



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study program

Mechanical Engineering

Study Module (if applicable)

-

Course title

Dynamics of Machinery

Level of study

Bachelor

Master's

Doctoral

Type of course

Obligatory

Elective

Semester

Autumn

Spring

Year of study

I

Number of ECTS allocated

10

Name of lecturer/lecturers

Nenad D. Pavlović

Teaching mode

Lectures

Group tutorials

Individual tutorials

Laboratory work

Project work

Seminar

Distance learning

Blended learning

Other

PURPOSE AND OVERVIEW (max. 5 sentences)

The purpose of this course is to gain some basic knowledge for solving dynamic problems of power machines. Students should gain the ability to analyse and solve the given examples of power machines dynamic problems.

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

- Dynamics of Rigid Machines (Mathematical Modeling, Dynamic Equation of Motion, Coefficient of Speed Fluctuation and Calculating the Required Moments of Inertia of the Fly Wheels).
- Dynamics of Machines with Elastic Links.
- Methods of Mass Balancing: Counterbalancing of Rigid Rotors, Mass Balancing of Planar Mechanisms.
- Machine Foundations and Foundation Vibrations Isolation
- Torsional Oscillations in Drive Systems.
- Bending Oscillations of Rotating Shafts.

LANGUAGE OF INSTRUCTION

Serbian (complete course)

English (complete course)

German (complete course)

Serbian with English mentoring Serbian with other mentoring _____

ASSESSMENT METHODS AND CRITERIA

Pre exam duties	Points	Final exam	points
Activity during lectures		Written examination	
Practical teaching		Oral examination	Max. 50
2 term papers	2x25=50	OVERALL SUM	100

*Final examination mark is formed in accordance with the Institutional documents