

Animal Science SECTION LESSON CONTENTS AND BOOKS TO BENEFIT FROM

1. SEMESTER

TURKISH LANGUAGE- I

(2+0) 2

ECTS:2

What is language?, The place and importance of language as a social institution in national life; the relationship between language and culture, the place of the Turkish language among world languages, the development and historical periods of the Turkish language, the current status of the Turkish language and its areas of spread, sounds in Turkish and their classification, the sound characteristics of Turkish and rules related to phonetics, syllable information, spelling rules and their application, punctuation marks and their application, derivational suffixes of the Turkish language and their application, noun and verb conjugations in Turkish, general information about composition, plans to be applied in composition writing.

Lesson Book:

- Turkish Language and Composition Information for Higher Education Students (KORKMAZ Z., ERCİLASUN AB, ZULFİKAR H., AKALIN M., GULENSOY T.PARLATIR C., FIRST N.)

Helper Textbooks :

- Applied Turkish Language and Composition Information, Prof. Dr. Yakup KRASOY, Assoc. Prof. Dr. Orhan YAVUZ, Lecturer Ahmet KAYASANDIK, Lecturer Bekir DİREKÇİ.
- University Turkish Language And Composition Lessons (YAVUZ K., YETİS K., FIRST N.)
- Turkish Language And Composition, Commission.
- Applied Turkish information, Osman GÖKER. Turkish Language and Composition Information, Fahri ÖZKAN.

BOTANICAL I

(3+0) 3

ECTS:4

The Cell, the Chemical Structure of the Cell and Ergastic Substances under the headings of Botany, Cytology, Histology, Orgonography, Physiology, Genetics, Ecology and Systematics, The cell Organic Its composition, Cell Division. Herb tissues, plants vegetative and generative

organs, nutrition and metabolic events in plants, growth, development and movement events, plant genetics, ecological characteristics of plants, nomenclature of plants, plant parts, mosses, ferns, gymnosperms, closed-seeded plants.

Lesson Book:

- Professor Dr. Kamil Karamanoglu General Botanical Beyoglu -Istanbul

Helper Textbooks :

- Prof. Dr. Kamil Karamanoğlu General Botany Beyoğlu - Istanbul
- Prof. Dr. Yıldırım Akman Botany, Palmiye Publications - Istanbul Linda E.Graham, James M.Graham, Lee W.Wilcox Plant Biology, Palmiye Publications. Translation Editor Kani Işık

BASIC COMPUTER KNOWLEDGE

(1+2) 2

ECTS:3

Computer hardware, software, operating systems, internet and computer networks, word processing, electronic computing, presentation software, system security, IT ethics.

Lesson Book:

- Lesson giving faculty member lecture notes

PHYSICS

(3+0) 3

ECTS:4

Physics and Measurement, One-Dimensional Motion, Vectors, Two-Dimensional Motion, Laws of Motion, Circular Motion and Other Applications of Newton's Laws, Work and Kinetic Energy.

Lesson Book:

- Science And Engineering for Physics I, Serway Beicher, Palme Publishing.

Helper Textbooks :

- Physics The foundations, Genghis Rugged
- Physical Principles, Kemal Colakoglu

CHEMISTRY

3(3+0)

ECTS: 4

Classification of Matter, Atomic Structure, Periodic Table and Properties, Chemical Bonding, Molecular Geometry, Chemical Reactions, Chemical Calculations, Gases, Solutions, Chemical Equilibrium, Equilibrium in Aqueous Solutions.

Lesson Book:

- General Chemistry (Volumes I and II) Principles and Modern Applications (Tahsin Uyar) (6th Edition)

Helper Textbooks :

- Basic Chemistry (I. And II. skin) Molecular, Articles And Changes TO. Sword, F. Koseoglu, H. Yilmaz
- Modern Basis Chemical (I. and II. skin) (Mustafa (Ozcan)

MATHEMATICS**3(3+0)****ECTS: 5**

Numbers, Identities, Equations and Inequalities, Intervals, Inequalities, Plane and Subsets of the Plane, Functions, Limit and Continuity, Derivative and its Applications, Indefinite Integral, Definite Integral and its Applications.

Lesson Book:

- Lesson Notes.

Helper Textbooks :

- General Maths, Ekrem Kadioglu, Muhammad Kamali, 2005, Erzurum
- General Maths, M. Ripeness Sagel, Enamel Aktas, Pegema Publishing, 2008, Ankara.
- General Maths, Volume I, Mustafa Balci, Balci Publications, 2006, Ankara.
- Basis And General Maths, Skin I, Hilmi Hacisalihoglu, Mustafa Balci, 1988, Ankara.
- Basis Maths, General Mathematics or Maths Analysis named other Books.

FOREIGN LANGUAGE I**(2+0) 2****ECTS: 2**

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

Lesson Book:

- English With Base

Helper Textbooks :

- Essential Grammar Of Use

ATATURK PRINCIPLES DENIAL. DATE I**(2+0) 2****ECTS: 2**

Conceptual Knowledge, Ottoman Empire and its Collapse, Tanzimat and Constitutional Monarchy Periods, Intellectual Movements in the Last Period of the Ottoman Empire, Important Events that Led to the Disintegration of the Ottoman Empire Military And Political Events, First World The war, First World The war During Secret Sharing Projects and the Treaties Ending the War, the Armistice of Mudros and the Occupations, The Birth of the National Struggle Movement and National Organizations, The Birth of the National Struggle Movement and National Organizations, The Period of National Struggle and the Life of Mustafa Kemal Atatürk, Mustafa Kemal Pasha's Arrival in Samsun, Amasya Circular and Erzurum Congress, Sivas Congress and Mustafa Kemal Pasha's Arrival in Ankara, The Opening of the Last Ottoman Parliament and the Declaration of the National Pact, The Period of the Grand National Assembly, Uprisings in the National Struggle and the National Forces.

Lesson Book:

- Atatürk Principles And Revolution History-I, II, III. (Commission)

Helper Textbooks :

- Atatürk-Speech I-II- III

ZOOLOGY

(3+0) 3 ECTS:3

History of zoology, its branches, scientific method, formation of living things, characteristics of living things, physical and chemical structure of living things, cell, cell membrane, cytoplasm and organelles, structure of the nucleus, cell division, mitosis and meiosis, oogenesis and spermatogenesis, development, types of eggs, types of segmentation and developmental theories, tissues: epithelial tissue, connective and supportive tissue, muscle tissue, tissues: nervous tissue, blood tissue, blood groups, organ systems and functions in animals, enzymes, nutrition and vitamins, digestive system, respiratory system, circulatory system and excretory system, sensory organs, nervous system, endocrine system, reproductive system: sexual and asexual reproduction, basic genetic rules, classification of invertebrates, classification of vertebrates.

Lesson Book:

- Lesson Notes.

Helper Textbooks :

- Tanyolaç Jülide, Tanyolaç Turgut 1990 General Animal Science.

CAREER PLANNING (2+0) 2 ECTS:2

Recognizing Career Center Activities, Increasing Self-Awareness, Exploring Career Options, Developing Self-Expression and Effective Communication Skills, Increasing awareness of the importance of developing soft skills in the career process, Understanding the importance of communication-affecting issues such as body language, diction, and address; developing

accurate and effective communication skills, Understanding the Importance of Professional Networks, Recognizing Support Units, Learning Effective Resource Utilization, Learning how to access the right resources and use them effectively in the career process, Improving the quality and efficiency of Career Center services.

Lesson Book:

- Lesson Notes.

2. SEMESTER

ATATURK PRINCIPLES DENIAL. DATE II

(2+0) 2

ECTS: 2

National Forces, Allied Powers' Projects for Sharing Türkiye, First Inonu War, Second Inonu War, Great Offensive, Mudanya Armistice, Turkish Revolution, Constitutional Movements, Political Parties After the War of Independence, Transition to the Multi-Party Period, Reactions Against the Regime, Reforms in the Field of Law, Reforms in the Field of Education, Reforms in the Social Field, Foreign Policy in the Atatürk Era, Turkish Foreign Policy Between 1930 and 1938, Atatürk's Principles and Reforms, Atatürk's Economic Policy, General Situation Between 1930 and 1938.

Lesson Book:

- Ataturk Principles And Revolution History-I, II, III. (Commission)

Helper Textbooks :

- Atatürk and the History of the Turkish Republic, Hacettepe University, Atatürk Principles and Revolution History Institute.
- Ataturk Principle And Revolution Date, Gazi Univ. (Commission).

BIOCHEMISTRY (2+0) 2 ECTS:3

Definition of biochemistry, its areas of interest, and its relationship to other disciplines. The cell and its components. An overview of biochemical reactions occurring within the cell and its components. Nucleic acids. Chemistry of biological materials: water and water dissociation. pH, acid-base concepts, and buffer systems. Proteins: classifications, properties, and their utilization in the body. Chemical, nutritional, and metabolic classifications of amino acids, synthesis and degradation, transamination, deamination, and decarboxylation. Definition, chemistry, importance in biochemical processes, classifications, and operating principles of enzymes. General structures, classifications, related metabolic pathways and cycles, synthetic reactions, and degradation of carbohydrates. Classifications of lipids, related metabolic pathways, synthetic reactions, and degradation. General properties of fatty acids, their importance in living systems, classifications, synthetic reactions, and degradation. Bioenergetics: the glycolytic pathway, the TCA cycle, and ATP formation. Classifications of vitamins, their functions as coenzymes, metabolic importance, requirement levels, dietary sources, absorption, and deficiency symptoms. Importance of minerals, their classification, roles in biochemical processes, requirement levels, dietary sources, absorption and deficiency symptoms.

Lesson Book:

- Ayyıldız, M., 1999. Measurement Information. Ankara University Faculty of Agriculture Publications, No: 550, Textbook: 182. 2. Songu, C., Serbetci, M., 2009. Measurement Information. Volume 1, Birsen Publishing House, 297 p., ISBN: 9755113444.

