



COURSE DATASHEET

Semester:	2012/13/1
Course:	Advanced Glasses
Code:	VEMKSI4112U
Responsible department:	Institute of Materials Engineering
Department code:	MKSI
Responsible instructor:	dr. Kristóf Kovács

Course objectives:

Introduction technologies, properties, measuring methods and applications of advanced glasses

Course content:

Special processing technologies, sol-gel techniques Preparation of thin film coating on glasses Fluoride and calcogenide glasses for telecommunications systems Glasses with progressive refractivity, metallic glasses, laser glasses Production and properties of optical fibres Compounds and properties of photosensitive and photo chrome glasses The structure and properties of colored glasses Safety and noise protective glasses Sun and thermo protecting glasses Fire protecting glasses, liquid crystal glasses Conducting, semiconducting and reflection reducing coatings on glasses Bioactive glasses , bioactive glass-ceramics Phase separation, microporous glasses Utilization of container glass waste, flue-dust and slag Features and elimination of glass faults

Requirements, evaluation and grading:

Compulsory attendance of the lectures, grading is based on a written examination

Required and recommended readings:

Fanderlik: Optical Properties of Glasses, Elsevier Amsterdam 1983 H. K. Pulker: Coatings on Glass, Elsevier Amsterdam 1984 Z. Strnad: Glass-ceramic Materials, Elsevier Amsterdam 1986 F. V. Tooley: The Handbook of Glass Manufacture, Ashlee Publ. Co. Inc. New York 1984 M. B. Volf: Technical Approach to Glass, Elsevier Amsterdam 1990