UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION			
Study Program	**Mechanical Engineering**		
Study Module (if applicable)	-		
Course Title	Mechanics 1 - Statics		
Level of Study	☒Bachelor	☐ Master's	☐ Doctoral
Type of Course	☒ Obligatory	☐ Elective	
Semester	☒ Autumn	☐Spring	
Year of Study	I		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Ratko G. Pavlović, Predrag S. Kozić, Dragan B. Jovanović, Goran B. Janevski		
Teaching Mode	☒ Lectures	☐Group tutorials	☒ Individual tutorials
	☐ Laboratory work	☐Project work	☐ Seminar
	☐ Distance learning	☐ Blended learning	☐ Other

Purpose and Overview (max. 5 sentences)

Students are introduced to the concept of force in mechanics, moment of force, force couple or pure moment, and system of forces up to a general three-dimensional system of forces. They study the conditions of equilibrium of a body and systems of more bodies. Define the internal static values and applied in the liner beams and trusses
Students learn to be able to model and solve practical engineering problems. Acquired basic knowledge to follow the teaching of the subject: Strength of Materials, Kinematics, Dynamics,Machine elements and Mechanical constructions.

Syllabus (brief outline and summary of topics, max. 10 sentences)

Statics in Engineering. Basic Concepts. Axioms of Statics. Constrained Body. Constraints and Reactions of Constraints. Constraint Removal Principle. Conditions of Equilibrium of Concurrent Force System. Equilibrium of Three-force System. Moment of a Force about a Point and Axis. Couple. Moment of a Couple. Equivalence of Couples. Equilibrium of Couple Systems. Fundamental Theorems of Statics. Reduction of Force Systems. Condition of Equilibrium of Force Systems. Center of Parallel Force System. Center of Gravity of a Body. Center of Gravity Determination. Guldin's Theorems. Types of Loads. Forces and Moments in Cross-section of Structures.

Language of Instruction

☒Serbian (complete course) ☐ English (complete course) ☐ Other _____ (complete course)

☒Serbian with English mentoring ☐Serbian with other mentoring _____

Assessment Methods and Criteria

Pre exam Duties	Points	Final Exam	Points
Activity During Lectures	10	Written Examination	45
Practical Teaching	-	Oral Examination	Max. 45
Teaching Colloquia	45	Overall Sum	100
*Final examination mark is formed in accordance with the Institutional documents			