Information sheet for the course
Fluid systems and components of cars and their maintenance

University: *Alexander Dubček University of Trenčín*	
Faculty: *Faculty of special technology*	
Course unit code: *SaOA/B/4-37/d*	**Course unit title:** *Fluid systems and components of cars and their maintenance*
Type of course unit: *compulsory*	
Planned types, learning activities and teaching methods: *2 lecture hours and 1 lab hour per week, attendance teaching method.*	
Number of credits: *2*	
Recommended semester: *6th semester in the 3rd year (full-time)* *6th semester in the 3rd year (part-time)*	
Degree of study: *I. (bachelor)*	
Course prerequisites: *SaOA/B/4-35/d Fluid mechanics*	
Assessment methods: *Continuous assessment: 100% attendance and active creative work on exercises meet the goals set exercises, mastery of technical terminology, min. 60% attendance at lectures, properly Term laboratory work. The ongoing evaluation is necessary to obtain min. 25 points out of a total of 50 points. Final assessment: Assignment form of a written test with emphasis on theoretical knowledge of the subject and the support of the oral response, which is verified mastering nature activities and calculate the basic mechanisms of fluid at various examples. Defend and explain the test questions and examples with additional queries.* *Point-rated evaluation criteria: (E) ≥ 56 points, (D) ≥ 67 points (C) ≥ 77 points (B) ≥ 87 points (A) ≥ 95 points.*	
Learning outcomes of the course unit: *The student will acquire a comprehensive overview of the basic elements and fluid systems for cars. He can make any individual hydraulic and pneumatic circuits using standard brands. Laboratory sessions compiled hydraulic and pneumatic circuits using experiments in learning measurement equipment.*	
Course contents: *Fluid power, basic transmission and transformation energy, principle and use energy converters, baffling flow, pressure components and other important elements of energy transfer and information, basic types of circuits, methods of design and calculation of fluid cleanliness and filtration, the errors in service and diagnostics , use in automotive technology.*	
Recommended of required reading: [1] PIVOŇKA, J. a kol.: *Tekutinové mechanismy*. Praha, SNTL 1987. [2] PACIGA, A. - IVANTYŠYN, J.: *Tekutinové mechanizmy*. Bratislava/Praha, ALFA/SNTL 1985. [3] ŠEBESTA, S. - TURZA, J.: *Teória tekutinových mechanizmov*. Bratislava, ES SVŠT 1989. [4] KOPÁČEK, J.: *Pneumatické mechanizmy. Pneumatické prvky a systémy*. Skriptum. Ostrava: VŠB-TU Ostrava, 1996. 267 s. [5] ŠEBESTA, S., TURZA, J.: *Teória tekutinových mechanizmov*. Bratislava, ES SVŠT 1989. ISBN 80-227-0120-3. [6] TURZA, J., PETRANSKÝ, I., JURČO, I., TKÁČ, Z.: *Dvojfázové hydraulické mechanizmy so striedavým prietokom kvapaliny*. Vedecká monografia. Trenčín: Vydala Trenčianska univerzita AD v Trenčíne 2005. 242 s. ISBN 80-8075-071-8. 242 s. [7] TURZA, J.: *Dynamika tekutinových systémov*. Žilina, ES VŠDS 1994. ISBN 80-7100-162-7. [8] TURZA, Jozef: *Axiálne piestové hydrostatické prevodníky*: Teória a výpočet. - Trenčín: TNUAD, 2009. - 101s - ISBN 978-80-8075-436-5 - 10 [9] CERHA, J.: *Hydraulické a pneumatické mechanizmy I*. Liberec, FS TU v Liberci	

2006. ISBN 80-7372-067-1.
[10] BAROŠKA, J. *Hydrostatické mechanizmy*. Martin, HYDAC 2012, ISBN 978-80-970 897-2-6.

Language: *Slovak*

Remarks:
The subject is provided in the summer semester of the third year of full-time study.

Evaluation history
Total number of students being evaluated: 154

A	B	C	D	E	FX
13.64	27.92	29.22	14.29	24.03	0

Lecturers: *prof. Ing. Jozef Turza, CSc. – lecturer*
Ing. Beáta Kopiláková, PhD. - assistant instructor

Last modification: *15.4.2014*

Supervisor: *prof. Ing. Alexej Chovanec, PhD., guarantee of the study program "Vehicles Maintenance and Repair".*