



COURSE DATASHEET

Semester:	2014/15/2
Course:	Properties of Nonmetallic Structural Materials Laboratory Practice
Code:	VEMKSIB433N
Responsible department:	Institute of Materials Engineering
Department code:	MKSI
Responsible instructor:	dr. Margit Eniszné Bódogh

Course objectives:

Application of the previously attained theoretical knowledge in the practice

Course content:

Testing of plasticity and drying sensitivity of raw materials. Chemical analyses of raw materials. Investigation of phase composition of ceramic raw materials and fired bodies by X-ray diffraction and derivatograph. Particle size distribution analyses of materials. Investigation of physical properties of dried and fired bodies. Investigation of morphology by electron microscope. Investigation of drying kinetics of ceramic materials. Rheological investigations. Determination of the optimum electrolyte content of casting slip. Qualification of gypsum binder materials. Measurement of specific surface, setting time and volume stability of cements. Measurement of heat conductivity. Measurement of thermal expansion of glasses. Colour measurement of glazes, colouring materials and enamels.

Requirements, evaluation and grading:

Successful paper from safety provisions

At least grade 2 end term paper

Accomplishing justified absence in an agreed occasion

One unjustified absence is the most

Evaluation of the laboratory practice: the final mark is the weighted mean value of the marks received for the practical tasks, the mid-term and the end-term paper. It is strictly required that the end-term paper and 50% of the practical tasks and the mid-term paper are at least grade 2.

Required and recommended readings:

Tamás F.: Szilvaterárium laboratóriumi vizsgálatok, Műszaki Könyvkiadó, Budapest, 1970; Riesz L.: Cement és mészgyártási kézikönyv, Műszaki Könyvkiadó, Budapest, 1989; Knapp O., Korányi Gy.: Üvegipari kézikönyv, Műszaki Könyvkiadó, Budapest, 1964; Somodi Zs., Pálffy A., Kámori L.: Finomkerámiaipari kézikönyv, Műszaki Könyvkiadó, Budapest, 1984;