Helper Lesson His books:

- Biochemistry, 1998. Ögün, S., İ.Y. Yurtman, L. Coşkuntuna, S. Soyca. Trakya University, Tekirdağ Faculty of Agriculture Publication No: 198, Textbook No: 22, 233 p. Tekirdağ.
- Principles of Biochemistry, 1994. Lehninger, A., DL Nelson and MM Cox. Worth Publishers, 1130 p, 33 Irving Place, New York NY 10003, USA.
- Biochemistry, 2006. Keha, EE and Ö.İ. Küfrevioğlu. Şafak Publishing House, 636 p, Erzurum.
- Biochemistry, 2003. Üstdal, M., L. Karaca, Y. Türmöz, H. Testereci, S. Kuş, H. Paşaoğlu. Medipres Printing and Publishing Co. Ltd., 673 p, Malatya.
- Molecular Biology of The Cell, 3rd ed.1994. Alberts, B., D. Bray, J. Lewis, M. Raff, K. Roberts, J.D., Watson. Garland Publishing, A member of the Taylor & Francis Group, 19 Union Square West, New York NY 10003, 1382 p, USA.
- Harper's Biochemistry, 1993. Murray, RK, PA Mayes, DK Granner, VW Rodwell. Barış Bookstore, 913 p, İstanbul. Nutrition, 1996. Baysal, A., Hatipoğlu Publishing House, 494 p, Ankara.
- Animal Nutrition, 2000. Aksoy, A., M. Macit, M. Karaoğlu. Atatürk University, Faculty of Agriculture Textbooks Publication No:220, 588 p, Erzurum.
- Hacettepe Biochemistry Lecture Notes, 1989. Metay Publications, 294 p, Ankara.

DIGITAL LITERACY**(3+0) 3****ECTS:3**

Introduction to the concept of digital literacy, Operating systems, Digital tools, Digital Platforms, Sample applications, mobile culture, Convergence, big data, open data, Digital democracy, collective intelligence, Digital divide.

Lesson Book:

- Lesson giving faculty member lecture notes

GENERAL ECONOMICS**(3+0) 3****ECTS: 4**

Economic Concepts, Economic Problem, Supply, Demand and Elasticity, Firms and Production, Production Costs, Benefit, Preferences, Facilities and Consumption, Perfectly Competitive Markets, Imperfectly Competitive Markets, Factor Markets, The Role of the Economist in the Government, Macroeconomic Concepts, National Accounts, Financial Intermediaries, Monetary Policies.

Lesson Book:

- General Economy Lesson Notes, Editor: Honorary YAVUZ, 2008.

Helper Textbooks :

- Economics ABC's, Mr. Ilker Free, Melody Bookstore Publications
- Microeconomics, Muammer Highlander, Beta Printing publication Distribution A.Ş. 2004, Istanbul.
- Macro Economy, Aziz Köklü, Joy Printing house, 1984, Ankara.
- In the market all Economy books helper lesson book aspect available.

GENETICS**(3+0) 3****ECTS: 3**

Definition of Genetics, Monohybrid Inheritance Cytological Basis of Inheritance, Dihybrid Inheritance Degree of Fitness and Probability Rules, Gene Linkage-Swapping of Segments-Chromosome Maps Inheritance of Multiple Alleles, Pseudoalleles and Blood Groups Statistical Concepts and Tools, Determination of Sex Sex-Linked Inheritance Chromosomal Aberrations Population Genetics Identification of Genetic Material Protein Synthesis Genetic Code Molecular Structure of Genes Regulation of Gene Activity, Cytoplasmic Inheritance Genetic Engineering .

Lesson Book:

- Soysal, MI (2006), Genetics “Inbreeding Information” Lecture Notes, 4th Edition, Trakya University, Tekirdağ Faculty of Agriculture, Animal Science and Genetics Department, 2006, Tekirdağ ISBN:9944-5405-0-1 Klug, SW, Cummings MR(2003) Genetic Concepts(Translation from the Sixth Edition). Palme Publishing House, September, 2003, ISBN:975-8624-21-0 Tamarin, RH (1999), Principles of Genetics.(Sixth Edition) University of Massachusetts Lowell, ISBN:0-697-35462-8

Helper Textbooks :

- Lesson giving faculty member lecture notes

ANIMAL ECOLOGY**(3+0) 3****ECTS: 4**

Introduction to ecology, ecosystems and ecological relationships; Ecosystem elements and functions; Population ecology; Differences between natural and agricultural ecosystems; Energy losses, carbon, nitrogen, phosphorus and sulfur cycles in modern agriculture and breeding; Genetic diversity and its conservation; Adaptation in farm animals; Adapting the environment to animals; cold, heat, comfort temperature range and critical temperatures; Natural and natural selection; Climatic environmental requirements of cattle; Climatic environmental requirements of sheep; Climatic environmental requirements of poultry; Interactions between animal production and environmental pollution.

Lesson Book:

- Savaş, T., Animal, Environment and Behavior B. Animal Ecology. Emsen H. 1992.

Principles of animal husbandry. Atatürk University Faculty of Agriculture Publication No: 95, ERZURUM.

- Price, EO, 2002 Animal domestication and behavior. CABI Publishing. Typeset by AMA DataSet Ltd, UK. Vaarst M. at all., 2004. Animal health and welfare in organic agriculture. Typeset by Wyvern 21 Ltd, Bristol

Helper Textbooks :

- Lesson giving faculty member lecture notes

CLIMATE INFORMATION

(2+0) 2

ECTS:3

Definition, importance and development of climate information, branches and application areas of meteorology, structure and properties of the atmosphere, temperature, air pressure, wind, humidity, evaporation and clouds, precipitation, air masses and frontal systems, meteorological observations, observation park.

Lesson Book:

- Climate Knowledge And Climatic Measuring Technique, Prof. Dr. H. Huseyin Ozturk, Birsen Publishing house

Helper Lesson His books:

- Moran, JM, Morgan, DM, Pauley, PM 1997. Meteorology: the atmosphere and the science of weather. Prentice Hall, New Jersey, USA 3. Türkeş, M. 2010. Climatology and Meteorology. Kriter Publishing House, Istanbul.

MEASUREMENT INFORMATION

(2+2) 3

ECTS:4

Horizontal measurements with simple measuring instruments, vertical ascending and descending instruments, measurement methods of small land pieces (triangulation, orthogonal method), plan drawing, area calculations, application, leveling; tools to be used in leveling works, horizontal distance and horizontal angle readings, height readings, profile and surface leveling, transferring measurements onto paper, area measurements from the plan.

Lesson Book:

- Ayyıldız, M., 1999. Measurement Information. Ankara University Faculty of Agriculture Publications, No: 550, Textbook: 182. 2. Songu, C., Serbetci, M., 2009. Measurement Information. Volume 1, Birsen Publishing House, 297 p., ISBN: 9755113444.

Helper Lesson His books:

- Lesson giving faculty member lecture notes

TURKISH LANGUAGE II

(2+0) 2

ECTS:2

Adverbial prepositions and their use in Turkish, Sentence Knowledge, Sentence elements, Sentence analysis and applications, Oral Composition types and applications, speech plan,

preparation speeches, Rules of eloquent speech, impromptu speech types and applications, Forms of expression in composition and applications, Types of written composition and applications, Expression and sentence defects and their correction, Rules to be applied in the preparation of scientific writings and doing research, Researching and examining scientific writing samples, Developing the ability to speak and write correctly and beautifully with examples selected from the world of literature and thought and the history of thought.

Lesson Book:

- Turkish Language and Composition Information for Higher Education Students (KORKMAZ Z., ERCİLASUN AB, ZULFİKAR H., AKALIN M., GULENSOY T., PARLATIR C., FIRST N.)

Helper Textbooks :

- Applied Turkish Language and Composition Information, Prof. Dr. Yakup KRASOY, Assoc. Prof. Dr. Orhan YAVUZ, Lecturer Ahmet KAYASANDIK, Lecturer Bekir DİREKÇİ.
- University Turkish Language And Composition Lessons (YAVUZ K., YETİS K., FIRST N.)
- Turkish Language And Composition, Commission.
- Applied Turkish Information, Osman GOKER.
- Turkish Language And Composition Information, Fahri OZKAN.

FOREIGN LANGUAGE II

(2+0) 2

ECTS: 2

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

Lesson Book:

- English With Base

Helper Textbooks :

- Essential Grammar Of Use

3. SEMESTER

PLANT PROTECTION

(2+2) 3

ECTS: 4

General information will be provided on the concept of disease, inanimate causes of disease, fungal, bacterial, and viral disease agents, epidemiology, pathology, and disease control methods. The external and internal structures of plant pests, their biology, ecology, and control methods will be covered.

Lesson Book:

- Alaoğlu, Ö., Boyraz, N., Güncan, A. and Baştaş, KK 2014. Plant Protection. S. University, Faculty of Agriculture, Department of Plant Protection, 266 p. Konya

Helper Textbooks :

- Lecture notes.

GENERAL MICROBIOLOGY

(2+2) 3

ECTS:4

The subject and sections of General Microbiology, classification and nomenclature of microorganisms, history of microbiology, groups of microorganisms, bacteria, rickettsia and chlamydiae, eukaryotic microorganisms, fungi, algae, protozoa, viruses, bacteriophages, virus-like infectious agents, nutrition in microorganisms, environmental factors affecting reproduction, grouping of microorganisms according to nutritional status, anaerobic culture methods, production of viruses, genetics of microorganisms, control of microorganisms, physical methods, chemical methods, laboratory equipment and its introduction in microbiology applications, microscope and its use, size of microorganisms measurement, preparation of media, measurement of pH, sterilization, preservation, isolation of microorganisms in the environment, obtaining pure culture and examining their properties, microorganism counting methods, examination of yeast and molds.

Lesson Book:

- Temiz, A. 1994. General Microbiology Practice Techniques. Dawn Printing Co. Ltd. Ankara, 266 Pages.

