



COURSE DESCRIPTION CARD - SYLLABUS

Course name

DESCRIPTIVE GEOMETRY WITH ELEMENTS OF MATHEMATICS 2

Course

Field of study

ARCHITECTURE

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

I/2

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

Number of hours

Lecture

15

Tutorials

30

Laboratory classes

0

Projects/seminars

0

Other (e.g. online)

0

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

dr Jacek Gruszka

Institute of Mathematics

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Responsible for the course/lecturer:

dr Jacek Gruszka

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Prerequisites

Knowledge of algebraic conversions, basic concepts and geometrical dependences on secondary school level. Knowledge and application of basic geometrical structures. Knowledge of limitations of own knowledge and understand the need for further education.

Course objective

The ability to geometrical mapping and transformation of objects in space onto two-dimensional plane; learning restitution methods; understanding record drawings.

Course-related learning outcomes

Knowledge

B.W4. mathematics, space geometry, statics, material strength, shaping, construction and dimensioning of structures, to the extent necessary to formulate and solve tasks in the field of architectural and urban design;

Skills

B.U4. develop solutions for individual building systems and elements in terms of technology, construction and materials;

Social competences

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:

- 3 Tests per term, evaluation in points: 0-20 points.
- Homework – 2x project in A3 format, essential quite correct, there is assessed the quality of work, evaluation in points: 5-10 points.

Final grading scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0

Summative assessment:

- Written exam.

Final grading scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0

Positive grade for module depends on achieved by student all learning outcomes specified in the syllabus.

Programme content

- Section through the surface (cone)



- Intersection the surface (method of managerial planes)
- Intersection the surface (method of clipping planes)
- Shadows to the surface and interior
- Shadows to the inside of vaults
- Direct perspective, scales of confluence, shadows in parallel illumination to the background
- Intermediate perspective, measuring points, points of partial measuring. Cone perspective
- Shadows in perspectives, shadows to interior
- Front perspective, perspective of a circle
- Perspective of mirror reflections

Teaching methods

1. Problem lecture with multimedial presentation.
2. Classes - classical problem method.

Bibliography

Basic

1. W. Jankowski, Geometria wykreślna Wydawnictwo Politechniki Poznańskiej, Poznań 1993 ,
2. B. Grochowski, Geometria wykreślna z perspektywą stosowaną Wydawnictwo Naukowe PWN, Warszawa 1999

Additional

1. Otto F., Otto E., Podręcznik geometrii wykreślnej, PWN, Warszawa 1979
2. Korczak J., Prętki Cz., Przekroje i rozwinięcia powierzchni walcowych i stożkowych, Wydawnictwo PP, Poznań 1993
3. Bartel K., Perspektywa malarska tom 1, PWN, Warszawa 1955



Breakdown of average student's workload

	Hours	ECTS
Total workload	93	3,0
Classes requiring direct contact with the teacher	53	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	40	2,0

¹ delete or add other activities as appropriate