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| **ESKİŞEHİR OSMANGAZİ UNIVERSITY AGRICULTURAL FACULTY**  **ANİMAL SCIENCE BACHELOR’S PROGRAMME**  **2017- 2018 COURSE DESCRİPTİONS**  **1st SEMESTER**  **251411001 Zoology**  Science and scientific methods, living and lifeless stuctures, animal cells, energy metabolism, enzymes, cell division, reproduction, fertilization and development, metamorphosis, animal tissue, organ and their systems, behaviour, distributions, classification of animals.  Fall Semester – Weekly 2 hours theory, 2 hours practical  Credit: 3  ECTS: 4  **251411002 Botany**  The definition of agruiculture botany and its interest areas, plant cytology, protoplast, cell wall, plant histology, classification of tissues and meristems, continuous tissues, vegetal tissues, vegetative tissues, root, stem, leaf, generative organs, flower, fruit, seed, plant physiology, methobolism physiology, genetic systematic botany, systematic of cultivated plants.  Fall Semester – Weekly 2 hour theory, 2 hour practical  Credit: 3  ECTS: 4  **251411003 Physics**  Vectors, kinematics, dynamics, gravitation, work and energy, momentum and collisions, rotation movement, balance.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 4  **251411004 Chemistry**  Matter measurements and the concept of moles, chemical reactions, reaction stoichiometry, properties of gases, thermochemistry, structure of the atom and periodic table, chemical bonds, molecular structures, liquid and solids, properties of solutions, chemical balance, kinetic, acids and bases, balance in aqueous solutions, thermodynamics, organic compounds, pH, EC measurements.  Fall Semester – Weekly 2 hour theory, 2 hour practical  Credit: 3  ECTS: 4  **251411005 Mathematics**  Inequalities, coordinate geometry, functions, trigonometry, exponential and logarithmic functions, limits, continuity, derivatives, derivative laboratories.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251411006 Introductory Animal Science**  Definition and scope of agricultural activities; Definition and scope of animal science activities; The importance of animal production in agriculture; The current status of animal husbandry in Turkey and in the world; Terms in Animal Science; Definition and scope of some concepts in animal breeding; Essential conditions for a profitable livestock production; Some economically important products; Reproduction in domestic animals; Breeding methods; Species and breed concepts; Characteristics, rearing and management of cattle, buffalo, sheep and goat breeds raised in Turkey; Broiler and Layer Farming; Animal shelters; Feeds and feed additives used in animal feeding; Animal nutrition.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 2  **251411007 Information Technology**  General information, definition, history, basic concepts, hardware, software, definition of Windows operating system, desktop, Microsoft Office installation (Word, Excel, PowerPoint, Outlook), backup, compression programs and processes, viruses, protection methods, anti virus programs, network systems, internet and browsers, downloading files.  Fall Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 2  **251411008 Turkish Language I**  Definition of language, language families in the world and the place of Turkish among the world languages, Turkish languagedevelopment and historical phases, the current state of Turkish language and its spreading areas, ways of recognizing Turkish words and phonetic events, spelling rules, plans to be applied in writing composition.  Fall Semester – Weekly 2 hourtheory  Credit: 0  ECTS: 2  **251411009 Atatürk’s Princeples and History of Revolution I**  The definition of the revolution, the developments in the Ottoman Empire until the First World War, the First World War, Mondros Truce Agreement, Mustafa Kemal Pasha's departure to Samsun, congresses, Misak-ı Milli, the birth of the national fighting movement and national organizations, the period of the national fight and the life of Mustafa Kemal Atatürk, the period of the Grand National Assembly.  Fall Semester - Weekly 2 hourtheory  Credit: 2  ECTS: 2  **251411010 Foreign Language I**  Basic tences and modes in English, sentence structure, noun, verb, adjective and objects, indirect expressions, beginner and intermediate vocabulary.  Fall Semester – Weekly 3 hourtheory  Credit: 0  ECTS: 3  **2rd SEMESTER**  **251412001 History of Agriculture and Deontology**  Phases of land utilization, agriculture in ancient civilizations, effects industrial revolution on agriculture, Atatürk and agriculture, the agriculture in the era of Republic of Turkey, definition, scope and relevant legislation of Agricultural Engineering, professional organizations, ethical concept, classification and ethical rules.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 2  **251412002 Surveying Technique**  The definition and topic of topography, units of measurement, division of topography, simple measuring instruments, scale, application of lines in the field, horizontal length measurements, handicapped land measurements, application of perpendicular angles, measurement of small pieces of land, measurement errors, classification of errors, scale change, area calculations according to the values measured in the field, maps and plans area calculation (graphical method), area calculation with planimeter, topography instrumentsintroduction, measurement of angles.