UČNI NAČRT PREDMETA/COURSE SYLLABUS

Predmet:	Vulkanologija
Course title:	Volcanology

Študijski programi in stopnja	**Študijska smer**	**Letnik**	**Semestri**
Geologija, prva stopnja, univerzitetni	Ni členitve (študijski program)	2. letnik	

Univerzitetna koda predmeta/University course code: 899

Predavanja	**Seminar**	**Vaje**	**Klinične vaje**	**Druge oblike študija**	**Samostojno delo**	**ECTS**
15	15	0	0	60	90	6

Nosilec predmeta/Lecturer: Mirijam Vrabec, Nina Zupančič

Vrsta predmeta/Course type: Izbirni / Elective

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

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisites:**
Pogoji za vključitev v delo je vpis v 2. ali 3. letnik študija geologije. Predmet je primeren tudi za študente drugih fakultet, ki jih zanima tematika vezana na vulkane in vulkanske procese.	Condition for inclusion in the work is inscription to the 2nd or 3rd academic year. The Course is appropriate also for students from other faculties who are interested in volcanoes and volcanic processes.

Vsebina:	**Content (Syllabus outline):**
Uvod v vulkanizem	Introduction to volcanism
Tektonika plošč in vulkanizem	Plate tectonics and volcanism
Fizikalne lastnosti magme	Physical properties of magma
Vulkanski izbruhi in produkti vulkanizma	Volcanis eruptions and their products
Klasifikacija vulkanskih izbruhov	Classification of eruptions
Izlivni vulkanski izbruhi in njihovi produkti	Effusive volcanic eruptions and their products
Eksplozivni vulkanski izbruhi in njihovi produkti	Explosive volcanic eruptions and their products
Vulkanski reliefne oblike in položaj vulkanov	Volcanic landforms and settigs
»Pozitivne« vulkanskega reliefne oblike	»Positive« volcanic landforms
»Negativne« vulkanskega reliefne oblike	»Negative« volcanic landforms
Procesi izgubljanja mase in njihovi produkti	Mass-wasting processes and products
Vulkani pod vodo, ledeniki in izven Zemlje	Submarine, Subglacial and extraterrestial volcanoes
Vulkani - življenje, podnebje in človeška zgodovina	Volcanoes – life, climate and human history
Vulkanske nevarnosti in tveganja	Volcanic hazards and risk
Gospodarska vulkanologija	Economic volcanology

Temeljna literatura in viri/Readings:

LOCKWOOD, J. P. & HAZLETT, 2010, Volcanoes, Global Perspectives.-Wiley-Blackwell, 541 pp.
FISHER, R. V., HEIKEN, G. & HULEN, J. B., 1997; Volcanoes, Crucibles of Change.-Princeton University Press, 317 pp.

Cilji in kompetence: **Objectives and competences:**

CILJI: Slušatelj pridobi razširjeno znanje o nastanku vulkanov in vulkanskih kamnin, o vulkanskih procesih, vulkanski dejavnosti in pojavljanju vulkanov v specifičnih geoloških okoljih. KOMPETENCE: Slušatelj je usposobljen za prepoznavanje in klasifikacijo vulkanov ter vulkanskih kamnin in interpretacijo pogojev njihovega nastanka. Sposoben je prepoznati različne vrste vulkanizma in razume pogoje pojavljanja vulkanske aktivnosti v globalnem geološkem smislu.	OBJECTIVES: Students learn about the formation of volcanoes and volcanic rocks, about the volcanic processes, volcanic activity and occurence of volcanoes in specific geological environments. COMPETENCES: The student is able to identify and classify volcanoes and volcanic rocks, and to interpret the conditions of their formation. He is able to recognize different types of volcanism and understand the conditions of occurrence of volcanic activity in the global geological terms.

Predvideni študijski rezultati:	**Intended learning outcomes:**
Študent razume in prepozna značilnosti in pogoje nastanka vulkanskih kamnin. Sposoben je klasificirati vulkane in vulkanske kamnine, prepozna glavne tipe vulkanske dejavnosti ter razume in pozna pomen vulkanizma za človeško populacijo, tako v smislu pozitivnih kot negativnih učinkov. Sposoben je uporabe strokovne literature, dela na terenu v laboratoriju ter z računalniškimi programi.	The student will understand and recognize the characteristics and conditions of formation of volcanic rocks. He is able to classify volcanoes and volcanic rocks, identify the main types of volcanic activity, and understand and know the importance of volcanism to the human population, in terms of both positive and negative effects. He is able to use the literature, to work in the field and in the laboratory, and to use computer programs.

Metode poučevanja in učenja:	**Learning and teaching methods:**
Predavanja, seminar in 8 dni terenskega dela. Študenti izdelajo terensko poročilo in seminarsko nalogo na dogovorjeno temo.	Lectures, seminar and 8 days of fieldwork. Students will prepare a fieldwork report and seminar work on an agreed topic.

Načini ocenjevanja:	**Delež/Weight**	**Assessment:**
Pisni izpit in/ali oddane domače naloge	40,00 %	Written exam and/or given homework
Seminarska naloga	30,00 %	Seminar work
Poročilo terenskega dela	25,00 %	Fieldwork report
Aktivno sodelovanje pri predavanjih	5,00 %	Active participation in lectures

Reference nosilca/Lecturer's references:

VRABEC, Mirijam, JANÁK, Marian, FROITZHEIM, Nikolaus, DE HOOG, J.C.M. Phase relations during peak metamorphism and decompression of the UHP kyanite eclogites, Pohorje Mountains (Eastern Alps, Slovenia). Lithos, 2012, vol. 144-145, str. 40-55, doi: dx.doi.org/10.1016/j.lithos.2012.04.004.

JANÁK, Marian, FROITZHEIM, Nikolaus, VRABEC, Mirijam, KROGH RAVNA, Erling J., HOOG, J.C.M. De. Ultrahigh-pressure metamorphism and exhumation of garnet peridotite in Pohorje, Eastern Alps. J. metamorph. geol., 2006, vol. 24, no. 1, str. 19-31.

JANÁK, Marian, FROITZHEIM, Nikolaus, LUPTÁK, Branislav, VRABEC, Mirijam, KROGH RAVNA, Erling J. First evidence for ultrahigh-pressure metamorphism of eclogites in Pohorje, Sloevnia : tracing deep continental subduction in the Eastern Alps. Tectonics (Washington, D.C.), 2004, vol. 23, no. 5, loč. pag.(TC5014).

ZUPANČIČ, Nina, ŠEBELA, Stanka, MILER, Miloš. Mineralogical and chemical characteristics of black coatings in Postojna cave system = Mineraloške in kemijske značilnosti črnih prevlek v Postojnskem jamskem sistemu. Acta carsol., 2011, letn. 40, št. 2, str. 307-317.

SKOBE, Simona, MANIATIS, Yannis, DOTSIKA, E., TAMBAKOPOULOS, D., ZUPANČIČ, Nina. Scientific charaterization of the Pohorje marbles, Slovenia. Archaeometry, 2010, vol. 52, issue 2, str. 177-190.

SKOBE, Simona, ZUPANČIČ, Nina. A cathodoluminescence and petrographical study of marbles from the Pohorje area in Slovenia. Chem. Erde, 2009, issue 1, vol. 69, str. 75-80.