

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	IZBRANA POGLAVJA IZ PALEONTOLOGIJE
Course title:	SELECTED TOPICS IN PALAEOLOGY

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Okoljske in regionalne študije, doktorski študij 3. stopnje	Paleobiologija in sedimentarna geologija		
Environmental and Regional Studies, doctoral study 3 rd level	Palaeobiology and Sedimentary Geology		

Vrsta predmeta / Course type

Izbirni/Elective

Univerzitetna koda predmeta / University course code:

DIP03

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
20	10	30			120	6

Nosilec predmeta / Lecturer:

Doc. dr. Špela Goričan

**Jeziki /
Languages:**

**Predavanja / Lectures:
Vaje / Tutorial:**

slovenščina, angleščina / Slovene, English

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

Prerequisite:

Vpis v 1. letnik.

Inscription to the 1st academic year.

Vsebina:

Content (Syllabus outline):

<ul style="list-style-type: none"> • Prokarionti, protisti, nevretenčarji (izbrane skupine). • Morfologija in sistematika • Biologija (prehranjevanje, razmnoževanje, ekologija, provincializem) • Procesi biomineralizacije in rast skeleta • Ohranjenost v fosilnem zapisu • Biostratigrafija • Paleoekologija in paleobiogeografija • Evolucija (filogenetske linije in diverzitetna dinamika) 	<ul style="list-style-type: none"> • Procaryotes, protists and invertebrates (selected groups) • Morphology and systematics • Biology (nutrition, reproduction, ecology, provincialism) • Biomineralization processes and skeletal growth • Preservation potential in the fossil record • Biostratigraphy • Palaeoecology and palaeobiogeography • Evolution (phylogenetic lineages and diversity dynamics)
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Temeljni literatura in viri / Readings:

Izbrana poglavja in članki iz/Selected chapters and papers from:

- Briggs, D. & Crowther, P.R. (Eds.) 1990. *Palaeobiology: A Synthesis*. 1-608, Blackwell Science.
- Briggs, D. & Crowther, P.R. (Eds.) 2001. *Palaeobiology II*. 1-600, Blackwell Science.
- Foote, M. & Miller, A. 2007. *Principles of Paleontology* (3rd edition), 1-354, Freeman.
- Clarkson, E.N.K. 1998. *Invertebrate Palaeontology and Evolution* (4th edition), 1-470, Blackwell Science.
- Lipps, J.H. 1993. *Fossil Prokaryotes and Protists*, 1-1-342, Blackwell Scientific Publications.
- Plus specific papers and catalogues for the selected groups of fossils.

Cilji in kompetence:

Namen predmeta je poglobiti znanje o izbranih skupinah fosilov. Vsaka skupina bo obravnavana z različnih vidikov, ki bodo pokrivali biologijo živečih taksonov ter stratigrafsko in geografsko razširjenost v fosilnem zapisu. Posebna pozornost bo namenjena tesni povezavi med biologijo teh organizmov in fizičnim okoljem, v katerem so živeli. Poudarek predmeta bo na individualnem raziskovalnem delu študentov. Obravnavane fosilne skupine bodo izbrane za vsakega študenta posebej in prilagojene njegovim raziskovalnim željam in potrebam.

Objectives and competences:

The purpose of the course is to deepen the knowledge on selected groups of fossils. Each group will be treated from different aspects covering biology of living taxa as well as spatial and temporal distribution in the fossil record. A close relationship between (palaeo)biology of these organisms and their physical environment will be emphasized. This course will be largely based on a supervised research project carried out by each student. The selection of the considered fossil group(s) will be adapted individually according to student's research interests.

Predvideni študijski rezultati:

Znanje in razumevanje:
Študent zna določiti fosile v preiskovanem materialu in pozna njihov pomen za določanje starosti in interpretacijo okolja. Zna analizirati njihovo diverziteteto v prostoru in času ter vzorce porazdelitve interpretirati v odvisnosti od sprememb okolja. Pozna glavne kriterije za klasifikacijo vrst, rodov in višjih taksonomskih kategorij. Empirično zna rekonstruirati filogenetske linije.

Intended learning outcomes:

Knowledge and understanding:
The student is able to identify the studied fossils and knows their significance as stratigraphic and/or environmental indicators. He can analyse and interpret their spatio-temporal diversity patterns in correlation with environmental changes. He knows the main criteria of classification at species, genus and suprageneric level. He can empirically reconstruct phyletic lineages.

Metode poučevanja in učenja:

- Predavanja
- e-učenje
- Seminarji
- Praktične vaje

Learning and teaching methods:

- Lectures
- e-learning
- Seminars
- Practical training

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Način (pisni izpit, ustno izpraševanje, naloge, projekt)		Type (examination, oral, coursework, project):
<ul style="list-style-type: none"> ● Pisni ali ustni izpit ● Seminarska naloga 	50	<ul style="list-style-type: none"> ● Written or oral exam
	50	<ul style="list-style-type: none"> ● Written paper

Reference nosilca / Lecturer's references:

1. Pirnia, T., Saccani, E., Torabi, G., Chiari, M., Goričan, Š., Barbero, E. 2020: Cretaceous tectonic evolution of the Neo-Tethys in Central Iran : evidence from petrology and age of the Nain-Ashin ophiolitic basalts. *Geoscience frontiers*. 11/1, 57-81. DOI: [10.1016/j.gsf.2019.02.008](https://doi.org/10.1016/j.gsf.2019.02.008).
2. Slovenec, D., Šegvić, B., Halamić, J., Goričan, Š., Zanoni, G. 2020: An ensialic volcanic arc along the northwestern edge of Palaeotethys : insights from the Mid-Triassic volcano-sedimentary succession of Ivanščica Mt. (northwestern Croatia). *Geological Journal*, 55/6, 4324-4351. DOI: 10.1002/gj.3664.
3. O'Dogherty, L., Aguado Merlo, R., Baumgartner, P. O., Bill, M., Goričan, Š., Sandoval, J., Sequeiros, L. 2018: Carbon-isotope stratigraphy and pelagic biofacies of the Middle-Upper Jurassic transition in the Tethys-Central Atlantic connection. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 507, 129-144.
4. Goričan, Š., Žibret, L., Košir, A., Kukoč, D., Horvat, A. 2018: Stratigraphic correlation and structural position of Lower Cretaceous flysch-type deposits in the eastern Southern Alps (NW Slovenia). *International journal of earth sciences*, 107/8, 2933-2953.
5. Goričan, Š., Carter, E.S., Guex, J., O'Dogherty, L., De Wever, P., Dumitrica, P., Hori, R.S., Matsuoka, A., Whalen, P. 2013. Evolutionary patterns and paleobiogeography of Pliensbachian and Toarcian (Early Jurassic) Radiolaria. *Palaeogeography, Palaeoclimatology, Palaeoecology* 386, 620-636.