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 4  **251412003 Technical Drawing**  Drawing materials, paper sizes, line types and where they are used, basic geometric drawings, creating a view from perspective, basic concepts of technical drawing, lines and different types of lines, geometric drawings, scales, perspective drawings, sectioning, dimensioning, projection, sketchs.  Spring Semester – Weekly 1 hour theory, 2 hour practical  Credit: 2  ECTS: 4  **251412004 Biochemistry**  Biomolecules and cell structure, proteins, enzymes, carbohydrates, lipids, nucleic acids, vitamins, hormones, general structure and properties of plant cells, structural organization in plant cells, organelles and their structure and functions, genetic material in plants, nucleic acid and amino group acids, plant genome structure and organization, replication, transcription and protein synthesis.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251412005 Meteorology**  Atmosphere, light, solar energy, forms of heat conduction, warming of the water, soil and the atmosphere and itseffects, temperature, frost, air humidity, water vapor, evaporation, condensation, cloud and cloudiness, rain and raining types, air pressure, wind formation and wind types, meteorological stations and properties.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251412006 Microbiology**  The subject and sections of microbiology, classification of microorganisms, microbiology laboratory equipment and its use in laboratories, preparation, sterilization and storage of feeds, isolation, identification and growth of prokaryotic microorganisms and eukaryotic fungi, basic principles of cell structure and functions, infectious agents.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 4  **251412007 Agricultural Ecology**  Definition of ecology, basic concepts in ecology, classification of ecology, concept of ecosystem, biochemical circulations, natural ecosystems and agricultural ecosystems, ecology and adaptation, light, temperature, wind, rain, agriculture and soil.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251412008 Turkish Language II**  Vocabulary, word types, sentence structure, verbal and written expression techniques, text analysis methods and laboratories, verbal composition types and laboratory, speech plan, beautiful speech rules.  Spring Semester – Weekly 2 hourtheory  Credit: 0  ECTS: 2  **251412009 Atatürk’s Princeples andHistory of Revolution II**    The proclamation of the Republic, the abolition of the caliphate, The 1924 Constitution, the multi-party period, The Sheikh Saiduprising, other reactions to the Republic, the Menemen incident and the reforms.  Spring Semester - Weekly 2 hourtheory  Credit: 2  ECTS: 2  **251412010 Foreign Language II**  Basic tences and modes in English, sentence structure, adjective, prepositions and adverbs, conditional sentences, adjectivephrases, indirect expressions, intermediate and advanced vocabulary.  Spring Semester – Weekly 3 hourtheory  Credit: 0  ECTS: 3  **3th SEMESTER**  **251413001 Statistics**  Basic concepts and definitions in statistics, probability theory and chance variables, some special probability distributions, statistical interpretation, relationships between variables: regression and correlation, introduction to sampling theory, collecting and summarizing data, sampling distribution and hypothesis controls, Z distribution, T distribution, Khi square distribution, non-parametric tests.  Fall Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 4  **251413003 Agricultural Economy**  Agricultural activity, the place and importance of agriculture in the economy, agricultural production decision (production economy)agricultural production factors, the concept of agricultural enterprise scale and capacity, agricultural marketing, agricultural financing, business planning, business analysis, calculation of agricultural product costs, agricultural cooperatives, agricultural valuation.  Fall Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251413004 Food Science and Technology**  General food hygiene, fermentation industry products (beer, vinegar, wine and spirits), fruitand vegetables, composition and structure of grains, storage and grinding, bread, cake, biscuit, malt and beer technology, liquid, solid vegetable oils, olive oil, meat and meat products, milk and dairy products.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251413006 Field Crops**  Basic information on cool climate cereals, hot climate cereals, edible legumes, industrial plants and forage crops, cultivation, care, harvesting, threshing, drying and storage, types.  Fall Semester – Weekly 2 hourtheory, 2 hourlaboratory  Credit: 2  ECTS: 3  **251413007 Horticulture**  Classification of garden plants, that the value of Turkeyin breeding garden plants, biological properties and ecological requirements of garden plants, physiological properties of garden plants,reproduction of garden plants, fruit, vegetable garden and vineyard plant, annual maintenance works.  