



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Hydraulic transmission		
Level of Study	<input checked="" type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input type="checkbox"/> Doctoral
Type of Course	<input type="checkbox"/> Obligatory	<input checked="" type="checkbox"/> Elective	
Semester	<input type="checkbox"/> Autumn	<input checked="" type="checkbox"/> Spring	
Year of Study	IV		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Živan T. Spasić, Saša Milanović		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	<input checked="" 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 aim of the course is to introduce all students to hydraulic transmission systems. The course is targeting both the theoretical and practical aspects of the hydraulic transmission, their construction, operating characteristics and practical use.

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

1) Characteristics and types of hydraulic transmission. Functional schemes (open and closed circulation contour, regulated and unregulated). 2) The characteristics of the displacement pumps and hydraulic motors. 3) Non-regulated hydraulic transmissions (hydrostatic and hydromechanical transmission). 4) Regulated hydraulic transmissions-tanks and / or variable displacement hydraulic motors. 5) Hydrodynamic couplings and gearboxes. Construction description and explanation of the principles of operation. 6) The performance of the hydrodynamic couplings. Braking mode. 7) The performance of the joint work of the engine and the hydrodynamic coupling. 8) The performance of the joint work of the hydrodynamic coupling and the actuator. 9) Calculation of time for steady operating regime. Basic calculation of the hydrodynamic coupling.

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	0
Practical Teaching	5	Oral Examination	50
Project Design	40	Overall Sum	100
*Final examination mark is formed in accordance with the Institutional documents			