



OPIS PREDMETA / SUBJECT SPECIFICATION

Predmet:	Biologija žuželk
Subject Title:	Biology of Insects

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Biologija in ekologija z naravovarstvom /Biology and ecology with nature conservation	Biologija; Ekologija z naravovarstvom / Biology; Ecology with nature conservation	1	2

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30	15		15	15	135	7

Nosilec predmeta / Lecturer:

Jeziki / Predavanja / Lecture:
Languages: Vaje / Tutorial:

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Vsebina:

- Koža. Členjenost telesa. Biokemija in presnova žuželk. Prehrana in prebava.
- Vsebnost vode, osmoregulacija, izločanje.
- Dihala. Hemolimfa in cirkulacija.
- Živčevje. Senzorični receptorji.
- Mišice in gibanje. Učenje in spomin.
- Hormonalni sistem. Razmnoževanje in razvoj.
- Socialne žuželke. Žuželke in rastline.
- Entomofage žuželke. Bioluminiscenca.
- Žuželke in mikroorganizmi.
- Medicinska entomologija.
- Biološka, kemijska in biotehniška kontrola škodljivcev. Regulacija gostote populacije.
- Biogeografija.
- Sistem žuželk.
- Žuželke v Sloveniji.

- Integument. Body segmentation. Biochemistry and metabolism. Nutrition and digestion.
- Water balance, osmoregulation, excretion.
- Respiratory system. Hemolymph and circulation.
- Nervous system. Sensory receptors.
- Muscles and locomotion. Learning and memory.
- Endocrine system. Reproduction and development.
- Social insects. Insects and plants.
- Entomophagous insects. Bioluminescence.
- Insects and microorganisms.
- Medical entomology.
- Biological, chemical and biotechnical pest control.
- Regulation of population density.
- Biogeography.
- Insect systematics.
- Insects in Slovenia.

Temeljni študijski viri / Textbooks:

- Borror, D. J., C. A. Triplehorn, N.F. Johnson, 1989: An introduction to the study of insects. Saunders College Publ., Philadelphia.
- Chapman, R. F., 1998: The insects: structure and function. Harvard University Press; Cambridge, Mass.
- Dettner, K., W. Peters, (eds.), 2003: Lehrbuch der Entomologie. Spektrum, G. Fischer, Heidelberg.
- Dusenbery, D. B., 1995: Sensory ecology: How organisms acquire and respond to information. W. H. Freeman and Company, New York.
- Elzinga, R. J., 2003: Fundamentals of entomology. Prentice Hall, Upper Saddle River.
- Jurc, M., 2005: Gozdna zoologija. Univerza v Ljubljani, Biotehniška fakulteta, Oddelek za gozdarstvo in obnovljive gozdne vire.
- Resh, V. H., R. T. Cardé, 2003: Encyclopedia of insects. Academic Press – Elsevier, New York.

Cilji:

- Razumeti kompleksnost biologije žuželk
- Spoznati predstavnike glavnih redov žuželk
- Poznati in razumeti vlogo gospodarsko pomembnih žuželk
- Poznati značilne predstavnike slovenske entomofavne

Objectives:

- To understand complexity of insect biology
- To present representatives of the most important insect orders
- To understand role of the economically important insects
- Knowledge of important representatives of Slovenian entomofauna

Predvideni študijski rezultati:

Znanje in razumevanje:

- Razumevanje biotskih adaptacij, ki vodijo do uspeha žuželk v okolju
- Razumeti kompleksnost biologije žuželk
- Spoznati predstavnike glavnih redov žuželk
- Poznati in razumeti vlogo gospodarsko pomembnih žuželk

Prenesljive/ključne spretnosti in drugi atributi:

- Sposobnost ustreznega zbiranje žuželk na terenu in determinacijo v laboratoriju

Intended learning outcomes:

Knowledge and Understanding:

- Understanding of the biotic adaptations employed to achieve survival and success of insects in environment
- To understand complexity of insect biology
- To present representatives of the most important insect orders
- To understand role of the economically important insects

Transferable/Key Skills and other attributes:

- Ability to conduct appropriate collecting in the field and determination in laboratory

Metode poučevanja in učenja:

- Predavanja
- Laboratorijske vaje – individualno eksperimentalno delo

Learning and teaching methods:

- Lectures
- Laboratory excersises – individual experimental practice

Načini ocenjevanja:

- Kolokvij iz vaj
- Seminarska naloga
- Pisni izpit

Delež (v %) /
Weight (in %)

30
30
40

Assessment:

- Partial exam of experimental practice
- Seminar essay
- Written exam

Materialni pogoji za izvedbo predmeta :

- *Multimedijska predavalnica*
- *Laboratorij*
- *Zbirka žuželk*

Material conditions for subject realization

- *Lecture hall for multimedia presentation*
- *Laboratory*
- *Insect collection*

Obveznosti študentov:**Students' commitments:**

<i>(pisni, ustni izpit, naloge, projekti)</i>	<i>(written, oral examination, coursework, projects):</i>
<ul style="list-style-type: none">• Kolokvij iz vaj• Seminarska naloga• Pisni izpit	<ul style="list-style-type: none">• Partial exam of experimental practice• Seminar essay• Written exam