Fall Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251413008 Foreign Language III**  Basic tences and modes in English, sentence structure, adjective, prepositions and adverbs, conditional sentences, adjectivephrases, indirect expressions, advanced vocabulary, English-Turkish, Turkish-English translationtechniques.  Fall Semester – Weekly 3 hourtheory  Credit: 0  ECTS: 3  **251413009 Professional Practice I**  To participate in the applications or to monitor the applications on-site at the internal and external units producing animal products and plants used in animal production. Observing and exploration of the management, structure and conditions of agricultural industrial enterprices on site. Inviting experts who are working in the sector and to give presentations on topics that have a direct and indirect relationship with animal science. Presentations and videos related to animal science practices.  Fall Semester – Weekly 4 hour practice  Credit: 0  ECTS: 3  **251413010 Agricultural Structures and Irrigation**  Soil and water resources, rural settlements, business structures, selection and planning of the business center, the importance and development of irrigation, climate, plant, soil and water relations,preparation of the land for irrigation, irrigation efficiency and irrigation water losses, water distribution systems,issues to be considered in system planning, classification of irrigation water, irrigation methods, surface drainage, closed drainage.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251413011 Genetics**  Genetic concept and Mendel expansion, structure of chromosomes, genetic code and protein synthesis, properties of genetic code, cell divisions and changes in the amount of DNA, recombination due to chromosome dispersions, monohybrid, dihybrid, trihybrid, polyhybrid openings, deviations rate from dihybrid open, linkage, crossing over, probability in genetic openings.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251413012 Occupational Health and Safety I**  Occupational health and safety concept, definition, scope and objectives, hazard and risk concepts, occupational accident and occupational disease definitions, causes of occupational accidents, dangerous movements and dangerous situations, occupational risks, preventive occupational health and safety approach, work environment surveillance, health surveillance and workplace medicine, responsibilities in work accidents.  Fall Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 2  **4th SEMESTER**  **251414001 Principles of Animal Nutrition**  What is Nutrition-Nutrition? Feed, ration of rough-concentrate feed, classification of feeds. Feed composition, preservation, digestion-absorption, metabolism. Anatomically, digestive system types and differences. Digestive systems and feeding principles of single stomachs. Nutrition and metabolic disorders of poultry. Digestive systems of ruminants and feeding principles. Animal nutrition and metabolic disorders. Vitamins and minerals in animal nutrition. Issues to be considered in ration preparation and ration preparation techniques.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251414005 Plant Protection**  Causes of plant protection, factors causing product loss in plants, plant diseases,pests, weeds, basic approaches to plant protection, cultural chemical,biological, integrated control methods, disease and pest monitoring and evaluation methods.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251414006 Farm Management and Planning**  Business, types and structure of agricultural business, business planning, business objectives and management, registration systems, continuity in productivity and efficiency, costs, profit-loss calculations.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251414007 Dairy Technology**  The composition and physicochemical properties of milk, milk, the importance of milk in human nutrition, lactation, milk secretion, milking, factors affecting milk quality and yield, milk collection and transportation, milk industry, admissions-platform analysis, sensory-physical-chemical and microbiological analyzes, preservation of milk, milk evaluation methods, starter cultures, dairy products (drinking milk, yogurt, cheese, kefir-kizi, butter, ice cream, milk powder).  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 3  **251414008 Foreign Language IV**  Teaching complex sentences after gaining basic English skills, reading, listening and increasing the comprehension skill, gaining the ability to communicate at an advanced level.  Spring Semester – Weekly 3 hourtheory  Credit: 0  ECTS: 3  **251414009 Professional Practice II**  To participate in the applications or to monitor the applications on-site at the internal and external units producing animal products and plants used in animal production. Observing and exploration of the management, structure and conditions of agricultural industrial enterprices on site. Inviting experts who are working in the sector and to give presentations on topics that have a direct and indirect relationship with animal science. Presentations and videos related to animal science practices.  