



## COURSE DATASHEET

<b>Semester:</b>	2014/15/2
<b>Course:</b>	Raw and starting materials for ceramic, glass and cement industry
<b>Code:</b>	VEMKSIB213S
<b>Responsible department:</b>	Institute of Materials Engineering
<b>Department code:</b>	MKSI
<b>Responsible instructor:</b>	dr. Éva Makó Kristófné Dr.

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### Course objectives:

The objective is the survey of the raw and starting materials for ceramic, glass and cement industry, as well as their preparatory processes

### Course content:

Definitions. Characteristics of raw materials. Formation and basic minerals of igneous rocks. Formation and basic minerals of sedimentary rocks. Formation, and basic minerals of metamorphic rocks. Formation and industrial application of feldspars, micas, perlite and trass. Formation and industrial application of SiO<sub>2</sub> minerals. Structure, properties, and applications of clay minerals. Formation and industrial application of zeolites. Formation, minerals and applications of salt beds. Formation and applications of sulfate minerals (rocks). Formation and applications of carbonate minerals (rocks). Searching methods for raw materials. Physical properties of minerals. Preparatory processes of minerals. The raw and starting materials of cement industry and their preparatory processes. The raw and starting materials of structural ceramics and their preparatory processes. The raw and starting materials of whitewares and their preparatory processes. The raw and starting materials of refractories and their preparatory processes. The raw and starting materials of glass industry and their preparatory processes.

### Requirements, evaluation and grading:

Attendance of lectures

### Required and recommended readings:

Juhász A.Z.: Bevezetés a szilikátkémiába I. Veszprémi Egyetem, Veszprém, 1985. Tamás F.: Szilikátipari kézikönyv. Műszaki Könyvkiadó, Budapest, 1982. Jantsky B.: Ásványtelepeink földtana. Műszaki Könyvkiadó, Budapest, 1966. W. E. Worall.: Clays and ceramic raw materials. Elsevier applied science publishers Ltd., England, 1986