

## CURRICULUM FOR 2022 AGRICULTURAL ECONOMICS DEPARTMENT COURSE CONTENTS

### 1. SEMESTER

#### Botany (Compulsory - ECTS 4)

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.

#### Chemistry (Compulsory - ECTS 4)

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.

#### Sociology of Village (Compulsory - ECTS 5)

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 4)

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 and History of Revolution - 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 punctuation, 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**

### **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

### **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, Effects of Industrial Revolution on Agriculture, 1929-1930 World Economic Crisis and the Effects of Agriculture in Turkey, 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 Reliability, Soil and Water Pollution, Ethical Aspects of Biotechnology, Status of Agricultural Workers, Animal Rights, Scientific Research Ethics in Agriculture.

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

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

### **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.

### **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.

### **Ataturk's Principles and Revolution 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, Reforms in the Field of Law, Reforms in the Field of Education, Reforms in the Social Field,  
Atatürk



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

### **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.

### **Climate Information (Compulsory - ECTS 3)**

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.

## **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 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.

### **Data Collection and Basic Analysis Methods 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 technique, to acquire the ability of presentation and scientific defense in front of the community, to have advanced knowledge about the thesis subject, to gain sufficient knowledge about current issues of agricultural economics, to acquire the ability to create analytical and logical inferences in scientific studies. The use of SPSS package program is taught in the application of basic analysis 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.

#### **Computer Use in Agricultural Economics (Compulsory - ECTS 4)**

Teaching of Office package programs. It is taught to make simple analysis of the data and to prepare the results for presentation as a report.

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

Definition of macroeconomics, elements, overview of macroeconomic analysis, introduction to 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, AdjectivesQuantity, Simple present tense, Modals, Comparativesandsuperlatives

### **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.

#### **Animal Production (Compulsory - ECTS 4)**

Status of Animal Husbandry in Turkey, Species and Breed Concepts in Farm Animals, Reproduction and Fertility in Farm Animals, Practical Breeding and Nutrition, Record Keeping and Evaluation Techniques.

#### **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-planting machines, fertilizing machines, agricultural war machines, harvesting machines, baling and silage machines, threshing machines.

#### **Occupational Health and Safety (Compulsory - ECTS 3)**

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 5)**

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 agriculture and agriculture-based industrial enterprises. Definition of Agricultural Accounting, the importance of the objectives; Auxiliary records to be kept on the farm, Farm inventory, Balance Sheet, Financial records; basic rules in keeping records, income and expense concept, Analysis of accounting records, analysis on the basis of business, analysis of production branches, gross margin and production cost analysis.

### **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 4)**

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 4)**

Introduction to statistics (Definition of statistics, basic statistical concepts), Data collection (Data characteristics, data measurement levels, data sources, data collection by survey), 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, relationship 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.



**European Union and Turkish Agriculture (Elective - ECTS 4)**





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.

#### **Communication and Presentation Techniques (Elective - ECTS 4)**

Definition, concept, elements, process and importance of communication. Barriers to effective communication and coping with these barriers. The importance and use of body language. Effective presentation techniques. 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.

#### **Professional Foreign Language I (Elective - ECTS 4)**

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

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

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 4)**

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

### **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 determination, expert witness in agricultural insurance, preparation of expert report.

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

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.

#### **Project Preparation and Evaluation (Compulsory - AKST 4)**

Project definition, scope and types, characteristics of investment projects, preparation and evaluation stages of investment projects, 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.

#### **Marketing Management (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.

**Natural Resources and Environmental Economics (Elective - ECTS 4)**



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.

#### **Social Assistance Policies in Rural Areas (Elective - ECTS 4)**

Components of social security system, public social assistance system, sources of social assistance, social assistance in rural areas.

#### **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.

#### **Graduation Study - I (Compulsory - ECTS 3)**

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

#### **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.

### **7. SEMESTER**

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

Introduction of the course; scope, rules and requirements, basic knowledge of law, provisions related to agriculture in the Constitution of the Republic of Turkey, provisions related to agriculture in the civil law of the Republic of Turkey, water law, pasture law, forest law, agricultural reform laws, laws related to cooperatives, other law groups related to agriculture, agricultural workers labor law, social security of self-employed in agriculture, laws regulating the working life of agricultural engineering

#### **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

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

Explanation of 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, how international organizations working on agriculture are involved in the formation of international agricultural policy and the economic and political



the role of international agricultural relations with their global and regional dimensions in Turkish agricultural policy.  
Explanation of its place and importance in determination

#### **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.

#### **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.

#### **Foreign Trade Policy for Agricultural Products (Elective - ECTS 4)**

Basic rules of foreign trade, legislation and policies for agricultural products, target and competing markets.

