Faculty of Civil Engineering / MANAGEMENT IN CIVIL ENGINEERING / GEOLOGY

Course:	GEOLOGY			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
200	Mandatory	2	5	2+1+1
Programs	MANAGEMENT IN CIVIL ENGINEERING			
Prerequisites	None.			
Aims	This Subject enables acqusition of basic information in fields of geology and hydrogeology			
Learning outcomes	After having passed the exam, students will be able to: 1. Describe and distinguish igneous, sedimentary and metamorphic rocks; 2. Assess physical-mechanical and structural properties of rocks for purposes of geotechnical foundation; 3. Use geological, hydrogeological and engineering-geological maps which represent the basis for the civil engineering design of structures.			
Lecturer / Teaching assistant	Dr Mićko Radulović - lecturer Dr Milan Radulović - assistant			
Methodology	Lectures, exercises, consultations, homeworks, etc.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction. Origin and structure of the Earth. Global tectonics of plates.			
I week exercises	Graphic layout of the Earth structure and crust. Homework.			
II week lectures	Foundations of mineralogy. Sistematics of minerals.			
II week exercises	Macroscopic examination of minerals. Homework.			
III week lectures	Rocks of Earth crust: magma and igneous rocks.			
III week exercises	Macroscopic examination of minerals and magmas. Homework.			
IV week lectures	Sedimentary rocks.			
IV week exercises	Macroscopic examination of minerals and rocks			
V week lectures	Metamorphic rocks			
V week exercises	Macroscopic examination of rocks.			
VI week lectures	Geological chronology. Tectonics. Folds, faults, overthrust nappes. Dip and strike.			
VI week exercises	Macroscopic examination of rocks			
VII week lectures	I TEST, I COLLOQUIUM			
VII week exercises	I TEST, I COLLOQUIUM			
VIII week lectures	Geological, engineering-geological (EG) and hydrogeological (HG) maps.			
VIII week exercises	Interpretation of geological maps. Measurement of fall elements by a compass.			
IX week lectures	Rock mass properties. Field investigation methods for construction of structures.			
IX week exercises	Geological and EG maps. Preparation of design for EG investigations.			
X week lectures	Foundations of hydrogeology. Groundwater.			
X week exercises	Hydrogeological maps, revision.			
XI week lectures	Hydrogeological functions of rock masses. Aquifiers.			
XI week exercises	Types of aquifier. Elements of intergranular aquifier- scheme.			
XII week lectures	Watersheds. Hydrogeological phenomena. Groundwater flow.			
XII week exercises	Type of water-intake structures. Determination of HG parameters (Kf, T)			
XIII week lectures	Methodics of HG investigations. Foundations of geodynamics.			
XIII week exercises	Preparation of design for HG investigations. Revision.			
XIV week lectures	Repetition of lessons.			
XIV week exercises	Repetition of lessons.			
XV week lectures	II TEST, II COLLOQUIUM			

XV week exercises	II TEST, II COLLOQUIUM
Student workload	Weekly 3.5 credits x 40/30 = 4 hours 40 min Total workload for the Subject 3.5x30 = 105 hours

Per week	**Per semester**
5 credits x 40/30=6 hours and 40 minuts 2 sat(a) theoretical classes 1 sat(a) practical classes 1 excercises **2 hour(s) i 40 minuts** of independent work, including consultations	Classes and final exam: **6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts** Total workload for the subject: **5 x 30=150 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **30 hour(s) i 0 minuts** Workload structure: **106 hour(s) i 40 minuts (cources), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)**
Student obligations	Attendance, preparation of graphical papers, taking the tests.
Consultations	Monaday 11.00-13.00
Literature	Radulovic Micko (2003) Foundations of Geology. University of Montenegro, Faculty of Civil Engineering in Podgorica
Examination methods	- Attendance to lectures and exercises from 2.4 to 3.0 credits; - Tests and homeworks from 2.8 to 8.0 credits; - Colloquiums per 20 to 40 credits; - Final exam ≤ 49 credits; - Pass requires minimum
Special remarks	Lectures are intended for a group of 90 students, and exercises for a group of 30 students.
Comment	Further information about the Subject can be required from the lecturer, assistant, head of the study program and vice dean of academic affairs.

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points