Helper Textbooks :

- Lesson giving teaching member's lecture notes

GENERAL ANIMAL TECHNICS

(2+2) 3

ECTS: 4

Animal cultivation about basis And current information will be given.

Lesson Book:

- Animal Breeding (Aquaculture), 2nd Edition, Editor: Mehmet ERTUĞRUL ,Ankara,1997.

Helper Textbooks :

- Lesson giving teaching member's lecture notes

STATISTICS

(3+0) 3

ECTS: 3

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

Lesson Book:

- To statistics Entrance, Necati STAR, Omar AKBULUT And Hudaverdi Bircan, *Aktif Publishing House* , Erzurum, 2002.

Helper Textbooks :

- Applied Statistics, Necati STAR And Hudaverdi Bircan, *Ataturk University Faculty of Agriculture Offset Facility* , Erzurum, 1994.

AGRICULTURE ECONOMY

(2+2) 3

ECTS: 4

The Place and Importance of Agriculture in the Economy, Characteristics of Agricultural Production and Agricultural Products, Natural Resources and Environmental Economics, Environmental Economics, Administration and Financing of Agricultural Enterprises, Agricultural Cooperatives and Organization, Cooperatives and Principles, Marketing of Agricultural Products, Agricultural Policy and International Trade, European Union and Rural Development.

Lesson Book:

- Agriculture The economy Lesson Notes, Erzurum, 2008

Helper Textbooks :

- Karagölge, C., Kızıloğlu, S. and Yavuz, O., Basic Principles of Agricultural Economics. Atatürk University Faculty of Agriculture Publications: 324.1995.

AGRICULTURE MACHINES

(2+2) 3

ECTS: 4

Definition, stages and objectives of agricultural mechanization, mechanization in agriculture, Türkiye agriculture and mechanization status, agricultural machinery selection and operating principles, energy sources and machinery in agriculture, internal combustion engines, agricultural tractors, soil tillage tools and machinery, sowing, planting, fertilizing and care machines, agricultural warfare machines, harvesting and threshing machines, barn and poultry house mechanization.

Lesson Book:

- Agricultural Mechanization, Rahmi Keskin, Doğan Erdoğan, Ankara University Faculty of Agriculture Publications No: 1254, Ankara, 1992.

Helper Textbooks :

- Agricultural Tools and Machinery, Emin Mutaş, Ege University Faculty of Agriculture Publications No: 218, İzmir, 1984
- Principles of Agricultural Machinery, Poyraz Ülger, Emin Güzel, Birol Kayışoğlu, Bülent Eker, Bahattin Akdemir, Yunus Pınar, Yılmaz Bayhan, Cihangir Sağlam, Fakülteler Press, İstanbul, 2002.
- Agricultural Machinery, Doğan Erdoğan, Ankara University Faculty of Agriculture Publications No: 1540, Ankara, 2005.

AGRICULTURAL STRUCTURES AND IRRIGATION (2+2) 3**ECTS: 4**

Culture introduction to technology; rural settlement And business location planning; agricultural structures environmental conditions; agricultural business structures and planning principles; the importance and necessity of irrigation; water-yield relationships; Türkiye's soil and water resources potential and adequacy; soil-water-plant relationships; infiltration; evapotranspiration; effective rainfall; irrigation efficiencies; irrigation interval and amount of irrigation water; irrigation methods.

Lesson Book:

- Kültürteknik, Okuroğlu, M., Yağanoğlu, AV, Şahin, Ü., 1998. Atatürk University, Faculty of Agriculture Textbooks Publication No: 213, Erzurum
- Cultural Technique (With Solutions) problems), Okuroğlu, M., Yağanoğlu, A. V., Şahin, U., 1994. Atatürk University, Faculty of Agriculture Textbooks Publication No: 213, Erzurum

Helper Textbooks :

- Irrigation, Y. Güngör, AZ Erözel, O. Yıldırım, Ankara University Faculty of Agriculture Course Book No:478, Ankara, 2002.
- Irrigation And Drainage Engineering, R. Kanber, R. Cakir, AMNESTY Tari, Agriculture Ministry of Agriculture and Rural Affairs, APK Department Head Publication No: 122, Ankara, 2002.
- Culture Technique (Solution Problems), AV Yağanoğlu, M. Okuroğlu, Ü. Şahin, 2001, Atatürk University, Faculty of Agriculture, Course Publications No:213, Erzurum, 2001.

- Irrigation, R. Kanber, Cukurova Uni. Lesson His books No: A-52, Adana, 1999.
- Irrigation, L. Delibaş, Trakya University, Tekirdağ Faculty of Agriculture, Lecture Note: 52, Tekirdağ, 1989

SOIL INFORMATION

(2+2) 3

ECTS: 4

Definition of soil, phases of soil, soil formation processes and factors, soil classification, physical, chemical and biological properties of soil, plant nutrition, fertilizers and fertilization, soil protection and soils of Türkiye.

Lesson Book:

- Fundamentals of Soil Science, 1993. Prof. Dr. Abdüsselam Ergene, Atatürk University Publication No: 586, Faculty of Agriculture Publication No: 267, Textbook Series No: 42. Erzurum.

Helper Textbooks :

- Akalan, C. 1988. Soil Science. Ankara University, Faculty of Agriculture Publications: 1058, Textbook: 309, Ankara.
- Soil Science, Saglam, TM, Bahtiyar, M., Cangir, MT, Tok, HH 1993. Trakya University, Tekirdağ Faculty of Agriculture, Soil Department, Tekirdağ, 1993.

4. SEMESTER

ANATOMY AND PHYSIOLOGY

(2-2) 3

ECTS: 4

anatomy and useful terms in explaining it, anatomy and physiology of animal cells, anatomy of animal tissues, general plan of the animal body, anatomy of the skeletal system, anatomy of the skeletal system, anatomy and physiology of muscles, anatomy and physiology of muscles, anatomy and physiology of muscles, anatomy and physiology of muscles, anatomy and physiology of the digestive system, secretion physiology, dental anatomy, anatomy of the nervous system.

Lesson Book:

- Anatomy and Physiology of Domestic Animals, Atatürk University Publications No: 479

Helper Textbooks :

- Lecture notes.

RESEARCH AND EXPERIMENT METHODS

(2-2) 3

ECTS: 4

Principles of planning, designing and conducting experiments, Trial Error -The Concept of

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Replication and Parallel -Comparison of two independent groups, F distribution and variance analysis technique -Randomized Plot Design -Example problem solutions and interpretation of results, Multiple comparison methods -Minimum Significant Difference method -Duncan test -Example problem solutions and interpretation of results, $F = t^2$ relationship -Prerequisites of variance analysis -Checking homogeneity of variances -Bartlett-Chi-Square statistics -Example problem solutions and interpretation of results, Randomized Block Design -Latin Square Design -Relative effectiveness -Missing observations -Example problem solutions and interpretation of results, Factorial Experiments -Factorial Experiments in Randomized Plots -Interpretation of sample problem solutions and interpretation of results, The concept of interaction -Simple and main effects -Example problem solutions and interpretation of results, Randomization Factorial Experiments in Blocks - Sample problem solutions and interpretation of results, Split Plots in Randomized Blocks - Sample problem solutions and interpretation of results, Repeated Measures Experiments - Single Factor Repeated Measures Experiments - Sample problem solutions and interpretation of results, Two Factor Repeated Measures Experiments - Sample problem solutions and interpretation of results.

Lesson Book:

- Düzgüneş, O.; Kesici, T.; Kavuncu, O.; Gürbüz, F. 1987. Research and Experimental Methods (Statistical Methods-II). Ankara University Faculty of Agriculture Publications: 1021, Textbook: 295, Ankara.
- Bek, Y. Efe, E. 1988. Research and Experimental Methods. Çukurova University Faculty of Agriculture Textbook, Adana.
- Soysal, İ. 1992. Principles of Biometry (Statistics I and II Lecture Notes). Trakya University Tekirdağ Faculty of Agriculture Publication No: 95, Tekirdağ.
- Yızdız, N.; Bircan, H. 1994. Research and Experimental Methods. Atatürk University Publications No: 697. Faculty of Agriculture No: 305, Erzurum.
- Yızdız, N.; Bircan, H. 1994. Applied Statistics. Atatürk University Publications No: 704. Faculty of Agriculture No: 308, Erzurum.
- İkiz, F.; Püskülcü, H. Eren, Ş. 1996. Introduction to Statistics. Ege University Press, Bornova, İzmir.
- Atıl, H. 1998. Statistics. Ege University Faculty of Agriculture Publications No: 531, E.Ü. Faculty of Agriculture Offset Workshop, Bornova, İzmir.

Helper Textbooks :

- Lecture notes.

GARDEN PLANTS

(2+2) 3

ECTS: 5

Classification of horticultural plants, Türkiye's horticultural crop cultivation the value it carries, the biological characteristics of garden plants, the ecological requirements of garden plants, the physiological characteristics of garden plants, the reproduction of garden plants, the establishment of fruit, vegetable gardens and vineyards, annual maintenance works.

Lesson Book:

- General Horticulture, YS Ağaoğlu, H. Çelik, M. Çelik, Y. Fidan, Y. Gülşen, A. Günay, -N. Halloran, AI Köksal, R. Yanmaz, Ankara University Faculty of Agriculture Education, Research and Development Foundation Publications No:4, 1995.

FOOD SCIENCE AND TECHNOLOGIES**(2-2) 3****ECTS: 4**

To provide general knowledge and skills regarding the composition of foods, packaging and storage of foods, grain, milk, meat, fruit, vegetable and vegetable oil technology and some of their products.

