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| | Bachelor Degree (B.Sc.) in Agriculture International Hellenic University, Faculty of Geotechnical Sciences, Department of Agriculture | | | | | |
| | Main Courses (Common courses for all three specializations) | | | | | |
| | 1st Semester | | | | | |
| | Code | Course | Course contents | ECTS- Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-190101 | Applied Mathematics | Linear Algebra (Matrices, Determinants, Linear systems) , Real functions of one real variable (The basic categories of functions and their properties, operations with functions, limits, continuity), Differential, Real functions of several real variables, Integral calculus , Specific applications to the above issues with emphasis on applications in the field of rural economy. | 4 | Study/project | (GR/EN) |
| 2 | 600-190102 | Computer Science | The course refers to the integration of Computer and Communication Science in Agriculture. In particular the issues analyzed during the course are: computer software and hardware, operational systems, key security issues, file organization, computer applications in agriculture. | 4 | Study/project | (GR/EN) |
| 3 | 600-190103 | Chemistry | Properties, structure and phases of matter. Chemical elements. Periodic table of elements. Atoms, molecules, ions. Chemical bonds. Inorganic chemical compounds. Chemical reactions. Chemical equilibrium. Aqueous solutions (solubility, concentration of solutions, dilution and condensation, osmosis, electrolytes, acids – bases – salts, water ionization, pH, neutralization, buffer solutions). Colloids. Redox. Organic chemistry: hydrocarbons (alkanes, alkenes, alkynes, cycloalkanes, aromatic hydrocarbons), alcohols, ethers, carbonyls, carboxylic acids, esters, organic nitrogen compounds, vitamins, hormones). | 4 | Study/project | (GR/EN) |
| 4 | 600-190104 | Principles of Economics | The course presents the concept and objective of economic science, the economic problem, efficiency and equity, interdependence and trade benefits, supply, demand and balance in the markets for goods and services, the elasticity of demand and supply and their applications, supply, demand and government's economic policy, the theory of consumer behaviour, the tax cost, the welfare economics and externalities, the business decisions and strategies, theory of production and production costs, the theory of the firm, the pricing in its different forms of markets. | 4 | Study/project | (GR/EN) |
| 5 | 600-190105 | Introduction to Animal Husbandry | Domestication of farm animals. Contribution of domestic animals in the social and economic evolution of man. History and evolution of zootechnical science. Farm animals and animal products. Farming systems and their evolution. Organic farms. Animal production in Greece. Breeds of farm animals Genetic and genetic improvement of farm animals. Reproduction of farm animals Digestion and nutrition of farm animals. Growth and lactation of farm animals. Farm animal welfare. Traceability of animals and animal products | 5 | Study/project | (GR/EN) |
| 6 | 600-190106 | Principles of Agronomy | The course includes the principles underlying practices used in the culture of, mostly, grain and forage crops. Crop classification, structure, growth, and improvement. Crop response to environmental factors, soils, and pests and associated management practices. Laboratories will cover crop botany, crop development, and problem solving. | 5 | Study/project | (GR/EN) |
| 7 | 600-190107 | Physics and Agrometeorology | Physics and Agrometeorology | 4 | Study/project | (GR/EN) |
| | | | | 30 | | |
| | | | | Total 30 | | |
| | 2nd Semester | | | | | |
| | Code | Course | Course contents | ECTS- Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-190201 | Agricultural Economics | Introduction to Agricultural Economics; Basic concepts and principles of economic production; Structure and current trends in agriculture in Greece; Agricultural production factors; Production costs and economic results; Introduction to marketing and marketing functions of agricultural products | 5 | Study/project | (GR/EN) |

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| 2 | 600-190202 | Rural Sociology | Definition of the countryside, rural society and rural community, mobility of rural population, social and demographic changes, globalization and rural society, governance of rural areas. Evolution of the Greek rural society, socio-economic forms of rural communities in Greece, the land reforms of Greek agriculture and their impact on rural society, modernization of agriculture and rural society, the European Union and the rural society, migration currents, demographic developments of Greek rural society, contemporary issues of Greek rural society, transformation of rural society and rural multifunctionality, typology of rural areas. | 5 | Study/project | (GR/EN/FR) |
| 3 | 600-190203 | Agricultural Statistics | Introductory concepts. Conducting a statistical survey. Presentation of statistical data. Descriptive measures of statistical data. Elements of probability theory. Basic theoretical distributions. Sampling distributions. Estimation. Testing statistical hypotheses. Test of independence. Correlation analysis. Linear Regression. Specific applications in the above topics with a focus on applications from the agricultural sector. | 5 | Study/project | (GR/EN) |
| 4 | 600-190204 | Microbiology | Microbiology: Procariotic and Eucariotic cell. Phyciology, morphology, multiplication, metabolism, biological needs, growth and classification of microorganisms. Antimicrobial factors, growth of resistance, genetics of microorganisms. Mechanism of pathogenic action. Bacteria, fungi, protozoa, and viruses description, which present interest for Animal Production. | 5 | Study/project | (GR/EN) |
| 5 | 600-190205 | Soil Science | General description of soil constituents and functions of soils in our ecosystem. Formation of soils from parent materials. Soil classification. Physical and Chemical properties of soils: adsorption of cations and anions, cation exchange reactions, clay flocculation and dispersion, soil pH, cation exchange capacity and base saturation. Organisms of the soil: soil fauna and flora, microorganisms and their actions in soils. Soil organic matter. Soil water. General concepts of soil degradation and soil conservation. | 5 | Study/project | (GR/EN) |
| 6 | 600-190206 | Agricultural Machinery | Knowledge to the systems and parts consisting of a farm tractor. Emphasis is given in agricultural machines joined in a tractor such as: ploughs, fertilizer distributions, drill machines, sprayers, grass cutting equipment, livestock machinery and harvester machines in conjunction to safety, maintenance, and work rate. | 5 | Study/project | (GR/EN) |
| 7 | 600-190207 | Foreign language 1* | Foreign language 1* | 0 | Study/project | (GR/EN) |
| | | | | Total 30 | | |
| | 3rd Semester | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-190301 | Plant Anatomy Morphology | The course refers to the basic knowledge of cytology and histology of plants. Particularly, it examines the major subcellular structures, the division of cells, of various tissues, of anatomical structure and external morphology in plant organs, such as stem, leaf, root, flower, fruit and seeds. | 5 | Study/project | (GR/EN) |
| 2 | 600-190302 | Soil Fertility, Plant Nutrition and Fertilizers | Environmental factors of plants growth. The role of nutrients on plants growth. Movement of nutrients in soils and adsorption by roots. Mycorrhizas. Laws of plants nutrition. Macronutrients (nitrogen, phosphorus, potassium, calcium, magnesium, sulfur) in soils and plants. Micronutrients (iron, manganese, zinc, copper, boron, molybdenum) in soils and plants. Soil analysis and foliar diagnosis. Deficiencies and toxicities. Inorganic commercial fertilizers. Liquid fertilizers. Organic fertilizers. Fertilizers application methods, salinity index, timing of fertilizers application. Introduction to hydroponics. | 6 | Study/project | (GR/EN) |
| 3 | 600-190303 | Animal Anatomy | Tissues, Kinetic system, Nervous system, Sensory organs, Endocrine system, Circulatory system, Respiratory system, Digestive system, Urinary system, Male and Female Genital system. | 5 | Study | (GR) |
| 4 | 600-190304 | Principles of Animal Nutrition | Introduction to animal nutrition. Chemical analysis and energy content of feedstuffs. Carbohydrate metabolism. Fat metabolism. Protein metabolism. Inorganic nutrients and vitamin metabolism. Metabolic diseases. Competition of nutrients. Determination of nutritive and dietary value of feedstuffs. | 5 | Study/project | (GR/EN) |

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| 5 | 600-190305 | Agricultural Policy | Concept and content of agricultural policy. Aims and principles of Common Agricultural Policy. Key features of Greek and Community Agriculture. Operators of agricultural policy. Structure, organization and operation of European Union agencies, with particular reference to agriculture. EU Operating mechanisms. Methods and agricultural policy measures. Common organization of the markets in key agricultural products. Agricultural structural policy. European programs for agricultural development. Agricultural Policy and Rural Development. Evolution and prospects of rural policy. Applied agricultural policy to basic agricultural products. | 5 | Study/project | (GR/EN) |
| 6 | Επιλογής 1 | Selection 1 | Selection 1 | 4 | | |
| 7 | 600-190306 | Foreign language 2* | Foreign language 2* | 0 | Study/project | (GR/EN) |
| | | | | Total 30 | | |
| | 4th Semester | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-190401 | Plant Physiology | Water and nutrient diffusion, structure of cell membranes, water uptake, transpiration. Nutrients: essential nutrients, uptake of nutrients Role of nutrients in the plant metabolism. Photosynthesis; reaction centres, photosynthetic pigments, photosystems I, II, Carbon metabolism. Dark reactions, Calvin Cycle, photorespiration. Nitrogen uptake and metabolism: Nitrogen Cycle. Anaerobic and aerobic respiration, carbohydrate catabolism, Glycolysis, citric acid cycle. Plant growth Regulators(PGRs) Effects of PGRs on various physiological functions of plants. Retardants and growth inhibitors. Flowering, photomorphogenesis, photoperiodism, Physiology of dormancy. Reaction of plants under stress conditions, environmental stress: Chilling and heat stress. Drought and flood stress in plants. | 5 | Study/project | (GR/EN) |
| 2 | 600-190402 | Genetics | Mendelian Genetics, dominance, co-dominance, polymorphism, lethal genes, mutations. Introduction to cytogenetics, the cell, nature and function of the genetic material. Mitosis, Meiosis, RNA, DNA. Sex linked inheritance, linked genes. Chromosomal aberrations and rearrangements (deletions, duplications, translocations, Inversions). Introduction to Molecular Genetics, DNA isolation, Restriction enzymes, Polymerase Chain Reaction (PCR), Molecular genetic markers, principles of genome mapping. Euploidy and Aneuploidy. Genotype, Phenotype. Genotype x Genotype interactions and Genotype x Environment interactions. Evolutions. Heterosis. Extranuclear (Cytoplasmic) Inheritance (mitochondrial and chloroplastic DNA). Introduction to Population Genetics. Introduction to Quantitative Genetics, environmental effects, Principals of genetics and inheritance in crop and animal production | 5 | Study/project | (GR/EN) |
| 3 | 600-190403 | Housing and Farm Management of Livestock Production | Buildings and equipment for livestock production. Establishment of the livestock enterprise. Planning and design of livestock housing. Livestock production sub-systems: housing, feeding, products' harvesting, waste management, environment management, general farm management. Zootechnical management of livestock enterprise. Farm animal welfare. Stockmanship and human resources management in the farm. Informatics' applications in the management of livestock production. | 4 | Study/project | (GR/EN) |
| 4 | 600-190404 | Agricultural Accounting | Meaning and purpose of agricultural accounting; Basic Accounting Principles and accounting system; Asset, Liabilities and Net Worth; Inventory; Accounts; Accounting methods; Depreciation; Accounting books; Farm accounting, analysis of key technical data and calculation of key financial results. | 4 | Study/project | (GR/EN) |
| 5 | 600-190405 | Animal Physiology | Animal Physiology | 4 | Study/project | (GR/EN) |
| 6 | Επιλογής 2 | Selection 2 | Selection 2 | 4 | | |
| 7 | Επιλογής 2 | Selection 2 | Selection 2 | 4 | | |
| | | | | Total 30 | | |
| | Selection 1 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |

