Information sheet for the course
Computer-assisted design III

University: *Alexander Dubček University of Trenčín*

Faculty: *Faculty of special technology*

Course unit code: *ŠST/I/4-57/d* | **Course unit title:** *Computer-assisted design III*

Type of course unit: *compulsory*

Planned types, learning activities and teaching methods:
2 hour seminar per week, attendance teaching method

Number of credits: *2*

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

Degree of study: *II. (engineer)*

Course prerequisites: *ŠST/I/4-59/d CAE metods in practice design*

Assessment methods: *Final assessment: at least 85% participation in exercises, maximum 2 absences, processing, submit and evaulation of semester assignments.*

Learning outcomes of the course unit:
The student will acquire basic knowledge of the issues in modeling and dynamic simulation of virtual prototypes of mechanical systems in the environment MSC.ADAMS.

Course contents:
Introduction to MSC.ADAMS / VIEW: environment, hierarchy and manipulation of the model, animation, plotting and displaying the results. Position, speed, acceleration of the body, movement of the body in the gravitational field and on an inclined plane. The lifting mechanism. Suspension and steering wheel car. Spring - damper system. Opening mechanism. The cam mechanism. Introduction to MSC.ADAMS / Car: environment, hierarchy data (templates, subsystems, model), creating and simulation of subsystems of the suspension, complete vehicle systems, management of virtual vehicles, creating and exploring the results of analyzes, parameterization of the model, creating templates and components, communicator of management and information exchange.

Recommended of required reading:
DE JALON, J.G., BAYO, E.: Kinetic and Dynamic Simulation of Multibody Systems, 440 s., ISBN 0-387-94096-0.
MacNeal - Schwendler Corp.: Getting Started Using Adams/Car, 2011.
MacNeal - Schwendler Corp.: Adams/Car Zser Manual, 2011.
MacNeal - Schwendler Corp.: Adams/Car Training Manuals, 2011.
ADAMS/View help.
ADAMS/Car help.
http://mat21.etsii.upm.es/mbs/bookPDFs/bookGjB.htm.

Language: *Slovak*

Remarks: *The subject is provided in the winter semester in the second year of full-time study. Elective subject.*

Evuation history
Total number of student being evaluated: 40

A	B	C	D	E	FX
10	22,5	67,5	0,0	0,0	0,0

Lectures: *Ing. Pavol Tököly, PhD. - assistant instructor*

Last modification: *15.4.2014*

Supervisor: *prof. Ing. Jiří Balla, CSc., guarantee of the study program "Special Mechanical Engineering Technology".*