

Agricultural Zoology – Entomology [3695]

COURSE OUTLINE

(1) GENERAL

SCHOOL	ANIMAL BIOSCIENCES		
ACADEMIC UNIT	DEPARTMENT OF ANIMAL SCIENCE		
LEVEL OF STUDIES	Undergraduate [Required]		
COURSE CODE	3695	SEMESTER	1 st
COURSE TITLE	AGRICULTURAL ZOOLOGY – ENTOMOLOGY		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS (ECTS)
Lectures		3	3
Laboratory Exercises		2	2
Total		5	5
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special Background		
PREREQUISITE COURSES:	No		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	Yes		
COURSE WEBSITE (URL):	https://oeclass.aua.gr/eclass/courses/5106/ https://oeclass.aua.gr/eclass/courses/AFPGM137/ https://oeclass.aua.gr/eclass/courses/5107/ https://oeclass.aua.gr/eclass/courses/AOA235		

(2) LEARNING OUTCOMES

Learning outcomes	
The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described. Consult Appendix A - Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area - Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B - Guidelines for writing Learning Outcomes	
Upon successful completion of the course, students will acquire knowledge, skills and abilities in the following subjects: - the classification, physiology, biology, and diversity of the animals - understanding of their role in the environment and in animal production in particular; and - management of animal organisms with a view to reducing their damaging and increasing their beneficial effects on animal production and on agriculture and the environment in general - the classification of the Phylum Arthropoda, the diversity and importance of insects. - Knowledge on the morphology, systematics, biological cycles, ecology, risk and modern methods concerning the management of pests that infest crops, stored products, agricultural or domestic animals and insects of public health importance. The Laboratory Exercises aim to familiarize students with and develop skills related to: The identification of the life stages of the Classes and important Families of animals and insects, with emphasis on pest of agricultural and hygiene importance as well as identifying the main types of symptoms and damages they cause.	
General Competences	
Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?	
Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
Decision-making	Respect for the natural environment
	Showing social, professional and ethical responsibility and sensitivity to gender

<i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>Others...</i>
- Adapting to new methods. - Decision-making. - Individual/Independent work. - Group/Team work. - Working in an international environment. - Design and application of management strategies against pests of stored-products and pests in urban areas. - Development of free, creative and inductive thinking.	

(3) SYLLABUS

Divisions of zoology, importance of agricultural – applied zoology and entomology - the biological basis of animal organisms - characteristics of the animal cell - the morphology, physiology and ecology of animal organisms - systematic zoology, zoological nomenclature, classification, phylogeny of animal organisms - the diversity of animal organisms - elements of agricultural zoology and entomology: emphasis on morphology, biology, ecology, identification and the role and management of protista, flatworms, nematodes, insects, mites and rodents - Insects of agricultural importance: morphology, biology and management of insect pests of crops - Arthropods of hygiene importance: Morphology, biology and management of insects of hygiene importance. - Insects, rodents and other vertebrates as pests of stored products and dwellings: Damage assessment. Health significance of these. Management by mechanical, biological, cultural and chemical means.
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(4) TEACHING and LEARNING METHODS - EVALUATION

TEACHING METHOD <i>Face-to-face, Distance learning, etc.</i>	In-class lecturing	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	- Support of the lectures using presentation software. - Use of audiovisual material. - Communication with students. - Support of the learning process through the AUA eClass asynchronous platform.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	Activity	Semester workload
	Lectures	39
	Laboratory practice	13
	Independent study	40
	Individual laboratory project (data processing and commenting)	33
	Course total (25 h of workload per ECTS)	125
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	III. The evaluation process of the theoretical part is in the language that the course is taught consists of: IV. Compulsory written final examination at the end of the semester which includes open-ended questions. V. Evaluation criteria: correctness, completeness, clarity. VI. The evaluation process of the laboratory part is in the language that the course is taught consists of: - Identification of pests and trapping/ management devices. - Evaluation criteria: correctness, completeness, clarity.	

(5) ATTACHED BIBLIOGRAPHY

- Emmanuel N. 1998. Agricultural Zoology, ed. A.U.A., pp. 315
- Van Emden H.F. 2014. Agricultural Entomology (N. Emmanuel, Trans.), ISBN: 9789603949770
- Triplehorn A.C. and J.F. Norman 2005. Borror and DeLong's Introduction to the Study of Insects. 7th Edition, BROKEN HILL PUBLISHERS LTD, ISBN: 9789925576715
- Gullan P.J. and P.S. Cranston 2014. The Insects: An Outline of Entomology, 5th Edition.