



Univerza v Mariboru

Fakulteta za naravoslovje
in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS

| | |
|----------------------|------------------------|
| Predmet: | Paleogeografija |
| Course title: | Paleogeography |

| Študijski program in stopnja Study programme and level | Študijska smer Study field | Letnik Academic year | Semester Semester |
|---|-------------------------------|-------------------------|----------------------|
| Univerzitetni študijski program Biologija, 1. stopnja | | 2. | 3. |
| Undergraduate university programme Biology, 1st degree | | 2 nd | 3 rd |

Vrsta predmeta / Course type

Univerzitetna koda predmeta / University course code:

| Predavanja Lectures | Seminar Seminar | Vaje Tutorial | Lab. vaje Lab. work | Druge oblike študija | Samost. delo Individ. work | ECTS |
|------------------------|--------------------|------------------|------------------------|-------------------------|----------------------------------|------|
| 20 | 10 | 15 | | | 75 | 4 |

Nosilec predmeta / Lecturer:

| | | |
|------------------------|---------------------------|--|
| Jeziki / Languages: | Predavanja / Lectures: | <input type="text" value="Slovenski/Slovenian"/> |
| | Vaje / Tutorial: | <input type="text" value="Slovenski/Slovenian"/> |

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

Ni pogojev.

Prerequisites:

No requirements.

Vsebina:

Content (Syllabus outline):

| | |
|---|---|
| <ul style="list-style-type: none"> • Nastanek in zgradba Zemlje • Kamninski krog • Geotektonika - tektonika plošč • Geodinamika - endodinamika in eksodinamika • Nastanek in lastnosti atmosfere • Paleoklimatologija – ledene in medledene dobe • Paleookolja • Razvoj površja Slovenije – geološka zgradba in tektonika • Baze paleogeografskih prostorskih podatkov | <ul style="list-style-type: none"> • The origin and structure of the Earth • The rock cycle • Plate tectonics • Geodynamics – endodynamics and exodynamics • The formation and properties of the atmosphere • Paleoclimatology – ice age cycles • Paleo-environments • The geological development and structure of the Slovenian territory • Spatial databases of paleogeographic data |
|---|---|

Temeljni literatura in viri / Readings:

OBVEZNA LITERATURA/ OBLIGATORY READINGS:

- Huc, AY. (1995). Paleogeography, Paleoclimate & Source Rocks (AAPG Studies in Geology) (Aapg Studies in Geology). American Association of Petroleum Geologists, ISBN: 089181048X, 9780891810483
- Tarbuck, EJ. (2016). Earth: an introduction to physical geology. Pearson, ISBN: 9781292161839 (izbrana poglavja)
- Saltzman, B. (eds.). (2002). Dynamical paleoclimatology: Generalized theory of global climate change. Academic Press (izbrana poglavja).
- IVAJNŠIČ, Danijel, GRUJIĆ, Jaša Veno. Paleogeografija : zbirka vaj. Maribor: Fakulteta za naravoslovje in matematiko, 2019. 1 spletni vir (1 datoteka PDF (64 str.)), ilustr. <http://185.164.136.112:21201/ivajnsicStudentskaGradiva/paleogeografija/>. [COBISS.SI-ID 46283267]

PRIPOROČENA LITERATURA/FACULTATIVE READINGS:

- Pavšič, J. (2003). Paleontologija. Naravoslovnotehniška fakulteta, Univerza v Ljubljani (izbrana poglavja).
- Pavšič, J. (1995) Fosili. Tehniška založba Slovenije, Maribor (izbrana poglavja).
- Pavšič, J. (1999) Osnove geologije. Filozofska fakulteta, Univerza v Ljubljani (izbrana poglavja).

Cilji in kompetence:

- študentje pojasnijo nastanek in zgradbo Zemlje
- študentje prepoznajo temeljne kamnine in opišejo njihove lastnosti ter razložijo njihov nastanek
- študentje pojasnijo dinamiko premikanja tektonskih plošč in analizirajo posledice tega procesa

Objectives and competences:

- students explain the origin and structure of the Earth
- students identify the basic rocks and describe their properties and explain their formation
- students explain the dynamics of plate tectonics and analyze the consequences of this process

- študentje pojasnijo nastanek in zgradbo atmosfere
- študentje opišejo vzroke za spreminjanje podnebja in povežejo le-te z eksodinamiko planeta
- študentje opišejo in primerjajo okoljske razmere v različnih geoloških fazah
- študentje povežejo pretekle okoljske razmere z fosilnimi najdbami flore in favne
- študentje opišejo in razložijo nastanek površja Slovenije
- študentje analizirajo prostorsko razporeditev kamnin v Sloveniji

- students explain the formation and structure of the atmosphere
- students describe the causes of climate change and connect them with the exo-dynamics of the planet
- students describe and compare environmental conditions in different geological phases
- students associate past environmental conditions with fossil finds of flora and fauna
- students describe and explain the formation of Earth's crust in the area of Slovenia
- students analyze the spatial distribution of rocks in Slovenia

