

General Information	
Academic subject	Agricultural Zoology and Entomology
Degree course	Agricultural Science and Technology
Curriculum	Rural System Management
ECTS credits	6
Compulsory attendance	No
Language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Rocco Addante	rocco.addante.uniba.it	AGR/11

ECTS credits details			
Basic teaching activities	07	AGR/11	6

Class schedule	
Period	I semester
Year	II
Type of class	Lectures and practice

Time management	
Hours	150
In-class study hours	60 (32 lectures + 28 practice)
Out-of-class study hours	90

Academic calendar	
Class begins	2 nd october 2017
Class ends	26 th january 2018

Syllabus	
Prerequisites/requirements	
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in A4a, A4b, A4c tables of the SUA-CdS)	<ul style="list-style-type: none"> • <i>Knowledge and understanding</i> <ul style="list-style-type: none"> o Knowledge of the main characteristics, and of structural organization of the main animal Phyla. o Knowledge of animal morphology, anatomy and physiology. o Basic knowledge of ethology, ecology, phylogeny and classification. o In-depth knowledge of Phyla of agrarian interest: Nematodes, Arthropods, Molluscs and Chordates o Knowledge of insect morphology, anatomy, ethology and ecology. o Knowledge of biotic and abiotic factors regulating the populations of harmful animals. o Knowledge of the strategies and means of control of harmful animals. • <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> o Ability to identify animals. o Ability to apply the integrated control strategies and means for the containment of harmful animal populations in respect of the environment and human health. • <i>Making informed judgments and choices</i> <ul style="list-style-type: none"> o Ability to identify issues related to insects and other animals. • <i>Communicating knowledge and understanding</i>

	<ul style="list-style-type: none"> o Ability to relate to the world of research and production <ul style="list-style-type: none"> • Ability to learn o Ability to learn and deepen the main subjects of the teaching.
Contents	<ul style="list-style-type: none"> • Organization of animals – Introduction. Gas exchange, circulation, excretion and osmoregulation, eating and nutrition, nervous system, endocrine system, skeletal system and movement. Symmetry and metamerism. • Reproduction and development – Agametic and gametic reproduction. Types of eggs. Embryonic and post-embryonic development. • Phylogeny and Classification - Evolutionary theory and adaptation phenomena. Definition of Species, zoological nomenclature, classification, systematics. • Ethology and Ecology –innate and learned behavior; tactism and tropisms. Societies. Symbiosis. Trophic relationships. Communication, mimicry, rhythms and biological clocks. Dispersion. The main concepts of ecology and population dynamics. • Phyla of economic interest in agriculture: Nematodes , arthropods, molluscs and chordates • Means and tools of investigation - Collection, conservation, breeding and identification of animal organisms. • General morphology and anatomy of insects - Exo - and endoskeleton. Head, thorax and abdomen. Colors. The nervous, digestive, circulatory, respiratory, excretory, secretory and reproductive systems. • Embryonic and post-embryonic development: moults and metamorphosis. • Communication between individuals. Insect aggregations and societies. • Integrated pest management - Means of control: biological, biotechnical, cultural, physical, chemical. • Notes on the most important Orders of insects
Course program	
Bibliography	<ul style="list-style-type: none"> • Notes on the lectures and other didactic material distributed during the course. • Integrated principle of Zoology (Cleveland <i>et al.</i>, 2005, McGraw-Hill).
Notes	The teacher's Power Point presentations are available by registering on the website: http://tempus-it.agrif.bg.ac.rs/registration.php?register=Registra
Teaching methods	The course topics will be featured with PowerPoint presentations and movie support.
Assessment methods (indicate at least the type written, oral, other)	For students enrolled in the course year in which the lessons are held, an oral intermediate examination is envisaged, whose vote is expressed in thirtieths. The Profit Exam consists of an oral exam on the topics developed during the theoretical and practical lessons in the classroom and in the laboratory as

	<p>reported in the Didactic Regulations of the Course of Agricultural Science and Technology (Article 9) and in the Plan of study (Annex A).</p> <p>The assessment of the student's preparation takes place on the basis of established criteria, as detailed in Annex A of the Teaching Regulations of the Bachelor's Degree.</p> <p>For students who have passed the intermediate examination, the final grade is obtained as the average between the grade on the intermediate examination and the final exam.</p> <p>For foreign students the exam can be made as a written questionnaire in multiple closed answers.</p>
<p>Evaluation criteria (Explain for each expected learning outcome what a student has to know, or is able to do, and how many levels of achievement there are.</p>	<ul style="list-style-type: none"> • <i>Knowledge and understanding</i> <ul style="list-style-type: none"> o <i>The student must demonstrate to know:</i> <ul style="list-style-type: none"> o the main characteristics and of structural organization of the main animal Phyla, o animal morphology, anatomy and physiology, o basic ethology, ecology, phylogeny and classification. o Phyla of agrarian interest: Nematodes, Arthropods, Molluscs and Chordates, o insect morphology, anatomy, ethology and ecology. o biotic and abiotic factors regulating the populations of harmful animals o strategies and means of control of harmful animals. • <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> o <i>The student must own the ability:</i> <ul style="list-style-type: none"> o to identify animals o to apply the integrated control strategies and means for the containment of harmful animal populations in respect of the environment and human health. • <i>Making informed judgments and choices</i> <ul style="list-style-type: none"> o The student must be able to apply the acquired knowledge to identify issues related to insects and other animals. • <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> o The student must be able to relate to the world of research and production • <i>Ability to learn</i> <ul style="list-style-type: none"> o The student must be able to learn and deepen the main subjects of the teaching.
<p>Further information</p>	