#### **Environmental Agricultural Policy (Elective - ECTS 4)**

Developing a positive attitude towards environmental protection in students, Raising awareness of students about environmental problems caused by agricultural activities, Understanding the basic concepts of the environment, Raising awareness of students in the use of natural resources, Ensuring a change in consumption habits that prioritize environmental protection Informing students about national and international policies for the solution of environmental problems caused by agricultural activities Informing students about environmental policies for agriculture applied in the European Union Informing students about environmentally friendly agricultural methods.

#### **Communication and Presentation Techniques (Elective - ECTS 4)**

Issues to be considered in communication, preparing a presentation using a package program.

#### **Physical Education (Elective - ECTS 4)**

Basic concepts in physical education and sport, the place, function and aims of physical education and sport in education and training.

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

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

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

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

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

General information about theaters.

#### **Sign Language (Elective - ECTS 4)**

Have knowledge about the development of Sign Language in the world and the history of Turkish Sign Language (TİD). 2) Learns TİD finger alphabet and signs used in daily life. 3) Learns basic TİD grammar concepts and structure.

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

Explanation of expression and illustration techniques appropriate to the given subject with different materials and drawing methods.



**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.

### **Graduation Study - II (Compulsory - ECTS 3)**

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

## **8. SEMESTER**

### **Good Agricultural Practices (Elective - ECTS 5)**

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.

### **Econometrics (Elective - ECTS 5)**

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 sought in estimators, Regression errors and tests, Heteroskedasticity, Autocorrelation, Multicollinearity, Dummy Variables, Forecasting.

### **Agricultural Organizations (Elective - ECTS 5)**

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 5)**

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.

### **Entrepreneurship (Elective - ECTS 5)**

Entrepreneurship and characteristics of the entrepreneur: to be able to define the concept and types of entrepreneurship within the framework of entrepreneurship theory, creativity in entrepreneurship: developing awareness about personal and organizational innovation and ways to develop creativity, factors affecting the realization of creativity: developing awareness about personal and organizational innovation and ways to develop creativity, innovation types, types of entrepreneurship: types of entrepreneurship: the process of institutionalization of newly established businesses, venture financing will be able to evaluate how an entrepreneur acts when making a new business decision, business plan will be able to prepare a business plan for starting a new business, entrepreneurship in developed and developing countries will be able to compare opportunities related to the appropriate sector by learning the barriers and incentives in entrepreneurship.

### **International Organizations and Economic Relations (Elective - ECTS 5)**

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.

### **Food Management (Elective - ECTS 5)**

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.

### **Agriculture Based Industry Management (Elective - ECTS 5)**



Based on the importance of food industry and agriculture-based industry in the Turkish economy, briefly explaining the food and agriculture-based industry, evaluating the interaction of agriculture and industry in terms of some factors. with business economics





Explanation of the objectives, functions and classification of the enterprise with the help of figures and examples, definition, scope, place and sub-sectors of the agriculture-based industry in the manufacturing industry and determination of application issues, comparison of agriculture-based industrial enterprises with agricultural enterprises and other enterprises and discussion of differences and determination of application issues, discussion of preliminary preparations and determination of application issues, discussion of factors affecting the choice of location in TDS enterprises, examination of the methods used in the selection of location with examples, evaluation of developments in agriculture-based organized industrial zones in terms of TDS and application.

#### **Agricultural Economics Information Use (Elective - ECTS 5)**

Data sources in the field of Agricultural Economics, techniques that can be applied in analyzing data, computer software that can be used in data analysis, use of software.

#### **Agricultural Input and Product Markets (Elective - ECTS 5)**

Major agricultural products (wheat, corn, citrus fruits, hazelnuts, vegetables, meat, milk, etc.) and agricultural production inputs (chemical fertilizers, pesticides, feed, etc.) market structures in Turkey (production, consumption, import, export quantities and developments, domestic and foreign prices, policies and marketing organizations) are introduced.

#### **Business Management (Elective - ECTS 5)**

Basic Concepts Related to Business, Objectives and Environment of Businesses, Classification of Businesses, Establishment of Businesses, Growth of Businesses, Internationalization of Businesses, Business Capacity and Capacity Types, Management, Supply and Production Function, Marketing Function, Accounting and Finance Function, Human Resources Management, Research, Development and Innovation, Public Relations in Business.

#### **Vocational Education in Business (Elective - ECTS 30)**

To do workplace training for the number of working days specified in the relevant directive and to be successful.

