



# UNIVERSITY OF NIŠ

**Course Unit Descriptor**

**Faculty**

Faculty of Mechanical Engineering

## GENERAL INFORMATION

Study program

**Mechanical Engineering**

Study Module (if applicable)

Course title

Power Transmissions

Level of study

Bachelor     Master's     Doctoral

Type of course

Obligatory  Elective

Semester

Autumn     Spring

Year of study

III

Number of ECTS allocated

6

Name of lecturer/lecturers

Stefanović-Marinović D. Jelena

Teaching mode

Lectures     Group tutorials     Individual tutorials  
 Laboratory work  Project work     Seminar  
 Distance learning     Blended learning     Other

## PURPOSE AND OVERVIEW (max. 5 sentences)

Student will be introduced with theoretical basis, calculation, design, functioning and application of power transmission.

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

- Basic terms and definitions. Power sources types. Types, characteristics and application of power transmissions.
- Universal geared power transmissions. Types and design of universal geared transmissions. Connections between power transmission and power source.
- Planetary gear trains. Basic terms and types of planetary gear trains. Kinematics. Mounting conditions. Loads. Efficiency. Lubrication.
- Power transmissions for motor vehicle
- Power transmissions for machine tools.
- Variable transmissions. Application and types of variable transmissions. Friction elements strength calculation.

- Hydro power transmissions. Elements and types of hydrostatic power transmissions and assemblies with reductors. Hydrodynamic couplings. Hydro-mechanical transmissions.

#### 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	
Practical teaching		Oral examination	45
Teaching colloquia	30+20	OVERALL SUM	100

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