



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Dynamics		
Level of Study	<input checked="" type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input type="checkbox"/> Doctoral
Type of Course	<input checked="" type="checkbox"/> Obligatory	<input type="checkbox"/> Elective	
Semester	<input type="checkbox"/> Autumn	<input checked="" type="checkbox"/> Spring	
Year of Study	II		
Number of ECTS Allocated	7		
Name of Lecturer/Lecturers	Ratko G. Pavlović, Goran Janevski		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input checked="" type="checkbox"/> Individual tutorials
	<input type="checkbox"/> Laboratory work	<input type="checkbox"/> Project work	<input type="checkbox"/> Seminar
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Blended learning	<input type="checkbox"/> Other

Purpose and Overview (max. 5 sentences)

The main objective of the course is to provide students theoretical knowledge of basic, general laws, principles of mechanics, geometry of mass movements of rigid bodies. Training students to follow lectures of Fluid Mechanics, Thermodynamics, Mechanical construction, Theories of oscillations and the Theory of mechanisms.

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

General laws of particle dynamics. Motion of particles under conservative forces. Motion of particles under central force. Motion of points on the line and surface. The dynamics of the relative motion of a point. Dynamics for a system of particles. Principles of dynamics and Lagrange's Equations 2nd. The inertia of body. Dynamics of translation, rotation rigid body about a fixed axis, plane motion of a rigid body and rotation rigid body about a fixed point. Elastic and inelastic collision. Dynamics of a body of variable weight.

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	5	Written Examination	50
Practical Teaching	5	Oral Examination	Max. 50
Teaching Colloquia	50	Overall Sum	100
*Final examination mark is formed in accordance with the Institutional documents			