COURSE DETAILS

"INFECTIVE DISEASES"

DEGREE PROGRAMME: PRECISION LIVESTOCK FARMING

ACADEMIC YEAR 2025-2026

GENERAL INFORMATION – TEACHER REFERENCES

TEACHER: VALENTINA IOVANE
PHONE: +39 0812539260
EMAIL: VALENTINA.IOVANE@UNINA.IT

GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE (IF APPLICABLE): LIVESTOCK HEALTH MONITORING
MODULE (IF APPLICABLE): INFECTIVE DISEASES
SSD OF THE MODULE (IF APPLICABLE): MVET-03/A (EX VET/05)
TEACHING LANGUAGE: ENGLISH
CHANNEL (IF APPLICABLE):
YEAR OF THE DEGREE PROGRAMME (I, II, III): II
SEMESTER (I, II, ANNUAL): II
CFU:5

REQUIRED PRELIMINARY COURSES (IF MENTIONED IN THE COURSE STRUCTURE "REGOLAMENTO")

none

PREREQUISITES (IF APPLICABLE)

none

LEARNING GOALS

The course aims to provide students with basic (theoretical and practical) knowledge aimed at protecting the health and welfare of farm animals, through:

- ✓ *the dissemination of the most recent and advanced knowledge, guidelines, and European management standards of the herd, aimed at facilitating and supporting the clinical activities of the veterinary practitioner;*
- ✓ *the acquisition of epidemiological, pathogenetic, and prophylactic knowledge of the main diseases affecting them, in order to facilitate and support the clinical activities of the veterinary practitioner;*
- ✓ *the implementation of activities aimed at promoting the development of appropriate management reasoning necessary to address and prevent the main individual and herd diseases, as well as to assess their impact on the entire food chain.*

Moreover, the objective of the course is to introduce students to the basic knowledge of the main infectious diseases of domestic and wild animals transmissible to humans (zoonoses), providing fundamental elements of etiopathogenesis and epidemiology. The course aims to develop an integrated understanding based on the "One Health" principle, which recognizes the inseparable interconnection between human, animal, and environmental health, as indicated by the Ministry of Health as the ideal approach to achieve global health

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Students must demonstrate knowledge and understanding of the issues related to the main infectious diseases of domestic and wild animals transmissible to humans (zoonoses). They must demonstrate the ability to elaborate arguments concerning the relationships among etiopathogenesis, epidemiology, and the spread of zoonoses, based on acquired notions regarding pathogen virulence mechanisms and environmental risk factors.
The training path aims to provide students with the basic knowledge and methodological tools necessary to analyze the causal connections between animal, human, and ecosystem health according to the "One Health" principle, and to grasp the epidemiological and health implications of these interrelations.

Applying knowledge and understanding

Students must demonstrate the ability to draw conclusions from a set of information to identify and solve problems concerning zoonoses in domestic and wild animals. They must be able to apply the acquired methodological tools to analyze and interpret clinical and laboratory data, manage direct and indirect diagnostic protocols, and evaluate the health status of farms.
The training path is aimed at transmitting the methodological and operational skills and tools necessary to concretely apply the acquired knowledge, promoting the ability to use such tools to organize control and prevention interventions for infectious diseases according to the "One Health" principle.

COURSE CONTENT/SYLLABUS

Frontal lectures (30 hours)
Introduction to zoonoses and the concept of "One Health" (4 hours)
The phenomenon of antibiotic resistance: causes, spread, and environmental impact (3 hours)
Characteristics of pathogens: pathogenic bacteria and viruses, virulence mechanisms (4 hours)
Main zoonoses in livestock: etiology, pathogenesis, epidemiology (10 hours)
Elements of laboratory diagnostics: direct and indirect methods (4 hours)
Strategies for controlling infectious diseases in livestock farms (4 hours)
Practical exercises (20 hours)
The role of the Veterinary Health Authority (ASL) in the livestock farm (5 hours)
Gram staining and microscopic observation, preparation of solid and liquid media for bacterial cultures, antimicrobial activity or ANTIBIOGRAM: diffusion method (Kirby Bauer) and dilution method (15 hours)

READINGS/BIBLIOGRAPHY

Scientific articles as references, materials provided by the teacher

TEACHING METHODS

The teacher will use:
a) frontal lectures for about 60% of the total hours (30 hours);
b) practical exercises to deepen theoretical aspects for 20 hours (40% of the total hours);
c) self-learning and team-working activities.

Lessons will be held at departmental facilities, using multimedia supports and teaching material available online for enrolled students.
The teacher will use a student-centered method; tutorials; Practical lessons, learning by doing method. The lessons will be supported by multimedia teaching material available to students on the teacher's website, after registering for the course

EXAMINATION/EVALUATION CRITERIA

a) Exam type:

Exam type	
written and oral	
only written	X
only oral	
project discussion	
other	

In case of a written exam, questions refer to: (*)	**Multiple choice answers**	X
	Open answers	
	Numerical exercises	

(*) multiple options are possible

The written test consists of multiple choice questions aimed at verifying basic theoretical knowledge and the application of core concepts related to zoonoses and diagnostics.

b) Evaluation pattern:

The exam will be written, with multiple-choice questions: each question will include four options, only one of which is correct. The final grade will be calculated in a weighted manner based on the CFU credits of each module: 'Non-Infective Diseases' module (5 ECTS) 50%, 'Infectious Diseases' module (5 ECTS) 50%.
For the evaluation, the "Regulation for Guidelines_for_exams_management" approved by the Didactic Coordination Committee of the Master Degree in Precision Livestock Farming will be considered.