

Course Syllabus

Course: *Animal Husbandry in the Mediterranean*

Department: *Biology*

Host Institution: *University of Nicosia, Cyprus*



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Semesters

Course Summary

Course Code	Course Title	ECTS Credits
BIOL-215	Animal Husbandry in the Mediterranean	6
Subject	Contact Hours	Prerequisites
Animal Science	42-45	Two Biology Courses
Department	Level of Course	Language of Instruction
Biology	Upper-Division	English

Course Description

This course focuses on the basic principles of Animal Husbandry with particular reference to the aspects of animal production that are of great economic importance to livestock industry in Cyprus and the Mediterranean region. It focuses on the types and breeds of farm animals, and the fundamental principles used in animal feeding and management and in selecting and breeding them, as well as on the economic problems associated with the production of meat, milk and eggs. Classroom sessions will be supplemented with visits to farms for a first-hand experience of the issues examined in class.

Prerequisites (if applicable)

Junior Standing, Two College-Level Biology Courses.

Instructor Information

Dr. Miltiades Hadjipanayiotou – *PhD Agricultural Biochemistry and Animal Nutrition, Newcastle University, U.K.*

Course Outline

Topic areas to be covered are selected from the following depending on the needs and characteristics of the class:

1. Basic Genetics (*Mitosis and Meiosis; Mendelian Inheritance; Deviations to Mendelian Genetics; Expression of Genes; Linkage and Crossing Over; Sex Determination, Sex Influenced and Sex Limited Characters; Blood Groups and Polymorphism; Chromosome Aberrations; Gene and its Structure*).
2. Quantitative Genetics (*Heritability, Repeatability and Genetic and Phenotypic Correlations, their Methods of Estimation and Precision of Estimates; Aids to Selection and their Relative Merits; Individual, Pedigree, Family and within Family Selection; Progeny Testing*).
3. Selection and Breeding (*Methods of Selection; Construction of Selection Indices and their Uses; Comparative Evaluation of Genetic Gains through Various Selection Methods; Inbreeding, Upgrading, Cross-breeding and Synthesis of Breeds; Crossing of Inbred Lines for Commercial Production*).
4. Digestive System and Gastrointestinal Tract of Different Animal Species.
5. Nutrients and their Metabolism.
6. Animal Feedstuffs used in the region as well as processing methods used for improving their nutritional worth and storage qualities.
7. Feeding and Management of Dual Purpose (*Milk and Meat*) Sheep and Goats Under Semi-intensive / Intensive Forms of Production (*Housing Facilities, Rearing Systems etc.*).
8. Feeding and Managing the Dairy Cow at Different Production Stages and of Calf and Heifer Feeding and Management.
9. Nutritional and Other Measures for Reducing Adverse Effects of Heat Stressed and During Drought.

Evaluation and Grading

Grading

Midterm Exam:	20%
Final Exam:	40%
In-Class Participation:	20%
Field Study Participation:	20%

Readings and Resources

Required Texts

Handouts and Articles Provided.

Optional Reading

1. Monroe W. Strickberger. Genetics. The Macmillan Company. NY.
2. John F. Lasley. Genetics of livestock improvement. Prentice-Hall, inc. New Jersey.
3. I. Michael Lerner. The genetic basis of selection. Greenwood press, Connecticut.
4. P. McDonald et al. Animal Nutrition. Upper Saddle River, NJ: Pentice Hall, Willey, 2005, 5th Edition.
5. Richard O. Kelmers, D.C. Church. Livestock Feeds and Feeding. Boston: Prentice Hall, c2010, 6th Edition.
6. Tisch David. Animals Feeds, Feeding & Nutrition and Ration Evaluation. Clifton Park, NY: Thomson Delmar Learning 2005.
7. Dairy Sheep Nutrition / Edited by G. Pulina. Oxfordshire, OX, UK; Cambridge, MA, USA: CABI Pub., c2004.

Other Academic Policies

Class attendance is compulsory. If unable to attend a class, students must inform the course lecturer in advance. A maximum of 20% excused absences is tolerated; however beyond this percentage, students will be withdrawn from the course. Moreover, any work missed due to absence must be completed on return to class.