STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Descriptive Geometry		**1010101111010340005**
Field of study	Profile of study (general academic, practical)	Year /Semester
Civil Engineering First-cycle Studies	**(brak)**	**1 / 1**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**obligatory**
Cycle of study:	Form of study (full-time,part-time)	
First-cycle studies	**full-time**	
No. of hours		No. of credits
Lecture: **30** Classes: **15** Laboratory: **-** Project/seminars: **-**		**4**
Status of the course in the study program (Basic, major, other)	(university-wide, from another field)	
(brak)	**(brak)**	
Education areas and fields of science and art		ECTS distribution (number and %)

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge of geometry.
2	**Skills**	Ability to use a pencil, compass, triangle and ruler.
3	**Social competencies**	Focus on increased knowledge and new skills in order to more fully participate in professional and social life.

Assumptions and objectives of the course:

Developing spatial imagination and transfer rules mapping of spatial objects in the plane, allowing the recording and reproduction of the actual shapes and sizes of these objects. Understanding the principles of projection and projection aksonometrycznego rectangular (Monge's projection).

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Students define and characterize the basic geometric objects. - [K_W01]
2. They recognize their relationship - [K_W01]
3. They Know the rules for mapping methods: Monge projection, axonometric projection. - [K_W01]

Skills:

1. Students know how to use the mapping method to produce three-dimensional space on a plane. - [K_U02, K_U02]
2. They can determine the position of elements in space. - [K_U02, K_U02]
3. They can draw lines cross the basic solids and surfaces. - [K_U01, K_U07]

Social competencies:

1. The student is aware of the importance of technical drawing as a way to communicate relevant technical sciences. - [K_K07]

Assessment methods of study outcomes

-two colloquiums (2x30 pts),
-two homeworks (2x10 pts).

points:mark
72-80 : 5,0
65-72 : 4,5
57-64 : 4,0
49-56 : 3,5
41-48 : 3,0
-40 : 2,0

Course description

Update 2018/2019:

Monge's projection.
Elements belonging and shared.
Flat roofs.
Viewport transformation.
Turnover and examples.
Sections and develop lumps.
Axonometric view.
Sections and develop the cone and the cylinder.
The vaults.

Applied methods of education.
Lecture:
1. Interactive lecture with formulationquestions to a group of studentsor to specific students indicated.
2. Theory presented in connection with current knowledge students.
3. The activity of the students is taken into account during the classes when giving a final grade.

Practical lessons:
1. Solving example tasks on the board.
2. Detailed review of task solutions and discussions on comments.
3. Initiate discussion on solutions.

Basic bibliography:

1. W. Jankowski, Geometria wykreślna, Wydawnictwo Politechniki Poznańskiej, 1999
2. J. Korczak, Cz. Prętki, Przekroje i rozwinięcia powierzchni walcowych i stożkowych, Wydawnictwo Politechniki Poznańskiej, 2007
3. B. Grochowski, Geometria wykreślna z perspektywą stosowaną, Wydawnictwo Naukowe PWN, 2010

Additional bibliography:

1. F. Otto, Zbiór zadań z geometrii wykreślnej, PWN, Warszawa 1963.
2. Z. Lewandowski, Geometria wykreślna, PWN, Warszawa 1977

Result of average student's workload

Activity	Time (working hours)
1. Preparing for classes	10
2. Preparing for written tests	20
3. Preparing to homeworks	20

Student's workload

Source of workload	hours	ECTS
Total workload	100	4
Contact hours	50	2
Practical activities	50	2