



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Metallic glass

Course

Field of study

Materials Science

Area of study (specialization)

Nanomaterials

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

1/2

Profile of study

general academic

Course offered in

polish

Requirements

elective

Number of hours

Lecture

15

Laboratory classes

15

Other (e.g. online)

Tutorials

Projects/seminars

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

dr inż. Grzegorz Adamek

Responsible for the course/lecturer:

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Wydział Inżynierii Materiałowej i Fizyki

Technicznej

ul. Piotrowo 3, 60-965 Poznań

Prerequisites

Knowledge: basic in chemistry, physics, materials science

Skills: logical thinking, using information obtained from the library and the Internet

Social competences: understanding the need to learn and acquire new knowledge

Course objective

1. To provide students with basic knowledge of metallic glasses, within the scope defined by the content of the curriculum appropriate for the field of study



2. Developing students' skills in solving simple problems related to the selection of metallic glasses, distinguishing based on the acquired knowledge

3. Shaping students' teamwork skills

Course-related learning outcomes

Knowledge

1. Student should characterize metallic glasses - [K_W04, K_W10]
2. The student should characterize the basic processes of producing metallic glasses - [K_W08]

Skills

1. The student is able to choose metallic glasses depending on the application - [K_U01, K_U13]
2. The student is able to propose the use of metallic glasses - [K_U01, K_U13]
3. The student is able to carry out tests of metallic glasses - [K_U08, K_U09, K_U10]

Social competences

1. The student is able to work in a group - [K_K03]
2. The student is aware of the role of metallic glasses in the modern economy and for society - [K_K02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Pass on the basis of a test consisting of 5 general questions (pass if the correct answer to at least 3 questions: <3? Ndst, 3? Dst, 3.5? Dst +, 4? Db, 4.5? Db +, 5? ? bdb) carried out at the end of the semester.

Laboratory exercises: Assessment based on an oral or written answer regarding the content of each project, a report on each project according to the instructions of the teacher. To be passed, all projects must be passed (positive grade from the answer and the project).

Programme content

Lecture: Pass on the basis of a test consisting of 5 general questions (pass if the correct answer to at least 3 questions: <3? Ndst, 3? Dst, 3.5? Dst +, 4? Db, 4.5? Db +, 5? ? bdb) carried out at the end of the semester.

Laboratory exercises: Assessment based on an oral or written answer regarding the content of each project, a report on each project according to the instructions of the teacher. To be passed, all projects must be passed (positive grade from the answer and the project).

Teaching methods

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



2. Laboratory exercises: practical exercises, discussion and preparation of the results in the form of a report, formulation of conclusions concerning the issues raised during the classes, case studies.

Bibliography

Basic

1. K. Sudzuki, Amorfnyje metally, Metallurgia, Moskwa 1987

Additional

1. Czasopisma naukowe Inżynieria materiałowa, Journal of Non-Crystalline Solids

Breakdown of average student's workload

	Hours	ECTS
Total workload	68	2,0
Classes requiring direct contact with the teacher	33	1,0
Student's own work (literature studies, preparation for laboratory classes, preparation for colloquium) ¹	35	1,0

¹ delete or add other activities as appropriate