

Information sheet for the course Car Construction II

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of special technology</i>	
Course unit code: <i>SaOA/B/1-64/d</i>	Course unit title: <i>Car Construction II</i>
Type of course unit: <i>compulsory</i>	
Planned types, learning activities and teaching methods: <i>Lectures 2 hours per week / laboratory exercises 2 hours per week, full-time method</i>	
Number of credits: 5	
Recommended semester: <i>5th semester in the 3rd year (full-time)</i> <i>6th semester in the 3rd year (part-time)</i>	
Degree of study: <i>I. (bachelor)</i>	
Course prerequisites: <i>none</i>	
Assessment methods: <i>Continuous assessment: 100% attendance and active creative work on laboratory exercises, the attainment of goals laboratory practice, mastery of technical terminology, min. 60% attendance at lectures, semester work properly. Twice during the semester written test. The ongoing evaluation is needed to get 40 points. Final assessment: test in a written test with emphasis on theoretical knowledge of the subject and the support of the oral response, which is verified deal activity description functional parts car. Of the 80 points is required to evaluate the minimum obtained: (E) - 55 points, (D) - 60 points (C) - 65 points (B) - 70 points (A) - 75 points.</i>	
Learning outcomes of the course unit: <i>The student will acquire a comprehensive overview of the basic foundations of mechanics motion car driving aspects of maintaining stability and operational safety of cars and the construction and operation of power train components, chassis and vehicle bodies, which is essential for the successful management of specialized subjects related to the construction of special mobile equipment on stage 2 study.</i>	
Course contents: <i>Powerplant cars. Gears cars. Power transmission and braking force to the wheels car, function and characteristics of the wheel tires, electronic control elements driving force to the wheels. Running resistances cars and trucks. Driving stability, types of vehicle safety and ways of their security features automatic driving stability, electronic components. Characteristics, purpose, main parts, construction and operation of the couplings. Dynamic model-starting the car, the time course of clutch engaged, the calculation of the basic parameters of the run-friction clutch, the main parameters of the inverter. Characteristics, purpose, main parts, construction and operation of transmissions and additional gear. Ranges gear, use power drive unit, gear ratios, automatic transmissions. Kinematics coupling and shafts, critical speed of the shaft. Characteristics, purpose, main parts, construction and operation rozvodoviek. Transfers driving axles and axle differentials between axle kinematics differential transmission torque. Characteristics of a core group of chassis. Types stress of car body and truck frames, stress axle cars. Theoretical conditions for filming wheel car when changing direction, theoretical and actual turning center, the emergence of the directional fluctuations, electronic control elements. Theoretical and actual course of braking, total brake force, braking deceleration, ensuring the stability of the car braking systems, electronic components braking forces. Types of oscillations cars, dynamic models of the suspension and the importance of speed and the shock springs semiactive and active suspension systems.</i>	
Recommended of required reading: <i>Eliáš, J.: Mobilná technika I [skriptá] - 1.vyd. - Trenčín: TnUAD, 2013. - 308 s. - ISBN 978-80-8075-608-6</i> <i>Eliáš, J.: Mobilná technika II [skriptá] - 1.vyd. - Trenčín: TnUAD, 2013. - 308 s. - ISBN 978-80-8075-609-3</i> <i>SLOBODA, A.-FERENCEY, V.-HLAVŇA, V.-TKÁČ, Z.: Konštrukcia kolesových a pásových</i>	

vozidiel. [učebnica] - 1.vyd. TU Košice. , Sjf TU Košice, 2008.- 558 s. ISBN 978-80-89232-28-4
ELIÁŠ, J.: Energetické stroje v mobilnej technike.-1.vyd .-Trenčín : TnUAD, 2011.-224 s. ISBN 978-80-8075-507-2

Eliáš, J.: Mobilná technika na kolesových podvozkoch [skriptá] : charakteristiky, technické údaje a popis /. - 1.vyd. - Trenčín : TnU AD, 2002. - 338 s. - ISBN 80-88914-62-0

Eliáš, J.: Špeciálna mobilná technika na pásových podvozkoch [skriptá] : Charakteristiky, technické údaje a popis / - 1.vyd. - Trenčín : TnUAD FŠT, 2002. - 266 s. - ISBN 80-88914-63-9

Language: Slovak

Remarks:

The subject is provided in the summer semester of the third year of part-time study. Subject is required.

Evaluation history

Total number of students being evaluated: 197

A	B	C	D	E	FX
1,52	5,58	18,28	19,20	48,22	7,11

Lecturers: Assoc.prof. Ing. Peter Droppa, PhD., Ing. Jozef Eliáš, PhD. – lecturers
Ing. Štefan Timár. - instructor

Last modification: 15.4.2014

Supervisor: Assoc.prof. Alexej Chovanec, PhD., guarantee of the study program “Vehicles Maintenance and Repair”