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|---|--------------------|--|---|---------------------|----------------------|----------------------------------|
| 1 | 600-191001 | Agricultural Entrepreneurship | The course covers specialized topics in agricultural entrepreneurship. Issues related to the economic and management principles, as well as the good business practices implemented in the rural area, are analyzed. | 4 | Study/project | (GR/EN) |
| 2 | 600-190002 | Biology | Biology | 4 | Study/project | (GR/EN) |
| 3 | 600-190003 | Farming systems in the world | The aim of the course is to get students able to describe and analyze farming systems in the world and compare them with each other, to describe and analyze the phases of European agriculture during the 20th century, to analyze the modern farming systems in the world and to recognize the challenges of the agriculture in the future. | 4 | Study/project | GR/EN/FR |
| 4 | 600-190004 | Management in Agricultural Machinery | The course provides the basic knowledge in farm management and selection in agricultural machinery. Define and describe the problems in farm management for agricultural machinery. Analyze the selection in agricultural machines from an economic point of view. Solve problems using scientific methods to combine equipment for operating cost reduction in farm enterprises. | 4 | Study/project | (GR/EN) |
| 5 | 600-190005 | Horse Husbandry | Classification-Origin-Nomenclature, Horse riding in Greece-Equestrian sports, External morphological-Shape, Colors, Particular color characteristics, Determination of age, Horse breeds, Reproduction, Principles of nutrition, General principles of hygiene, horse transport, equestrian facilities. | 4 | Study/project | (GR/EN) |
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| | Selection 2 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-192017 | Biochemistry | Biochemistry | 4 | Study/project | (GR/EN) |
| 2 | 600-190007 | Agricultural Experimentation | Concept and aim of biometry. Introduction to the probabilities calculus. Introduction to the experimental statistics. Theoretical distribution, sample distribution. Case control. Confidence interval. Organization of animal experimentation. Analysis of variance. Experimental designs. Co-variance regressions. | 4 | Study/project | (GR/EN) |
| 3 | 600-190008 | Companion Animal Care and Management | Classification, origin, nomenclature and breeds of dogs and cats. External morphological conformation, anatomy and physiology of dogs and cats. Husbandry, feeding, reproduction, diseases and prevention. Behaviour of companion animals with emphasis to dog and cat. | 4 | Study/project | (GR/EN) |
| 4 | 600-190009 | Apiculture | Honey bee species and breeds. The honey bee colony. Anatomy, physiology and social physiology of the honey bee. Bee nest architecture. Honey bee nutrition. Honey bee activities and behaviour. Swarming. Honey bee genetics and breeding. Crop pollination. Honey plants. Beekeeping equipment. Seasonal management. Production of queens. Products of the hive. Diseases and pest of honey bees. Pesticide poisoning | 4 | Study/project | (GR/EN) |
| 5 | 600-190010 | Agrifood Business Management | The subject of the course aims to introduce students to understand the various aspects of administrative practice and develop skills in analyzing organizational problems and making decision. | 4 | Study/project | (GR/EN) |
| 6 | 600-190011 | Marketing of Agricultural Products | Objects and concepts of marketing of the agricultural products. Specificities of the agricultural production. Marketing mix and marketing environment. Preparatory marketing functions. Supply functions. Communication and informational marketing functions. Facilitative functions. Selling of the agricultural products. Stakeholders and channels of the agricultural marketing. Marketing costs, margins and marketing efficiency. Modern marketing systems. Direct marketing and cooperative marketing of the agricultural products. Marketing of the agricultural inputs. | 4 | Study/project | (GR/EN) |
| 7 | 600-190012 | Collective actions and social entrepreneurship | The aim of the course is to get students familiar with the theories, logic and dynamic of collective actions in the rural areas, as well with the forms of social entrepreneurship in the countryside. | 4 | Study/project | GR/EN/FR |
| 8 | 600-190013 | Systematic Botany | Historical Aspects. Pre-Linnaean period. Greek Civilization. Herbalists. Linnaeus. Post- Linnaean period. Naming. Rules of Nomenclature. Categories of Classification-Taxa. Natural systems of Classifications. Cronquist systems of Classifications. Schizophyta. Phycophyta- Algae. Mycophyta- Fungi. Lichenophyta-Lichens. Bryophyta- Mosses. Pteridophyta- Ferns. Spermatophyta, Gymnosperms, Angiosperms. Dicots, Monocots. | 4 | Study/project | (GR/EN) |

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| 9 | 600-190014 | Tourism in the Countryside | The aim of the course is to get students familiar with the role of rural tourism as a tool for the development of the rural areas and the multifunctionality of agricultural holdings. In particular, to recognize and analyze the various categories of rural tourism and to create the business plan of a tourist unit in the countryside. | 4 | Study/project | GR/EN |
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| | Agricultural Economy and Entrepreneurship Division | | | | | |
| | Semester 5 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-191024 | Agricultural microeconomic analysis | The course covers topics of the economic behaviour of individual units in agricultural markets. Issues related to the theory of demand and the theory of the firm as well as the demand for labor and other factors of production, are analyzed. | 4 | Study/project | (GR/EN) |
| 2 | 600-191502 | Agricultural Cooperatives | Definition of cooperatives, cooperative values and cooperative principles, historical evolution of cooperatives, economic theory of cooperatives, cooperatives and private enterprises, structure of agricultural cooperatives in Greece, activities of cooperatives, cooperatives and the European Union, the evolution of cooperative legislation in Greece, cooperative management, "new generation" cooperatives, the cooperatives in times of crisis, cooperatives in the world. | 4 | Study/project | (GR/EN/FR) |
| 3 | 600-191503 | Agricultural Financial Management | The overall objective of financial management. The financial administration within the agricultural business. Meaning and analysis of financial statements and balance sheets. Financial indicators (liquidity, traffic speed, efficiency, cost coverage). Financial analysis using ratios. Cash flow (meaning, calculation and their role in financial decisions). enterprising and effective risk management. Risk categories. Economic decision making under risk. Investment in Fixed Assets. Organization of production factor "capital". The cost of debt capital. Concept of capitalization. Relationship between rate of interest, time and capitalization. Rented capital. Model case studies in agriculture. | 5 | Study/project | (GR/EN) |
| 4 | 600-191504 | Agricultural Cost Accounting | Concept of production costs and importance of knowledge. Types of production costs. The cost of production of agricultural products. Discrimination of cost. Meaning, conditions and difficulties in costing agricultural products. Methods of dividing the farm overheads into individual products. Ways of calculating the cost of production and analysis of components. Costing applications for agricultural products produced by annual crops, perennial crops and livestock sectors. Labor costs of agricultural machinery, factors that influence it and ways of reducing it. | 5 | Study/project | (GR/EN) |
| 5 | 600-191505 | Sustainable Natural Resource Management | To enable students to: understand the environmental protection requirements, help environmental and energy policies, apply environmental ethics on agriculture. | 4 | Study/project | (GR/EN) |
| 6 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| 7 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| | | | | Total 30 | | |
| | Semester 6 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-191601 | Agricultural Economics | Objectives of the course is that students are able to: understand both the theoretical and practical aspects of agricultural economics. And to be familiar with national and international objects of Agricultural Economics and gain knowledge that will help in dealing with various problems related to his profession | 4 | Study/project | (GR/EN) |
| 2 | 600-191602 | Decision Making Methods in Agriculture | Objective of the course is that students are able to use mathematical Models in making business decisions. Emphasis is given in the quantitative approach in solving business problems. Decision-making process is analyzed. | 5 | Study/project | (GR/EN) |

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| 3 | 600-191603 | Agricultural Finance & Investment Evaluation | Concept, types, purpose, benefits, institutions, instruments, systems and methods for agricultural finance. Economic and policy for agricultural finance. The financing of Greek agriculture. Management problems in agricultural loans-Agricultural debts. Mechanisms of financing investment in the framework of agricultural policy. The timing of investment. National policies to improve the financial environment for business. European programs to improve the financial environment for business and growth competitiveness. Current International financial situation. New bank loan facilities. Practical applications in the Greek rural areas. Decision making. Investment projects. Feasibility studies. | 5 | Study/project | (GR/EN) |
| 4 | 600-191604 | Agricultural Economic Statistics | Objective of the course is that students are able to use the basic techniques of statistical analysis and distinguish the limits of application and to analyze the results and export the relative conclusions. Emphasis is given on applications from the agricultural sector. | 4 | project | (GR/EN) |
| 5 | 600-191605 | Farm Appraisal | Meaning and purpose of agricultural Appraisal; Applications of financial mathematics in agricultural appraisal; Methods of agricultural Appraisal; Appraised value of soil, land reclamation, agricultural construction, perennial farming, agricultural machinery, animal production, agricultural products and supplies, cultivation advances and harvest; Methods of damage assessment of agricultural production | 4 | Study/project | (GR/EN) |
| 6 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| 7 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| | | | | Total 30 | | |
| | Semester 7 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-191701 | Rural Development Economy | To enable students to identify the factors that contribute to rural development, measure the rural development, acknowledge the ways the rural development can contribute to the regional and urban development, familiarize with the policy followed in Greece in the rural development field. | 5 | Study/project | (GR/EN) |
| 2 | 600-191702 | Research Methodology | Structure research project, stages of empirical research, collecting information and data, search and use of the bibliography, sampling, field research, questionnaire construction, online research, qualitative research, questionnaire coding, quantitative and qualitative data analysis, the researcher ethics, scientific work writing, presentation of scientific work. | 5 | Study/project | (GR/EN/FR) |
| 3 | 600-191703 | Consumer Behavior | Introduction to food consumer behavior. Factors influencing consumer behavior (psychological, sociological, anthropological, economic, physical, communicative). Consumer's decision-making process. Consumer's perception, learning and commitment. Measurement and changing of attitudes. Store selection and buying behavior. Research of food consumer behavior. Market research for agricultural and food products. Market research methods and data collection. Questionnaire, sampling and data processing. Syntax of agricultural market research reports. Intermediate purchasers of agricultural products behavior. | 6 | Study/project | (GR/EN) |
| 4 | 600-191704 | International Trade of Agriculture Products | Objective of the course is that students will be able to understand basic concepts of international trade and familiarize students with the traditional theory of international trade and developments. | 6 | project | (GR/EN) |
| 5 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| 6 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| | | | | Total 30 | | |
| | Semester 8 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |

