Course Unit Descriptor

Study Programme: Industrial engineering in exploitation of oil and gas

Course Unit Title: Geology

Course Unit Code: OAS257

Name of Lecturer(s): Assistant Professor Snežana Komatina

Type and Level of Studies: Bachelor Academic Degree

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to-face

Number of ECTS Allocated: 3

Prerequisites: None

Course Aims:

Introduction to students with basic theory related to the Earth Sciences and methods of field research .

Learning Outcomes:

Acquiring basic knowledge of field work and preparing for further study.

Syllabus:

Theory

The Earth – origin and structure; tectonics-intro; types of deformations; plate tectonics; magmatism; seismic activity; metamorphism; Earth's evolution through geological time; geodynamics and geotectonic structure of Serbia; exodinamic processes, basic concepts, agents and types of processes; groundwater.

Practice

Introductory lectures on selected geological profiles and practical training of students. Introduction of the types of rock and geological structure on the selected polygon, using the geological compass, measurement of geological structures. Orientation on the field and on the topographic map. Writing a field diary and taking samples.

Required Reading:

1. Komatina M., 2004. *MEDICAL GEOLOGY. Effects of geological environments on human health*. Elsevier, Amsterdam, 498.
2. Gerhard C.L., Harrison E.W., Hanson M.B., 2001. *Geological Perspectives of Global Climate Change*. AAPG Studies in Geology, No.47, USA, 372 p.
3. Hencher S., 2012. *Practical Engineering Geology*. Applied Geotechnics Vol.4, Spon Press, NY, USA, 450 p.
4. Keller, E.A., 2000. *Introduction to Environmental Geology*, 8th edition, Prentice Hall, New Jersey. Montgomery,
5. Clague J.J., Stead D., 2012. *LANDSLIDES. Types, Mechanisms and Modeling*. Cambridge University Press, UK, 412 p.
6. Schofield W., Breach M., 2007. *Engineering Surveying*. Elsevier, 622 p.
7. Styles P., 2012. *Environmental Geophysics*. EAGE Education Tour Series, Houten, Netherlands, 220 p.
8. Komatina-Petrović S. (ed.), 2006. *Geodynamic investigations in Serbia and Montenegro.* Geodynamics of the Balkan Penninsula; Monograph, Reports on Geodesy, Warsaw University of Technology, No. (5) 80.
9. Knoll H.A., Canfield E.D., Konhauser O.K., 2012. *Fundamentals of Geobiology*. Wiley-Blackwell, UK, 440 p.

Weekly Contact Hours: 3	**Lectures:** 2	**Practical work:** 1

Teaching Methods:

Lectures and students group work

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation		written exam	40.00
Practical work	30.00	oral exam	
Preliminary exam(s)			

Seminar(s)	30.00		