Lesson Book:

- Zeki Ertugay, Ahmet Kurt, Adem Elgün and H. Yusuf Gökalp (1994). Food Science and Technology. Atatürk University, Faculty of Agriculture, Department of Food Engineering. ERZURUM
- Adem Elgün and Zeki Etugay (1992). Grain Processing Technology. Atatürk University, Faculty of Agriculture Publications. ERZURUM.
- Meat and Meat Products Processing Engineering (1994). Hüsnü Yusuf Gökalp, Mükerrrem Kayay and Ömer Zorba. Atatürk University, Faculty of Agriculture Publications. ERZURUM.
- Bekir Cemeroğlu, Feryal Karadeniz and Mehmet Özkan (2003).3 Fruit and Vegetable Processing Technology. Ankara University, Faculty of Engineering, Department of Food Engineering. ANKARA
- Dairy Technology (2007). Ankara University, Faculty of Agriculture, Publication No: 1560, Textbook: 513 (Editor: Prof. Dr. Atilla YETİŞEMİYE).

Helper Textbooks :

- Lecture notes.

MECHANIZATION IN LIVESTOCK**(3+0) 3****ECTS: 4**

Introduction to the concept of mechanization, the importance of mechanization in animal husbandry, systems used in barns and shelters, feed preparation and distribution machines, waterer and feeder systems, manure cleaning and removal systems, milking machines and milk cooling equipment, ventilation and climate control systems, animal handling equipment, automatic monitoring and control systems, energy use and efficiency, the impact of mechanization on the workforce, along with current technologies and sustainable practices.

Lesson Book:

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- Lecture notes.

WORK HEALTH AND SECURITY

(3-0) 3

ECTS: 4

Providing information on the Purpose and Scope of the Occupational Health and Safety Law No. 6331, Basic information on duties, authorities and responsibilities for ensuring occupational health and safety in workplaces.

Lesson Book:

- Lecture notes.

Helper Textbooks :

- Lesson giving teaching member's lecture notes

FIELD CROPS

(2-2) 3

ECTS: 3

History of field crops, their importance, ways of utilizing them, production practices, care, problems and solutions.

Lesson Book:

- Gökkuş, A., Karadoğan, T. Kantar, F., Koç, A. (1998) Field Crops Akçin, A. 1981. Food Grain Legumes Lecture Notes. Atatürk University, Faculty of Agriculture Publications, Erzurum.
- Baysal, I. 1975. General Principles of Field Agriculture, Erzurum Ceylan, A., 1988. Field Agriculture. Ege University Faculty of Agriculture Publications No: 491. Ege University Faculty of Agriculture Offset Printing House. Bornova/İZMİR.
- Günel, E., 1993. Industrial Plants "Cultivation Techniques of Fiber Plants" Yüzüncü Yıl University Faculty of Agriculture Publications No: 6, Van.
- İlisulu, K., 1983. Oilseed Crops and Their Breeding. Çağlayan Bookstore Beyoğlu İstanbul. İncekara, F., 1972. Industrial Plants and Their Breeding. Volumes I, II, III, IV. Ege University Faculty of Agriculture Publications, Bornova-İzmir.
- Köycü, Ç., 1974. Cool Season Cereals Lecture Notes. Atatürk University, Faculty of Agriculture, Erzurum.
- Tosun, F., 1974. Culture of Forage Legumes and Cereals. Atatürk University Publications No: 242. Faculty of Agriculture Publications No: 123. Textbook Series No: 8, Atatürk University Printing House.
- Kün, E., 1981. Cool Climate Cereals. Ondokuz Mayıs University, Faculty of Agriculture Publications No: 6, Lecture Notes No: 1. Samsun.

Helper Textbooks :

- Lecture notes.

FEED INFORMATION AND FEED TECHNOLOGY (2-2) 3 ECTS: 4

Importance and classification of feeds Meadows, pastures and highlands Legume forage crops Cereal forage crops Silage Energy feeds Energy feeds Protein supplementary feeds Protein supplementary feeds Mixed feed Mineral and vitamin supplementary feeds Feed additives Factors affecting the nutritional value of feeds Toxic substances in feeds and feed analysis.

Lesson Book:

- Özen, N., Çakır, A., Haşimoğlu, S. and Aksoy, A., 1993. Feed Information and Feed Technology. Atatürk University, Faculty of Agriculture, Lecture Notes: 50. Erzurum Akyıldız, R., 1981. Feed Information and Technology. Atatürk University, Faculty of Agriculture, Publication: 974, Textbook: 286

Helper Textbooks :

- Lesson giving teaching member's lecture notes

5. SEMESTER**BREEDING OF BEE AND SILKWORMS (2-2) 3 ECTS: 3**

Topics covered include the fundamentals of beekeeping, bee biology, bee breeds, colony structure, bee products, beekeeping equipment, care and management practices, pests and diseases, and migratory beekeeping. The history of sericulture, silkworm biology, the importance of mulberry leaves, the care process, cocoon harvesting, and silk production are also covered.

Textbook :

- Lesson giving teaching member's lecture notes

VOCATIONAL ELECTIVE COURSES-I: (This lesson Professional Elective course 5th semester 10 ECTS from the group will be taken, see below.)

FACULTY ELECTIVE COURSE 1: (This lesson Faculty Elective Course 5th semester 3 ECTS from the group will be taken, see below.)

ANIMAL FEEDING PHYSIOLOGY AND METABOLISM (2-2) 3 ECTS: 3

Introduction to nutritional physiology, anatomy and physiology of the digestive system, digestive processes in monogastric and ruminant animals, functions of digestive secretions and enzymes, carbohydrate, fat and protein metabolism, vitamin and mineral metabolism, water and electrolyte balance, energy metabolism and ATP production, effects of hormones on metabolism.

Textbook :

- Lesson giving teaching member's lecture notes

ANIMAL BREEDING

(2-2) 3

ECTS: 4

Phenotype, Qualitative and Quantitative Characters. Genotype, Gene and Genotype Frequency Calculation. Heredity and Environment, Discrete and Continuous Environmental Factors Evaluation. Environment and Genotype Relationships. Repeatability, Heritability and Estimation Methods. Genetic Correlation and Estimation Methods. Breeding Value. Genetic Improvement and Selection Advantage. Increasing Heritability, Calculation of Generation Interval. Selection Methods. Crossbreeding, Pure Breeding, Line Breeding. Inbreeding and Calculation of Inbreeding. Breeding Bull Breeding Program and Elite Herd Breeding Plan.

Lesson Book:

- Düzgüneş, O., A. Eliçin, N. Akman. 2003. Animal Breeding: A. University Faculty of Agriculture Publications: 1535/488 Supplementary Resources Kumlu, S. 2003. Animal Breeding. Publications of the Turkish Cattle Breeders' Central Union, No:1

ORGANIC LIVESTOCK

(2-2) 3

ECTS: 4

The definition and importance of organic agricultural and animal production, and the reasons for the transition. Principles to be considered in the site selection and construction of animal shelters in organic production. Organic milk production; the care and management of dairy cattle. Organic red meat production; the care and management of beef calves, transportation, and slaughter. Organic egg production; the care and management of chicks/pulp chicks and chickens. Organic white meat production; the care and management of chickens. Organic sheep and goat milk production; and the basic principles of organic lamb meat production. Definition of organic feed, organic energy and protein feeds, organic roughages, use of pastures in organic - ecological livestock farming. Feed production in organic - ecological livestock farming enterprises and conditions of use of non-organic feeds. Vitamin and mineral feeds and feed additives used in organic - ecological livestock farming enterprises and in organic feed. Feeding of cattle in organic - ecological livestock farming enterprises and the main differences between organic - non-ecological feeding. Feeding of sheep and goats in organic - ecological livestock farming enterprises and the main differences between organic - non-ecological feeding. Feeding of chickens in organic - ecological livestock farming enterprises and the main differences between organic - non-ecological feeding. Certification related to organic production, structures of certification bodies and control mechanisms .

Textbook:

- First International Congress on Organic Animal Production and Food Safety, Proceedings

Book, 28 April-1 May 2004, Kuşadası.

- Petek M, Üstüner H (2004) Organic Livestock: A longing for the past? An investment in the future? Proceedings book of the 1st Veterinary Animal Science Congress, Elazığ.
- Proceedings of International Conference on Organic meat and milk from ruminants, 4-6 October, 2001.
- Athens, Greece Feeds, feed hygiene and technology. Ergün, A.; Tuncer, Ş.D.; Medisan Publishing House, Ankara, 2001.
- 267 Regulation on the Principles and Implementation of Organic Agriculture, Official Gazette Date of Publication: June 10, 2005, Number: 25841. www.tarim.gov.tr

Supplementary Textbooks:

- Lecture notes of the instructor who taught the course

FEED ANALYSIS TECHNIQUES

(2-2) 3

ECTS: 3

Introduction to feed analysis, including dry matter determination, crude protein determination (Kjeldahl method), crude fat determination, crude fiber, NDF and ADF analyses, crude ash determination, energy analysis, and calculations are covered. This is followed by vitamin and mineral (macro and microelement) analysis methods, antinutrient determination, microbiological analysis, and modern analysis techniques, and the evaluation of analysis results.

Textbook :

- Lesson giving teaching member's lecture notes

6. SEMESTER

VOCATIONAL ELECTIVE COURSES-I: (This lesson Professional Elective course 6th semester 14 ECTS from the group will be taken, see below.)

FACULTY ELECTIVE COURSE 2: (This lesson Faculty Elective Course 6th semester 3 ECTS from the group will be taken, see below.)

LARGE ANIMAL BREEDING

(2-2) 3

ECTS: 4

Introduction to cattle farming, classification and characteristics of cattle breeds, dairy and combined cattle breeds, beef cattle breeds, calf rearing and prevention of calf mortality, heifer rearing and young animal care, dairy herd management, beef cattle breeding and productivity improvement, housing planning and barn systems, animal behavior and welfare, reproductive biology and fertility management, herd health and disease prevention, recording system and performance monitoring, and sustainable cattle farming and environmental impacts.

