

### **Agricultural Control Methods and Pesticides (Elective - ECTS 3)**

Methods of control of plant diseases, pests and weeds, legal methods, cultural methods, biological methods, physical methods, chemical methods, spraying methods, classification of chemical substances used in diseases, pests and weeds, definition and occurrence of resistance, types of resistance, resistance to herbicides.

### **Poultry (Elective - ECTS 3)**

Poultry, poultry house and poultry preparation, poultry and hygiene, control of breeding eggs.

### **Medicinal and Aromatic Plants (Elective - ECTS 3)**

General characteristics of medicinal and aromatic plants, usage areas and cultivation possibilities, important medicinal plants that we import and export, classification of medicinal plants, morphological characteristics of medicinal plants that are very important for our country, origins, production of medicinal plants in the world and in our country, usage, cultivation techniques, harvesting and drying.

### **Project Preparation and Evaluation (Compulsory - AKST 5)**

Project definition, scope and types, characteristics of investment projects, investment project preparation and evaluation stages, market study and demand forecasting, site selection, capacity and production technology selection, project financing, project income and expenses, project analysis methods,

environmental impact assessment (EIA), sample feasibility studies, preparation of feasibility reports of investment projects as homework for students.

### **Agricultural Cooperatives (Compulsory - ECTS 4)**

General information about cooperatives, history of cooperatives, universal values and principles of cooperatives, differences between cooperatives and companies, associations, etc., benefits of cooperatives, cooperative education, legal status of cooperatives in Turkey and the establishment of cooperatives, the structure and organs of management in cooperatives, cooperative supervision, the main types of cooperatives in Turkey, cooperative problems and solutions.

### **Production Economics (Compulsory - ECTS 5)**

Factor-product relations; production function, law of diminishing returns, basic concepts. Stages of classical production function, analysis of basic concepts. Determination of optimum input utilization level. Cost functions, obtaining cost functions from production functions, cost definitions, calculation of costs. Profit function, maximum profit conditions. Factor-factor analysis; relationships between inputs, production surface, production function with two variable inputs, co-product curves, marginal rate of substitution. Co-cost lines, optimum input composition. Elasticity of substitution, substitution and expansion effects, effects of price changes on input utilization. Product-product analysis; relations between products, production possibilities curve, coincident income line. Optimum product mix. Economies of scale, scale and size relations, optimum enterprise size. Technical progress (development), basic concepts, measurement of technical progress, results of technical progress.

## **7.SEMESTER**

### **Internship (Compulsory - ECTS 4)**

At the end of the VIth semester, before the start of the VIIth semester, the students of the Faculty of Agriculture must do an internship for the number of working days specified in the internship directive and be successful.

### **Econometrics (Elective - ECTS 4)**

Definition of econometrics, Application areas, Deterministic and probabilistic models, Examples of econometric modeling, Single explanatory models, Regression models in different mathematical forms, F and t tests, Slope and elasticity, Multi-explanatory models, Assumptions of linear regression model, Properties of estimators, Regression errors and tests, Heteroskedasticity, Autocorrelation, Multicollinearity, Dummy Variables, Forecasting.

### **Agricultural Organizations (Elective - ECTS 4)**

The nature of organization and organization theories, types of organization, examination of system theory in terms of organization, contingency approach and organizational structure, organization and technology, organization and leadership, the importance and necessity of organization, agricultural organizations and functions in Turkey, various agricultural organizations operating in agriculture and agricultural industry, examination of some important agricultural organizations in the form of case studies.

### **Sampling Methods in Agricultural Economics (Elective - ECTS 4)**

Science and scientific approach, scientific research process, hypothesis development, statement of research problems and objectives, planning of research, data in scientific research; research population and sampling, qualitative research methods and analysis techniques.

### **Food Management (Elective - ECTS 4)**

Development of food industry and its place in the Turkish economy, basic concepts related to food economics and management, business concept and classification of enterprises, production factors, business objectives, functions, characteristics of food industry enterprises, establishment of enterprises and selection of location, technology and capacity selection, management functions, production management and planning, financial management and personnel management and motivation, productivity measurements and performance evaluations.

### **Marketing Method (Elective - ECTS 4)**

Definition of agricultural marketing, definition of marketing management, historical development and definition of marketing approaches, development of marketing in terms of business, definition of marketing understanding, micro and macro environmental factors affecting agricultural marketing, strategic planning and marketing management process, agricultural marketing information system and marketing research.

### **International Organizations and Economic Relations (Elective - ECTS 4)**

International organizations, international economic relations, foreign economic policy and customs tariffs, non-tariff restrictions, world trade liberalization efforts, world trade organization, European Union, regional economic unions in the world countries, international monetary system, European monetary system, international monetary fund and its functions, international development problems.

### **Good Agricultural Practices (Elective - ECTS 4)**

Natural resources, soil-plant and environment relations, conservation, the origin and history of good agricultural practices, food safety, sustainability and traceability concepts, good agricultural practices in plant production and its scope, control and certification process in good agricultural practices, control points and eligibility criteria in plant production, good agricultural practices in terms of plant protection, good agricultural practices, good agricultural practices regulation, conventional and good agricultural practices in the world.

