UČNI NAČRT PREDMETA/COURSE SYLLABUS

Predmet:	Mikropaleontologija
Course title:	Micropaleontology

Študijski programi in stopnja	**Študijska smer**	**Letnik**	**Semestri**
Geologija, druga stopnja, magistrski	Regionalna geologija in paleontologija (modul)	1. letnik	Letni

Univerzitetna koda predmeta/University course code: 742

Predavanja	**Seminar**	**Vaje**	**Klinične vaje**	**Druge oblike študija**	**Samostojno delo**	**ECTS**
30	0	30	0	15	75	5

Nosilec predmeta/Lecturer: Luka Gale

Vrsta predmeta/Course type: Obvezni / Compulsory

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisites:**
Opravljen izpit iz paleontologije, sedimentologije in stratigrafije. Študent mora redno (vsaj 75% udeležba) obiskovati predavanja in vaje.	Finished courses in Paleontology, Sedimentology, Stratigraphy. Students are obliged to attend to lectures and practical work (at least 75% of teaching hours).

Vsebina:	**Content (Syllabus outline):**
Študentje se seznanijo z naslednjimi vsebinami: kaj je mikropaleontologija, s čim se ukvarja in kakšne so njene metode proučevanja, vzorčenje: količina vzorca, načini preparacije (litificirana kamnina in nevezan sediment, izdelava zbruska, razpuščanje in topljenje kamnine), ponovitev lastnosti posameznih fosilnih skupin: foraminifere, radiolariji, konodonti, diatomeje, silikoflagelati, palinomorfi, kalpionele, dazikladaceje, koralinaceje, ostrakodi, kokolitofore, mikrofosili kot pokazatelji paleookolja (praktično delo s foraminiferami), foraminiferni morfotipi, uporaba mikrofosilov v biostratigrafiji.	Students get familiar with the following topics: what is Micropaleontology, what it deals with and what are the research methods, sampling: quantity of the samples, preparation techniques (lithified and unlithified sediment, thin sections, phisical and chemical methods of preparations), properties of various groups of microfossils: foraminifera, radiolarians, conodonts, diatoms, silicoflagellates, palynomorphs, calpionellids, dasycladacean green algae, corallinacean algae, ostracods, coccolithophores, microfossils as paleoenvironmental indicators (practical work with foraminifera), foraminiferal morphotypes, microfossils in biostratigraphy.

Temeljna literatura in viri/Readings:

ARMSTRONG, H., Brasier, M., 2005, Microfossils (2nd ed.), Blackwell Publishing, 296 str.
BIGNOT, G., 1985, Elements of Micropalaeontology, Graham & Trotman, 217 str.
FLÜGEL, E., 2004, Microfacies of carbonate rocks, Springer Verl., 976 str.
HAMMER, Ø., HARPER, D., 2006, Paleontological data analysis. – Blackwell Sci. Publ., 351 pp.
HAQ, B. U., BOERSMA, A., 1998, Introduction to Marine Micropaleontology, Elsevier, 376 str.
MARTIN, R.E. (ed), 2000, Environmental Micropaleontology: The application of Microfossils to Environmental geology, Kluwer Academic/Plenum Publishers, 504 str.
MOLINA, E. (ed.), 2004, Micropaleontología, Prensas Universitarias de Zaragoza, 704 str.

Cilji in kompetence:	Objectives and competences:
CILJI: Slušatelji spoznajo najznačilnejše skupine mikrofosilov, njihovim prepoznavanjem in uporabo kot orodje za določevanje starosti in paleo-okolja. KOMPETENCE: Slušatelji so sposobni odločanja o pravilni tehniki vzorčenja in usposobljeni za preparacijo različnih skupin mikrofosilov; sposobni so poiskati relevantno določevalno literaturo in razumejo principe biostratigrafije in paleoekologije.	OBJECTIVES: Students gain knowledge about different groups of microfossils, their identification, taxonomy and use as a tool for determining age and paleoenvironment. COMPETENCES: Students should be able to decide upon the correct sampling method and to choose the right type of preparation; they are capable of finding and using the correct litherature for species determination; they understand principles of biostratigraphy and palaeoecology.

Predvideni študijski rezultati:	Intended learning outcomes:
Študent je sposoben pravilnega vzorčenja na terenu, izdelave ustreznih preparatov ter določanja mikrofosilov s pomočjo ustrezne literature. Sposoben je biostratigrafske in paleoekološke interpretacije. Pri praktičnem delu je sposoben sodelovati s strokovnjaki iz drugih področij geologije (sedimentologija, stratigrafija, paleoekologija, paleogeografija) in izven geologije (biologi, arheologi), uporabljati domačo in tujo strokovno literaturo ter relevantne računalniške programe in statistične metode.	Students are capable of correct sampling in the field, of sample preparation and correct identification of different microfossil groups. He is able to make stratigraphic and paleoenvironmental interpretations. They are compatible with experts in sedimentology, stratigraphy, paleoecology, paleogeography, as well as with biologists and archaeologists. They are familiar with foreign and home literature and with the use of specific software.

Metode poučevanja in učenja:	Learning and teaching methods:
Predavanja (30 ur) z uporabo prezentacij. Vaje potekajo kot vodene seminarske vaje (30 ur). Na terenu (15 ur) se študentje naučijo pravilnega vzorčenja.	Power-point presentation will be given to students. Tutorial about vertebrate bones (30 h) will take part in osteological collection. Each student will be obliged to write a seminar work on a specific topic (15 h) and to present it to others.

Načini ocenjevanja:	Delež/Weight	Assessment:
Pisni in/ali ustni izpit, kolokvij iz vaj.	100,00 %	Written and/or oral exam from theoretical part. Colloqium.
Aktivna udeležba na predavanjih in vajah, pisni in/ali ustni izpit, kolokvij iz vaj. Ocenjevalna lestvica po pravilniku UL: 51-60% (6); 61-70% (7); 71-80% (8); 81-90% (9); 91-100% (10).		Written and/or oral exam from theoretical part. Before the theoretical exam, student will have to successfully pass the colloquium. 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, 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, RETTORI, Roberto, MARTINI, Rossana, ROŽIČ, Boštjan. Decapoalina n. gen. (Miliolata, Milioliporidae; Late Triassic), a new foraminiferal genus for Sigmoilina schaeferae Zaninetti, Altiner, Dager & Ducret, 1982. Bollettino della societa paleontologica italiana, 2013, vol. 52, no. 2, str. 81-93, doi: 10.4435/BSPI.2013.02.

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. Lower jurassic foraminiferal biostratigraphy of Podpeč limestone (external Dinarides, Slovenia) = Spodnjejurske foraminifere podpeškega apnenca (zunanji Dinaridi , Slovenija). Geologija, ISSN 0016-7789. [Tiskana izd.], 2014, 57, št. 2, str. 119-146, ilustr., doi: 10.5474/geologija.2014.011.

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.