Spring Semester – Weekly 4 hour practice  Credit: 0  ECTS: 3  **251414011 Research and Experimentation Methods**  Planning of experiment, application to the field, selection of experiment material, experiment patterns (random parcels, random blocks, latin square, augmented, factorial experiments, split variance analysis of parcels, latin experiment pattern and other experiment patterns and averages grouping), determining the number of experiment units and repetitions, collecting and analyzing the data, explain and present the results.  Spring Semester – Weekly 2 hour theory, 2 hour practice  Credit: 3  ECTS: 4  **251414012 Occupational Health and Safety II**  Occupational health and safety concept, definition, scope and objectives, hazard and risk concepts, work accident andoccupational disease definitions, causes of work accidents, dangerous movements and dangerous situations, occupational risks, preventive occupational health and safety approach, work environment surveillance, health surveillance and workplace medicine, responsibilities in work accidents.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 2  **251414014 Agricultural Extension and Communication**  Definition and scope of agricultural extension, principles and objectives of agricultural extension, agricultural extension modelsand extension approaches, communication, diffusion and adoption of innovations, agricultural extensiontools and methods.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS: 2  **251414015 Soil Science**  Definition of soil, soil formation, soil properties, factors affecting soil formation, soil maturation events, soil fertility concept, factors affecting soil fertility, definition of plant nutrients elements,  classification, the uptake of plant nutrients and factors affecting the uptake, transport and distribution of plant nutrients, their functions in the plant, deficiency and toxicity symptoms, methods to be followed in eliminating deficiency or toxicity.  Spring Semester – Weekly 2 hourtheory  Credit: 2  ECTS:2  **251414013 Internship I**  Introducing the profession, contributing to the development of human relations, informationabout agricultural engineering, teaching of relevant study topics, the ability to produce solutions to problems to gain ideas, to form an opinion at the point of decision about career after graduation and obtain the ability to work as a team.  Spring Semester  Credit: 0  ECTS: 2  **5th SEMESTER**  **251415001 Mechanization in Animal Husbadry**  Facilitation, speeding up in animal husbandry, mechanization for increasing quality and economic production, tools and machines in animal production, working principles.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251415002 Biochemistry of Animal Nutrition**  Definition, history of biochemistry and recent developments. Characteristics that determine living things. Structure of animal body and feed. Acid-base concept and buffer compounds. Classification, structure, functions of carbohydrates. Carbohydrate derivatives. Classification, structure, functions of lipids. Classification, structure, functions of proteins. Enzymes, structure, mode of action, functions. Classification, structure and functions of hormones. Classification, structure, functions of vitamins. Classification, structure, functions of minerals. Nucleic Acids and their importance, importance for water and living.  Fall Semester – Weekly 2 hourtheory  Credit: 3  ECTS: 3    **251415003 Animal Biotechnology**  Definition of biotechnology and introduction information. Biotechnology in animal nutrition, physiology and health. Reproductive biotechnology (semen and artificial insemination biotechnology, estrus synchronization, in vivo and in vitro embryo production and embryo transplantation, transgenesis, genetically modified animals in pharmacology and toxicology, gender orientation, sex determination and cloning).  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 4    **251415004 Animal Anatomy and Physiology**  Definition and basic concepts, skeleton, joint, muscle, digestion, male and female reproductive systems, pregnancy-birth, udder-lactation, skin and related structures, circulation, excretion, blood and other body fluids  Fall Semester – Weekly 2 hour theory, 2 hour practice  Credit: 3  ECTS: 5  **251415005 Reproductive Biology and Artificial Insemination**  The importance of reproduction; Historical developments in reproduction; Female reproductive system; The estrous cycle; Reproduction in poultry; Male reproductive system; Gametogenz (Spermatogenesis, oogenesis); Semen and its properties; Determination of gender; Control of reproduction; Pregnancy, embryonic development, birth and lactation; Artificial insemination  all Semester – Weekly 2 hour theory, 2 hour practice  Credit: 3  ECTS: 3    **251415006 Horse Breeding and Nutrition**  The historical development of horse breeding, importance of horse management for Turkey and the world, horse breeds, the special marks and coats for horse, the inheritance of coats, reproduction and management and feding, reproduction and management and feeding, skill of hike, hike faults, selection and genetic improvement of horse, hereditary faults, body measuremets and estimating of age, horse races.