



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Metalic foams - technology, properties and application [S1FT2>PMTWWiZ]

Course

Field of study Technical Physics	Year/Semester 3/6
Area of study (specialization) –	Profile of study general academic
Level of study first-cycle	Course offered in Polish
Form of study full-time	Requirements elective

Number of hours

Lecture 30	Laboratory classes 0	Other 0
Tutorials 0	Projects/seminars 0	

Number of credit points

2,00

Coordinators

Lecturers

Prerequisites

Basic knowledge of materials science. The ability to solve simple material problems based on the acquired knowledge, the ability to obtain information from indicated sources. Understanding the need to expand your competences.

Course objective

Provide students with knowledge about metalic foams, production technologies, properties and application

Course-related learning outcomes

Knowledge:

As a result of the conducted classes, the student:

1. Has knowledge of selected areas of chemistry, necessary to understand basic physicochemical and technological processes
2. Knows and understands the basics of mechanical engineering, strength of materials and basic principles of engineering structures.

Skills:

As a result of the course, the student should demonstrate skills in the following areas (the student will be able to):

1. can select materials with appropriate physicochemical and design properties for laboratory and engineering applications
2. is able to obtain information from literature, databases and other sources, interpret them and draw conclusions, formulate and justify opinions

Social competences:

As a result of the course, the student will acquire the competences listed below. Completing the course means that:

1. can work independently and in a team on a given task, shows responsibility in this work

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Credit based on a discussion conducted during classes, students' activity in discussions and solving tasks in a group

Programme content

Metallic foams in biomaterial applications as well as a construction material, sandwich systems, technologies for the production of metallic foams, blowing agents, sintering, open / closed porosity,

Course topics

Metallic foams in biomaterial applications as well as a construction material, sandwich systems, technologies for the production of metallic foams, blowing agents, sintering, open / closed porosity,

Teaching methods

Lecture: multimedia presentation, illustrated with examples given on the board.

Bibliography

Basic:

1. JCR publications provided by the teacher during the class

Additional:

1. JCR publications provided by the teacher during the class

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00