

Course title: **Bioceramics**
Institute/Division: Institute of Materials Engineering, Faculty of Materials Engineering and Physics
Number of contact hours: 30 hours
Course duration: 1 semester
ECTS credits: 6

Course description:

This course gives the knowledge of basic properties of ceramics, including biocompatibility and bio-functionality, information about basic methods of testing bioceramics material and various applications of ceramic materials in the medical field.

Topics covered include:

- Fundamentals of bio-ceramics
- Ceramics as biomaterials
- Biominerals and mineralized tissues
- Biostable ceramics
- Bioactive ceramics
- Composites based on ceramic matrix
- Bioactive coatings
- Applications

Literature:

- LL Hench, 2013, An Introduction to Bioceramics: Second Edition, World Scientific Publishing Company
- I.V. Antoniac (ed.), 2016, Handbook of Bioceramics and Biocomposites, Springer

Course type: Lectures (30 hours)
Assessment method: Attendance, activity, oral presentation, oral exam
Prerequisites: At least one college level math, physics and chemistry course
Primary target group: Majors in Materials Engineering
Lecturer: Kinga Korniejenko, PhD
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