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251415007 Alternative Forage Crops Breeding**  To learn agricultural and morphological characteristics, adaptation, cultivation, usability, yield, economy, and utilization methods of plants that can be considered as forage other than legume and forage crops.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251415008 Analysis of Agricultural Commodities**  Herbal and animal products, quality criteria and determination of criteria, sensory and chemical analysis.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251415009 Aquaculture and Nutrition**    Classification of seafood, fresh and saltwater fish, shellfish; lobster, mussel, crab breeding, aquarium fish, fresh and saltwater fish breeding, fish production, maintenance and feeding, fish feeds.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251415012 Feed Plants and Breeding**  The importance of forage crops, botanical characteristics, soil and climate properties, maintenance processes, harvest, threshing and storage.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251415010 Professional Foreign Language I**  Proffssional foreign language learning and working techniques, Learning terms in the field of Animal Science, reading, understanding and translating English professional texts, sentence structures, simple and complex sentences, tenses / patterns used in academic publications, sample text analysis and vocabulary knowledge in Animal Science.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 2    **251415011 Professional Practice III**  To participate in the applications or to monitor the applications on-site at the internal and external units producing animal products and plants used in animal production. Observing and exploration of the management, structure and conditions of agricultural industrial enterprices on site. Inviting experts who are working in the sector and to give presentations on topics that have a direct and indirect relationship with animal science. Presentations and videos related to animal science practices.  Fall Semester – Weekly 4 hour practice  Credit: 0  ECTS: 3    **6th SEMESTER**  **251416014 Animal Diseases and Health Protection**  Disease prevention, nature of diseases, nutrition and health, housing and health, reproductive health; common bacterial, viral, protozoer, parasitic, metabolic, deficiency, yeast-mold-fungal diseases; zoonotic diseases of farm animals.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 2  **251416002 Apiculture and Sericulture**  The history and development of beekeeping, Importance of beekeeping in agriculture and country economy, beekeeping in the World and Turkey, bee races, anatomy, growth and development of honey bees, nutrition and nutrient requirements in honey bees, specifications of honey bees and life cycles in the colony, seasonal works in beekeeping and basic principles of technical beekeeping, queen rearing, honey bee products and diseases.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251416003 Physiology and Metabolism of Anim. Nut.**  General information, Digestive system anatomy and physiology, Energy metabolism, Carbohydrate metabolism, Lipid metabolism, Protein metabolism, Mineral metabolism, Vitamin metabolism.  Spring Semester – Weekly 3 hour theory  Credit: 3  ECTS: 4  **251416015 Feed Science and Technology**  Definition and classification of feed, roughages, intensive feeds, mineral supplements, vitamin supplements, amino acid supplements, feed additives, technological processes applied to feeds, technological processes applied to roughages, technological processes applied to dense feeds, conservation of green feeds, Feed Inhibitors Found In Feeds, Mixed Feed Industry.  Spring Semester – Weekly 2 hour theory, 2 hour practice  Credit: 4  ECTS: 4  **251416005 Grassland and Forage Crops**  Definition of meadow pasture management, its relations with plant physiology and ecology, grazing, grazing capacity, grazing season, uniform grazing, animal grazing suitable for feed type, grazing systems, utilization of meadows. Description of meadow and pasture improvement, artificial insemination, fertilization of meadows and pastures, weed warfare, soil and water conservation methods, normal maintenance works, pasture facilities and structures.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251416006 Obstetrics**  Anatomy of reproductive organs, pregnancy physiology, pregnancy diagnosis, abortion, delivery and help with delivery, endocrine order of birth, difficult births, care for mother and offspring, lactation, postpartum problems, metabolic diseases affecting birth.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 2  **251416007 Computer Use in Animal Husbandry**  Giving information about computer hardware and internet technology in parallel with the introduction of computer and development in computer technology. Demonstrate the practical access to all kinds of information such as statistical analysis applications for keeping and recording data in animal husbandry, national and international data on animal husbandry, application techniques and new products via the internet.  Spring Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251416008 Silage Crops Breeding**  What is silage, silage plants and cultivation, silage making, factors affecting silage quality, importance of silage in animal nutrition, silage preservation methods.  