APICULTURE

COURSE OUTLINE

Responsible: Eleftherios Alyssandrakis

1. GENERAL			
SCHOOL	School of Agricultural Sciences		
ACADEMIC UNIT	Department of Agriculture		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	0810.9.001.0	**SEMESTER**	2nd
COURSE TITLE	Apiculture		

INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course	**WEEKLY TEACHING HOURS**	**CREDITS**
	4	5
Total	**4**	**5**

COURSE TYPE general background, special background, specialised general knowledge, skills development	Specialised Background Course
PREREQUISITE COURSES	Novε
LANGUAGE OF INSTRUCTION and EXAMINATIONS	English
OFFERED TO ERASMUS STUDENTS	Yes (in English) — Spring Semester
COURSE WEBSITE (URL)	https://eclass.hmu.gr/courses/GF110/

2. LEARNING OUTCOMES

Learning outcomes

The course introduces students to the fundamental principles of apiculture through the study of honey bee biology, behaviour and colony organisation. It focuses on beekeeping products, their nutritional value and applications, beekeeping management practices, and annual colony management planning. The overall objective is to provide students with comprehensive knowledge covering the entire field of apiculture.

Upon successful completion of the course, students will be able to:

- understand the taxonomy and races of honey bees;
- describe the biological cycle and social organisation of honey bee colonies;
- understand honey bee behaviour and activities;
- identify the major nectar flows and bee forage resources;
- apply essential beekeeping management practices and understand the production of bee products;
- recognise the major pests and diseases affecting honey bees;
- understand the principles of honey bee genetics, breeding and queen rearing;
- develop annual management plans for honey bee colonies.

General Competences

- Search for, analyse and synthesise data and information using appropriate technologies.
- Decision-making.

- Independent work.
- Teamwork.
- Generation of new research ideas.
- Respect for the natural environment.
- Promotion of free, creative and inductive thinking.

3. SYLLABUS

Theoretical Syllabus

- Taxonomy and races of honey bees.
- Biological cycle and social organisation of honey bee colonies.
- Honey bee behaviour and activities.
- Major nectar flows and bee forage resources.
- Beekeeping management practices.
- Bee products.
- Honey bee pests and diseases.
- Honey bee genetics, breeding and queen rearing.
- Annual planning of beekeeping management.

Laboratory Syllabus

- Honey bee morphology and anatomy.
- Bee forage plants.
- Beekeeping equipment.
- Honey crystallisation.
- Identification of bee pests and diseases.
- Honey sensory evaluation (honey tasting).
- Introduction to other bee products.

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	Face-to-face lectures in the lecture hall and laboratory practical sessions.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students	• PowerPoint presentations and audiovisual material, including videos. • Learning support and communication with students through the HMU e-Class platform.
TEACHING METHODS The manner and methods of teaching are described in detail.	

Activity	**Semester workload**
Lectures	24
Laboratory Exercises	16
Coursework	45
Independent Study	40
Course total	**125**

STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure	**Theory** Students are assessed at the end of the semester through a written examination consisting of: • short-answer questions; • multiple-choice questions. **Laboratory** The laboratory grade is based on: • written examination with short-answer and multiple-choice questions; • identification of laboratory specimens and materials presented during practical sessions. • project

5. ATTACHED BIBLIOGRAPHY

- Sammataro D. and Avitable A. (2021). *The Beekeeper's Handbook*, CORNELL UNIVERSITY PRESS
- Flottum K. (2024). *The Backyard Beekeeper – Fifth Edition: An Absolute Beginner's Guide to Keeping Bees in Your Yard and Garden*, Quarto Publishing Group USA Inc
- Journals: Apidologie, Bee World, Journal of Apicultural Research, The American Bee Journal