

UČNI NAČRT PREDMETA/COURSE SYLLABUS

Predmet:	Paleoekologija
Course title:	Paleoecology

Študijski programi in stopnja	Študijska smer	Letnik	Semestri
Geologija, druga stopnja, magistrski	Regionalna geologija in paleontologija (modul)	2. letnik	Zimski

Univerzitetna koda predmeta/University course code:

Predavanja	Seminar	Vaje	Klinične vaje	Druge oblike študija	Samostojno delo	ECTS
45	15	15	0	0	75	5

Nosilec predmeta/Lecturer:

Vrsta predmeta/Course type:

Jeziki/Languages:	Predavanja/Lectures:	Angleščina, Slovenščina
	Vaje/Tutorial:	Angleščina, Slovenščina

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

Opravljenosti obveznosti pri predmetih paleontologija, sedimentologija, stratigrafija na 1. bolonjski stopnji.	Prerequisites: Finished courses in Palaeontology, Sedimentology and Stratigraphy.
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Vsebina:

<p>Prvi del predavanj je namenjen spoznavanju osnov ekologije in paleoekologije. Paleoekologijo vpelje kot vedo, ki sloni na ekologiji recentnih ekosistemov in njenih metodah, a poudari njene specifične (tafonomija, časovno povprečenje...). Študenti se učijo o okoljskih parametrih, abiotičnih in biotičnih dejavnikih. Poudarek je na virih in dejavnikih v morskih ekosistemih. Spoznamo različna življenjska okolja in zahteve skupin organizmov. Od ekologije posameznikov se usmerimo k ekologiji populacij in združb. Študenti učno snov dopolnjujejo z lastnim branjem člankov in izbranih poglavij ter skušajo snov aplicirati na fosilni zapis.</p> <p>Drugi del predavanj je v celoti posvečen fosilnemu zapisu in preteklim ekosistemom. Fosilni zapis skušamo interpretirati od faciesne analize do rekonstrukcije. Poudarek je na kamninah domačega okolja, katere študentje spoznajo pri predmetu stratigrafija.</p>	<p>Content (Syllabus outline):</p> <p>The first part of the course introduces palaeoecology as a study related and dependant on the study of recent ecosystems. It points out major differences and specifics of the fossil record (taphonomy, time averaging etc.). Secondly, the students learn about environmental parameters: abiotic and biotic factors. Among abiotic, sources important in marine ecosystems are given more attention. We learn about organisms' living space and their requirements. We then move to features and structures of populations and assemblages. Students are encouraged to find examples from the fossil record and to apply the gained knowledge to the fossil record.</p> <p>The second part of the course is entirely dedicated to the fossil record as part of sedimentary rocks. We learn about fossil assemblages from other parts of the world and specifically try to make interpretation for assemblages preserved in local formations.</p>
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Temeljna literatura in viri/Readings:

<p>Izbrana poglavja iz:</p> <p>BRENCHLEY, P.J., HARPER, D.A.T., 1998, Palaeoecology, Ecosystems, Environments and evolution, Champan & Hall, 402 str.</p> <p>HAMMER, Ø., HARPER, D. 2006, Paleontological data analysis. – Blackwell Sci. Publ., 351 str.</p> <p>MCKERROW, W.S., 1981, The ecology of fossils: an illustrated guide, The MIT Press, 383 str.</p> <p>LIEBERMAN, B.S., 2000, Paleobiogeography: Using fossils to study global change, plate tectonics and evolution, Kluwer</p>

Acad. Press., 208 pp.

PROTHERO, D.R., 1998, Bringing fossils to life, An Introduction to Paleobiology. McGraw-Hill, 503 str.

Cilji in kompetence:

CILJI: Sluša telji bodo s pomočjo paleoekoloških pravil vzrokov in posledic dobili sliko o evoluciji biosfere. Na podlagi fosilne združbe se bodo naučili interpretirati abiotske dejavnike .
KOMPETENCE: Sluša telji bodo sposobni prepoznati ostanke različnih fosilnih skupin in na podlagi sestave in ohranjenosti ostankov sklepati na okoljske parametre v času depozicije (npr. globina in energija vode). S tem bi pomembno prispevali k interpretaciji kamnin in sodelovali s stratigrafi in sedimentologi.

