



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study program

Mechanical Engineering

Study Module (if applicable)

Course title

Geared Power Transmissions

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

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 in the field of geared power transmission, their implementation, calculation and analyses.

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

- Classification, characteristics and application of geared power transmissions.
- Variants of geared power transmissions design. Advantages and disadvantages of different design of geared power transmissions.
- Modular principle of design of geared power transmission.
- Planetary gear transmissions as reducers and multipliers.
- Recent design of mechanical transmissions (*harmonic drive, roller drive, cycloid geared transmissions*).
- Special mechanical transmissions (transmissions with great transverse contact ratio, transmissions with none involute tooth gearing; transmissions for usage in robots, transmissions for shaft generators, turbine transmissions etc).
- Choice and calculation of the basic kinematic and dynamic parameters of these transmissions (transmission ratio, efficiency, loads, torques etc.)

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		Written examination	
Practical teaching		Oral examination	50
Teaching colloquia	50	OVERALL SUM	100

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