

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) (brak)	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 3
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art		ECTS distribution (number and %)
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		

<p>-two colloquiums (2x30 pts), -two homeworks (2x10 pts).</p> <p>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</p>		
Course description		
<p>Update 2018/2019:</p> <p>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.</p> <p>Applied methods of education. Lecture:</p> <ol style="list-style-type: none"> 1. Interactive lecture with formulation questions to a group of students or 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. <p>Practical lessons:</p> <ol style="list-style-type: none"> 1. Solving example tasks on the board. 2. Detailed review of task solutions and discussions on comments. 3. Initiate discussion on solutions. 		
<p>Basic bibliography:</p> <ol style="list-style-type: none"> 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 		
<p>Additional bibliography:</p> <ol style="list-style-type: none"> 1. F. Otto, Zbiór zadań z geometrii wykreślniej, 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	60	3
Contact hours	40	2
Practical activities	20	1