Spring Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251416009 Appraisal of Animal Products**  The concepts of valuation, valuation, all kinds of animals and livestock-related structures, tools, equipment, and valuation qualities of the product, valuation mathematics, market, income, cost and quantitative valuation methods, ownership, tenancy and cooperative lands, and appreciation of farm values, farm productivity valuation, agricultural expertise, environmental pollution, loss and loss, insurance, valuation reporting and presentation techniques.  Spring Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **2514160012 Meat Science and Technology**  The course, physical, chemical, sensory, microbiological and biochemical properties of beef, sheep, fish and poultry meat, and the factors affecting the quality of meat and the conversion of muscle to meat. The basic principles of meat preservation methods include meat products, the importance of meat technology in industry, microorganisms causing zoonotic diseases, hygiene and sanitation.  Spring Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251416010 Professional Foreign Language II**  Advanced professional foreign language learning and working techniques, learning terms in the field of Animal Science, reading, understanding and translating English professional texts, sentence structures, simple and complex sentences, tenses / patterns used in academic publications, sample text analysis and vocabulary related to Animal Science.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 2  **251416011 Professional Practice IV**  To participate in the applications or to monitor the applications on-site at the internal and external units producing animal products and plants used in animal production. Observing and exploration of the management, structure and conditions of agricultural industrial enterprices on site. Inviting experts who are working in the sector and to give presentations on topics that have a direct and indirect relationship with animal science. Presentations and videos related to animal science practices.  Spring Semester – Weekly 4 hour practice  Credit: 0  ECTS: 3  **251416013 Internship II**  Introducing the profession, contributing to the development of human relations, information about agricultural engineering, teaching of relevant study topics, the ability to produce solutions to problems to gain ideas, to form an opinion at the point of decision about career after graduation and obtain the ability to work as a team.  Spring Semester  Credit: 0  ECTS: 2  **7th SEMESTER**  **251417001 Dairy Cattle**  Cattle breeding in the world and Turkey. Where is the cattle in zoological system. Turkey cattle breeds, culture breeds of cattle, breeding methods, selection, nutrition of cattle, udder system and lactation, milking and milking procedures, reproduction, taking care and growing of young animals, taking care of the cows, cattle type scoring.  Fall Semester – Weekly 2 hour theory, 2 hour practice  Credit: 3  ECTS: 5  **251417002 Poultry Breeding**  Development of poultry industry and poultry industry in Turkey, chicken breeds, biology of chicken, structure of egg, embryo development and incubation, poultry housing, structure and equipments, broiler and layer raising, genetics and breeding in poultry, rasing chicken for breeding, poltry diseases, general principles in protection and control of the diseases, turkey production.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 4  **251417003 Animal Breeding**  The importance and objective of animal breeding, phenotypic variation and its components, population genetic structure and ways to change the frequency of gene, parameter estimates, selection policies and the progress achieved with selection, selection methods, breeding systems, breeding value estimates, animal breeding programs.  Fall Semester – Weekly 2 hour theory, 2 hour practice  Credit: 3  ECTS: 4  **251417004 Small Ruminant Breeding**  The importance of small ruminant breeding in the world and Turkey, wild forms of domestic goats and sheep and domestication, classification of sheep and goats, feeding principles in sheep and goats, sheep and goat breeds, housing systems in sheep and goats, milking, shearing and wool ın sheep, reproduction in sheep and goats, Health care in sheep and goats, milk and mohair production in goats.  Fall Semester – Weekly 2 hour theory, 2 hour practice  Credit: 3  ECTS: 5  **251417005 Animal Shelter Planning**  Basic concepts of Projecting and Planning, Agricultural Project types and properties, Market study and determination of sales volume. Project capacity determination, technology selection, location of establishment. Technical evaluation of the projects (poultry, ovine, bovine livestock projects), Financial and economic evaluation of the projects, the impact of the project on the environment (feces, CED report).  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251417006 Graduation Thesis I**  Conducting a research on a thesis within the scope of departments by each of the undergraduate students under supervision of one of the faculty members.  