# Information sheet for the course Selected Chapters from Nanotechnologies and Nanomaterials

University: Alexander Dubček University of Trenčín

**Faculty:** Faculty of Industrial Technologies in Púchov

Course unit code: MI-I-PV-29 Course unit title: Selected Chapters from

Nanotechnologies and Nanomaterials

**Type of course unit:** *optional* 

Planned types, learning activities and teaching methods:

State Examination Subject; face to face

Number of credits: 2

**Recommended semester:** 4<sup>th</sup> semester in the 2<sup>nd</sup> year full-time

6<sup>th</sup> semester in the 3<sup>rd</sup> year part-time

**Degree of study:** the 2<sup>nd</sup> degree of study (Engineer's degree)

Course prerequisites: Completion of all compulsory and optional courses of the study plan,

including MI-I-P-18 Nanotechnologies and Nanomaterials.

**Assessment methods:** 

Successful completion of the state examination subject.

**Learning outcomes of the course unit:** 

Student will successfully complete the state examination subject.

#### **Course contents:**

- 1. Definition of nanomaterials, their development and perspective.
- 2. Types of nanomaterials.
- 3. Structures and ways of nanomaterials preparation.
- 4. -7. Technologies of nanomaterials preparation.
- 8.-10. Machines and equipment for preparation and processing of nanomaterials.
- 11. 13. Use and application of nanomaterials.

## **Recommended of required reading:**

Štaudner E.: Modifikácia polymérov. SVŠT Bratislava, 1981.

Kyselá G.: Modifikácia polymérov a kompozity (interný účebný text). FPT Púchov, 2002.

Rothon, R. N.: Particulate-Filled Polymer Composites, R. N. Rothon (Ed.), Longman Scientific, London, 1993.

Pinnavaia T.J.: Polymer-clay nanocomposites , 2000 John Wiley, New York, NY 10158-0012

Bhagwan D. Agarwal: Vlaknove kompozity. SNTL Praha (1987).

Language: Slovak

### Remarks:

### **Evaluation history**

Number of evaluated students: 0

A	В	С	D	Е	FX
0.0	0.0	0.0	0.0	0.0	0.0

Lecturers: prof. Ing. Ignác Capek, DrSc.

**Last modification:** 31.03.2014

Supervisor: prof. Ing. Darina Ondrušová, PhD.