Predvideni študijski rezultati:

Znanje in razumevanje:

- študentje povezujejo geološke, geografske, biološke in ekološke vsebine vezane na procese, ki preoblikujejo Zemljino površje in vplivajo na litosfero, hidrosfero, atmosfero in biosfero.
- študentje prepoznajo in, po nastanku, lastnostih in geografski razporeditvi, primerjajo različne tipe kamnin tako v globalnem kot v lokalnem merilu (Slovenija)
- študentje analizirajo vzroke za podnebne spremembe in povezujejo le-te z geografsko razporeditvijo organizmov v različnih geoloških obdobjih

Prenesljive/ključne spretnosti in drugi atributi:

- študentje razpravljajo, kako različni procesi, ki neprestano potekajo v zemljini notranjosti in na njeni površini, vplivajo na okolje in s tem na evolucijo vseh živih bitij.
- Študentje prepoznajo, primerjajo in razlikujejo najbolj razširjene vrste kamnin in nekatere njihove fizikalne lastnosti.

Intended learning outcomes:

Knowledge and Understanding:

- students associate geological, geographical, biological and ecological contents related to processes, which transform the Earth's surface and influence the lithosphere, hydrosphere, atmosphere and biosphere.
- students identify and, after their formation, properties and geographical distribution, compare different types of rocks from the global to the local perspective (Slovenia)
- students analyze the causes of climate change and connect them with the geographical distribution of organisms in different geological periods

Transferable / Key Skills and other attributes:

- the students discuss how different processes that are constantly taking place in the earth's interior and on its surface affect the environment and thus the evolution of all living beings
- students identify, compare and distinguish the most common types of rocks and some of their physical properties

| | |
|--|---|
| <ul style="list-style-type: none"> • Študentje opišejo različne metode pridobivanja in uporabo paleo-prostorskih podatkov | <ul style="list-style-type: none"> • students describe different methods of obtaining and usage of geospatial paleo-data |
|--|---|

Metode poučevanja in učenja:

| |
|---|
| Predavanja <ul style="list-style-type: none"> • Seminar • Avdio-video predstavitve • Individualno delo |
|---|

Learning and teaching methods:

| |
|--|
| Lectures <ul style="list-style-type: none"> • Seminar • Audio-video presentations • Individual work |
|--|

Delež (v %) /

Načini ocenjevanja:

Weight (in %)

Assessment:

| | | |
|--|----------|---|
| <ul style="list-style-type: none"> • Naloge v sklopu vaj • Pisni izpit Obe obveznosti morata biti pozitivno opravljene šele nato se upoštevajo uteži | 30 70 | <ul style="list-style-type: none"> • Evaluation of tutorials • Written exam Both obligations must be positively evaluated and then the weights are taken into account |
|--|----------|---|

Reference nosilca / Lecturer's references:

| |
|--|
| <ul style="list-style-type: none"> • KRYŠTUFEK, Boris, AL-SHEIKHLY, Omar F., LAZARO, Javier, HABA, Mukhtar K., HUTTERER, Rainer, MOUSAVI, Sayed B., IVAJNŠIČ, Danijel. A forgotten rodent from the Garden of Eden : what really happened to the long-tailed nesokia rat in the Mesopotamian marshes?. <i>Mammalia : morphologie, biologie,systematique des mammiferes</i>. 2021, vol. 85, iss. 2, str. 103-108, ilustr. ISSN 0025-1461. DOI: 10.1515/mammalia-2020-0092. [COBISS.SI-ID 28446467] • IVAJNŠIČ, Danijel, ŠKORNIK, Iztok, KALIGARIČ, Mitja, LIPEJ, Lovrenc. Vpliv podnebnih sprememb na gnezdenje obrežnih ptic = Climate change impact on seashore-breeding birds. V: IVAJNŠIČ, Danijel (ur.), et al. <i>Primeri prostorskih analiz vplivov podnebnih sprememb : monografija v okviru projekta Preprečevanje toplotnega stresa v urbanih sistemih v luči podnebnih sprememb (ARRS J7-1822)</i>. 1. izd. Maribor: Univerza v Mariboru, Univerzitetna založba, 2022. Str. 123-159, ilustr. ISBN 978-961-286-645-7. https://press.um.si/index.php/ump/catalog/view/681/968/2446-2, DOI: 10.18690/um.fnm.8.2022.6. [COBISS.SI-ID 120096259] • IVAJNŠIČ, Danijel, DEVETAK, Dušan. GIS-based modelling reveals the fate of antlion habitats in the Deliblato Sands. <i>Scientific reports</i>. 2020, vol. 10, art. no. 5299, str. 1-9. ISSN 2045-2322. DOI: 10.1038/s41598-020-62305-3. [COBISS.SI-ID 16499971] |
|--|