Fall Semester – Weekly 2 hour practice  Credit: 1  ECTS: 3  **251417007 Exotic Animal Nutrition (Elective Course In Department)**  Exotic animals; domestic reptiles; snake, turtle iguana, amphibians; salamander, arthropods; tarantula, cultivation, care and feeding of exotic insects, creation of habitat.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251417008 Animal Behavior and Welfare (Elective Course In Department)**  Definition of animal behavior and welfare, physiological, genetic and environmental principles of animal behavior, factors affecting animal behavior, reactions of animals under different stress conditions, mechanisms of behavior formation, social environment and behavior in animals, use of animal behavior in practice, behavior characteristics in cattle, ovine and poultry, animal behavior and disease relationship, animal welfare during and after transport, before and during slaughter, animal protection and animal rights, ethical rules in animal production, legal regulations regarding animal welfare in the world and in our country.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251417009 Animal Fibers (Elective Course In Department)**  Animal fibers, animal fibers in textile industry and their importance, animal fiber production, maintenance and feeding factors affecting fiber quality, cashmere, fleece, hair, mohair, astrakhan, waketa.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251417010 Environment-Nutrition Relationship in Animal Husbandry (Elective Course In Department)**  Animal's environmental temperature demands, responses to temperature change, stress conditions, temperature stress, changes in nutrient needs under stress, feeding patterns for reducing stress effect.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251417011 Fur Animal Breeding and Nutrition (Elective Course In Department)**  Historical Development of Fur Livestock; Fur Livestock and Hide Production in Some Countries; Skin; Fleece Fiber; Mink, Fox, Zibelin, Raccoon, Tree Marten, House Marten, Skunk, Weasel, Chinchilla, Nutria, Beaver, Rabbit Breeding; Obtaining of Fur from Fur Animals and Processing of Fur.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251417022 Feed Evaluation and Analysis Methods (Elective Course In Department)**  Feeds and their types, factors affecting feed quality, classification of feeds, sensory and chemical analysis of feeds, analysis methods, chemical preparation, laboratory equipment.  Fall Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251417012 Photography (Social Elective Course)**  Information will be given on photo shooting techniques, camera recognition, light usage, flash usage, angle and depth, color usage, aperture settings, shutter settings, ISO settings, efficient use of the lens.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251417013 Hunting (Social Elective Course)**  Hunting, hunting animals, hunting dogs, hunting techniques, traps and baits, hunting tools and weapons, hunting seasons.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3    **251417014 Calligraphy (Social Elective Course)**  History of calligraphy, fine writing techniques, writing styles, calligraphy materials.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251417015 Riding (Social Elective Course)**  Riding animals, history of riding, using the horse right on the spot, calm, on time, safely and using as much force as possible, riding suits, riding types.    Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251417021 Turkish Folk Dances (Social Elective Course)**  Summary information about Turkish Folk dances, information on folk dances, culture and traditions of various regions.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **8th SEMESTER**  **251418001 Beef Cattle Breeding**  The importance of cattle fattening, cattle fattening in the world and Turkey, cattle fattening in the world and Turkey, breeds used for meat production, shelters and mechanization, reproduction, growth and development, reproduction, growth and development, cattle fattening methods, fattening performance and factors affecting, evaluatıon of cattle carcass according to S/EUROP classification system, the basic principles of beef cattle breeding.  Spring Semester – Weekly 2 hour theory, 2 hour practice  Credit: 3  ECTS: 5  **251418002 Ruminant Nutrition**  Nutrients, classification, characteristics, nutrition of pregnant and dry animals, nutrition of growing and developing animals, nutrition of lactation animals, nutrition, principles and methods, defects caused by feeding.  Spring Semester – Weekly 3 hour theory  Credit: 3  ECTS: 4  **251418003 Ration Preparation Techniques**  Concentrated and roughages, nutrient content, properties of feeds to be considered when preparing rations for different species, feed of farm animals in different physiological conditions and feed regulations and TSE standards related to these feeds, Pearson square method, algebraic method, trial and error method, linear programming, Using linear programming package programs and commercial ration preparation programs and ration solution with programs, Application of linear programming in Microsoft Excell, Database preparation and ration solution for poultry and ruminants in Microsoft Excel.  