



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Izbrana poglavja iz entomologije
Course title:	Selected Topics in Entomology

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Doktorski študij Ekološke znanosti, 3. stopnja		1. ali 2.; 1 st or 2 nd	1.– 4.; 1 st – 4 th
Doctoral Study Ecological Sciences, 3 rd cycle			

Vrsta predmeta / Course type

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Lab. vaje Laboratory work	Terenske vaje Field work	Samost. delo Individ. work	ECTS
15			10	5	150	6

Nosilec predmeta / Lecturer:

Jeziki / Predavanja / Lectures:
Languages: Vaje / Tutorial:

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

Vsebina:
Obravnavana so izbrana poglavja iz naslednjih poglavij:
Pregled morfolologije, anatomije in fiziologije žuželk.
Interakcije med žuželkami in drugimi organizmi.
Uvod v medicinsko entomologijo.
Invazivne žuželke.

Content (Syllabus outline):
Selected topics in the following chapters are discussed:
A review of the morphology, anatomy, and physiology of insects.
Interactions between insects and other organisms.
An introduction to medical entomology.
Invasive insects.

Varstvo biodiverzitete žuželk.

Insect diversity conservation.

Temeljni literatura in viri / Readings:

Temeljni vir / Basic:

– Gullan, P.J., P.S. Cranston, 2015: The Insects: An Outline of Entomology 5th Edition. Wiley-Blackwell, West Sussex, UK.

Priporočeni viri / Recommended:

– Chapman, R.F., S. J. Simpson, A. E. Douglas, 2012: The insects. Structure and function. 4th Edition. Cambridge University Press, London.

– Dettner, K., W. Peters, 2010: Lehrbuch der Entomologie. Elsevier GmbH, München.

– Harrison, J.F., H.A. Woods, S.P. Roberts, 2012: Ecological and environmental physiology of insects. Oxford University Press, Oxford.

– Jurc, M., 2011: Gozdna zoologija (3. natis). Univerza v Ljubljani, Biotehniška fakulteta, Oddelek za gozdarstvo in obnovljive gozdne vire.

– Pedigo, L.P., M.E. Rice, 2015: Entomology and Pest Management, Sixth Edition. Waveland Press, Inc, Long Grove, IL.

– Resh, V. H., R. T. Cardé, 2009: Encyclopedia of insects 2nd Edition. Academic Press – Elsevier, New York.

– Schowalter, T. D., 2016: Insect ecology. An ecosystem approach. 4th ed. Elsevier, Amsterdam.

– Wermelinger, B., 2017: Insekten im Wald – Vielfalt, Funktionen und Bedeutung.

Eidg. Forschungsanstalt WSL, Birmensdorf; Haupt, Bern.

Cilji in kompetence:

- Poznavanje biologije žuželk in razumevanje interakcij med žuželkami in drugimi organizmi.
- Z razumevanjem bionomije, avtekologije in demekologije različnih žuželčnih vrst študentje podrobno spoznajo njihovo vlogo in pomen v ekosistemu.
- Podrobno razumejo potrebe po naravovarstvu žuželk.

Objectives and competences:

- Understanding biology of insects and their interactions with other organisms.
- By understanding the bionomy, autecology, and demecology of various insect species in detail, students learn about their role and importance in ecosystem.
- Understanding in detail the need for conservation of insects.

Predvideni študijski rezultati:

Intended learning outcomes:

Po uspešno opravljene učne enote naj bi bili študenti zmožni:

- pojasniti in diskutirati prednosti holometabolnih žuželk pred hemimetabolnimi;
- razumeti in pojasniti kompleksno vlogo žuželk v ekosistemih;
- razložiti vlogo izbranih žuželk v gozdnih in kmetijskih ekosistemih.

By the end of this course students should be able to:

- explain and discuss the advantage of holometabolous vs hemimetabolous insects;
- understand and explain complex role of insects in ecosystems;
- explain the role of selected insects in forest and agricultural ecosystems.

Metode poučevanja in učenja:

Learning and teaching methods:

- Predavanja
- Terensko delo
- Laboratorijsko delo.

- Lectures
- Field work
- Laboratory work.

Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

- Seminarska naloga	50 %	- Seminar essay
- Pisni izpit	50 %	- Written exam

Reference nosilca / Lecturer's references:

BADANO, Davide, MAKRIS, Christodoulos, JOHN, Eddie, HADJICONSTANTIS, Michael, SPARROW, David J., SPARROW, Rosalyn, BETHAN, Thomas, DEVETAK, Dušan. The antlions of Cyprus : review and new reports (Neuroptera: Myrmeleontidae). *Fragmenta Entomologica*, ISSN 0429-288X, 2018, vol. 50, no 2, str. 95-102, ilustr., doi: [10.4081/fe.2018.307](https://doi.org/10.4081/fe.2018.307). [COBISS.SI-ID [24304904](https://www.cobiss.si/id/24304904)]

DEVETAK, Dušan. *Neuroptera of Slovenia*. College Station: Texas A & M University, 2017. <http://lacewing.tamu.edu/Slovenia/Main>. [COBISS.SI-ID [23694856](https://www.cobiss.si/id/23694856)]

DEVETAK, Dušan, KLOKOČOVNIK, Vesna. The feeding biology of adult lacewings (Neuroptera) : a review. *Trends in entomology*, ISSN 0972-4761, 2016, vol. 12, str. 29-42, ilustr. [COBISS.SI-ID [22624264](https://www.cobiss.si/id/22624264)]

KLOKOČOVNIK, Vesna, HAUPTMAN, Gregor, DEVETAK, Dušan. Effect of substrate temperature on behavioural plasticity in antlion larvae. *Behaviour*, ISSN 0005-7959, 2016, vol. 153, issue 1, str. 31-48, doi: [10.1163/1568539X-00003322](https://doi.org/10.1163/1568539X-00003322). [COBISS.SI-ID [21695496](https://www.cobiss.si/id/21695496)]

PODLESNIK, Jan, KLOKOČOVNIK, Vesna, KLENOVŠEK, Tina, JANŽEKOVIČ, Franc, DEVETAK, Dušan. First records of spongillaflies (Neuroptera: Sisyridae) in Serbia and Bosnia and Herzegovina, with notes on their occurrence in the Balkan countries. *Turkish journal of zoology*, ISSN 1300-0179, 2017, vol. 41, iss. 1, str. 164-169, ilustr., doi: [10.3906/zoo-1508-48](https://doi.org/10.3906/zoo-1508-48). [COBISS.SI-ID [22917640](https://www.cobiss.si/id/22917640)]