	COUF	RSE DESCRIP	TION CARD	
	rse/module E GEOMETRY WITH EL E GEOMETRY WITH EL			Code A_P_1.2_006
Main field of study  ARCHITECTU	JRE		Educational profile (general academic, practical) general academic	Year / term
Specjalization	-		Language of course: <b>Polish</b>	Course (core, elective)
Hours Lectures: <b>15</b>	01000001 = = ===	boratory -	Projects / seminars: -	Number of points 3
Level of qualification:	Form of studies (full-time studies/part-time studies)	Education area(s)		ECTS division (number and %)
I	Full-time studies and part-time studies		iences	100%

**Basic** 

Lecturer responsible for the course:

## dr Jacek Gruszka

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tel: 665-23 20

# Lecturer:

### dr Jacek Gruszka

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# Prerequisites defined in terms of knowledge, skills, social competences:

1	Knowledge:	Knowledge of algebraic conversions, basic concepts and geometrical dependences on secondary school level and knowledge of descriptive geometry acquired in first semester.
2	Skills:	Knowledge and application of basic geometrical structures and all skills acquired in first semester.
3	Social Competences	Knowledge of limitations of own knowledge and understand the need for further education.

## Objectives of the course:

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

	Learning outcomes			
Knowledge:				
W01	Student has knowledge of parallel projections in particular of orthographic projection and its properties;	AU1_W07 AU1_W08		
W02	Student has knowledge of basic structures of descriptive geometry and principles of perspective;	AU1_W07 AU1_W08		
W03	Student has knowledge of restitution methods and measuring methods in perspective;	AU1_W07 AU1_W08		
W04	Student has knowledge of types of illumination and related to them structures of shadow to interiors as well as shadows in perspective;	AU1_W07 AU1_W08		
W05	Student has knowledge of types of conics and them structures as well as using them to plane construction, application of theorem about disintegration of penetration lines in constructions of shadows in orthogonal projections and in perspective.	AU1_W07 AU1_W08		

Skills:		
U01	Student is able to solve task related to designation of penetration lines of surface;	AU1_U06
U02	Student is able to draught solid perspective and its shadows;	AU1_U06
U03	Student is able to draught perspective of architectural detail with proper arrangement.	AU1_U07
Social	competences:	
K01	Student can work over a set task independently;	AU1_K01
K02	Student understands the need of continuous self-education.	AU1_K03

#### The evaluation methods

#### Formative assessment:

- 3 Tests per term, evaluation in points: 0-20 points.
- Homework 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:

- Credit of classes based on mentioned above documented knowledge and skills.
- Exam (2,5 h) preparation of architectural detail perspective, assignation of shadows, arrangement. 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.

#### Course contents

- Section through the surface (cone)
- Penetrate the surface (method of managerial planes)
- Penetrate 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 inside
- Front perspective, perspective of a circle
- Perspective of mirror reflections

## Basic bibliography:

- W. Jankowski, Geometria wykreślna Wydawnictwo Politechniki Poznańskiej, Poznań 1993 (i późniejsze),
- 2. B. Grochowski, *Geometria wykreślna z perspektywą stosowaną* Wydawnictwo Naukowe PWN, Warszawa 1999 (i późniejsze),

# Supplementary bibliography:

- 1. Otto F., Otto E., Podrecznik geometrii wykreślnei, PWN, Warszawa 1979 (i późniejsze)
- 2. Korczak J., Prętki Cz., *Przekroje i rozwinięcia powierzchni walcowych i stożkowych*, Wydawnictwo PP, Poznań 1993 (i późniejsze)
- 3. Bartel K., Perspektywa malarska tom 1, PWN, Warszawa 1955

## The student workload

Form of activity	Hours	ECTS
Overall expenditure	75	3
Classes requiring an individual contact with teacher	50	2
Practical classes	50	-

Form of activity	Number of hours
participation in lectures	15 h
participation in classes/ laboratory classes (projects)	30 h
preparation for classes/ laboratory classes	5 h
preparation to colloquium/final review	15 h
participation in consultation related to realization of learning process	-
preparation to the exam	7,5
attendance at exam	2,5

75 h

Overall expenditure of student: 3 ECTS credits

As part of this specified student workload:

• activities that require direct participation of teachers:

2 ECTS credits