

ACADEMIC YEAR: 2018-2019

COURSE: Entomology and Zoology

TYPE OF EDUCATIONAL ACTIVITY:

TEACHER: Patrizia Falabella

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Language: Italian

ECTS: 9

n. of hours: 56

Campus: Potenza

Trimester: III

(6 of lectures and 3 of
tutorial/practice)

School: SAFE

Forestry and Environmental Science
(LM)

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

Main objectives: learning about animal and insect classification, biology, morphology, anatomy and physiology behaviour and ecology reproduction, post embryonic development, ecology, insect pest management, QBS.

- **Knowledge and understanding:** knowledge and ability to understand the classification of animals, phylogeny and their evolution, animal body organization, the structural plan of the various animal phyla (with particular regard to nematodes, molluscs and arthropods), morphology of insects, the functions of animal organisms with particular regard to insects, reproductive and embryonic and post-embryonic development of animal organisms with particular regard to insects, control of harmful animal organisms in agriculture, main characteristics of orders.
- **Applying knowledge and understanding:** applying knowledge on morphology and anatomy of adult insects and larval stages by observing insects prepared in dry or alcohol, insects or parts of insects mounted on a slide, plastic illustrating morphology and insect anatomy. Applying knowledge on insect orders and the main harmful species, by observing insects prepared in dry, alcohol or on a slide.
- **Making judgements:** ability to choose and judge what is the fruit of the didactic setting of teaching, in which theoretical training is accompanied by examples, applications, exercises, both practical and theoretical, individual and group, aimed to accustom students to make decisions and to judge and predict the effect of their choices. Within this teaching, the student will acquire the ability to work in the laboratory, conduct experiments, build and process databases.
- **Communication skills:** ability to communicate, organizing in a logical and exhaustive manner acquired knowledge and skills, using a correct language.
- **Learning skills :** ability to collect and organize information received during the lesson hours and seminars held by external experts or sought after on the recommended texts and on available scientific literature.

PREREQUIREMENTS

- General and Inorganic Chemistry
- Genetics
- Organic Chemistry

SYLLABUS

ECTS-1:

Classification of animals, phylogeny and evolution; organization of animal body (symmetry, tissues, coelomic cavity); structural plan of the various animal phyla (with particular regard to nematodes, molluscs and arthropods); morphology of insects.

ECTS-2:

Animal organisms functions (feeding and digestion, respiration, circulation, excretion, support and movement, nervous and hormonal coordination) with special reference to insects

ECTS-3:

Reproduction and animal organisms embryonic and post-embryonic development, animal communication and society, with particular regard to insects.

ECTS-4:

Means of monitoring of the harmful organisms in animal agriculture.

ECTS-5:

Understanding of the main characteristics of the Orders: Protura, Diplura, Thysanura, Collembola, Ephemeroptera, Odonata Blattoidea, Mantoidea, Isoptera

ECTS-6:

Dermaptera, Orthoptera, Hemiptera, Thysanoptera, Neuroptera.

Understanding of the main characteristics of the Orders: Coleoptera, Diptera, Lepidoptera, Hymenoptera

ECTS-7 (practice):

Acquisition of knowledge about the anatomy of the animals through the observation of zoological material

ECTS-8 (practice):

Knowledge acquisition of the morphology and anatomy of adult insects and larvae through the observation of insects prepared dry or in alcohol, insects or parts of insects mounted on glass slides, models illustrating the morphology and anatomy of insects.

ECTS-9 (practice):

Knowledge acquisition on the Orders of insects and the main harmful species, through the observation of dry insects, in alcohol, or slide.

TEACHING METHODS

Students could deepen into the different topics covered during the course through detailed observation of insects in entomological boxes and through single-topic seminars held outside lectures hours

EVALUATION METHODS

Oral examination and Discussion of a project work.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- L. Masutti, S. Zangheri - Entomologia generale e applicata. CEDAM
- E. Tremblay – Entomologia applicata. Volume primo: generalità e mezzi di controllo
- P.J. Gullan P.S. Cranston Lineamenti di Entomologia Zanichelli
- Teaching material

INTERACTIONS WITH STUDENTS

At the beginning of the course, after describing the objectives, the program and the methods of evaluation, the teacher will provide the material (lessons in Power Point, Scientific Articles). Simultaneously, a list of students who intend to enroll the course, together with name, serial number and email, will be drafted.

Office hours: on Tuesday and on Thursday from 15:30 to 16:30 in the teacher office. In addition to the weekly reception, the teacher will be available by e-mail or cell phone.

EXAMINATION SESSIONS (Forecast)

See on the web site <https://unibas.esse3.cineca.it/Home.do>

SEMINARS BY EXTERNAL EXPERTS YES



EXAMINATION COMMITTEE

PRESIDENT

Prof. Patrizia Falabella

MEMBER

Prof. Donatella Battaglia

MEMBER

Prof. Paolo Fanti