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|---|---------------------|---|---|---------------------|----------------------|----------------------------------|
| 1 | 600-191801 | Agricultural Industrial Economics | Object of the theory in Industrial Economics. Basic definitions and basic concepts. Theory of the Firm. Firm behavior in Monopoly, in Perfect and almost Perfect competition and in Monopolistic Competition. Basic theory of Oligopoly with a homogeneous product and compared to monopoly and perfect competition. Dynamic games and strategies. Market structure: concentration and market efficiency. Vertical Integration Product differentiation (variety and quantity). Role of Advertising. Entrants and entry barriers. Mergers. Introduction to cartels. Introduction on Research and Development and Technology Competition. E-business. | 6 | Study/project | (GR/EN) |
| 2 | 600-191802 | Agricultural extension and advisory | The aim of the course is to get students familiar with the role of innovation in sustainable agricultural development and ways to diffuse it to the rural population, as well to get them familiar with agricultural advisory methods. | 5 | Study/project | GR/EN/FR |
| 3 | 600-191803 | Quality Management in Agriculture | Quality, competitiveness and value. Standardisation and quality. Quality control. TQM Principles and Tools. Quality management systems in primary production. Development of quality management systems in the enterprises of the agro-food sector. Standards of the quality management systems used by the enterprises in the rural space (international, European, national). Auditing, certification and review of the quality management systems. Managing the economics of the quality in the agribusinesses. Continuous quality improvement. | 6 | Study/project | (GR/EN) |
| 4 | 600-191804 | Environmental Economics and Policy | The course provides the necessary information and methodology to analyze the basic economic principles and models for the preservation and management of natural resources and to implement appropriate policy measures for the management and conservation of natural resources. | 5 | Study/project | (GR/EN) |
| 5 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| 6 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| | | | | Total 30 | | |
| | Semester 9 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-191901 | Agro-Econom Projects | The course includes the following major units: The definition and the categories of studies/projects. The meaning and the content of rural development. The National and European Community legal framework. Mechanisms of funding the rural development studies. Methodology of preparing rural development studies. Process of evaluation the rural development studies. | 6 | Study/project | (GR/EN) |
| 2 | 600-191902 | Farm Management | Principles of production economics; Farm as an economic unit; Farm types; Definition of management; The farmer as manager; Management of farm inputs; Decision making process; Methods of organization farms; | 5 | Study/project | (GR/EN) |
| 3 | 600-191903 | Strategic Planning of Food and Agricultural Enterprises | The subject of the course aims to introduce students to the main tools of strategic evaluation, analysis and strategic decision making. As part of the course, students will have the opportunity to evaluate the key components of the administration's main strategy question, how and why some organizations perform better than others, and to suggest solutions for the long-term survival of each type of organization. | 5 | Study/project | (GR/EN) |
| 4 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | Study/project | (GR/EN) |
| | Διπλωματική Εργασία | Thesis | Thesis | 10 | | |
| | | | | Total 30 | | |
| | Semester 10 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| | Διπλωματική Εργασία | Thesis | Thesis | 20 | | |

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| | Πρακτική Άσκηση (1 Μαρτίου – 31 Αυγούστου) | Practical Training (1 March-31 August) | Practical Training (1 March-31 August) | 10 | | |
| | | | | Total 30 | | |
| | Selection 3 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-191001 | Agricultural Entrepreneurship | The course covers specialized topics in agricultural entrepreneurship. Issues related to the economic and management principles, as well as the good business practices implemented in the rural area, are analyzed. | 4 | Study/project | (GR/EN) |
| 2 | 600-192001 | Fishing and Fishing Stock | History and evolution of fishing. Fishing fleet (types, characteristics, types of targets). Fishing of aquatic ecosystems (coastal zone, lake, sea, etc.). Common Fisheries Policy and Fisheries Code of Fisheries. Protected Areas (framework, management bodies). Fisheries Data: assessment and evaluation. Fishing stocks, disposal of discarded and by-products. Socio-economic dimension of fishing. Sustainable management of fisheries resources, reduction of fishing footprint. | 4 | Study/project | (GR/EN) |
| 3 | 600-193903 | Floriculture – Landscape Architecture | Ranking and cultivating practices of floricultural plants. production, organization in a greenhouse. Requirements of floricultural plants at ambient conditions. Supplementary and photoperiodic lighting applications carbon dioxide and floricultural crops. Misting and aeroponic misting systems. Application of micropropagation in various floral species. Hydroponic systems, materials, nutrient solutions and applications in floriculture. Installation and requirements of outdoor cut flowers. Harvesting, sorting, and packaging cut flowers. Principles of Landscape Architecture. Garden design. Installations of irrigation systems in gardens. Corridors, frames and shapes of various plant species | 5 | Study/project | (GR/EN) |
| 4 | 600-191004 | Optimization of Agricultural Production | The learning objective of this course is the acquisition of the necessary knowledge and skills related to the principles and the optimization of agricultural economics and the students' familiarization with specialized econometric and mathematical software packages. | 4 | Study/project | (GR/EN) |
| 5 | 600-193003 | Biological (Organic) Agriculture | Basic principles of organic agriculture and its impact on the ecosystem. Structure and activities of international organizations and committees. Analysis of Community legislation on organic farming. Organization and operation of inspection and certification body. Process control and certification of organic farming products. Quality characteristics of organic farming products. Application of organic agriculture in the cultivation of olive trees, fruit trees, vegetables and Plants of big culture. Organic farmers organization. | 4 | Study/project | (GR/EN) |
| 6 | 600-192002 | Organic Animal Farming | Organic farming and livestock production – Definitions. Organic products. Basic principles of organic livestock production. Organic livestock production in EU and Greece. Relevant legislation. Future perspectives of organic livestock production in Greece per kind of animal. Supervision of animals - nutrition - hygiene - conversion to the organic production system. Advantages and disadvantages of conventional and organic livestock farms. Organic livestock production and the environment | 4 | Study/project | (GR/EN) |
| 7 | 600-191007 | Precision Agriculture | Precision Agriculture | 4 | Study/project | (GR/EN) |
| 8 | 600-190003 | Farming systems in the world | The aim of the course is to get students able to describe and analyze farming systems in the world and compare them with each other, to describe and analyze the phases of European agriculture during the 20th century, to analyze the modern farming systems in the world and to recognize the challenges of the agriculture in the future. | 4 | Study/project | GR/EN/FR |
| 9 | 600-193902 | Agrochemicals | Chemistry, biochemistry, toxicology of insecticides, herbicides, fungicides and other agrochemicals. Residues (origin, environmental residues behavior) and methods that analyze them. Greek and international laws related with trade and control of agrochemicals. Quality control, identification and principles of secure trade and use of agrochemicals. Environment protection from the use of agrochemicals. | 6 | Study/project | (GR/EN) |

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| 10 | 600-191010 | Agricultural Education and Lifelong Learning | This course is designed to assist university students understanding and controlling the fundamental principles of learning and assessment as they apply in adult educational settings. The focus is on the study and application of psychological principles, theories, methodologies and strategies to issues of teaching and learning for farmers. | 4 | Study/project | (GR/EN) |
| 11 | 600-191011 | Agricultural Law | The aim of the course is to get students familiar with the legal concepts concerning the agricultural sector. In particular, to become familiar with family and inheritance law, the legal status of companies, to analyze the laws on agricultural cooperatives, as well as the laws concerning the transfer of agricultural real estate, to know the rules of management of common agricultural resources. | 4 | Study/project | GR/EN |
| 12 | 600-191012 | Food Supply Management | Food Supply Management | 4 | Study/project | (GR/EN) |
| 13 | 600-192007 | Rabbit and Fur Animal Husbandry | Classification, origin, nomenclature and breeds of rabbits and fur animals (mink, fox). Rabbit and fur animal husbandry in Greece and worldwide. External morphological conformation, digestive system, reproductive system. Production properties: reproduction, meat production, fur production, hair production. Feeding and genetic improvement. Breeding methods, housing and equipment. Diseases and hygiene of rabbits and fur animals. | 4 | Study/project | (GR/EN) |
| 14 | 600-191014 | Applied Econometrics | Introduction. Types of data used in an econometric analysis. The bivariate linear model. The multivariate linear model. The coefficient of determination and the adjusted coefficient of determination. Sources of variation in linear regression. Hypothesis testing using the t and F statistics. Confidence Intervals. Simple predictions. Special types of explanatory variables. Alternative methods. Violation of basic assumptions, heteroskedasticity, autocorrelation. Special types of nonlinear models. Specific applications in the above topics with a focus on applications from the agricultural sector. Special reference to Analysis of Variance and its connection to the Regression Analysis. | 4 | Study/project | (GR/EN) |
| 15 | 600-193008 | E-Commerce in Agrifood Sector | The subject of the course aims to introduce students to the basic concepts of e-commerce, and to understand the opportunities that IT provides for interactions between organizations and customers or other interest groups. Emphasis is given to the digital solutions, which meet the needs of the users and their application and commercialization, in different business models in Agrifood sector. | 4 | Study/project | (GR/EN) |
| 16 | 600-193009 | Ornamental Indoor Plants | All the information about the indoor environment and the needs of pot plants, as well as the cares for their maintenance are provided. For every pot plant species are provided: origin, description, species, varieties, culture needs, (propagation, light, soil, temperature, relative humidity, watering, fertilization, and other cares), ornamental value and use. | 4 | Study/project | (GR/EN) |
| 17 | 600-193011 | Post-Harvest Physiology and Treatment of Agricultural Products | Economic importance of post-harvest treatment of agricultural products. Post-harvest Losses during preharvest treatment. Ripening criteria. Post-harvest handling. Factors affecting the quality of agricultural products. Processing methods of agricultural products. Techniques for silage of stem, biochemical and nutritional changes during storage and preservation. Ethylene and its role in post-harvest treatments. Maintenance at ambient conditions. Transportation of agricultural products. Post-harvest storage and transportation conditions that best prolong shelf life. | 4 | Study/project | (GR/EN) |
| 18 | 600-191018 | Food Legislation | Food Legislation | 3 | Study/project | (GR/EN) |
| 19 | 600-191019 | European Integration economy | The course provides the necessary information and methodology to analyze the most important policies, which determine the evolutionary process of European Economic Integration and to justify the necessity and the functioning of Economic and Monetary Union of the EU. | 4 | project | (GR/EN) |
| 20 | 600-192013 | Economics of Animal Production | The learning objective of this course is the acquisition of the necessary knowledge and skills related to the principles and methods of agricultural economics that apply to animal production. | 4 | Study/project | (GR/EN) |
| 21 | 600-192027 | Silkworm production | Knowledge on the principles, systems and practices of silkworm production. Relation to mulberry tree, silkworm life cycle, silkworm cocoon, reeling and silk fiber production and uses. | 4 | Study/project | (GR/EN) |

