Fish Diseases [318]

COURSE OUTLINE

(1) GENERAL

SCHOOL	ANIMAL BIOSCIENCES		
ACADEMIC UNIT	DEPARTMENT OF ANIMAL SCIENCE		
LEVEL OF STUDIES	Undergraduate [Major Elective]		
COURSE CODE	**318**	**SEMESTER**	**8th**
COURSE TITLE	FISH DISEASES		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**CREDITS**
Theory	2	2
Laboratory practice	2	1
TOTAL	**4**	**3**

COURSE TYPE	Scientific area
PREREQUISITE COURSES:	
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	No
COURSE WEBSITE (URL):	https://oeclass.aua.gr/eclass/modules/document/?course=5961
TEACHING STAFF:	Theory: Konstantina Bitchava Laboratory practice: Konstantina Bitchava

(2) LEARNING OUTCOMES

Learning outcomes

The aim of the course is to provide students with the necessary knowledge to understand the basic principles of ichthyopathology: definition, conditions for the manifestation of diseases, basic principles of diagnosis, history, macroscopic findings, necropsy and other examinations. The methods of samplings will be analyzed, the main functions of the fish immune system and the wellfare of fish and other aquatic organisms.

Upon successful completion of the course, students will be able (according to Bloom) to:

- Understand the principles of fish welfare (**Knowledge / Comprehension**).
- Understand the terminology of diseases and recognize the clinical signs of diseases (**Knowledge / Comprehension**).
- Understand the principles of epidemiology in freshwater and marine aquaculture systems (**Knowledge / Comprehension**).
- Understand the principles of non-specific and specific disease prevention in an aquatic environment (**Knowledge / Comprehension**).
- Select appropriate treatment strategies (**Application / Analysis**).
- Collect and handle pathological samples for different diagnostic objectives in the differential diagnosis of diseases (**Application / Analysis**).
- Solve clinical problems for successful treatment in aquaculture systems and aquariums (**Application / Evaluation**).
- Recognize diseases of farmed crustaceans, molluscs, bivalves, mammals, and wild aquatic fauna (**Knowledge / Comprehension / Analysis**).

General Competences

• Laboratory exercises within the course are adapted to new situations using new technologies, so that the student acquires skills and abilities in handling modern methods of analysis and the use of scientific instruments.
• Teamwork is carried out with the aim of promoting free, creative and inductive thinking.
• Independent personality
• Teamwork skills
•Project planning and management
•Consideration for the natural environment
•Develop judgement and self-criticism
•Promotion of free, creational and inductive thinking

(3) SYLLABUS

Theory

- General principles of fish health and welfare
- Bacterial fish diseases
- Viruses in fish diseases
- Fish Diseases Caused by Parasites
- Fish Diseases Caused by Fungi
- Non-Transmissible - Foodborne and Environmental Diseases
- Tropical and Ornamental Fish Diseases
- Principles of Treatment and Management of Diseases
- Vaccines - Disease Prevention

Laboratory practice

- History, collection, examination & sending of samples
- Diagnostic methods used in ichthyopathology
- Classical microbiology techniques and antibiograms
- Parasitic disease diagnosis techniques
- Viral disease diagnosis techniques
- Modern molecular techniques
- Analysis of treatment and vaccination techniques
- Compliance with welfare rules on a farm

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face to face and distance learning
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	• PowerPoint slideshows and video projections during teaching • Teaching activity support through e-class platform • Contact with the students via e-mail and announcements in the platform e-student
TEACHING METHODS	

Activity	***Semester workload***
Lectures	26
Laboratory practice focusing on methodology implementation and case studies in small student groups	26
Independent study	23
Course total (25 h of workload per ECTS)	***75***

STUDENT PERFORMANCE EVALUATION	I. Theory (a) Optional attendance of Lectures by students (progress, assignments, etc.). (b) Final written examination (100%) including short answer or multiple-choice questions. II. Laboratory practice (a) Mandatory monitoring of the laboratory exercises by the students, with attendance records (progress, assignments, exercises, etc.). (b) Assessment of skills in laboratory measurements/samplings and written examination with short answer or multiple-choice questions. III. The evaluation criteria are communicated to the students.

(5) ATTACHED BIBLIOGRAPHY

Recommended Literature for Theory:

(A) Related scientific journals - Publications:

1. Welfare of Mediterranean Fish, ELOPY, December 2019 2. Health and Biosecurity of Farmed Fish - Practical Guide, ELOPY, 2023

(B) Digital Educational Materials (e-class)

1. K. Bitchava. Fish diseases in aquaculture (lecture presentations, ppt), Department of Animal Science, Agricultural University of Athens (AUA)

(C) Recommended Textbooks (EVDOXOS): -

Related scientific journals: Scientific journals in the Impact Factor – Web of Science system, which publish articles on Ichthyopathology and health management of aquatic organisms