Lesson Book:

- Instructor's lecture notes and slides

LARGE AND SMALL ANIMAL FEEDING (2-2) 3**ECTS: 4**

The digestive system of ruminants and an introduction to nutrition, nutrient requirements and energy-protein balance, feeding calves, steers and heifers, lactation feeding in dairy cattle, dry period feeding in dairy cattle, feeding and ration preparation in beef cattle, lamb and kid feeding principles, feeding dairy sheep and dairy goats, feeding beef sheep and goats, properties and use of roughage and concentrates, ration preparation techniques, vitamins, minerals and additives, feeding errors and digestive disorders, applied ration examples and field applications.

Textbook :

- Lesson giving teaching member's lecture notes

ANIMAL HEALTH AND ANIMAL DISEASES (1-2) 2**ECTS: 4**

Disease and health, definition of disease; examination methods. Causes of disease, mechanical causes, chemical causes, physical causes, biological causes. Infections; course, spread in the environment, sources of microorganisms. Sanitation, disinfection. Health protection and hygiene, syringes and injections. Environmental health. Organizations and laws related to animal health. Methods of taking samples for diagnosis, general measures in case of epidemics, first aid practices. Zoonotic Diseases. Bacterial Diseases. Mycoplasma infections. Viral diseases. Parasitic diseases. Poultry Diseases. Poultry Diseases.

Lesson Book:

- Instructor's lecture notes and slides

POULTRY BREEDING**(2-2) 3****ECTS: 4**

Introduction to poultry farming, poultry species and their economic importance, chicken breeds and classification, broiler chicken farming, layer chicken farming, chick rearing and raising periods, breeding enterprises and incubation techniques, housing planning and environmental control, poultry feeding principles, poultry diseases and vaccination programs, animal welfare and behavior, alternative systems (organic, free-range chicken, etc.), farming of other poultry species (geese, ducks, turkeys) and current developments and sustainable poultry production.

Textbook :

- Lesson giving teaching member's lecture notes

7. SEMESTER

VOCATIONAL ELECTIVE COURSES-III : (This course will be taken as a Professional Elective course with 8 ECTS from the 7th semester group, see below.)

GRADUATION STUDY – I (Annual) (0+2)2 **ECTS: 3**

Fourth-year students prepare a graduation thesis in the form of an application or literature review under the supervision of a faculty member.

SOCIAL-CULTURAL CONTENTS LESSON: (This course will require at least 4 ECTS credits from the Social-Cultural Elective course group, see below.)

POULTRY FEEDING (2+2) 3 **ECTS:4**

Introduction to poultry nutrition, digestive system and physiological characteristics, nutrient requirements of poultry, feed ingredients used and their nutritional values, principles of ration preparation, broiler feeding, layer feeding, breeder poultry feeding, chick starter feeding, use of alternative feed sources, vitamin and mineral requirements, effects of feed additives and enzymes, feeding systems and feed hygiene, performance monitoring and feed evaluation methods.

Textbook :

- Lesson giving teaching member's lecture notes

SMALL ANIMAL BREEDING (3-0) 3 **ECTS: 4**

A General Overview of Sheep Breeding Sheep breeding in the World and in Turkey Classification of sheep, sheep breeds, Genetic Improvement in Sheep Environmental Improvement to Increase Lamb Production Reproductive physiology in sheep Basic principles of sheep nutrition, lamb raising techniques Practical breeding work, care and other tasks Health protection in sheep, hereditary defects General Overview of Goat Breeding Classification of goats, local and culture breeds, Practical breeding work, care and feeding Sheep and goat breeding strategy in Turkey Fundamental problems of small ruminant farming and proposed solutions .

Textbook:

- Advanced Sheep Breeding, 2006. Izmir Province Breeding Sheep-Goat Breeders Association Publications No.1, 2nd Expanded Edition, Bornova, Izmir, Türkiye.
- Nutrient Requirements of Small Ruminants: Sheep, Goats, Cervids, and New World Camelids. Committee on the Nutrient Requirements of Small Ruminants, National Research Council. ISBN: 978-0-309-10213-1, 384 pages, 8 1/2 x 11, hardback (2007).

- Goat Breeding, 2006. Izmir Province Breeding Sheep-Goat Breeders Association Publications No.2, 2nd Expanded Edition, Bornova, Izmir, Türkiye.

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Supplementary Textbooks:

- Lecture notes of the instructor who taught the course

INTERNSHIP

0(0+0)

ECTS: 4

Student what he saw to classes related aspect applied is providing training .

REPRODUCTIVE BIOLOGY AND ARTIFICIAL INSEMINATION (2+2) 3 ECTS:4

Reproduction, scientific developments related to reproduction, technological developments related to reproduction today Sexual maturity, detection methods, examination of affecting factors Anatomy, physiology and functions of reproductive organs in male and female farm animals Estrus cycle, phases, hormonal mechanism in farm animals Estrus cycle, phases, hormonal mechanism in farm animals Estrus synchronization in farm animals, methods, comparative results Estrus synchronization in farm animals, methods, comparative results Semen collection, evaluation and storage in farm animals Artificial insemination in farm animals, methods Fertilization and embryonic development Assisted reproductive techniques, historical development Embryo transfer, In vitro fertilization, transgene technology Techniques for producing offspring of the desired sex Pregnancy testing in farm animals, methods.

Textbook:

- Pathways to Pregnancy and Parturition, PL Senger Reproduction in Farm Animals, Hafez, B Comparative Reproductive Biology, Heide Schatten, Gheorghe M. Constantinescu

Supplementary Textbooks:

- Lecture notes of the instructor who taught the course

8. SEMESTER

VOCATIONAL ELECTIVE COURSES-IV : (This course will be taken as a Professional Elective course in the 8th semester group with 30 ECTS, see below.)

VOCATIONAL ELECTIVE COURSES GROUP

VOCATIONAL ELECTIVE COURSES – I (5TH SEMESTER)

MEAT AND DAIRY TECHNOLOGIES

(2+0) 2

ECTS: 5

Introduction to meat and dairy technologies, structure, composition and quality criteria of meat,

meat processing and preservation methods, meat products technology (sausage, salami, sausage, etc.), slaughter hygiene and healthy meat evaluation, structure, composition and quality criteria of milk, milk collection, transportation and preservation, milk pasteurization and sterilization methods, fermented dairy products technology (yoghurt, kefir, etc.), cheese technology and varieties, butter and cream production techniques, quality control, packaging, labeling and legal regulations in milk and dairy products, and current developments and R&D applications in meat and dairy products.

Textbook:

- Lecture notes of the instructor who taught the course

ANIMAL SHELTERS AND PLANNING (2+0) 2 ECTS: 5

Introduction to animal shelters and basic concepts, environmental conditions and animal welfare in shelters, factors such as temperature, humidity, airflow and lighting, floor structures and properties of materials used, barn types and building planning principles, dairy cattle shelters, beef cattle shelters, sheep and goat shelters, poultry shelters, hygiene, cleaning and waste management in shelters, mechanization and automation systems, animal density and layout, shelter project and drawing techniques, modern shelter practices and sustainability approaches.

Textbook:

- Lecture notes of the instructor who taught the course

LAMB FATTENING TECHNIQUES (2+0) 2 ECTS: 5

Introduction to lamb fattening and its importance, breed selection and breeding stock supply, lamb rearing and feeding periods, post-weaning feeding strategies, characteristics of fattening lamb feeds, ration preparation and feeding programs, feed consumption, feed conversion ratio and daily live weight gains, monitoring and evaluation of fattening performance, effects of housing conditions and environmental factors, disease control, health protection and vaccination programs, economic analysis in lamb fattening, meat quality and carcass characteristics, fattening lamb marketing and sales strategies, practical ration examples and field studies.

Lesson Book:

- Instructor's lecture notes and slides

VOCATIONAL FOREIGN LANGUAGE- I (2+0) 2 ECTS: 5

The aim is to translate texts containing professional English terms related to the subjects covered in the professional courses taught in the department, from English to Turkish and from Turkish to English, in a way that will improve the students' English at a professional level. The aim is to provide students with both professional experience and improve their professional English through the translations made.

Lesson Book:

- Lesson giving teaching member's lesson notes, recommended source books

VOCATIONAL ELECTIVE COURSES – II (6TH SEMESTER)**ALTERNATIVE POULTRY PRODUCTION****(2+0)2****ECTS: 5**

Introduction to alternative poultry production and conceptual framework, organic poultry production systems, free-range production systems, free-range chicken farming, traditional backyard poultry practices, broiler goose, duck and turkey farming, ornamental chicken and special breeds production, housing and equipment needs in alternative systems, feeding strategies and alternative feed sources, health protection measures, biosecurity practices and disease management, animal welfare and ethical production approach, consumer preferences and marketing strategies, environmental impacts of alternative production systems with applied examples and field studies.

Lesson Book:

- Lesson giving teaching member's lesson notes, recommended source books

ANIMAL BEHAVIOR AND ANIMAL WELFARE (2+0)2**ECTS: 5**

The Concept and Importance of Animal Behavior, Causes of Animal Behavior, Communication Methods Between Animals, Types of Behavior in Farm Animals, Types of Behavior in Farm Animals, Behavior Measures, Symptoms of Nervousness in Animals and Animal Psychology, Evaluation of Animal Behavior in Terms of Husbandry, Social Behavior in Cattle, Behavior Physiology, Behavior of Calf, Inheritance of Behavioral Characteristics, Behavior of Employees in Livestock Farms. Behavior of Employees in Livestock Farms.

Lesson Book:

- Various Lecture Notes

ORGANIZATION IN LIVESTOCK**(2+0)2****ECTS: 5**

Purpose and Importance of Organizations, Basic Characteristics of Organizations, Planning of Organizations, Structure of Organizations, Animal Husbandry Organizations in Türkiye, Animal Husbandry Organizations in Türkiye, Duties and Functions of Official Animal Husbandry Organizations, Duties and Functions of Official Animal Husbandry Organizations, Duties and Functions of Private Enterprise Animal Husbandry Organizations, Duties and Functions of Private Enterprise Animal Husbandry Organizations, Animal Breeding Organizations, Animal Husbandry Organizations in Europe, Animal Husbandry Organizations in Europe, International Animal Husbandry Organizations.

