Faculty of Mechanical Engineering / MECHANICAL ENGINEERING / MOBILE WORKING MACHINES

Course:	MOBILE WORKING MACHINES			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
12220	Mandatory	3	4	2+2+0
Programs	MECHANICAL ENGINEERING			
Prerequisites	None			
Aims	The aim of studying the course is to acquire the knowledge needed for designing, calculating and exploiting mobile work machines			
Learning outcomes	The student will be able to classify mobile working machines, to design mobile working machines, to calculate the working and operational parameters of mobile working machines, to define the conditions of use of mobile working machines			
Lecturer / Teaching assistant	Ph.D Sreten Simović			
Methodology	Lectures and auditory exercises; consultation through a combined/digital approach to learning based on the synergy between educational technology and real/virtual environment (video case studies, critical analysis of presented material, audio-visual support, etc), individual projects, individual and team presentations, consultations			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction to the subject and method of teaching; Classification and categorization of mobile working machines			
I week exercises	Introduction to the subject and method of teaching; Classification and categorization of mobile working machines			
II week lectures	Functional systems and construction of mobile working machines			
II week exercises	Functional systems and construction of mobile working machines			
III week lectures	Loads and calculation of mobile working machines			
III week exercises	Loads and calculation of mobile working machines			
IV week lectures	Excavators (types, application and calculation of basic parameters)			
IV week exercises	Excavators (types, application and calculation of basic parameters)			
V week lectures	Loaders (types, application and calculation of basic parameters)			
V week exercises	Loaders (types, application and calculation of basic parameters)			
VI week lectures	Bulldozers (types, application and calculation of basic parameters)			
VI week exercises	Bulldozers (types, application and calculation of basic parameters)			
VII week lectures	Colloquium I			
VII week exercises	Colloquium I			
VIII week lectures	Graders (types, application and calculation of basic parameters)			
VIII week exercises	Graders (types, application and calculation of basic parameters)			
IX week lectures	Scrapers (types, application and calculation of basic parameters)			
IX week exercises	Scrapers (types, application and calculation of basic parameters)			
X week lectures	Breakers (alculation of basic parameters)			
X week exercises	Breakers (alculation of basic parameters)			
XI week lectures	Machines for soil compaction (static rollers, vibrating rollers, characteristics and calculation of basic parameters)			
XI week exercises	Machines for soil compaction (static rollers, vibrating rollers, characteristics and calculation of basic parameters)			
XII week lectures	Machines for concrete making and transporting (types, principle of operation and parameters of transport equipment)			

XII week exercises	Machines for concrete making and transporting (types, principle of operation and parameters of transport equipment)
XIII week lectures	Machines for asphalt concrete making and installing (calculation of basic parameters)
XIII week exercises	Machines for asphalt concrete making and installing (calculation of basic parameters)
XIV week lectures	Machines for transporting materials in underground and surface mines (types, basic characteristics and calculation)
XIV week exercises	Machines for transporting materials in underground and surface mines (types, basic characteristics and calculation)
XV week lectures	Colloquium II
XV week exercises	Colloquium II
Student workload	

Per week	**Per semester**
4 credits x 40/30=5 hours and 20 minuts 2 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises **1 hour(s) i 20 minuts** of independent work, including consultations	Classes and final exam: **5 hour(s) i 20 minuts x 16 =85 hour(s) i 20 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **5 hour(s) i 20 minuts x 2 =10 hour(s) i 40 minuts** Total workload for the subject: **4 x 30=120 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) **24 hour(s) i 0 minuts** Workload structure: **85 hour(s) i 20 minuts (cources), 10 hour(s) i 40 minuts (preparation), 24 hour(s) i 0 minuts (additional work)**
Student obligations	Attendance of lectures and exercises (live or online)
Consultations	Consultations in the office and online (every working day)
Literature	Durković R.: Građevinske i rudarske mašine, script, Faculty of Mechanical Engineering, Podgorica, 2002. Jevtić V.: Građevinske i rudarske mašine I i II, Faculty of Mechanical Engineering, Niš, 1995.
Examination methods	Class attendance: 5 points; I colloquium: 30 points; II colloquium: 30 points; Final test: 35 points; A pass grade is obtained if at least 51 points are obtained cumulatively
Special remarks	
Comment	

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