

Study program / course: Mechanical Engineering				
Type and level of study: Master academic studies				
Course: Hydrodynamic transmission				
Lecturers: <u>Vanja M. Šušteršič, Ph.D</u>				
Status of course: Elective for module M₄, III semester				
Number of ECTS:6				
Precondition: /				
The objective of course The aim of this subject is for students to learn about the types of the power plants in motor vehicles, their principle of work, calculation and construction of hydrodynamic transmission.				
The outcome of course After this course, students will be able to, independently and using teamwork, involve in solving the problems pertaining to transmission both hydrostatic and hydrodynamic. These transmissions are used in the following sectors: in-line industry, chemical industry, metal industry, pharmaceuticals, agriculture, energy, foodstuffs...				
Syllabus Theoretical study Historical development of transmission. Introductory remarks about hydro transmission. The basic parameters of hydrodynamic coupling. Constructive solutions. Applications. Design and calculation of hydrodynamic coupling. Basic construction and operating parameters of hydrodynamic torque converter. Design solutions. Applications. Design and calculation of hydrodynamic torque converter. Adjustment of work of hydrodynamic transmission with engine.				
Practical classes include: In the framework of practice, as well as independent work, students will be able to calculate and design hydrodynamic transmission in 3D environment, within the framework of domestic and project task score.				
Recommended reading 1. D. Simic, R. Radonjic, Kelic V.: "Motor vehicles: hydrodynamic transmission in transmission of vehicles", Kragujevac, Faculty of Mechanical engineering, 1976 (in Serbian) 2. Sekulic M., Jevtic D., V. Zrnic, "Hydraulic and pneumatic systems of management and transmission", Belgrade: The alliance of Mechanical and Electric Power Engineers and technicians of Serbia, 1974 (in Serbian) 3. Krstic B.: "Hydrodynamic transmission in aggregates of motor vehicles," monograph, Kragujevac: Faculty of Mechanical engineering, 2003 (in Serbian)				
The number of hours of active teaching:				Other classes:
Theory: 3	Practical classes: 1,4	Other forms of teaching: 0,6	Research study: 0	1
Methods of teaching Using the new teaching methods - video presentations and educational films helps students to be more interactive at classes. Practices consist of doing homework, two tests and one final work.				
Evaluation of knowledge				
Pre-final exam obligations	points	Final exam	points	
Activities during the classes:	10			
Practical classes:		Final work	40	
Colloquiums(s) :	2*15			
Seminar(s) :	20			