Lesson Book:

Bu belge 5070 sayılı elektronik imza kanununa göre güvenli elektronik imza ile imzalanmıştır.

Evrak teyidine <http://ebys.igdir.edu.tr/document/records/public.search> adresinden Belge Num.:26144459-300-E.655 ve Barkod Num.:328321 bilgileriyle erişebilirsiniz.

- Various lecture notes on livestock organizations

VOCATIONAL FOREIGN LANGUAGE II (2+0)2

ECTS: 5

The purpose of teaching a foreign language is to teach students the basic rules of the foreign language they are learning, to develop their foreign language vocabulary, to understand what they read in a foreign language, and to express themselves verbally or in writing.

Lesson Book:

- Lesson giving teaching member's lesson notes, recommended source books

AQUATIC PRODUCTS

(2+0)2

ECTS: 5

Basic Information About Aquaculture, Rainbow Trout Farming, Rainbow Trout Farming, Rainbow Trout Farming, Rainbow Trout Farming, Carp Farming, Carp Farming, Carp Farming, Sea Bream Farming, Sea Bream Farming, Sea Bream Farming, Sea Bream Farming, Sea Bass Farming, Sea Bass Farming.

Lesson Book:

- Hüseyin Alpbaz, Marine Fish Culture, Ege University Publications, 1996. Sıtkı Aras et al., Fundamentals of Aquaculture, Atatürk University Publications, 1996.

Supplementary Textbooks:

- Lesson giving teaching member's lesson notes, recommended source books

VOCATIONAL ELECTIVE COURSES – II I (7TH SEMESTER)

ANIMAL ECOLOGY-2

(2+0)2

ECTS: 5

Review of basic concepts of animal ecology, population ecology and structure of animal populations, relationships and interactions among species, concept of habitat and habitat preferences of animals, ecological niche and adaptation mechanisms, energy flow and food chains, ecological basis of animal behavior, matter cycles in ecosystems, biodiversity and conservation of animal diversity, ecological effects of agricultural activities, sustainability of animal production systems, effects of climate change on animals, environmental management and waste control in animal husbandry, protection of natural resources and sustainability of ecological balance.

Lesson Book:

- Lesson giving teaching member's lesson notes, recommended source books

COMMUNICATION SKILLS AND CONSULTANCY (2+0)2

ECTS: 5

Definition, Characteristics and Importance of Agricultural Extension, Objectives in Agricultural Extension; General Objectives, Project Objectives, Action Objectives, Agricultural Extension and Rural Development Strategy, Agricultural Extension Systems, Approaches and Methods, Definition of Education, Programs, Objectives, Teaching Tools and Methods, Measurement and Evaluation in Education, Human Nature; Personal Differences and the Concept of Need for Adoption of Innovations, Individual and Group Extension Tools and Methods, Negotiation Meetings; Forum; Symposium, Panel, Mass Extension Tools and Methods, Project Process in Agricultural Extension, Communication, Body Language, Motivation, Conflict Management.

Lesson Book:

- Agricultural Extension and Communication Techniques, Ziya Yurttaş, Tecer Atsan, Atilla Keskin, Aüzf Publications, No: 67, Erzurum 2010.
- International Agricultural Extension Systems, Ziya Yurttaş, Aüzf Agricultural Economics Department Lecture Notes, 2011.
- Strengthening Agricultural Extension And Advisory Systems, Burt Swanson, Riikka Rajalahti, Agriculture And Rural Development Discussion Paper 45, World Bank, Washington DC 2010.

SILAGE TECHNOLOGY

(2+0)2

ECTS: 5

Definition and importance of silage, silage plant species and their characteristics, biochemical basis of silage making, silage production techniques and stages, additives and their intended uses, fermentation process, silage quality and factors affecting quality, silage analysis methods, spoilage and its prevention, practical silage making and appropriate storage techniques, the importance of silage in animal nutrition, its economic evaluation, silage production with new technologies, silage applications and prevalence in Türkiye.

Lesson Book:

- Lesson giving teaching member's lesson notes, recommended source books

RATION PREPARATION FOR DAIRY COWS (2+0)2**ECTS: 5**

Ration and animal nutrition concepts, importance and basic principles of nutrition in dairy cows, basic nutrients and digestive physiology, energy and protein requirements, vitamin and mineral needs, classification and properties of feedstuffs, chemical analysis of feeds, feeding strategies according to lactation period, dry period and transition period feeding, ration preparation methods, computer-aided ration preparation tools, ensuring energy-protein balance in the ration, economic ration planning and feed cost calculations, feeding problems encountered in practice and suggested solutions.

Lesson Book:

- Ration preparation for dairy cows Various lecture notes

VOCATIONAL ELECTIVE COURSES – IV (8TH SEMESTER)**HUNTING AND WILDLIFE****(3+0)3****ECTS: 5**

Introduction to hunting and wildlife, historical development and cultural aspects of hunting, wildlife species and classifications in Türkiye, habitat concept and wildlife ecology, behavior of wild animals, game animals and their economic importance, conservation and sustainability studies in wildlife, development of hunting tourism, relevant national and international hunting legislation, poaching problems, hunter education and ethical rules, the effects of hunting on the ecological balance, wildlife management in Türkiye and examples of successful practices.

Lesson Book:

- Lesson giving teaching member's lesson notes, recommended source books

COMPUTER AIDED AGRICULTURAL STATISTICS AND ANALYSIS (2+2)3 ECTS: 5

Introduction to agricultural statistics, basic statistical concepts, data collection and classification, graph and table creation, measures of central tendency and dispersion, probability theory and distributions, hypothesis testing, analysis of variance (ANOVA), regression and correlation analyses, multiple regression applications, agricultural experimental design, introduction to statistical software such as SPSS, Minitab and Excel, evaluation of agricultural data with computer-aided analysis techniques and interpretation of results through application examples.

Lesson Book:

- Suggested reference sources with notes shared by the faculty member

COMPUTER APPLICATIONS IN LIVESTOCK (2+2)3

ECTS: 5

Selection and its Applications in Animals Sampling Methods Regression Analysis Correlation Analysis Hypothesis Testing Developmental Applications in Cattle Breeding Computer Applications in Biostatistics Computer Applications in Goat Breeding Computer Applications in Sheep Breeding Computer Applications in Cattle Breeding Computer Applications in Poultry Breeding Estimation of Variance Components in Animal Husbandry Nonparametric Statistical Methods Statistical Package Programs.

Lesson Book:

- Kaps, M., and Lamberson, W.R. (2004). Biostatistics for Animal Science.
- Kayaalp, GT, Yıldız, N. and Bek, Y., 1993. Estimation of Variance Components in Animal Breeding with Two Different Methods. Harran University Journal of Agriculture 4(19) 210-223.
- Kayaalp, GT and Bek, Y., 1998. Lacto Package Program. 2nd National Symposium on Computer Applications in Agriculture. TUBITAK- Selçuk University, Faculty of Agriculture-S.Ü. Technical Sciences Vocational School. 28-30 September 1998, Konya.

BIOTECHNOLOGY IN LIVESTOCK

(2+0)2

ECTS: 5

Biotechnology in animal production and breeding. Importance and ethical aspects of new gene technologies. Blood groups in animal husbandry. Protein electrophoresis methods. Nucleic acid extraction. Polymerase chain reaction. Transgenic animal production. Sex determination in embryo and sperm. Biotechnological feed additives. Cloning. Cloning. Domestic animal genetic resources and conservation methods. Domestic animal genetic resources and conservation methods.

Lesson Book:

- Renaveille, R. Burny, A. 2002. Biotechnology in Animal Husbandry Kluwer Academic Publishers. ISBN: 0-792-36851-7
- M. Fitzgerald-Hayes and F. Reichsman, 2010, DNA and Biotechnology, Academic Press is an imprint of Elsevier, ISBN: 978-0-12-048930-5
- Desmond S. and T. Nicholl, 2002, An Introduction to Genetic Engineering, Cambridge University Press, ISBN-10 0-511-33689-6
- L. Bonnicksen, 2009, Chimeras, Hybrids, and Interspecies Research, Georgetown University Press, Washington, DC, ISBN 978-1-58901-574-6

RECORD KEEPING AND EVALUATION IN LIVESTOCK (2+2)3

ECTS: 5

The importance of record keeping in livestock enterprises, record types and classification, creation of pedigree and performance records, keeping feed consumption and yield records, recording systems related to reproduction and fertility, organization of records related to animal health, monitoring of welfare data, herd management software and electronic tracking systems, analysis and evaluation techniques of records, use of decision support systems, national livestock information systems, auditing and checking of records, and the place and importance of records in economic analysis .

Lesson Book:

- Course materials and recommended academic resources provided by the instructor.

PROJECT PREPARATION AND EVALUATION IN LIVESTOCK (2+2)3 ECTS: 5

Concept of plan, program, project and investment Characteristics and classification of projects Stages in project planning and project creation Feasibility study and market research in project preparation Demand forecasting methods Raw material study, location selection, capacity selection Technology selection and engineering, business organization and human resources, calculation of investment amount, fixed capital investment Operating period expenses and revenues, project implementation program Project financing and financial analysis, selection of discount rate Criteria used in the evaluation of agricultural projects, Technical evaluation of projects, Financial evaluation of projects Economic evaluation of projects, calculation of payback period and profitability Calculation of net present value, internal profitability, benefit cost ratios Macroeconomic evaluation of projects EU project cycle method.

Lesson Book:

- Timur M and Çağıltay F. 2008. Project preparation technique, Nobel Publishing, ANKARA.
- Özışık AG, 2012, Project management techniques, Birsen Publishing.
- Bodie, Z and Merton RC, 2001. Finance. Prentice-Hall Inc. IPARD Documents and project preparation and evaluation lecture notes.

ANIMAL BREEDING PRINCIPLES (3+0)3

ECTS: 5

The importance of agriculture and animal husbandry Some factors for profitable animal husbandry Animal breeding in Türkiye Animal production in Türkiye Domestication Species Breeds Relationships between animal and environment Growth and reproduction Growth and reproduction Fertility Fertility Breeding systems Breeding systems.