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| 22 | 600-193013 | Digital Garden Design | Digital technologies used in Landscape Architecture field. Introduction to AutoCAD software as a design tool for landscape design. Features, commands, and techniques for composing, editing and printing 2D and 3D computer drawings concerning garden design projects of different scale and typology. | 4 | Study/project | (GR/EN) |
| 23 | 600-191023 | Agricultural Prices | Review of the Economic Role of Prices and Approaches to the Study of Agricultural Market Organization. Conduct and Performance. Economic role of Agricultural prices. Equilibrating functions with the market. Approaches to the study of agricultural market organization and performance. Theoretical Models of Market Structure and Performance. The Food Marketing Channel. Empirical Agricultural Price Analysis International Agricultural Trade Managing Price Through Futures Markets Strategic Price Setting Creative Pricing Schemes. Monopsony and oligopsony models of agricultural product markets. Conditions for monopsony and oligopsony. Price and output determination under different market structures. | 4 | Study/project | (GR/EN) |
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| | Selection 4 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-191501 | Agricultural macroeconomic analysis | The course provides the necessary information and methodology to enable the students to understand how to measure and identifies the different economic fundamentals and also to introduce the students to the description and critical discussion of macro-economic perception, improve quality and ethical practices in the economy. | 4 | Study/project | (GR/EN) |
| 2 | 600-193602 | Agricultural Ecology | Introduction to Ecology. Environmental conditions and natural resources. Climate and biomes. Greek natural ecosystems. Population dynamics. Anatomical and functional adaptive mechanisms of organisms. Ecosystems and bio-communities. Flow of energy and matter through ecosystems. Applied topics in Ecology. | 4 | Study/project | (GR/EN) |
| 3 | 600-193802 | Plant Disease | It examines the main diseases of the vine and of crops of fruit and vegetables have been found in Greece. For each category of crops, diseases classified under induced causes, such as fungal diseases, prokaryotic virological etc. The study of the disease each is brief, but given all the knowledge and information necessary for their identification, the manner and the force conditions, development and broadcasting and basic management principles. | 5 | Study/project | (GR/EN) |
| 4 | 600-193804 | Applied Entomology | Knowledge regarding the hosts, distribution, identification, biology, ethology, and control of insects. Emphasis is placed on the application of Entomology in agriculture, wood - boring insects and stored product pests. | 6 | Study/project | (GR/EN) |
| 5 | 600-193603 | Weed Science | Course description: Survival mechanisms of weed, damage caused by weeds in cultivated plants, morphology, physiology and ecology of the most important weeds of our country and methods to face with them. Also describes the process of the absorption, assessment, action, selectivity, removal and the factors affecting the residual duration of herbicides, also the standardization, the application and classification in species based on the act-how mechanism. | 5 | Study/project | (GR/EN) |
| 6 | 600-193021 | Ornamental Outdoor Plants | All the information about the main native and foreign woody species (Gymnosperms and Angiosperms) commonly used in parks and gardens in urban and suburban environments are provided. For every outdoor plant species are provided: Systematic classification (scientific/common name, family), origin, description, propagation, ecological/culture needs, ornamental value and use. | 4 | Study/project | (GR/EN) |
| 7 | 600-193022 | Garden Design | Garden design over centuries and across continents. Presentation of the world's most influential garden designers and their gardens. Types and styles of gardens. Site inventory and analysis. Landscape design elements, principles, and procedures. Plant selection and groupings. A year-round gardening calendar. Project: Small groups developing and presenting garden design scenarios. | 4 | Study/project | (GR/EN) |

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| 8 | 600-190010 | Agrifood Business Management | The subject of the course aims to introduce students to understand the various aspects of administrative practice and develop skills in analyzing organizational problems and making decision. | 4 | Study/project | (GR/EN) |
| 9 | 600-190011 | Marketing of Agricultural Products | Objects and concepts of marketing of the agricultural products. Specificities of the agricultural production. Marketing mix and marketing environment. Preparatory marketing functions. Supply functions. Communication and informational marketing functions. Facilitative functions. Selling of the agricultural products. Stakeholders and channels of the agricultural marketing. Marketing costs, margins and marketing efficiency. Modern marketing systems. Direct marketing and cooperative marketing of the agricultural products. Marketing of the agricultural inputs. | 4 | Study/project | (GR/EN) |
| 10 | 600-190009 | Apiculture | Honey bee species and breeds. The honey bee colony. Anatomy, physiology and social physiology of the honey bee. Bee nest architecture. Honey bee nutrition. Honey bee activities and behaviour. Swarming. Honey bee genetics and breeding. Crop pollination. Honey plants. Beekeeping equipment. Seasonal management. Production of queens. Products of the hive. Diseases and pest of honey bees. Pesticide poisoning | 4 | Study/project | (GR/EN) |
| 11 | 600-191034 | Foreign Language - Agro-ecological Terminology | Foreign Language - Agro-ecological Terminology | 4 | Study/project | (GR/EN) |
| 12 | 600-191035 | Financial Mathematics | Simple Interest. Discount Interest. Equivalence in promissory notes. Compound Interest. Annuities. Loans. | 4 | Study/project | (GR/EN) |
| 13 | 600-191036 | Economics of Agricultural Production Processing | The subject area of the course includes the importance and benefits of processing of agricultural products and the economic effectiveness of a processing unit. Issues related to place selection to establish a manufacturing industry are analyzed. | 4 | Study/project | (GR/EN) |
| 14 | 600-191037 | Environmental Education | Introductory environmental education course designed to prepare university students to implement environmental education opportunities in formal and non-formal education settings. Topics include history and philosophy of environmental education, environmental laws and regulations, GIS, environmental issues and decision-making, curriculum integration and environmental education teaching methodologies. | 4 | Study/project | (GR/EN) |
| 15 | 600-191038 | Agricultural Information Systems | Knowledge of the Information and Communication Technologies that interacts with and influences agricultural productivity, with a specific reference to information and the complementary networks of hardware and software that farmers and agribusinesses use to collect, filter, process, create and also distribute data, aiming to support operations, management and decision-making. | 4 | Study/project | (GR/EN) |
| 16 | 600-191039 | Policy of Agricultural Products | The subject of the course aims to introduce students to the main tools of agricultural policy and to understand the impact of policy implementation in agricultural products. | 4 | Study/project | (GR/EN) |
| 17 | 600-192026 | Breeding Snails | The course deals with new expertise and analyzes systems of rearing snails. In particular it will provide the basic knowledge and all the basic information about the biology of the snail, for both modern husbandry systems (open and closed), and the rules that rearing ensure good productivity and quality in the conditions of our country | 4 | Project | (GR/EN) |
| 18 | 600-190012 | Collective actions and social entrepreneurship | The aim of the course is to get students familiar with the theories, logic and dynamic of collective actions in the rural areas, as well with the forms of social entrepreneurship in the countryside. | 4 | Study/project | GR/EN/FR |
| 19 | 600-190014 | Tourism in the Countryside | The aim of the course is to get students familiar with the role of rural tourism as a tool for the development of the rural areas and the multifunctionality of agricultural holdings. In particular, to recognize and analyze the various categories of rural tourism and to create the business plan of a tourist unit in the countryside. | 4 | Study/project | GR/EN |
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| | Division of Animal Science | | | | | |
| | Semester 5 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |

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|---|-------------------|--|--|---------------------|----------------------|----------------------------------|
| 1 | 600-192501 | Applied Animal Nutrition | Introduction in feedstuffs. Properties of feedstuffs and their use in animal nutrition. Nutritional requirements of various animal species. Determination of minimum and maximum use of feedstuffs for various animal species. Ration formulation using linear programming. | 4 | Study/project | (GR/EN) |
| 2 | 600-192502 | Poultry Production | Structure and importance of rearing. Sort origin domestication nomenclature. External morphological conformation productive properties. Quality products manufactured. Breeds of hens. Genetic improvement of hens. Stabling of-microclimate. Diet Methods of rearing. Welfare of organizing poultry business | 5 | Study/project | (GR/EN) |
| 3 | 600-192503 | Pig Production | The pig farming internationally. Structure of the Greek pig farming, problems and prospects of the Greek pig production. Origin of the modern breeds of pig, the main breeds of pigs in use. Reproduction of the pig. Pig growing and fattening. Pig housing. The health of pigs and facilities hygiene. Genetic of the pigs. Economics and management of the pig farms. The use of Informatics - Computing in the economic management of pig farming. | 5 | Study/project | (GR/EN) |
| 4 | 600-192504 | Physiology of Farm Animal Reproduction | Functional anatomy of male and female reproduction, Hormones and reproduction, Reproductive cycles (cattle, buffalo, sheep, goats and pigs), Folliculogenesis, Egg maturation and ovulation, Transport and survival of gametes, Spermatogenesis, Spermatozoa and seminal plasma, Fertilization and cleavage, Implantation and maternal recognition, Gestation, stages of embryo development, prenatal physiology and parturition, Newborn care, Pregnancy diagnosis, Mammary elements of anatomy and physiology, Natural defense mechanisms, composition and milk secretion, Hormonal control, Factors that are involved in the induction of mastitis, Mastitis, Preventive measures to treat mastitis, Management measures for the treatment and prevention of mastitis. | 4 | Study/project | (GR/EN) |
| 5 | 600-192505 | Meat Technology | General principals of organization and function of slaughter-houses. Hygiene rules in the slaughter-houses. Slaughter procedure of cattle, pigs, sheep, goats and poultry. Carcass labeling (stamps), qualitative classification of meat. General about cutting meat into pieces. HACCP, Good Manufacturing Practice in slaughter-house and meat cutting plants. Rules of European Communication rules numbers 852,853, 854/2004 ect. Structure of muscular tissue, chemical composition of meat. Physiological and no physiological changes of meat. Manufactures of meat, products of meat, mechanically separation of meat. Differences between raw and frozen meat. Water holding capacity. Bacteriological tests. Diseases of slaughtered animals. Poisoning of food. | 4 | Study/project | (GR/EN) |
| 6 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| 7 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| | | | | Total 30 | | |
| | Semester 6 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-192601 | Bovine Husbandry | Classification, origin, nomenclature and breeds of bovines. Cattle production in Greece and worldwide. External morphological conformation, anatomy and physiology of bovines. Tissue development and growth of bovines. Feeding and digestive process in bovines. Genetic improvement, selection, and reproduction of bovines. Biotechnology methods in reproduction (artificial insemination, embryo transfer). Mammary gland, milk production, milk quantity and quality control. Cow milking and milking machines. Breeding methods, Diseases, Hygiene. Cattle housing and equipment. | 5 | Study/project | (GR/EN) |

