Study Program: Biology

Type and level of studies: Bachelor studies

Course name: Applied Entomology

Lecturer: Živić V. Nebojša

Status: Compulsory

ECTS: 5

Attendance Prerequisites: Morphology and systematics invertebrates 1

Course aims

Grasping the diversity of entomofauna and understanding the significance of insects.

Course outcome

The students are able to identify and study insects independently. They have acquired practical and research-related knowledge.

Course content

Theoretical classes

Development of entomology and the history of entomological research. Main features of the morphology and anatomy of insects. Insects through geological epochs (paleoentomology). Insect nomenclature and taxonomy. The concept of species and modern scientific approaches to the problem of species.

An overview of research on the insect fauna of Serbia. Land and aquatic insects. An overview of the most significant families. Parasitic insects and predators and their role in agriculture and forestry.

Biological pest control methods (an overview of the biological control programs in the world, biocontrol agents; biological control and sustainable agriculture; biocontrol agents implementation protocols and techniques; PCR and biological control. Insects as pathogen vectors in agriculture (phytoplasmas and viruses). Storage pests. An overview of the most important groups; biological control. Pollination biology and a review of significant pollinator groups. Solitary bees– domestication, cultivation and application. Core principles of physiological and biochemical functions in insects. Medical entomology. Epidemiological, ecological and diagnostic factors relevant for insects and other arthropod vectors.

Practical part

Methods of insect collecting, formation of collections, use of identification keys, preparation of insect specimens. PCR identification of insects pathogens. Domestication, cultivation and use of solitary bees. Identification of important storage pests. Experimenting with insects as model organisms.

Literature

1. Томановић, Ж. и сар. (2012): Примењена ентомологија, Универзитет у Београду.
2. Керовец, М., (1986): Приручник за упознавање бескраљежњака наших потока и ријека, СНЛ,
5. Загреб.
6. Танасијевић, Н. и Илић, Б.(1973): Општа ентомологија, БИГЗ, Београд.
7. Танасијевић, Н. и Симова-Тошић, Д. (1987): Посебна ентомологија, Научна књига, Београд.
8. Живојиновић, С. (1948): Шумарска ентомологија, Научна књига, Београд.

And other literature available to students, both in paper and electronic form.

Number of active classes				Other classes
Lectures: 2	Practical classes: 0	Other forms of teaching: 1	Students' research work	

Teaching methods

Lectures, calculation exercises, laboratory exercises, consulting, term papers, homework, written exam.

Assessment (maximum 100 points)

Course assignments	**points**	Final exam	**points**
tests during practical classes	**15-30**	written exam	
tests during lectures	**15-40**		
oral exam			**30-70**

Knowledge assessment: written and oral exam, presenting projects, seminars, workbooks, fieldwork, etc.