Lesson Book:

- Ayhan Eliçin's Animal Husbandry Principles Ankara University Faculty of Agriculture Publications Hakkı Emsen's Animal Husbandry Principles Atatürk University Faculty of Agriculture Publications

FUR ANIMAL BREEDING**(2+2)3****ECTS: 5**

The Fur Animal Husbandry course covers the following topics: an introduction to fur animal husbandry and its history; classification of fur animals; breeding of major species such as mink, fox, and rabbit; breed characteristics and genetic structures; shelter requirements; feeding programs; breeding and raising methods; common diseases and health practices; environmental and genetic factors affecting fur quality; fur harvesting and processing techniques; discussions on ethics and animal welfare; the economic value of fur products; marketing methods; and the general status of the sector in Turkey and globally.

Lesson Book:

- Course materials and recommended academic resources provided by the instructor.

EGG PRODUCTION**(2+0)2****ECTS: 5**

The Egg Production course covers the importance of egg production and its place in the industry, laying hen breeds and their production characteristics, the egg formation process and physiology, housing systems and environmental control practices, care and management according to growing periods, balanced nutrition and feeding programs, factors affecting productivity, lighting and photoperiod practices, health protection measures, egg collection, classification and storage, evaluation of egg quality, alternative production systems such as free-range and organic, animal welfare issues, and the marketing and economic aspects of egg production.

Lesson Book:

- Course materials and recommended academic resources provided by the instructor.

FACULTY ELECTIVE COURSE 1 (5TH SEMESTER)**BUG MORPHOLOGY and PHYSIOLOGY****(2+2) 3****ECTS: 4**

Insecta of the class Arthropoda branch in place of definition And determination, structure, shape and shape of the body wall molting with appendages, insect embryology, head, thorax and abdomen structure And extensions, sense organs structure And functions, respiratory, digestive, excretory, nervous systems, structure and function of blood, structure and function of hormones will be explained.

Lesson Book:

- Of life Basis Rules II. Ali Demirsoy 1995, General Entomology. I. Akif Kansu. 2000□

Helper Textbooks :

- The Insects, Structure and Function. Fourth edition RF C

MYCOLOGY

(2+0) 2

ECTS: 4

Mushrooms to the world entrance, Mycology In science basis concepts, in fungi cell structure, ecology of fungi, vegetative structure of fungi, propagation of fungi.

Lesson Book:

- Mycology-I Professor Dr. Mehmet ONER, Aegean Univ. Publication, 180 p.
- Mycology-II Prof. Dr. Mehmet SUGGESTION, Aegean Univ. The publication, 136 p.

Helper Textbooks :

- Mushroom Science, Prof. Dr. Gıyasettin SPOON, Selcuk University, Konya, 432 p.

GENERAL HERBOLOGY

(1+2) 2

ECTS:4

Herbology science of development, foreign benefits of herbs And damages, foreign grasses biology and its ecology, advantages of weeds over cultivated plants, general methods used in weed control, classification of herbicides, basic information on herbicide use, introduction of weeds that cause problems in agricultural areas.

Lesson Book:

- Ozer, Z. et al. 2001. Herbology (Weed Science) GOP University Faculty of Agriculture Publication No: 20 TOKAT.

Helper Textbooks :

- Lesson giving teaching member's lecture notes

RURAL DEVELOPMENT

(2+0) 2

ECTS:4

Rural development And basis concepts, rural development with other science branches between relations, rural field definition and in Türkiye And in some countries rural to the areas basic features of rural development, main working areas and objectives in rural development practices, aims, tools and methods applied in rural development studies, basic features of rural development policies and practices, rural development policies and practices in the EU policy changes, changes in rural development policies in the world, evaluation of rural development policies, practices and results in Türkiye, evaluation of the results of rural development projects implemented and in progress in Türkiye, potential determination and inventory studies in rural development, problem analysis techniques, priority setting, risk analysis and solution approaches, Türkiye-National Rural Development Strategy.

Lesson Book:

- Coppersmith, M., 2007. In Türkiye Rural Development, Nobel Academic Publishing, 416 p.

Helper Textbooks :

- Lesson giving teaching member's lecture notes

AGRICULTURAL MANAGEMENT

(2+2) 3

ECTS: 4

The concept of agricultural management, classification of agricultural enterprises, their characteristics, the purpose of enterprise analysis and data collection, criteria used in the analysis of agricultural enterprises, activity results And success their situation measuring business planning definition, purpose and data used in planning, basic concepts and applications used in business planning, budgeting method; method and applications, program planning method; method and applications, linear programming method; basic concepts and assumptions, linear programming method; profit maximization, graphical solution, interpreting the results, linear programming method; model building, simplex solution Interpreting simplex solution results, sensitivity analysis, cost minimization, graphical and simplex solution, interpretation.

Lesson Book:

- Directory, TO., Type, T., 2005. Agricultural Business administration And Planning. Uludag University, ISBN:975-6149-06-X.

Helper Textbooks :

- Kay, RD, WM, Edwards, PE Duffy, 2004, Farm Management, 5th Edition, Mc Graw Com. Inc
- Castle, MOST, MH Becker, A.G. Nelson, 1987, Farm Business Management, The Decision Making Process, Macmillan Pub. Company.
- Erkus, A., R. Blacksmith, 1996, Agricultural Business administration And Planning, A.U. Faculty of Agriculture Yay., Publication number: 1435, Textbook: 417, Ankara.
- Believe, I.H., Agricultural Business Management And Planning Lesson The note, Tekirdağ, 2008.

AGRICULTURAL VALUE DISCRETION And EXPERT WITNESS (2+0) 2 ECTS: 4

The nature of agricultural valuation, time value of money, objectives of valuation, criteria taken into consideration in valuation, valuation methods, valuation of agricultural lands, valuation of agricultural enterprises, valuation of orchards, valuation of lands covered with fruitless trees, valuation of buildings, valuation of land plots, valuation in agricultural credit applications, determination of pollution damages in agriculture, expert witnessing and preparation of expert reports.

Lesson Book:

- Gulten, Ş., 2000, Value Discretion, Ataturk Univ. Agriculture Faculty. Broadcasting No:202, Erzurum.

Helper Textbooks :

- Bland, ZG, 2008, Agricultural Value Mowing And Expert witness, Competent

Publications, Ankara.

- Directory, TO., 2008, Agricultural Value Discretion (Valuation) And Expert witness, Crop Publications, Bursa

Wheatgrass BAIT PLANTS

(2+2) 3

ECTS:5

General structural features of forage grasses, general characteristics of important forage grass species, structural features of some forage grass species will be covered.

Lesson Book:

- Forage crops. R. Avcioglu, R. Hatipoglu And Y. Montenegro (Ed.), 3 Skin. Agriculture And Ministry of Rural Affairs, Ankara. 2009.

Helper Textbooks :

- Forage crops cultivation, Gençkan, MS 1981. Ege University, Faculty of Agriculture, Publication No. 467. İzmir, 1981.
- Genetics Resources Ugh Forage Plants. J. G. Mc Ivor and R. A. Bray (eds.) pp. 63-81. CSIRO. Vega Press Pty Ltd. Blackburn, Australia. 1983
- Bait Plants, Canny, TO. Uludag Uni. Strength. Foundation Spring. No. 182. Bursa. 2001.
- Legume And wheatgrass bait plants. Envoy, Sh. Agriculture And Rural Affairs Ministry. Mart Printing House, Istanbul. 486 p. 2006.

OIL PLANTS

(1-2) 2

ECTS: 4

Introducing the botanical and botanical characteristics of the oilseed plants, some of which are mentioned below. Providing students with the cultivation techniques used to produce these plants.

Lesson Book:

- Arıoğlu, H., 1999. Cultivation and breeding of oil crops. Ç.Ü. Faculty of Agriculture. General Publication No: 220. Adana.

Helper Textbooks :

- Confidence, M., 1995. Oil Plants Volume: II, Ç.Ü. Faculty of Agriculture Lesson Book: No:47. Adana.
- Koç, H., 2001. Oil Plants.Gaziosmanpaşa Uni. Faculty of Agriculture Publications No: 58, Textbooks series No:22, Tokat.

VOCATIONAL FOREIGN LANGUAGE- I

(2+0) 2

ECTS: 2

The aim is to translate texts containing professional English terms related to the subjects taught in the professional courses taught in the department, in a way that will improve the students' English at a professional level, from English to Turkish and from Turkish to English. The translations aim to provide students with both professional experience and to improve their professional English.

Lesson Book:

- Lesson giving teaching member's lesson notes, recommended source books

HERB ACAROLOGY**(1+2) 2****ECTS: 4**

Definitions, biology, damages and control of economically important mites in fruit, vineyard, grain, vegetable, forage and industrial plants.

Lesson Book:

- Marjorie, A., Hoy., 2011. Agricultural Acarology. Taylor and Francis 393p.

Helper Textbooks :

- Lesson giving teaching member's lecture notes

HERB BACTERIUM DISEASES**(2+2) 3****ECTS: 4**

Plant pathogenic bacteria, which cause economic losses in the world, are involved in disease development. environmental factors role, herb pathogen bacteria isolation And in the diagnosis methods used, management of the disease, disease-causing mechanisms of pathogens and resistance mechanisms of plants.

Lesson Book:

- Lesson giving teaching member's lecture notes

INSECT SYSTEMATICS**(2+2) 3****ECTS: 4**

Introduction of insects at the order and family level, their biological characteristics, their roles in the ecosystem, beneficial and harmful insect groups.

Lesson Book:

- Lesson giving teaching member's lecture notes

AGRICULTURAL STRUGGLE METHODS And AGRICULTURE MEDICINES (2+0) 2
ECTS: 4

Cultural, mechanical, physical, biological, chemical and integrated control methods used in combating plant diseases and recommended drugs and doses against agricultural diseases in Türkiye, cultural, mechanical, physical, biological, chemical and integrated control methods used in combating pests. Biotechnical, chemical, and integrated control methods are provided. The aim is to provide information on the biology, ecological requirements, economic values, herbicides, and weed control methods used in different crop plants.

