

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Descriptive Geometry</b>		Code <b>1010104111010340005</b>
Field of study <b>Civil Engineering First-cycle Studies</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>1 / 1</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>part-time</b>	
No. of hours Lecture: <b>20</b> Classes: <b>12</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>4</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art		ECTS distribution (number and %)
<b>Responsible for subject / lecturer:</b>  dr Piotr Rejmenciak email: piotr.rejmenciak@put.poznan.pl tel. 61665-2320 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Basic knowledge of geometry.
2	<b>Skills</b>	Ability to use a pencil, compass, triangle and ruler.
3	<b>Social competencies</b>	Focus on increased knowledge and new skills in order to more fully participate in professional and social life.
<b>Assumptions and objectives of the course:</b> 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).		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
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]		
<b>Skills:</b>		
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]		
<b>Social competencies:</b>		
1. The student is aware of the importance of technical drawing as a way to communicate relevant technical sciences. - [K_K07]		
<b>Assessment methods of study outcomes</b>		

<p>-two colloquiums (2x20 pts),                  -two homeworks (2x10 pts).</p> <p>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</p>		
<b>Course description</b>		
<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>		
<b>Basic bibliography:</b>		
<p>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>		
<b>Additional bibliography:</b>		
<p>1. F. Otto, Zbiór zadań z geometrii wykreślnej, PWN, Warszawa 1963.                  2. Z. Lewandowski, Geometria wykreślna, PWN, Warszawa 1977</p>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. Preparing for classes	10	
2. Preparing for written tests	20	
3. Preparing to homeworks	20	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	100	4
Contact hours	50	2
Practical activities	0	0