



# UNIVERSITY OF NIŠ

**Course Unit Descriptor**

**Faculty**

Faculty of Mechanical Engineering

## GENERAL INFORMATION

Study program

**Mechanical Engineering**

Study Module (if applicable)

Course title

Gearboxes and Continuous Variable Transmissions

Level of study

Bachelor     Master's     Doctoral

Type of course

Obligatory  Elective

Semester

Autumn     Spring

Year of study

II

Number of ECTS allocated

10

Name of lecturer/lecturers

Milčić S. Dragan, 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)

Introducing the latest design solutions in the field of gearboxes and continuous variable transmissions, their implementation, calculation and analyses.

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

- Variable transmissions. Discrete and continuous gear ratio - gearboxes and continuous variable transmissions (CVT).
- Variable transmissions application.
- Classification of variable transmissions. Friction variable transmissions with rigid parts. Variable transmissions with flexible parts. Planetary variable transmissions. The way of working and basic kinematic dependencies.
- Gearboxes as a part of transmission in motor vehicles. Classification according to various criteria. Mechanical speed and torque conversion. Hydraulic speed and torque conversion. Electric speed and torque conversion.
- Manual transmission.
- Automatic transmission; semi-automatic transmission; DSG; CVT; Transmission on hybrid electric vehicle.

**LANGUAGE OF INSTRUCTION**

Serbian (complete course)       English (complete course)       Other \_\_\_\_\_ (complete course)  
 Serbian with English mentoring       Serbian with other mentoring \_\_\_\_\_

**ASSESSMENT METHODS AND CRITERIA**

<b>Pre exam duties</b>	<b>Points</b>	<b>Final exam</b>	<b>points</b>
<b>Activity during lectures</b>		<b>Written examination</b>	
<b>Practical teaching</b>		<b>Oral examination</b>	<b>50</b>
<b>Teaching colloquia</b>	<b>50</b>	<b>OVERALL SUM</b>	<b>100</b>

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