Lesson Book:

Bu belge 5070 sayılı elektronik imza kanununa göre güvenli elektronik imza ile imzalanmıştır.

Evrak teyidine <http://ebys.igdir.edu.tr/document/records/public.search> adresinden Belge Num.:26144459-300-E.655 ve Barkod Num.:328321 bilgileriyle erişebilirsiniz.

- Yıldırım, E., 2008. Agricultural Pest Control Methods and Pesticides. 2nd Edition. Atatürk University Faculty of Agriculture Publications No: 219, Faculty of Agriculture Offset Facility, Erzurum, 350 p.

Helper Textbooks :

- Ozer, Z., Kadioglu, I., Onen, H., And Tursun, N., 2001. Herbology (Foreign Grass Science) Gaziosmanpaşa University Faculty of Agriculture Publications No: 20 Book Series No: 10, 3rd Edition, Tokat
- Guncan, A., 2009. Foreign Herbs And Struggle Principles. Selcuk University, Faculty of Agriculture, 4th Edition, Konya
- Rich, H., Blacksmith, TO., 2001. Herb Diseases And Foreign With herbs War Methods, Erzurum, 160 p.

AGRICULTURE BUSINESSES ANALYSIS and PLANNING (2+2)3 ECTS: 4

It is aimed for them to develop their knowledge and skills in the decision-making process, to understand the meaning and importance of planning in agricultural management, to establish models with the data they will obtain from agricultural enterprises by learning planning methods, to develop guiding suggestions for agricultural enterprises by interpreting the solutions of the models.

Lesson Book:

- Agricultural Business administration, Agriculture Their businesses Analysis and Planning, KARAGÖLGE, C., 2001.

Helper Textbooks :

- Business The economy And Management, Muammer Dogan. Agriculture The economy And Business Administration, I. Hakkı İNAN, 2006.

AGRICULTURE ACCOUNTING (2+2) 3 ECTS: 4

Development of accounting, basic concepts, basic financial tables, uniform chart of accounts in accounting, single and double-entry bookkeeping techniques, bookkeeping based on balance sheet and business account, accounting systems applied in agriculture, agricultural business records (physical and financial records, analysis of accounting records, some sample applications on computers.

Lesson Book:

- Agricultural Accounting (With Applied Examples), Prof. Dr. Bahattin ÇETİN and Asst. Prof. Dr. Tolga TİPİ, Nobel Publications, Ankara, 2007.

Helper Textbooks :

- Lesson giving teaching member's lecture notes

PRODUCTION ECONOMY**(2+2) 3****ECTS: 4**

Production economy definition, purposes And other with sciences relationship, agricultural of production characteristics, production and cost functions (law of diminishing returns, basic concepts, classical production function, cost function), factor-product analysis (optimum input use level), factor-factor analysis (relationships between inputs, isoquant curves, least cost input combination), product-product analysis (relationships between products, production possibilities curve, optimum product combination), economies of scale, technical progress and agriculture.

Lesson Book:

- Lesson giving teaching member's lecture notes

LEGUME BAIT PLANTS**(2+2) 3****ECTS:6**

The importance of legume forage crops such as alfalfa, sainfoin, clover, oxeye, rock clover and vetch, their use, climate, soil and nutrient requirements, crop rotation, seed bed preparation, planting, fertilization, irrigation, weed, disease and pest control, seed production, harvesting and storage.

Lesson Book:

- Canny, TO., Bait Plants.2001 Uludag University, Agriculture Faculty, Field Department of Plants. Uludağ University Strengthening Foundation Publication No: 182.

Helper Textbooks :

- Heath, ME, Barnes, RF, Metcalfe, DS, 1985. Forages. The Science of Grassland Agriculture. Iowa State University Press.
- Envoy, Ş., 2005. Legume And Poaceae Bait Plants. Turkish Republic Agriculture And Ministry of Rural Affairs Publications.
- Youngblood, M. S., 1983. Bait Plants Agriculture. Aegean university, Agriculture Faculty Publications No:467.
- Squad, I., Acar, Z., Ayan, I., 1995. Legume Bait Plants. Nineteen Mayıs University Faculty of Agriculture. Course Note: No, 7.

VOCATIONAL FOREIGN LANGUAGE II**(2+0)2****ECTS: 4**

The purpose of teaching a foreign language is to teach students the basic rules of the foreign language they are learning, to develop their foreign language vocabulary, to understand what they read in a foreign language, and to express themselves verbally or in writing.

Lesson Book:

- Lesson giving teaching member's lesson notes, recommended source books

RECREATION WORKS IN LANDSCAPE AREAS (2+2)3**ECTS: 4**

This course begins by discussing urban design and landscape practices and their relationship to architecture through the lens of the issue of discipline. In addition to theoretical discussions aimed at diversifying and exemplifying urban design and landscape through different themes and emphases, the course will also include fieldwork throughout the semester. The theoretical discussions will explore urban landscapes through a different theme each week, focusing on play, contemporary art, extreme landscapes, archaeology, nature, waterfront, infrastructure, disability, urban agriculture, and more. These themes will also lead to theoretical discussions related to publicity, power, security, surveillance, democracy, the right to the city, partnership, and everyday life. The fieldwork, informed by these discussions, will involve weekly workshops discussing an urban problem, assigned to the course participants at the beginning of the semester, around each participant's individual project.

Lesson Book:

- Alexander, C. 1977. A Pattern Language: Towns, Buildings, Construction (Center for Environmental Structure Series), University of California Press.
- Krier, R. 1979. Urban Space, Academy Editions, London.
- Lynch, K. 1960. The Image of the City, the MIT Press.
- Rossi, A. 1984. The Architecture of the City, Oppositions Books.
- DS as an Atypical Architectural Practice. 2015. Ed. P. Derviş, Yem Publications, Istanbul.
- Projects Structures 6: Landscape Design. 2016. Yem Publications, Istanbul.
- Mcleod V. 2012. Details from Contemporary Landscape Architecture. Yem Publications. Istanbul. Journals: Betonart, 44, Winter 2015, Guest editor: Burcu Serdar Köknar, Landscape: An Embrasive Phenomenon. Arredamento Architecture, 100+75, December 2004, File: Landscape Design in Turkey. File 18, February 2010, City and Landscape [<http://www.mimarlarodasiankara.org/dosya/dosya18.pdf>]

ENTREPRENEURSHIP

(3+0)3

ECTS: 4

Introduction to entrepreneurship, history and types of entrepreneurship, characteristics of entrepreneurs, business idea development, business model creation, business plan preparation, market research, marketing strategies, financial planning, financing sources in entrepreneurship, business establishment process and legal structures, entrepreneurship ecosystem, successful startup examples and general evaluation and presentations.

Lesson Book:

- Lecture notes

MEDICAL AND AROMATIC PLANTS

(3+2) 4

ECTS: 7

Knowing and classifying certain medicinal plants, knowing the origin, distribution and botanical characteristics of certain medicinal plants, learning the cultivation techniques and quality criteria of these plants, realizing the importance of harvesting, drying and storage of these plants, Examining medicinal plants according to their active substances, examining secondary metabolites and their functions, understanding the importance of secondary metabolites, understanding the properties of active substances and their role in their areas of use, becoming aware of the economic importance of this group of plants.

Lesson Book:

- Kamil Ilisulu, 1992, Ankara University Faculty of Agriculture, Publications, p. 302

Helper Textbooks :

- Gazelle, A., 1995, Medical Plants I, (3. Bsm.), E.U., Agriculture Faculty. Publications Number: 312
- Gazelle, A., 1996, Medical Plants II, (2. Bsm.), E.U., Faculty of Agriculture Publications Number: 481
- Gazelle, A., 1994, Medical Plants III, (1. Bsm.), E.U., Agriculture Faculty. Publications Number: 509.

FORAGE CROPS AND PASTURES (2+2) 3 ECTS: 4

Introduction to forage crops, concepts of meadow and pasture, forage crops and pasture existence of Turkey, classification of forage crops, annual forage crops, perennial forage crops, forage legumes, forage grasses, meadow and pasture vegetation, pasture improvement and management, grazing systems, planting and care of forage crops, harvesting, drying and silage techniques, and problems and solutions encountered in forage crop agriculture .

Lesson Book:

- Lesson giving faculty member lecture notes

SOCIAL CONTENTS LESSON GROUP**BODY EDUCATION (3-0) 3 ECTS: 4**

Ability to plan appropriately for Physical Education teaching. learning ability to organize environments skill. Body Education teaching to be able to use technological resources in the process of achieving their goals. To be able to use appropriate tools and resources in the Physical Education teaching process. To be able to plan school team work.

FOLK DANCES (3-0) 3 ECTS: 4

Analysis of the basic steps of the stage techniques suitable for development on the figures and Turkish folk games competition rules.

SIGN LANGUAGE (3-0) 3 ECTS: 4

Turkish Sign of Dili alphabet, basis word and grammar structures by teaching lesson students who are hearing impaired communicate through this language.

MUSIC (3-0) 3 ECTS: 4

Through scientific and artistic activities, it contributes to the promotion and preservation of local, national, and universal values of music education, thus contributing to their transmission to future generations. It utilizes information and communication technologies and at least one notation and vocalization program. It also acquires knowledge of choral and orchestral culture and repertoire, as well as techniques for conducting choral and orchestral. It contributes to the development of existing knowledge in music education and culture within its region.

PICTURE

(3-0) 3

ECTS: 4

Identify drawing and painting materials from classical to contemporary art. Identify techniques and differences in the use of materials. Identify materials suitable for specific purposes and know materials appropriate for specific techniques. Use plastic values.

THEATRE

(3-0) 3

ECTS: 4

In Turkish language skills individual gains the use of theatre.