Information sheet for the course
Electronic Systems of Special Mobile Technology

University: *Alexander Dubček University of Trenčín*

Faculty: *Faculty of special technology*

Course unit code: *ŠST/I/1-85/d*	**Course unit title:** *Electronic Systems of Special Mobile Technology*

Type of course unit: *compulsory*

Planned types, learning activities and teaching methods:
2 hours of lectures per week, 2 hours laboratory exercises per week face to face

Number of credits: *4*

Recommended semester: *4th semester in the 2nd year (full-time)*
5th semester in the 3rd year (part-time)

Degree of study: *II. (engineer)*

Course prerequisites: *ŠST/B/1-81/d Fundamentals of Electrical Engineering and Electronics, ŠST/B/1-63/d Mobile Technology*

Assessment methods:
100% attendance and active creative work on laboratory exercises, the attainment of goals laboratory practice, mastery of technical terminology, min. 60% attendance at lectures. Twice during the semester written test. The ongoing evaluation is necessary to obtain min. 30 points. Final assessment: test in a written test with emphasis on theoretical knowledge of the subject and the support of the oral response. In the 30 points is required to evaluate the minimum obtained: (E) - 20 points, (D) - 22 points (C) - 24 points (B) - 26 points (A) - 28 points.

Learning outcomes of the course unit:
The student can analyze factual knowledge of the theoretical foundations of existing opportunities and implementation of construction, operation and maintenance of electrical and electronic equipment systems special mobile equipment. With an emphasis on energy, information, communication and electricity systems of hybrid drives used in special mobile technology.

Course contents:
Basic concepts and quantities of electrical and electronic systems, special mobile equipment. Description, measurement and testing of basic and operational characteristics of electrical equipment in mobile technology. On-board diagnostics, sensing methods and data processing. Supply of mobile devices special techniques and control onboard network. Energy and information networks of mobile technology. Basic electronic circuits, control unit and a bus in a motor vehicle. Process management engine, chassis, gear and accessories for combustion and hybrid engines special mobile equipment.

Recommended of required reading:
VLK, F...: Diagnostika motorových vozidiel, VLK 2006, ISBN 80-239-7064-X,
LIŠČÁK, Š.: Spoľahlivosť v prevádzke cestných vozidiel. Žilina, ŽU 2002.
TÚRÓ,T., ŠPONAR, L.: Řídicí, diagnostické a komunikační sítě vozidiel, S950, UO Brno.
JAN, Z., KUBÁT, J., ŽDÁNSKY, B.: Elektrotechnika motorových vozidiel 2, Avid s. r. o., Brno, 2006.
ŠŤASTNÝ, J., REMEK, B.: Autoelektrika a autoelektronika, nakl. F. Malina, Praha 2003.
TECHNICKÝ POPIS VOZIDLA OT - 90 HYBRID, BRATISLAVA 2009.

Language: *Slovak*

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

Evaluation history:
Total number of students being evaluated: 20

A	B	C	D	E	FX
15,0	20,0	25,0	30,0	10,0	0,0

Lecturers: *Ing. Milan Jus, PhD. lecturer and instructor*
Last modification: *15.4.2014*
Supervisor: *prof. Ing. Jiří Balla, CSc., guarantee of the study program "Special Mechanical Engineering Technology".*