

Information sheet for the course Theory and means of automated management

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of special technology</i>					
Course unit code: <i>STaM/D/1-28/e</i>			Course unit title: <i>Theory and means of automated management</i>		
Type of course unit: <i>compulsory</i>					
Planned types, learning activities and teaching methods: <i>Lecture 2 hours per week, 1 hour per week of laboratory exercise, part-time</i>					
Number of credits: <i>5</i>					
Recommended semester: <i>1st semester in the 1st year</i>					
Degree of study: <i>III. degree</i>					
Course prerequisites: <i>none</i>					
Assessment methods: <i>100% participation in exercises, fulfilling the objectives set exercises, min. 60% attendance at lectures. Developing smestrálnej work for 20 points. The final evaluation will be a written test of 80 points. Overall, the acquisition and evaluation is necessary to obtain at least 90 points to get user B at least 80 points to score at least 70 points C, D to score at least 60 points and score at least 50 points E.</i>					
Learning outcomes of the course unit: <i>The student will become familiar with the physical principles, methods and design of existing automation systems. The student will acquire the necessary information on the means of obtaining information, transmission and signal conditioning means for processing and information management subsystems in information management systems and actuators.</i>					
Course contents: <i>Characterization and classification means systémov. Statické automated management and dynamic properties of the control elements. Differential equations of system and transfer. Impulse response. Transient response. Frequency response. Traffic delays. Block diagrams. Controllers - foundations, properties, methods of construction, use. Stability control loops. Discrete control circuit .. Description discrete members. Digital controllers. Stability of discrete circuits. Control systems and communications zbernice. Normy industrial automation equipment. Typical applications of automation technology.</i>					
Recommended of required reading: <i>BALÁTEĽ, J.: Automatické řízení. Vyd. BEN Praha 2004, ISBN 978-80-7300-355-5, ISBN 80-7300-148-9</i> <i>ROUBAL, J.: Regulační technika v příkladech. Vyd. BEN Praha 2011, 276 s. ISBN 978-80-7300-260-2</i>					
Language: <i>Slovak</i>					
Remarks: <i>The subject is provided in the winter semester of the first year of full-time study. The course is optional.</i>					
Evaluation history <i>Total number of students being evaluated:</i>					
A	B	C	D	E	FX
Lecturers: <i>doc. Ing. Peter Lipták, CSc.- lecturer and instructor</i>					
Last modification: <i>15.4.2014</i>					

Supervisor: *prof. Ing. Vojtěch Hrubý, CSc., guarantee of the study program “Technologies and Materials in Mechanical Engineering“, Assoc. prof. Ing. Ondrej Hřeš, CSc., Assoc. prof. Ing. Viliam Cibulka, CSc. – together-guarantors.*