UNIVERSITY OF PANNONIA

COURSE DATASHEET

Semester:	2015/16/1
Course:	Technology of Ceramics and Binding Materials
Code:	VEMKSIB144G
Responsible department:	Institute of Materials Engineering
Department code:	MKSI
Responsible instructor:	dr. Tamás Korim

Course objectives:

Teaching ceramic- and cementitious materials, its technology, characteristic features and applications fields of products made

Course content:

The history of ceramics. Classification of ceramic materials; Raw materials for ceramics, considerations of their selection; Forming methods of ceramics (slip casting, throwing, jiggering, plastical pressing, turning, semi-dry pressing); Drying and firing: structural changes and product properties; Structural changes and product properties under the firing of ceramics; Driers and kilns: consideration of their selection; Ceramic glazes and colours, decoration techniques; "Classic" products of ceramic industry (brick, roofing tiles, stove tiles, majolica, faience, china); physical and chemical properties; The history of binding materials; Classification of binding materials; Non-hydraulic cementitious materials, their manufacture and applications (plaster, lime); Hydraulic cementitious materials, their manufacture and applications (portland cement, alumina cement); Effect of quality of raw materials on properties of the product; Determination of proper composition of a raw material mixture; Characterization and manufacture of cementitious materials (wet-, semi-dry-, dry technologies); Manufacture of concrete.

Requirements, evaluation and grading:

Required and recommended readings:

Somodi-Pálffy-Kámori: Finomkerámiaipari technológia, MK, 1984 Tamás Ferenc: Szilikátipari kézikönyv, MK, Budapest, 1982. Talabér József: Cementipari kézikönyv MK, Budapest, 1982 Déri Márta: Szilikátkémiai technológia, VE jegyzet