

Course title: Technology of glass – selectable

Number of contact hours: 15 hours

ETCS credits: 1

Course description:

The lecture reviews the technology of glass production and raw materials used in the process (glass batch, depending on the role played in the melting process). Preparation of glass consisting of weighed and mixed dried and shredded raw materials will be discussed. Components with special properties, such as soda will be reviewed. The chemical and physical properties of melting glass will be given. Formation of desired shape of glass will be provided. Types of glasses based on chemical composition and application will be discussed.

Education effects (P7S_UW, , P7S_WG):

- **knowledge:** student knows technologies of glass preparation; knows types of batch mixtures and their influence on physicochemical properties of glass; knows methods of glass etching
- **skills:** student can select the proper batch composition depending on desired properties of glass; can etching the surface of glass using chemical and physical methods
- **social:** student is able to work independently and in the group at preparing basic reports on influence of composition of batch and etching mixtures on glass properties

Literature:

1. R. Persson, Flat glass technology, 2013,
Springer-Verlag New York Inc.
2. Zschimmer **Chemical Technology of Glass, 2013**
3. Frederick T. Wallenberger, Paul A. Bingham, Fiberglass and Glass Technology, 2010, Springer

Assessment method: Final test, attendance and active participation in conversations

Prerequisites: Basic knowledge in chemical technology and engineering

Primary target group: All specialties students

Lecturer: dr hab. inż. Marcin Banach, prof. PK, dr inż. A. Staroń, Contact person: dr hab. inż. Marcin Banach, prof. PK, e-mail: marcinbanach@chemia.pk.edu.pl