

E – Charakteristika studijního předmětu/Subject Specification					
Název studijního předmětu / Subject title	Řídicí systémy vozidel / Control Systems of the Vehicle				
Typ předmětu / Subject type	Compulsory elective		dopor. ročník / semester/ recommended year / semester	2/4	
Rozsah studijního předmětu / Study load in hours and credits		hod. za týden / weekly load	2+2	Kreditů / Credits	5
Jiný způsob vyjádření rozsahu / Other expression of study load	10 weeks, each 2 hours of lectures and 2 hours of seminary				
Způsob zakončení / Assessment	Zkouška / Exam.		Forma výuky / Form of teaching	Lectures and Labs	
Další požadavky na studenta / Other demands on students					
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Vyučující / Lecturer	Doc. Ing. Miroslav Malý, PhD.				
Stručná anotace předmětu / Subject annotation	The subject is focused to: fundamental properties of driving system elements, accessories and control systems, design of structurally-constrained control systems: e.g. output feedback electrohydraulic control systems, block diagrams and signal flow graphs of engine control, transmission control. Vehicle safety systems – vehicle stabilization systems: anti-lock brakes and other systems of vehicles. [1] Drivetrain, function, design, drivetrain elements. [2] Transmissions. Manually shifted and automatic transmission. [3] Hydrostatic transmission of mobile machines, energy transmission and transformation in hydraulic circuits (the velocity control of the wheels) [4] Steering – system requirements, hydraulic and electric power assisted steering. 4WS (four-wheel steering systém). [5] Braking systems, design and components of braking systems, [6] Vehicle stabilization systems, antilock braking systems, traction control system, electronic stability program, [7] Safety systems, information and communication.				
Informace ke kombinované nebo distanční formě / Information for students in external form of study					
Rozsah konzultací (soustředění) / Consultations, study meetings		hodin za týden / hours per week			
Rozsah a obsahové zaměření individuálních prací studentů a způsob kontroly / Individual student work – type, load, content and way of checking					
Individ. project – 6 weeks – report and presentation					
Studijní literatura a studijní pomůcky / Reading list and study utilities					
[1] BAUER, H.: Diesel – Engine Management. 3rd. ed. Robert Bosch, D. 2004, ISBN 0-7680-1343-7 [2] BUCKENDALE, L., R.: Truck Systéme Design Handbook. Vol. II. SAE. Danvers, MA. 2002. ISBN 0-7680-0887-5 [3] DUDZINSKI, P.- HAWRYLAK, H.- HOHL, G.- KETTING, M.: Off-Road Machines and Vehicles in Tudory and Practuce. ISTVS, Technical University of Wroclaw. 1996. ISBN 83-906518-0-7. [4] JURGEN, R., K.: Electronic Bracking, Traction, and Stability Controls. SAE. Warendale, PA. 1999. ISBN 0-7680-1513-8... [5] NOACK, S.: Hydraulic in Mobile Equipment. OMEGON Fachtliteratur, Ditzinger, Germany.2001. ISBN 3-933698-16-2, ISBN 0-7680-0885-5 [6] BOSCH: Automotive Handbook. Robert Bosch, D. 2004. ISBN 0-7680-1513-8					