

Herd Health Management in Ruminants [337]

COURSE OUTLINE

(1) GENERAL

SCHOOL	ANIMAL BIOSCIENCES		
ACADEMIC UNIT	DEPARTMENT OF ANIMAL SCIENCE		
LEVEL OF STUDIES	Undergraduate [Major Elective]		
COURSE CODE	337	SEMESTER	9 th
COURSE TITLE	HERD HEALTH MANAGEMENT IN RUMINANTS		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	CREDITS
Theory: Lectures		2	
Laboratory practice		1	
TOTAL		3	2
COURSE TYPE	Skills development		
PREREQUISITE COURSES:	-		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	Yes (in English)		
COURSE WEBSITE (URL):	-		
TEACHING STAFF:	Athanasios Gelasakis		

(2) LEARNING OUTCOMES

Learning outcomes
The course focuses on the study of ruminant health, specifically addressing the fundamental principles, protocols, and procedures for health management at both the individual animal and herd levels. Within the scope of the course, critical factors and parameters influencing ruminant health are described and evaluated, alongside key indicators used to assess health status. Additionally, major health issues affecting ruminants, and measures for their prevention and control, including transmission dynamics of pathogens within herds, are systematically analyzed. Expected Learning Outcomes Upon successful completion of the course, students will be able (classified according to Bloom's Taxonomy) to: - Understand the fundamental principles of ruminant health management and become familiar with the relevant terminology (Knowledge / Comprehension). - Comprehend the epidemiology and pathogenesis of major ruminant diseases (Comprehension). - Understand appropriate husbandry practices, normal and abnormal animal behaviors, and principles of reproductive management (Comprehension / Analysis). - Understand the legislative framework governing animal welfare in ruminant industries and the integration of welfare-based management measures (Comprehension / Application). - Apply evidence-based health management practices to reduce disease risks for both animals and humans, including the prudent use of pharmaceuticals (Application / Analysis). - Recognize abnormal behavioral patterns that impact animal health and apply appropriate management modifications (Application / Analysis). - Use available diagnostic tools and methodologies at both the individual animal and herd levels (Application). - Implement disease control, prevention, and eradication strategies (vaccination, biosecurity, clinical nutrition, etc.) and ensure compliance with health management protocols (Application / Synthesis). - Analyze herd-level health data to identify management deficiencies and deviations from proper husbandry or production practices (Analysis). - Evaluate the economic and social implications of disease outbreaks and failures to meet productivity or welfare targets (Evaluation). - Assess the impact of implemented health management strategies and monitor their effectiveness to propose targeted modifications (Evaluation / Synthesis). - Develop comprehensive, welfare-driven, and sustainable herd health management plans based on scientific evidence and field data (Synthesis / Evaluation). - Integrate knowledge from epidemiology, nutrition, and animal behavior to ensure optimal health, welfare, and

productivity in ruminant systems (**Synthesis / Evaluation**).

General Competences

- Investigate, analyse and compose data and information, using the appropriate technical means
- Adaptation to evolving circumstances
- Autonomous work
- Decision making
- Team work
- Promote free, creative and conductive thinking

(3) SYLLABUS

- Fundamental principles and strategies for ruminant health management.
- Protocols for recording and evaluating health and welfare indicators in ruminants.
- Udder health management.
- Foot health management.
- Neonatal health management.
- Health management during the periparturient period.
- Reproductive management in ruminant farms and reproductive performance indicators.
- Applications and precision livestock farming systems in ruminant production.
- Immunization programs, prophylactic and metaphylactic use of chemotherapeutic agents in ruminant farming. Rational drug use.
- Clinical, laboratory, and imaging diagnostics

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face-to-face – Classroom discussion, Distance learning through the Eclass platform and MS Teams	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Internet (infographics, videos), communication via e-mail, exploitation of electronic platforms to support teaching (e.g. open e-class, e-student, Microsoft teams)	
TEACHING METHODS	Activity	Semester workload
	Non-supervised study	15
	Interactive teaching – lectures	15
	Research essay	10
	Laboratory practice	10
	Course total (25 h of workload per ECTS)	50
STUDENT PERFORMANCE EVALUATION	The evaluation will be conducted in Greek for undergraduate students and in English for Erasmus students • Optional attendance of Lectures. • Written exams with short answer and multiple-choice questions. • Preparation of an essay on one of the subjects of the course and presentation in the class (50% bonus on the final grade). • Erasmus students prepare a written essay of their choice related to the course and present it in the class.	

(5) ATTACHED BIBLIOGRAPHY

Notes and lectures from the course instructor

Scientific Journals:

Animal Journal of Dairy Science
Livestock Science
Preventive Veterinary Medicine
Small Ruminant Research
Veterinary Journal
Veterinary Parasitology
Veterinary Record