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|---|-------------------|-----------------------------|---|---------------------|----------------------|----------------------------------|
| 2 | 600-192602 | Sheep and Goat Production | Historical evolution of sheep and goats. Sheep and goat production in the world, EU and Greece. Criteria for classification of sheep and goat breeds. Main breeds of sheep and goats, greek and foreign. Morphological – Zootechnical characteristics – productive properties. Body measurements – body condition scoring. Analysis of breeding systems in Greece and in the rest of the world. Reproduction – Nutrition – Genetic improvement of sheep and goats. Analysis of productive properties. Dehorning, docking, trimming, age determination, hand milking, machine milking, milkability of small ruminants, lambing and kidding, weaning, Artificial suckling, artificial insemination, shearing, care and management of sheep and goats according to the category and the physiological stage. Sheep and goat holdings and shelters – Basic diseases – Hygiene | 5 | Study/project | (GR/EN) |
| 3 | 600-192603 | Animal Pathology | Definition of Health and Disease. Etiology and Pathogenesis. Clinical signs of various diseases and Diagnosis. Clinical examination, methods of examination. Laboratory tests. General examination: Body temperature monitoring, Heart rate and rhythm monitoring, Respiration rate monitoring, Examination of lymph nodes. Clinical examination of the Skin, the Digestive System, the Respiratory System, the Cardiovascular System, the Nervous System, the Urinary System. Treatment and Control of diseases. | 4 | Study/project | (GR/EN) |
| 4 | 600-192604 | Parasitology of Livestock | About parasites and parasitism. Relations between parasites and hosts. Nomenclature of parasites. Classification. Metazoa parasites. Synomotaxies of parasites: Platyhelminthes, Nematelminthes, Acanthocephala, Anellida, Arthropoda. Morphology, systems, biological cycles. Omotaxies: Trematoda, Cestoda and Nematoda parasites. General morphology and classification. Visual morphology and biological cycle of the main parasites of our country, with particular emphasis on the description of biological cycles. Trematodioseis, Cestodioseis, Nematodioseis and Arthropodioseis as clinical entities and as causes of serious economic losses. | 4 | Study/project | (GR/EN) |
| 5 | 600-192605 | Feed Technology | Feed Technology. Storage, processing, manufacturing of feeds. Quality control. Novel feeds. Antinutritional factors. | 4 | Study/project | (GR/EN) |
| 6 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| 7 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| | | | | Total 30 | | |
| | Semester 7 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-192701 | Animal Breeding | Biometrical study of production traits, analysis methods, experimental designs, results inference. Elements of population genetics, creation and evolution of species. Elements of Quantitative Genetics meaning and estimation of genetic parameters, selection theory, inbreeding. Genetic evaluation (BLUP), selection index, selection methods, progeny testing. Breeding methods, outbreeding, crossbreeding, heterosis, hybrids. Means and organization of genetic improvement of farm animals, recording and evaluation of traits. Pedigree records and impact of biotechnology in the genetic improvement of farm animals. | 6 | Study/project | (GR/EN) |
| 2 | 600-192702 | Ichthyology | Introduction to Ichthyology. Aquatic environment (Abiotic & Biological factors). Fish morphology and anatomy. Movement in the water medium. Breathing. Development. Reproduction, Nutrition. Age and weight gain, weight-to-weight ratio, weight gain parameters. Reproduction and fertility. Fish and habitats. Fish and freshwater fish fauna. Greek and Mediterranean fish fauna | 6 | Study/project | (GR/EN) |
| 3 | 600-192703 | Precision Livestock Farming | Analysis on the principles and applications of precision farming in the livestock sector. Explanation of the differences with conventional animal production, the benefits and potential of precision livestock systems. | 6 | Study/project | (GR/EN) |

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| 4 | 600-192704 | Applied Pharmacology | Drug forms, mode of action, excretion ways, metabolism, undesirable reactions, administration, dosage, prescription, legislation. Description of main drugs of nervous, cardiovascular, respiratory, digestive, urinary, reproductive system, as well as of drugs against infectious and parasitic diseases. Hormones. Anaesthesia. Poison antidotes. Euthanasia drugs. Drugs residues in animal products. Residue screening programmes. National and European Legislation | 4 | Study/project | (GR/EN) |
| 5 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| 6 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| | | | | Total 30 | | |
| | Semester 8 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-192801 | Reproductive Biotechnology in Farm Animals | Methods for detecting estrus, Methods of synchronization of estrus, Semen, Collection of semen, Checking the quantitative and qualitative characteristics of sperm - Examination & evaluation of sperm, Extending maintenance and infusion of semen, Artificial insemination, Factors affecting the results of artificial insemination, Disinfection & sterilization of artificial insemination tools and materials, Collection - Transfer of embryos, In vitro fetal production, Gender identification and selection. | 6 | Study/project | (GR/EN) |
| 2 | 600-192802 | Dairy Farming | Production and development of milk. Milk constituents. Factors that affect the composition and quality of the milk produced. Physical properties of the milk. Nutritional and biological value of milk. Microbiology of fresh milk. Cases of mastitis-antibiotics. Production pure-healthy milk. Thermal treatment of milk. Basically dairy products. Sampling of milk. Methods of analysis of milk. Adulteration of milk. | 6 | Study/project | (GR/EN) |
| 3 | 600-192803 | Pasture Management | General aspects, classification and registration (or mapping) of natural pastures and artificial meadows. The effects (or influence) of abiotic and biotic aspects (or factors) on the characteristics of natural pastures. Plant species and establishment of artificial grasslands. Management of artificial and natural grasslands. Determination of pasture productivity (quantitative and qualitative), estimation of pasture grazing capacity and stocking rate, optimal utilization. Pasture-fed livestock production systems. Effects of Grazing on the Environment. Contribution of modern technology to pasture management and monitoring. | 5 | Study/project | (GR/EN) |
| 4 | 600-192804 | Implementation of Artificial Insemination in Domestic Animals | Implementation of Artificial Insemination in Domestic Animals | 5 | Study/project | (GR/EN) |
| 5 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| 6 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| | | | | Total 30 | | |
| | Semester 9 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-192901 | Animal Waste Management | Animal Waste Management | 5 | Study/project | (GR/EN) |
| 2 | 600-192902 | Aquatic Animal Breeding | Introduction to aquaculture and prospects. Qualitative water characteristics for the cultivation of aquatic organisms (physicochemical characteristics, origin). Distorted Aquatic Organisms (Fish, Molluscs, Decapoda, Carcinoids), species selection criteria and main phases of the production process. Breeding systems, organization and management of breeding units. | 5 | Study/project | (GR/EN) |
| 3 | 600-192903 | Animal Diseases and Hygiene | Animal Diseases and Hygiene | 6 | Study/project | (GR/EN) |
| 4 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| | Διπλωματική Εργασία | Thesis | Thesis | 10 | | |
| | | | | Total 30 | | |

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|---|--|--|---|---------------------|----------------------|----------------------------------|
| | Semester 10 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| | Διπλωματική Εργασία | Thesis | Thesis | 20 | | |
| | Πρακτική Άσκηση (1 Μαρτίου – 31 Αυγούστου) | Practical Training (1 March-31 August) | Practical Training (1 March-31 August) | 10 | | |
| | | | | Total 30 | | |
| | Selection 3 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-192001 | Fishing and Fishing Stock | History and evolution of fishing. Fishing fleet (types, characteristics, types of targets). Fishing of aquatic ecosystems (coastal zone, lake, sea, etc.). Common Fisheries Policy and Fisheries Code of Fisheries. Protected Areas (framework, management bodies). Fisheries Data: assessment and evaluation. Fishing stocks, disposal of discarded and by-products. Socio-economic dimension of fishing. Sustainable management of fisheries resources, reduction of fishing footprint. | 4 | Study/project | (GR/EN) |
| 2 | 600-192002 | Organic Animal Farming | Organic farming and livestock production – Definitions. Organic products. Basic principles of organic livestock production. Organic livestock production in EU and Greece. Relevant legislation. Future perspectives of organic livestock production in Greece per kind of animal. Supervision of animals - nutrition - hygiene - conversion to the organic production system. Advantages and disadvantages of conventional and organic livestock farms. Organic livestock production and the environment | 4 | Study/project | (GR/EN) |
| 3 | 600-193701 | Industrial - Energy Plants | Utility, morphological characteristics, ecological requirements, crop production, crop maintenance and the technology of industrial and energy plant products, such as tobacco, cotton, sugar beets, potatoes and tomatoes. Furthermore, the most important insects, diseases, weeds and their manipulating methods are also briefly outlined. Also, botanical description, adaptability, cultivation techniques, harvest-storage on the quantity and quality of output of oilseeds. | 5 | Study/project | (GR/EN) |
| 4 | 600-191901 | Agro-Economy Projects | The course includes the following major units: The definition and the categories of studies/projects. The meaning and the content of rural development. The National and European Community legal framework. Mechanisms of funding the rural development studies. Methodology of preparing rural development studies. Process of evaluation the rural development studies. | 6 | Study/project | (GR/EN) |
| 5 | 600-192005 | Applied Microbiology | Animal diseases caused by microorganisms with emphasis to animal production. Immunisation programs. Prevention. Zoonoses. Case studies. | 4 | Study/project | (GR/EN) |
| 6 | 600-192006 | Game Animal Husbandry | Bird physiology (reproductive, digestive, urinary, skeletal and respiratory systems). Design - operation of a poultry farm (Legislative Framework). Nutrition of birds. Breeding of winged hunting animals (pheasant, quail, partridge, cockroach, partridge, duck). Diseases of winged hunting animals. Hair hunting animals breeding. Hunting releases (pheasant, partridge, hare). Socio-economic dimension of hunting animals breeding. | 4 | Study/project | (GR/EN) |
| 7 | 600-192007 | Rabbit and Fur Animal Husbandry | Classification, origin, nomenclature and breeds of rabbits and fur animals (mink, fox). Rabbit and fur animal husbandry in Greece and worldwide. External morphological conformation, digestive system, reproductive system. Production properties: reproduction, meat production, fur production, hair production. Feeding and genetic improvement. Breeding methods, housing and equipment. Diseases and hygiene of rabbits and fur animals. | 4 | Study/project | (GR/EN) |

