

### Faculty of Civil Engineering / INFRASTRUCTURES / ENGINEERING GEOLOGY

<b>Course:</b>	ENGINEERING GEOLOGY			
<b>Course ID</b>	<b>Course status</b>	<b>Semester</b>	<b>ECTS credits</b>	<b>Lessons</b> (Lessons+Exercises+Laboratory)
11922	Mandatory	1	5	2+1+1
<b>Programs</b>	INFRASTRUCTURES			
<b>Prerequisites</b>	None.			
<b>Aims</b>	This Subject enables acquisition of basic information in fields of engineering geology .			
<b>Learning outcomes</b>	After having passed the exam, students will be able to: <ol style="list-style-type: none"> <li>1. Explain engineering-geological terms ;</li> <li>2. Explain phases of engineering-geological investigations for the construction of roads and hydro-technical facilities;</li> <li>3. Create engineering-geological sections;</li> <li>4. Understand engineering-geological maps;</li> <li>5. Understand engineering-geological projects;</li> <li>6. Understand engineering-geological reports.</li> </ol>			
<b>Lecturer / Teaching assistant</b>	Prof. Dr. Milan Radulović - lecturer			
<b>Methodology</b>	Lectures, exercises, consultation, field work.			
<b>Plan and program of work</b>				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction. Igneous, sedimentary and metamorphic rocks.			
I week exercises	Identification of rocks.			
II week lectures	Tectonics. Geological, hydrogeological and engineering geological maps (adapted to the study program INFRASTRUCTURE).			
II week exercises	Geological and hydrogeological maps.			
III week lectures	Engineering-geological types of rocks. Geological and engineering-geological characteristics of Montenegro (adapted to the study program INFRASTRUCTURE).			
III week exercises	Engineering-geological maps.			
IV week lectures	Methodology of engineering-geological ground investigation for the design and construction of roads and hydrotechnical facilities.			
IV week exercises	Engineering-geological section according to drilling data.			
V week lectures	Engineering-geological processes (landslides, escarpments).			
V week exercises	Engineering-geological section over a landslide.			
VI week lectures	Investigations of landslides.			
VI week exercises	Elements of a landslide.			
VII week lectures	Technical measures to improve properties of a ground: compaction, piles, anchors, injection, drainage.			
VII week exercises	Plate loading test.			
VIII week lectures	I Test, I Colloquium.			
VIII week exercises	I Test, I Colloquium.			
IX week lectures	Engineering-geological conditions for the construction of roads and pipelines.			
IX week exercises	An example of engineering-geological report for the construction of a road and pipeline.			
X week lectures	Engineering-geological conditions for tunnels and roads (open route) construction.			
X week exercises	RMR classification.			
XI week lectures	Engineering-geological conditions for construction of bridges and dams.			
XI week exercises	Engineering-geological section for a bridge construction.			
XII week lectures	Investigation of geological building material deposits.			
XII week exercises	Engineering-geological section over a deposit and reserves assessment.			

XIII week lectures	Eurocode 7 - Geotechnical design, Part 2: Ground investigation and testing					
XIII week exercises	Finalisation of graphic works.					
XIV week lectures	Field visit.					
XIV week exercises	Field visit.					
XV week lectures	II Test, II Colloquium.					
XV week exercises	II Test, II Colloquium.					
<b>Student workload</b>	Weekly Lectures: 3.5 credits x 40/30 = 4h 40min Total workload for the Subject 3.5x30 = 105h					
<b>Per week</b>			<b>Per semester</b>			
<b>5 credits x 40/30=6 hours and 40 minuts</b> 2 sat(a) theoretical classes 1 sat(a) practical classes 1 excercises <b>2 hour(s) i 40 minuts</b> of independent work, including consultations			Classes and final exam: <b>6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts</b> Necessary preparation before the beginning of the semester (administration, registration, certification): <b>6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts</b> Total workload for the subject: <b>5 x 30=150 hour(s)</b> 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) <b>30 hour(s) i 0 minuts</b> Workload structure: <b>106 hour(s) i 40 minuts (courses), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)</b>			
<b>Student obligations</b>			Attendance of lectures and exercises, homework and testing.			
<b>Consultations</b>			Friday 11.00-13.00			
<b>Literature</b>			Mićko Radulović, Basic Geology, Textbook (2003), University of Montenegro; Mićko Radulović, Engeneering Geology, Script (2003), University of Montenegro.			
<b>Examination methods</b>			- Attendance to lectures and exercises: max 5 pt; - Graphic works: max 5 pt; - Tests: max 20 pt; - Colloquiums: max 40 pt; - Final exam: max 30 pt; - Pass requires minimum 50 pt.			
<b>Special remarks</b>						
<b>Comment</b>			Further information about the Subject can be required from the lecturer, assistant, head of the study program and vice dean of academic affairs.			
<b>Grade:</b>	F	E	D	C	B	A
<b>Number of points</b>	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