Objectives and competences:

OBJECTIVES: Students will gain insight into development of the biosphere. Moreover, they will learn to interpret abiotic conditions from the fossil record.
COMPETENCES: Students will be able to recognize various fossil groups in the sedimentary record and interpret them from the paleoecological point of view. With their knowledge, they should be able to make interpretation on environmental parameters (water depth, energy...) and as such cooperate with stratigraphers and sedimentologists.

Predvideni študijski rezultati:

Študentje razumejo interakcije med organizmi in njihovim okoljem. Poznajo ekosisteme preteklosti in specifi ke posameznega obdobja. Poznajo metode raziskovanja in pristop k problematiki.

Intended learning outcomes:

Students comprehend interactions between organisms and their environment. They know ecosystems of the past and specifics of each of them. They are familiar with methods of research and with approach to research.

Metode poučevanja in učenja:

Predavanja (30 ur) potekajo ob uporabi power-point prezentacij. Študenti opravljajo domače naloge (lastno branje in iskanje podatkov, pripravljanje na predavanja), med predavanji deloma razpravljamo o njihovih ugotovitvah (30 ur). Spodbuja se iskanje in branje znanstvenih člankov z območja Slovenije. 15 ur predavanj in vaj opravimo na terenu (spoznavanje metodologije in lastno praktično delo).

Learning and teaching methods:

Lectures (30 h) are accompanied by power-point presentations. Students are tasked with home work (additional reading and searching for data). Their findings are in part discussed in the class (30 h). Field work is intended for 15 h.

Načini ocenjevanja:

Delež/Weight

Assessment:

Ustni in/ali pisni izpit iz teoretičnega dela

100,00 %

Written and/or oral exam from theoretical part

Pogoji za pristop k izpitu: vsaj 75% prisotnost na predavanjih in vajah, opravljena seminarska naloga. Ocenjevalna lestvica: 51-60% (6); 61-70% (7); 71-80% (8); 81-90% (9); 91-100% (10) ob upoštevanju Statuta UL in fakultetnih pravil.

Before the theoretical exam, student will have to: attend at least 75% of lectures and exercises, defend the seminar work. Grades (according to norm set by the UL): 51-60% (6); 61-70% (7); 71-80% (8); 81-90% (9); 91-100% (10).

Reference nosilca/Lecturer's references:

GALE, Luka, KELEMEN, Matej. Early Jurassic foraminiferal assemblages in platform carbonates of Mt. Krim, central Slovenia. *Geologija*, 2017, vol. 60, no. 1, str. 99-115, doi: 10.5474/geologija.2017.008.

GALE, Luka, NOVAK, Uroš, KOLAR-JURKOVŠEK, Tea, KRIŽNAR, Matija, STARE, France. Characterization of silicified fossil assemblage from upper Carnian Amphiclina beds at Crngrob (central Slovenia). *Geologija*, 2017, vol. 60, no. 1, str. 61-75, doi: 10.5474/geologija.2017.005.

GALE, Luka. Microfacies characteristics of the Lower Jurassic lithotid limestone from northern Adriatic carbonate platform (central Slovenia). *Geologija*, 2015, 58, št. 2, str. 121-138, doi: 10.5474/geologija.2015.010.

GALE, Luka, SKABERNE, Dragomir, PEYBERNES, Camille, MARTINI, Rossana, ČAR, Jože, ROŽIČ, Boštjan. Carnian reefal blocks in the Slovenian Basin, eastern Southern Alps. *Facies*, 2016, vol. 62, no. 4, str. 1-15, doi: 10.1007/s10347-016-0474-8.

GALE, Luka, CELARC, Bogomir, CAGGIATI, Marcello, KOLAR-JURKOVŠEK, Tea, JURKOVŠEK, Bogdan, GIANOLLA, Piero. Paleogeographic significance of Upper Triassic basinal succession of the Tamar Valley, northern Julian Alps (Slovenia). *Geologica Carpathica*, 2015, vol. 66, no. 4, str. 269-283, doi: 10.1515/geoca-2015-0025.