Information sheet for the course Selected Chapters from Technology of Special Inorganic Materials

University: Alexander Dubček University of Trenčín

Faculty: Faculty of Industrial Technologies in Púchov

Course unit code MI-I-PV-38 Course unit title: Selected Chapters from

Technology of Special Inorganic Materials

Type of course unit: optional

Planned types, learning activities and teaching methods:

Course of state examination; face to face

Number of credits: 2

Recommended semester: 4th semester in the 2nd year full-time

6th semester in the 3rd year part-time

Degree of study: the 2nd degree of study (Engineer's degree)

Course prerequisites: Graduation of all compulsory and optional course units from study plan including the course of MI-I-PV-15B Technology of special inorganic materials

Assessment methods: Successful graduation of the state examination course.

Learning outcomes of the course unit:

During state examination, student has knowledge about patterns and principles of selected technology of special inorganic materials. Student has knowledge about the properties of given special materials and their utilization in the science as well as industry.

Course contents:

Definition of the special materials

Special technologies, small-scale technologies

Physical-chemical principles

Sol-gel technology

Glass-ceramics materials

Ionically conducting non-metallic materials

Inorganic-organic materials

Recommended of required reading:

MUCK, A.: Základy strukturní anorganické chemie. Praha: Academia, 2006.

RAO, N.R., MÜLLER, A., CHEETHAM, A.K.: The chemistry of nanomaterials., Vol. 1, 2.

Weinheim: Wiley-VCH, 2004.

BRINKER, C.J., SCHERER, G.W.: Sol-gel Science: The physics and chemistry of sol-gel

processing. Boston: Academic Press, 1990.

SWAIN, M.V. (Ed.): Structure and Properties of Ceramics, Vol. 11. In: Cahn, R.W., Haasen, P.,

Kramer, E.J. (Eds.): Materials Science and Technology: A Comprehensive Treatment.

Weinheim: Wiley-VCH, 2000.

Language: Slovak

Remarks: none

Evaluation history:

Number of students: 0

Number of students.						
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0.0	0.0	0.0	0.0	0.0	0.0	

Lecturers: prof. Ing. Eugen Jóna, DrSc., Ing. Jana Pagáčová, PhD.

Last modification: 31.03.2014

Supervisor: prof. Ing. Darina Ondrušová, PhD.