Information sheet for the course
Selected Chapters from Mechanics

University: *Alexander Dubček University of Trenčín*	

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Faculty: *Faculty of Industrial Technologies in Púchov*

Course unit code: TTN-P-9	**Course unit title:** *Selected Chapters from Mechanics*

Type of course unit: *compulsory*

Planned types, learning activities and teaching methods:
Lecture: 2 hours weekly/26 hours per semester of study; face to face
Seminar: 2 hours weekly/26 hours per semester of study; face to face
Laboratory tutorial:0

Number of credits: *4*

Recommended semester: the 2nd semester in the 1st year of the full-time form of study
the 4th semester in the 2nd year of the part-time form of study.

Degree of study: *the 1st degree of study (Bachelor's degree)*

Course prerequisites: *none*

Assessment methods:
To accomplish the given subject, student is obliged to be present at the lessons with the reference to specifications introduced in the study rules for the given study programme. He/she is also obliged to prepare and defend the determined semestral or terminal work, while the given work consists of numerical resolution relating to three specified tasks including bar construction, beam construction and solid entity system.

Learning outcomes of the course unit:
Student has acquired and is familiar with all required and fundamental principles in the field of the most important systems of mechanics. He/she is able to solve the tasks and problems relating to vector mechanics (point balance, solid entity balance, balance of solid entity systems or constructions, passive resistances as well as kinematics of point and solid entity).

Course contents:
Fundamental terms and variables. Axioms and fundamental rules. Force systems. Static connections and relationships. Point balance, solid entity balance and balance of solid entity systems as well as constructions. Centre of gravity for solid entity. Bar constructions. Friction. Introduction to kinematics of point, solid entity and determination of distance as well as speed and acceleration for point and solid entity. Linear, rotation and any other types of 2-D motion for solid entity. 3-D motion for solid entity.

Recommended or required literature:
1. VAVRO, J., VAVRO, J.ml.: MECHANIKA I-Statika, Fakulta priemyselných technológií so sídlom v Púchove, TnUAD v Trenčíne, 2011
2. VAVRO, J.,TVARŮŽEK, J.: Statika – príklady, ŽU v Žiline 1996, ISBN 80-7100-381-6.
3. VAVRO, J., KOPECKÝ,M.: Nové prostriedky a metódy riešenia sústav telies I, ZUSI v Žiline 2001, ISBN 80-968605-0-X.
4. JANČINA, J., PEKÁREK,F.: Kinematika, Alfa Bratislava1987

Language: *Slovak*

Remarks: —

Evaluation history: /Grading system/

A	B	C	D	E	FX
Excellent	*Laudable*	*Good*	*Accepted results*	*Pass*	*Fail*

Lecturers: *prof. Ing. Ján Vavro, PhD., doc. Ing. Ján Vavro, PhD.*

Last modification: *31.03.2014*

Supervisor: *doc. Ing. Pavol Lizák, PhD.*