Spring Semester – Weekly 2 hour theory, 2 hour practice  Credit: 3  ECTS: 5  **251418004 Poultry Nutrition**  General information, feed and water consumption in poultry, digestive physiology, nutrient requirements (energy, protein, mineral substances, vitamins), Kanatlı hayvan yemlerinde kullanılan yemler, yumurtlayan tavukların beslenmesi (büyüme ve verim dönemi), nutrition of meat breeds at stud, feeding of broiler chickens, feeding of turkey, duck and geese, feeding of quail partridge and pheasants, effect of feeding on egg quality, effect of feeding on carcass quality.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251418005 Design and Plannin in Animal Husbadry**  Planing, project preparation, SWOT analysis, feasibility study, sample project preparation, breeding systems, dairy farm planning, herd composition, feed material calculation, fattening operation, ovine farm planning, poultry farm planning, marketing of products, market finding, profit and loss calculations.  Spring Semester – Weekly 1 hour theory, 2 hour practice  Credit: 2  ECTS: 4  **251418006 Graduation Thesis II**  Conducting a research on a thesis within the scope of departments, to prepare and present it as a thesis by each of the undergraduate students under supervision of one of the faculty members.  Spring Semester – Weekly 2 hour practice  Credit: 3  ECTS: 5  **251418007 Organic Animal Husbandry (Elective Course In Department)**  Organik animal production and Comparison of organic and conventional livestock production, why organic livestock, advantages and disadvantages of organic livestock, how organic livestock is produced, organic animal breeding and production principles, organic milk, meat, eggs, aquaculture and honey production, legal regulations, problems of organic livestock and solution proposals.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251418009 Feed Mill Production Technology (Elective Course In Department)**  Working principles of feed factory, raw material selection, types and production of feeds, processes and purposes applied to feeds, dosing, crushing and grinding, pelletizing, expander and extruder feeds, packaging, parts of feed factory.    Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251418010 Growth and Development of Farm Animals (Elective Course In Department)**  Growth and development in animals, cell divisions, tissue and organ formation, genetic and environmental factors affecting growth and development.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251418015 Dog Breeding (Elective Course In Department)**    Dog's structure (Skin and fur, skeleton and movement, Brain and mind, Hormonal reactions, Vision, Hearing, Smell and taste, Respiratory and circulation, Consumption, Urinary and genital systems, Immunity, Communication, people and dogs), Dog breeds, Domestic dog breeds, Behavior (Natural variability, Herd logic, Courtship and mating, Waiting for puppy, Birth, Addiction to mother, Socializing at an early age, Joining the human herd, Table manners, Marking the area, The importance of the game, Regular care, Aging) Living together, Health problems.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3    **251418022 Pasture Animal (Diseases Elective Course In Department)**  Rangeland Livestock Disease course covers the pasture varieties and diseases associated with these types of pastures according to Turkey's geographical regions. Pasture selection principles are transferred according to animal species. Information is given about the major bacterial, viral and parasitic diseases originating from pasture, and in the light of this information, it is aimed for the student to evaluate the risks and take precautions.  Spring Semester – Weekly 2 hour theory  Credit: 2  ECTS: 3  **251418011 Marbling Art (Social Elective Course)**  Introduction and application of marbling art.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251418012 Interior Plants Decoration (Social Elective Course)**  Cultivation of indoor indoor plants and selection of species-specific growing environments.  Spring Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251418013 Diction (Social Elective Course)**  The ability to speak fluently and comprehensively in accordance with the rules, the individual's ability to express theirself effectively, to control their excitement while speaking in front of the community, to make all sounds correct and beautiful in terms of phonology, to use the individual's voice effectively, to use the body language effectively of the individual.  Spring Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251418014 First Aid**  Definition of first aid, aims and rules of first aid, patient transportation, first aid in bleeding, first aid in burns, first aid in freezing events, first aid in fractures, dislocations and sprains, first aid in heart-lung resuscitation, first aid in poisonings, first aid in convulsions and epilepsy, first aid in other emergencies.  Fall Semester – Weekly 3 hour theory  Credit: 3  ECTS: 3  **251418021 Effective Communication (Social Elective Course)**  Communication, basic components of communication, communication models, communication types, communication barriers, conflict resolution, empathy, effective presentation techniques, communication laboratories.  Fall Semester – Weekly 3 hourtheory  Credit: 3  ECTS: 3 |