| 8 | 600-192008 | Animal Welfare and Ethology | An approach to animal welfare, with emphasis given on productive animals under breeding conditions. Analysis on the five freedoms of animals and the role of breeding practices in the application of animal ethology principles. | 4 | Study/project | (GR/EN) |
|----|-------------|--|--|--------------|---------------|---------------------------|
| 9 | 600-190005 | Horse Husbandry | Classification-Origin-Nomenclature, Horse riding in Greece-Equestrian sports, External morphological-Shape, Colors, Particular color characteristics, Determination of age, Horse breeds, Reproduction, Principles of nutrition, General principles of hygiene, horse transport, equestrian facilities. | 4 | Study/project | (GR/EN) |
| 10 | 600-192010 | Animal Genetic Evaluation Methods | Breeding Value Estimation (EBV). Phenotypic Performance under different environmental conditions. Breeding Value Estimation for one trait from various sources (e.g. mass selection, repeated measurements, sib selection, family selection, progeny testing). Composite Selection Indices. Total Merit Estimation. Accuracy of EBV and Total Merit. Marker Assisted Selection (MAS) and Quantitative Trait Loci (QTL) Detection. Genomic Selection and Genome Wide Association Analysis (GWAS). | 4 | Study/project | (GR/EN) |
| 11 | 600-192011 | Research Methodology and Experimental Design | Research Methodology and Experimental Design | 4 | Study/project | (GR/EN) |
| 12 | 600-192012 | Molecular Biology | Lectures: Introduction to cell theory. Chemical composition of the cell - macromolecules and their properties. Prokaryotic and eukaryotic chromosome structure. DNA copying in prokaryotic and eukaryotic organisms. Mechanisms of recombinant DNA. Mutations and correcting mechanisms of DNA. Transcription in prokaryotic and eukaryotic organisms - regulation of gene expression. Translation in prokaryotic and eukaryotic organisms. Recombinant DNA technologies. Genomes - Modern Genomics and the new -omics technologies. Laboratory: 1. DNA isolation from animal and plant tissue using spin columns. 2. RNA isolation from animal and plant tissue. 3. Reverse Transcription of poly(A)-RNA in cDNA. 4. In silico design of PCR primers. 5. PCR of cDNA (RT-PCR). 6. Electrophoresis in agarose gel. 7. Bioinformatics analysis of gene and genomic sequences. | 4 | Study/project | (GR/EN) |
| 13 | 600-192013 | Economics of Animal Production | The learning objective of this course is the acquisition of the necessary knowledge and skills related to the principles and methods of agricultural economics that apply to animal production. | 4 | Study/project | (GR/EN) |
| 14 | 600-193504 | Cereals - Legumes | Morphological characteristics, ecological requirements, crop production, crop silage, hay and fresh maintenance of products of winter-spring cereals and legumes. Furthermore, the most important insects, diseases, weeds and their manipulating methods are also briefly outlined. | 4 | Study/project | (GR/EN) |
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| | Selection 4 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-193801 | Aromatic - Medicinal Plants | Botanical description, morphological characteristics, ecological requirements, crop production, crop maintenance adaptability, cultivation techniques, harvest-storage on the quantity and quality of output of herbs oregano, Sage, mint, thyme, Melissa, lavender, Chamomile, Laurel, Rosemary, eucalyptus and other. Furthermore, the most important insects, diseases, weeds and their manipulating methods are also briefly outlined. | 6 | Study/project | (GR/EN) |
| 2 | 600-192016 | Biotechnology - Bioengineering | Analysis of the principles of biology combined with the possible applications of other applied sciences and engineering tools in animal production. Explanation of the benefits and potential of bioengineering for sustainable and animal-friendly livestock production systems. | 4 | Study/project | (GR/EN) |
| 3 | 600-192017 | Biochemistry | Biochemistry | 4 | Study/project | (GR/EN) |

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|----|------------|--|--|---|---------------|---------|
| 4 | 600-193602 | Agricultural Ecology | Introduction to Ecology. Environmental conditions and natural resources. Climate and biomes. Greek natural ecosystems. Population dynamics. Anatomical and functional adaptive mechanisms of organisms. Ecosystems and bio-communities. Flow of energy and matter through ecosystems. Applied topics in Ecology. | 4 | Study/project | (GR/EN) |
| 5 | 600-192019 | Nutritional – Metabolic Diseases of Animals | Nutrition related health problems in animals, etiology and consequences. | 4 | Study/project | (GR/EN) |
| 6 | 600-190008 | Companion Animal Care and Management | Classification, origin, nomenclature and breeds of dogs and cats. External morphological conformation, anatomy and physiology of dogs and cats. Husbandry, feeding, reproduction, diseases and prevention. Behaviour of companion animals with emphasis to dog and cat. | 4 | Study/project | (GR/EN) |
| 7 | 600-193023 | Fodder Plants - Ranges | Cultivation of main intensively cultivated fodder plants. Factors that influence the production of ranges. Types of range vegetation. Improvement of ranges by application of proper use, control of weeds, seeding and fertilization. Grazing management and proper management of ranges. Measurement of range vegetation production, proper use, percentage of use. Range Site Quality. Grazing capacity and stocking rate. | 4 | Study/project | (GR/EN) |
| 8 | 600-190010 | Agrifood Business Management | The subject of the course aims to introduce students to understand the various aspects of administrative practice and develop skills in analyzing organizational problems and making decision. | 4 | Study/project | (GR/EN) |
| 9 | 600-190011 | Marketing of Agricultural Products | Objects and concepts of marketing of the agricultural products. Specificities of the agricultural production. Marketing mix and marketing environment. Preparatory marketing functions. Supply functions. Communication and informational marketing functions. Facilitative functions. Selling of the agricultural products. Stakeholders and channels of the agricultural marketing. Marketing costs, margins and marketing efficiency. Modern marketing systems. Direct marketing and cooperative marketing of the agricultural products. Marketing of the agricultural inputs. | 4 | Study/project | (GR/EN) |
| 10 | 600-190009 | Apiculture | Honey bee species and breeds. The honey bee colony. Anatomy, physiology and social physiology of the honey bee. Bee nest architecture. Honey bee nutrition. Honey bee activities and behaviour. Swarming. Honey bee genetics and breeding. Crop pollination. Honey plants. Beekeeping equipment. Seasonal management. Production of queens. Products of the hive. Diseases and pest of honey bees. Pesticide poisoning | 4 | Study/project | (GR/EN) |
| 11 | 600-192025 | Quality and Control of Foodstuffs of Animal Origin | General hygiene principals of the primary production of foodstuffs of animal origin. General and special requirements of hygiene for production, treatment and processing in food industry of foodstuffs of animal origin. Definition of safety and quality of foodstuffs of animal origin. Hazard Analysis Critical Control Point (HACCP), International Organization for Standardization (ISO), European Regulations 853,853,854/2004 of the European Parliament and of the Council ect. General rules of Good Manufacturing and Hygiene Practice in food industries of foodstuffs of animal origin. Categories and hygiene of meat. Physiological and non physiological changes of meat. Control of minced meat, meat preparations and meat products. Degradation of products. Control of milk and milk products. Control of poultry and eggs. Control of fish, mollusk and shellfish. Control of honey. The action of the inspector. Greek and European Community legislation. | 4 | Study/project | (GR/EN) |
| 12 | 600-192026 | Snail Breeding | The course deals with new expertise and analyzes systems of rearing snails. In particular it will provide the basic knowledge and all the basic information about the biology of the snail, for both modern husbandry systems (open and closed), and the rules that rearing ensure good productivity and quality in the conditions of our country | 4 | Project | (GR/EN) |
| 13 | 600-192027 | Silkworm Production | Knowledge on the principles, systems and practices of silkworm production. Relation to mulberry tree, silkworm life cycle, silkworm cocoon, reeling and silk fiber production and uses. | 4 | Study | (GR) |

