

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Descriptive Geometry		Code 1010104111010340005
Field of study Civil Engineering First-cycle Studies	Profile of study (general academic, practical) general academic	Year /Semester 1 / 1
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) part-time	
No. of hours Lecture: 20 Classes: 12 Laboratory: - Project/seminars: -		No. of credits 4
Status of the course in the study program (Basic, major, other) basic		(university-wide, from another field) university-wide
Education areas and fields of science and art technical sciences		ECTS distribution (number and %) 4 100%
Responsible for subject / lecturer: dr Piotr Rejmenciak email: piotr.rejmenciak@put.poznan.pl tel. 61665-2320 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
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 (2x20 pts), -two homeworks (2x10 pts). points:mark 55-60 : 5,0 49-54 : 4,5 43-48 : 4,0 37-42 : 3,5 31-36 : 3,0 -30 : 2,0		
Course description		
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.		
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	0	0