### **General Photography (Elective - ECTS 4)**

Other parts of the camera, aperture, shutter, aperture and shutter relation, use of the viewfinder and lcd screen in digital cameras, depth of field, movement, sharpness. what is light, color and color temperature of light, color correction filters, adjusting color temperature in digital cameras. composition in photography, theory and practice. lenses, lens types, films and film types. the concept of resolution in digital photography, recording media in digital photography, exposure, determination of exposure values, light meters, exposure modes, shooting techniques and practice.

### **Music (Elective - ECTS 4)**

To gain the behavior of playing and singing depending on the note. To inform about form, melodic structure, prosody and repertoire.

### **Folk Dances (Elective - ECTS 4)**

Definition of Folklore (Folklore), Explanation of Turkish Folk Dances according to the subjects and types, Examples.

### **Correct and Effective Speech Training (Elective - ECTS 4)**

Gestures and Mimics, Expression, Word and Word Points, Importance of Diction Art and Sound.

### **Graduation Study - I (Compulsory - ECTS 2)**

Students are obliged to do a graduation study related to the department in the presence of their advisors and to be successful.

## **8. SEMESTER**

### **Agricultural Extension and Communication (Compulsory - ECTS 4)**

Definition, characteristics and importance of agricultural extension aims in agricultural extension; general aims, project aims, action aims strategy in agricultural extension and rural development agricultural extension systems, approaches and methods definition of education, programs, aims teaching tools and methods, measurement and evaluation in education human nature; personal differences and adoption of innovations concept of need individual and group extension tools and methods, discussion meetings; forum; symposium, panel mass extension tools and methods.

### **Agricultural Finance (Compulsory - ECTS 4)**

Business level financing capital and the importance of capital in agricultural enterprises, agricultural financial resources, resource utilization, financial analysis and evaluation of investment decisions in agricultural enterprises, financial analysis and evaluation of investment decisions in agricultural enterprises, interest at the cost of the loan, time-related decisions, classification of loans, interest at the cost of the loan, time-related decisions, classification of loans, general applications within the framework of agricultural credit resources bank and some terms related to credit general applications within the framework of agricultural credit resources bank and some terms related to credit, interest, discount calculations, preparation of repayment plan preparation of repayment plan

### **Data Collection and Analysis Techniques in Agricultural Economics (Compulsory - ECTS 4)**

To gain the ability to identify problems and hypotheses, data collection, analysis, analytical thinking, interpretation and solution proposals in agricultural economics, to gain the ability to access professional data and information, to learn scientific report writing techniques, to acquire the ability to present and defend in front of the community, to have advanced knowledge about the thesis topic, to gain sufficient knowledge about current issues in agricultural economics, to acquire the ability to create analytical and logical inferences in



scientific studies.

### **International Agricultural Policy (Compulsory - ECTS 4)**

Explanation of the international formations taken into account in the determination of national agricultural policies, how international agricultural policies emerge in terms of theory and practice and how they direct international agricultural relations, the roles of international organizations working on agriculture in the formation of international agricultural policy and economic and political changes in the world, the place and importance of international agricultural relations in the determination of Turkish agricultural policy with its global and regional dimension

### **Graduation Study - II (Compulsory - ECTS 2)**

Students are obliged to do a graduation study related to the department in the presence of their advisors and to be successful.

### **Economics of Organic Agriculture (Elective - ECTS 4)**

The concept and scope of organic agriculture, organic agriculture and sustainability, chemicals prohibited for use in organic agriculture, possible risks of agricultural chemicals in terms of environment and human health, biological control types, green manure, definition and benefits of green manuring, effects of organic agriculture on soil protection and improvement.

### **Personal Development and Speed Reading Techniques (Elective - ECTS4)**

Learning to learn how we read, how we should read, testing our reading speed. reading measurement obstacles to fast reading and ways to get rid of these obstacles, fast reading exercises and applications.

### **Consumer Behavior (Elective - ECTS 4)**

To know the consumer, to understand consumer behavior models, to understand consumer behavior roles, to determine the factors affecting purchasing behavior, to evaluate the consumer decision-making process.

### **Rural Tourism (Elective - ECTS 4)**

General characteristics of rural, concepts close to rural tourism, the current situation in Turkey, the place and importance of eco-tourism in mass, alternative, nature and sustainable tourism concepts, Sustainable development and tourism, Rural-tourism types, Protection of natural and cultural resources.

### **Agricultural Markets (Elective - ECTS 4)**

Agricultural markets and marketing organizations, fresh fruit and vegetable wholesale markets, marketplaces, cut flowers and ornamental plants auction, fish markets, animal market exchange, commodity exchange, specialized exchanges, licensed warehouses, cold storage, e-agricultural trade, ditap, agricultural kits and agricultural cooperatives, forms of agricultural product sales, price formation in agricultural markets, factors affecting price formation in agricultural markets, agricultural market interventions, limitations, control, quality, brand and health in agricultural markets, taxation and market financing tools