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|----|----------------------------------|---------------------------------|--|---------------------|----------------------|----------------------------------|
| 14 | 600-190013 | Systematic Botany | Historical Aspects. Pre-Linnaean period. Greek Civilization. Herbalists. Linnaeus. Post- Linnaean period. Naming. Rules of Nomenclature. Categories of Classification-Taxa. Natural systems of Classifications. Cronquist systems of Classifications. Schizophyta. Phycophyta- Algae. Mycophyta- Fungi. Lichenophyta-Lichens. Bryophyta- Mosses. Pteridophyta- Ferns. Spermatophyta, Gymnosperms, Angiosperms. Dicots, Monocots. | 4 | Study/project | (GR/EN) |
| 15 | 600-192029 | Water Ecosystems | Introduction to Water Ecosystems. Legislative framework for the protection and management of aquatic ecosystems. Types of Wetlands (Delta, Lakes, Artificial Lakes, Ellis, Lagoon and Rivers) and Marine Ecosystems. Abiotic and Biological Factors. Protected water ecosystems (values and threats). Water ecosystem management. | 4 | Study/project | (GR/EN) |
| 16 | 600-192030 | Digestive Physiology of Animals | Digestive Physiology of Animals. Differences, parts and functions between ruminant and monogastric digestive systems. | 4 | Study/project | (GR/EN) |
| | | | | | | |
| | Plant Production Division | | | | | |
| | Semester 5 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-193501 | Agricultural hydraulics | Physical properties of fluids. Surface tension, capillary phenomena. Hydrostatic pressure. Fluid Hydrodynamics. The law of conservation of mass, energy and momentum. Hydraulic structures and water flow measurements. Open channel flow and pipe flow hydraulics. Soil-Water properties. Available soil moisture for plants. Crop water requirements. Salinity control. Irrigation Scheduling. | 4 | | |
| 2 | 600-193502 | Plant Breeding | Plant cellular organization and genetic structure. Plant genetic resources for plant breeding. Sexual hybridization and wide crosses in plant breeding. Tissue culture and the breeding of clonally propagated plants. Polyploidy in plant breeding. Biotechnology. Classical methods of plant breeding. Breeding for resistance to diseases and insect pests. Breeding for resistance to abiotic stresses. | 4 | Study/project | (GR/EN) |
| 3 | 600-193503 | General Pomology | The importance of pomology in Greek and worldwide. Morphology of the fruit trees, soil requirements, propagation methods - rootstocks. Selection of the appropriate location for the plantation of fruit trees - planting systems. Soil cultivation - Fertilization - Irrigation. Fruiting Organs – Pruning - Thinning. Criteria of harvesting - Sorting - Packaging and Maintenance of fruits. | 4 | Study/project | (GR/EN) |
| 4 | 600-193504 | Legumes | Morphological characteristics, ecological requirements, crop production, crop silage, hay and fresh maintenance of products of winter-spring cereals and fruitful leguminous. Furthermore, the most important insects, diseases, weeds and their manipulating methods are also briefly outlined. | 5 | Study/project | (GR/EN) |
| 5 | 600-193505 | Vegetable Crops | Nutrition Value of vegetables. Types of vegetable farms. Factors affecting the production of vegetables and their improvement. Establishment of vegetable garden and seedbeds. Transplanting, sowing in situ. Cultivation. Harvest - sorting -packing. Storage, Marketing. Greenhouses Operation, low enclosures. Classification of vegetables. Improvement of vegetable plants. Soil. Fertilization, irrigation. Hydroponics. | 5 | Study/project | (GR/EN) |
| 6 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| 7 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| | | | | Total 30 | | |
| | Semester 6 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |

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|---|-------------------|---------------------------------|---|---------------------|----------------------|----------------------------------|
| 1 | 600-193601 | Irrigation and drainage methods | Sources of irrigation water. Selection of irrigation methods for agriculture. Surface Irrigation methods. Sprinkler Irrigation. Drip irrigation. Design of small scale irrigation systems. Drainage of irrigated land. Design criteria. Surface and subsurface drainage systems. Drain spacing formulae under steady and unsteady state conditions. | 4 | | |
| 2 | 600-193602 | Agricultural Ecology | Introduction to Ecology. Environmental conditions and natural resources. Climate and biomes. Greek natural ecosystems. Population dynamics. Anatomical and functional adaptive mechanisms of organisms. Ecosystems and bio-communities. Flow of energy and matter through ecosystems. Applied topics in Ecology. | 4 | Study/project | (GR/EN) |
| 3 | 600-193603 | Weed Science | Course description: Survival mechanisms of weed, damage caused by weeds in cultivated plants, morphology, physiology and ecology of the most important weeds of our country and methods to face with them. Also describes the process of the absorption, assessment, action, selectivity, removal and the factors affecting the residual duration of herbicides, also the standardization, the application and classification in species based on the act-how mechanism. | 5 | Study/project | (GR/EN) |
| 4 | 600-193604 | Specialized Pomology | Origination - Spreading. Botanic classification. Economic importance - Uses. Climate and soil requirements. Propagation - Rootstocks. Establishment of plantation. Fruiting Organs. Pruning - Pollination - Fertilization – Growth Stages. Cultivars, Fertilization - Irrigation. Plant protection with emphasis on physiological disorders. Preharvest Physiology. Harvesting and storage. | 5 | Study/project | (GR/EN) |
| 5 | 600-193605 | Research Methodology | Structure research project, stages of empirical research, collecting information and data, search and use of the bibliography, sampling, field research, questionnaire construction, online research, qualitative research, questionnaire coding, quantitative and qualitative data analysis, the researcher ethics, scientific work writing, presentation of scientific work. | 5 | Study/project | (GR/EN/FR) |
| 6 | Επιλογή 4 | Selection 4 | Selection 4 | 4 | | |
| 7 | Επιλογή 4 | Selection 4 | Selection 4 | 4 | | |
| | | | | Total 30 | | |
| | Semester 7 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-193701 | Industrial - Energy Plants | Utility, morphological characteristics, ecological requirements, crop production, crop maintenance and the technology of industrial and energy plant products, such as tobacco, cotton, sugar beets, potatoes and tomatoes. Furthermore, the most important insects, diseases, weeds and their manipulating methods are also briefly outlined. Also, botanical description, adaptability, cultivation techniques, harvest-storage on the quantity and quality of output of oilseeds. | 5 | Study/project | (GR/EN) |
| 2 | 600-193702 | Introduction in Plant Pathology | Description of main groups of plant pathogens. General disease cycle. General features of fungal pathogens, taxonomy, morphology, fungal pathogenicity etc. Introduction to phytopathogenic bacteria and pathogenicity factors. Introduction to phytopathogenic viruses. Taxonomy, morphology, replication cycle. Diagnosis of phytopathogenic viruses and viroids. Serological and molecular techniques. Resistance of plants to pathogens. Defense reactions. Introduction to phytoplasmas and rickettsia-like-organisms, parasitic plants. Description of abiotic causes | 6 | Study/project | (GR/EN) |
| 3 | 600-193703 | Viticulture | Statistical and Economical information for the vines. Morphology - Anatomy. Physiology, vegetative and reproductive cycle. Climate and soil requirements. Establishment of vineyard. Propagation and rootstocks. Winter and Summer pruning. Soil cultivation, fertilization, irrigation. Table, Wine and Dried Cultivars. Harvesting, Storage, Plant Protection. Processing, standardization and marketing. | 6 | Study/project | (GR/EN) |
| 4 | 600-193704 | General Entomology | General aspects about insects of cultivated plants. Injuries and benefits from insects. External and internal insect morphology, classification in orders. Insect discrimination from other pest. Chemical, biological and integrated methods of controlling insects. | 5 | Study/project | (GR/EN) |

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|---|--------------------|---------------------------------------|---|---------------------|----------------------|----------------------------------|
| 5 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| 6 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| | | | | Total 30 | | |
| | Semester 8 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-193801 | Aromatic - Medicinal Plants | Botanical description, morphological characteristics, ecological requirements, crop production, crop maintenance adaptability, cultivation techniques, harvest-storage on the quantity and quality of output of herbs oregano, Sage, mint, thyme, Melissa, lavender, Chamomile, Laurel, Rosemary, eucalyptus and other. Furthermore, the most important insects, diseases, weeds and their manipulating methods are also briefly outlined. | 6 | Study/project | (GR/EN) |
| 2 | 600-193802 | Plant Disease | It examines the main diseases of the vine and of crops of fruit and vegetables have been found in Greece. For each category of crops, diseases classified under induced causes, such as fungal diseases, prokaryotic virological etc. The study of the disease each is brief, but given all the knowledge and information necessary for their identification, the manner and the force conditions, development and broadcasting and basic management principles. | 5 | Study/project | (GR/EN) |
| 3 | 600-193803 | Seed Production | Seed certification and commercial seed multiplication. Origin and development of seeds. Collection, sorting, storage and control of germination of seeds. Dormancy and germination of seed. Substrates used in decontamination methods and production. | 5 | Study/project | (GR/EN) |
| 4 | 600-193804 | Applied Entomology | Knowledge regarding the hosts, distribution, identification, biology, ethology, and control of insects. Emphasis is placed on the application of Entomology in agriculture, wood - boring insects and stored product pests. | 6 | Study/project | (GR/EN) |
| 5 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| 6 | Επιλογής 4 | Selection 4 | Selection 4 | 4 | | |
| | | | | Total 30 | | |
| | Semester 9 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| | | | | | | |
| 1 | 600-193901 | Olive Culture | Classification, Origination, Spreading. Botanical characters. Varieties. Fruit set. Soil and Climate requirements. Propagation. Pollination, fertilization. Establishment of Plantation. Cultivation. Harvesting. Edible olives (packaging-storage). Cultivation economy. Export, Marketing, Trade Name, Standardization, Dietary Value and Olive Oil Alterations. Oil Mill Wastes. | 5 | Study/project | (GR/EN) |
| 2 | 600-193902 | Agrochemicals | Chemistry, biochemistry, toxicology of insecticides, herbicides, fungicides and other agrochemicals. Residues (origin, environmental residues behavior) and methods that analyze them. Greek and international laws related with trade and control of agrochemicals. Quality control, identification and principles of secure trade and use of agrochemicals. Environment protection from the use of agrochemicals. | 6 | Study/project | (GR/EN) |
| 3 | 600-193903 | Floriculture – Landscape Architecture | Ranking and cultivating practices of floricultural plants. production, organization in a greenhouse. Requirements of floricultural plants at ambient conditions. Supplementary and photoperiodic lighting applications carbon dioxide and floricultural crops. Misting and aeroponic misting systems. Application of micropropagation in various floral species. Hydroponic systems, materials, nutrient solutions and applications in floriculture. Installation and requirements of outdoor cut flowers. Harvesting, sorting, and packaging cut flowers. Principles of Landscape Architecture. Garden design. Installations of irrigation systems in gardens. Corridors, frames and shapes of various plant species | 5 | Study/project | (GR/EN) |
| 4 | Επιλογής 3 | Selection 3 | Selection 3 | 4 | | |
| | | | | 10 | | |
| | | | | Total 30 | | |
| | Semester 10 | | | | | |

| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
|---|--|--|--|--------------|---------------|---------------------------|
| | Διπλωματική Εργασία | Thesis | Thesis | 20 | | |
| | Πρακτική Άσκηση (1 Μαρτίου – 31 Αυγούστου) | Practical Training (1 March-31 August) | Practical Training (1 March-31 August) | 10 | | |
| | | | | Total 30 | | |
| | Selection 3 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-191001 | Agricultural Entrepreneurship | The course covers specialized topics in agricultural entrepreneurship. Issues related to the economic and management principles, as well as the good business practices implemented in the rural area, are analyzed. | 4 | Study/project | (GR/EN) |
| 2 | 600-191502 | Agricultural Cooperatives | Definition of cooperatives, cooperative values and cooperative principles, historical evolution of cooperatives, economic theory of cooperatives, cooperatives and private enterprises, structure of agricultural cooperatives in Greece, activities of cooperatives, cooperatives and the European Union, the evolution of cooperative legislation in Greece, cooperative management, “new generation” cooperatives, the cooperatives in times of crisis, cooperatives in the world. | 4 | Study/project | (GR/EN/FR) |
| 3 | 600-193003 | Biological (Organic) Agriculture | Basic principles of organic agriculture and its impact on the ecosystem. Structure and activities of international organizations and committees. Analysis of Community legislation on organic farming. Organization and operation of inspection and certification body. Process control and certification of organic farming products. Quality characteristics of organic farming products. Application of organic agriculture in the cultivation of olive trees, fruit trees, vegetables and Plants of big culture. Organic farmers organization. | 4 | Study/project | (GR/EN) |
| 4 | 600-191007 | Precision Agriculture | Precision Agriculture | 4 | Study/project | (GR/EN) |
| 5 | 600-191901 | Agro-Economim Projects | The course includes the following major units: The definition and the categories of studies/projects. The meaning and the content of rural development. The National and European Community legal framework. Mechanisms of funding the rural development studies. Methodology of preparing rural development studies. Process of evaluation the rural development studies. | 6 | Study/project | (GR/EN) |
| 6 | 600-190004 | Management in Agricultural Machinery | The course provides the basic knowledge in farm management and selection in agricultural machinery. Define and describe the problems in farm management for agricultural machinery. Analyze the selection in agricultural machines from an economic point of view. Solve problems using scientific methods to combine equipment for operating cost reduction in farm enterprises. | 4 | Study/project | (GR/EN) |
| 7 | 600-193007 | Applied Hydrology | Applied Hydrology | 4 | | |
| 8 | 600-193008 | E-Commerce in Agrifood Sector | The subject of the course aims to introduce students to the basic concepts of e-commerce, and to understand the opportunities that IT provides for interactions between organizations and customers or other interest groups. Emphasis is given to the digital solutions, which meet the needs of the users and their application and commercialization, in different business models in Agrifood sector. | 4 | Study/project | (GR/EN) |
| 9 | 600-193009 | Ornamental Indoor Plants | All the information about the indoor environment and the needs of pot plants, as well as the cares for their maintenance are provided. For every pot plant species are provided: origin, description, species, varieties, culture needs, (propagation, light, soil, temperature, relative humidity, watering, fertilization, and other cares), ornamental value and use. | 4 | Study/project | (GR/EN) |

| 10 | 600-191504 | Agricultural Cost Accounting | Concept of production costs and importance of knowledge. Types of production costs. The cost of production of agricultural products. Discrimination of cost. Meaning, conditions and difficulties in costing agricultural products. Methods of dividing the farm overheads into individual products. Ways of calculating the cost of production and analysis of components. Costing applications for agricultural products produced by annual crops, perennial crops and livestock sectors. Labor costs of agricultural machinery, factors that influence it and ways of reducing it. | 5 | Study/project | (GR/EN) |
|----|-------------|--|--|--------------|---------------|---------------------------|
| 11 | 600-193011 | Post-Harvest Physiology and Treatment of Agricultural Products | Economic importance of post-harvest treatment of agricultural products. Post-harvest Losses during preharvest treatment. Ripening criteria. Post-harvest handling. Factors affecting the quality of agricultural products. Processing methods of agricultural products. Techniques for silage of stem, biochemical and nutritional changes during storage and preservation. Ethylene and its role in post-harvest treatments. Maintenance at ambient conditions. Transportation of agricultural products. Post-harvest storage and transportation conditions that best prolong shelf life. | 4 | Study/project | (GR/EN) |
| 12 | 600-193012 | Mechanical Harvesting of Agricultural Products | Introduction to agricultural harvesters. Combine harvesters, operation and uses. Harvesting grass plants. Cotton pickers. Sugarbeet harvesters and potatoes harvesters. | 4 | Study/project | (GR/EN) |
| 13 | 600-193013 | Digital Garden Design | Digital technologies used in Landscape Architecture field. Introduction to AutoCAD software as a design tool for landscape design. Features, commands, and techniques for composing, editing and printing 2D and 3D computer drawings concerning garden design projects of different scale and typology. | 4 | Study/project | (GR/EN) |
| | | | | | | |
| | Selection 4 | | | | | |
| | Code | Course | Course contents | ECTS-Credits | Study/project | Teaching language (GR/EN) |
| 1 | 600-193014 | Acarology | Knowledge on hosts, distribution, identification, biology, ethology, and control of mites. Emphasis is given on the application of Acarology in agriculture and stored product pests. | 4 | Study/project | (GR/EN) |
| 2 | 600-193015 | Viticulture | Viticulture | 4 | Study/project | (GR/EN) |
| 3 | 600-192017 | Biochemistry | Biochemistry | 4 | Study/project | (GR/EN) |
| 4 | 600-190007 | Agricultural Experimentation | Concept and aim of biometry. Introduction to the probabilities calculus. Introduction to the experimental statistics. Theoretical distribution, sample distribution. Case control. Confidence interval. Organization of animal experimentation. Analysis of variance. Experimental designs. Co-variance regressions. | 4 | Study/project | (GR/EN) |
| 5 | 600-193018 | Soils Management | General concepts of soil conservation and management. Degraded and problematic soils (acid soils, calcic soils, saline and sodic soils, management practices and remediation) in agriculture. Soil erosion and desertification – management practices. Soil organic matter and management practices for increasing it in soils. Soil compaction and management practices on compacted soils. Sealing of urban soils. Soil pollution from agricultural wastes, fertilizers, herbicides etc. Management and remediation of polluted soils. Soil quality. | 4 | Study/project | (GR/EN) |
| 6 | 600-193019 | Biology and weed management | Knowledge to the biology and ecology of weeds, implications for management, the interference between weeds and crops, methods and tools of weed management and integrated weed management. | 4 | Study/project | (GR/EN) |
| 7 | 600-193020 | Culture of vegetables under greenhouse conditions | Techniques for the cultivation of the main vegetable species under greenhouse conditions. Morphology and physiology of plant growth. Climate and soil. Propagation of plants. Varieties. Pollination. Harvest. Seed production. Physiological disorders and abnormalities. Pests and diseases. | 4 | Study/project | (GR/EN) |

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|----|------------|--|---|---|---------------|----------|
| 8 | 600-193021 | Ornamental Outdoor Plants | All the information about the main native and foreign woody species (Gymnosperms and Angiosperms) commonly used in parks and gardens in urban and suburban environments are provided. For every outdoor plant species are provided: Systematic classification (scientific/common name, family), origin, description, propagation, ecological/culture needs, ornamental value and use. | 4 | Study/project | (GR/EN) |
| 9 | 600-193022 | Garden Design | Garden design over centuries and across continents. Presentation of the world's most influential garden designers and their gardens. Types and styles of gardens. Site inventory and analysis. Landscape design elements, principles, and procedures. Plant selection and groupings. A year-round gardening calendar. Project: Small groups developing and presenting garden design scenarios. | 4 | Study/project | (GR/EN) |
| 10 | 600-193023 | Fodder Plants - Ranges | Cultivation of main intensively cultivated fodder plants. Factors that influence the production of ranges. Types of range vegetation. Improvement of ranges by application of proper use, control of weeds, seeding and fertilization. Grazing management and proper management of ranges. Measurement of range vegetation production, proper use, percentage of use. Range Site Quality. Grazing capacity and stocking rate. | 4 | Study/project | (GR/EN) |
| 11 | 600-190010 | Agrifood Business Management | The subject of the course aims to introduce students to understand the various aspects of administrative practice and develop skills in analyzing organizational problems and making decision. | 4 | Study/project | (GR/EN) |
| 12 | 600-190011 | Marketing of Agricultural Products | Objects and concepts of marketing of the agricultural products. Specificities of the agricultural production. Marketing mix and marketing environment. Preparatory marketing functions. Supply functions. Communication and informational marketing functions. Facilitative functions. Selling of the agricultural products. Stakeholders and channels of the agricultural marketing. Marketing costs, margins and marketing efficiency. Modern marketing systems. Direct marketing and cooperative marketing of the agricultural products. Marketing of the agricultural inputs. | 4 | Study/project | (GR/EN) |
| 13 | 600-190009 | Apiculture | Honey bee species and breeds. The honey bee colony. Anatomy, physiology and social physiology of the honey bee. Bee nest architecture. Honey bee nutrition. Honey bee activities and behaviour. Swarming. Honey bee genetics and breeding. Crop pollination. Honey plants. Beekeeping equipment. Seasonal management. Production of queens. Products of the hive. Diseases and pest of honey bees. Pesticide poisoning | 4 | Study/project | (GR/EN) |
| 14 | 600-193027 | Drying Machines and Storage of Agricultural Products | Psychrometry and Psychrometric Chart. Methods and mechanical equipment of drying agricultural products. Drying process design and management. Drying of seeds, grass and fruit trees. Dry energy sources. Storage means and conditions for agricultural products | 4 | Study/project | (GR/EN) |
| 15 | 600-191036 | Economics of Agricultural Production Processing | The subject area of the course includes the importance and benefits of processing of agricultural products and the economic effectiveness of a processing unit. Issues related to place selection to establish a manufacturing industry are analyzes. | 4 | Study/project | (GR/EN) |
| 16 | 600-190012 | Collective actions and social entrepreneurship | The aim of the course is to get students familiar with the theories, logic and dynamic of collective actions in the rural areas, as well with the forms of social entrepreneurship in the countryside. | 4 | Study/project | GR/EN/FR |
| 17 | 600-190013 | Systematic Botany | Historical Aspects. Pre-Linnaean period. Greek Civilization. Herbalists. Linnaeus. Post- Linnaean period. Naming. Rules of Nomenclature. Categories of Classification-Taxa. Natural systems of Classifications. Cronquist systems of Classifications. Schizophyta. Phycophyta- Algae. Mycophyta- Fungi. Lichenophyta-Lichens. Bryophyta- Mosses. Pteridophyta- Ferns. Spermatophyta, Gymnosperms, Angiosperms. Dicots, Monocots. | 4 | Study/project | (GR/EN) |
| 18 | 600-190014 | Tourism in the Countryside | The aim of the course is to get students familiar with the role of rural tourism as a tool for the development of the rural areas and the multifunctionality of agricultural holdings. In particular, to recognize and analyze the various categories of rural tourism and to create the business plan of a tourist unit in the countryside. | 4 | Study/project | GR/EN |
| 19 | 600-193032 | Ground water hydraulics | Ground water hydraulics | 4 | | |