



Subject card

Subject name and code	Descriptive geometry, PG_00072036						
Field of study	Architecture						
Date of commencement of studies	October 2026		Academic year of realisation of subject			2026/2027	
Education level	first-cycle studies		Subject group			Obligatory subject group in the field of study	
Mode of study	Full-time studies		Mode of delivery			blended-learning	
Year of study	1		Language of instruction			Polish	
Semester of study	1		ECTS credits			4.0	
Learning profile	general academic profile		Assessment form			assessment	
Conducting unit	Department of Visual Arts -> Faculty of Architecture -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		mgr inż. arch. Michał Malewczyk				
	Teachers		dr inż. arch. Anna Wanclaw				
			mgr inż. arch. Michał Malewczyk				
			mgr inż. arch. Barbara Chomicka				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	30.0	0.0	45
	E-learning hours included: 30.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	45		5.0		50.0	100
Subject objectives	Developing the ability to read projections and present space in a 2D drawing efficiently. Acquiring the ability to use axonometric and construction drawing efficiently to the extent necessary to formulate and solve tasks in the area of architectural and urban design;						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K6_U01] is able to use the experience gained during studies to critically analyze the conditions and formulate conclusions for design in an interdisciplinary context		is able to use theoretical knowledge of the subject in order to critically analyze conditions and formulate conclusions to solve spatial problems			[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject	
	[K6_U03] is able to prepare a graphic, written and oral presentation of your own design concepts in the field of architecture and urban planning, meeting the requirements of a professional record appropriate for architectural and urban design		Can prepare graphic presentations and present the results of their work in an attractive manner. Demonstrates manual dexterity in precise linear drawing.			[SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task	
	[K6_U04] is able to use analytical methods to formulate and solve project tasks		He can use various methods of space mapping to solve simple spatial problems. He can present the effects of work in an attractive way. Has manual skills in the precise execution of linear drawings.			[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject	

Subject contents	Course content – lecture 1 Introduction to the subject, historical outline, importance of the subject, projection 2 Rectangular and diagonal axonometry, principles of formation, construction of shortenings 3 Projections Mongea rules, specific position of elements, transformation 4 Belonging, parallelism, perpendicularity 5 Insertion points, interference of planes, interference of projection planes, viewports, oblique planes, interference of planes with viewports, interference of oblique planes 6 Cross-sections of solids, cross-sections with projecting planes, viewports, using plane traces, intentional transformation, alignment and affinity relationships 7 Interference of polyhedra: interference of two cuboids, pyramids, a cuboid with a pyramid 8 Shadows: own shadows, on the viewport, mutual shadows 9 Gauge projection, introduction to the method, basic issues, insertion points, interpenetration of planes 10 Roof geometry - traditional roofs, sunken roofs, floors, chimneys and towers, edge, linear and point drainage 11 Cross-sections and views of roofs 12 Design of hardening in the projection of features. 13 Terrain transformations in the projection of features 14 Field reservoirs in the feature plan. 15 Material summary
	Course content – project 1 Introduction to classes 2 Sheet 1 oblique axonometry and rectangular structure of the polyhedron 3 4 Sheet 2 rectangular axonometry, construction of a polyhedron using the construction of contractions, Mongea transformations 5 Sheet 3 axonometrics - affiliation, parallel task using lateral projections 6 Sheet 4 axonometry, Mongea projections, penetration, construction of the penetration of two planes 7 Test 1 construction of polyhedra, transformations, affiliation, parallelism, perpendicularity, puncture points 8 9 Sheet 5 axonometry, Mongea projections, cross-sections, checking by purposeful transformation and alignment or affinity 10 11 Sheet 6 axonometrics penetration of solids task using side projections

	12 13 14 Sheet 7 axonometry, projections Mongea shadows solution of the task using two methods		
	15 Test 2 cross-sections and interpenetration of polyhedra, shadows		
Prerequisites and co-requisites	brak		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Quality of drawings from Descriptive Geometry	100.0%	50.0%
	Aquiring minimum points form Descriptive Geometry reviews	51.0%	50.0%
Recommended reading	Basic literature	Błach A., <i>Inżynierska geometria wykreślna</i> , Gliwice 2002	
		Górska R., <i>Geometria wykreślna</i> , Kraków 2015	
	Supplementary literature	Grochowski B., <i>Geometria wykreślna z perspektywą stosowaną</i> , PWN 2018	
		Otto F.E., <i>Geometria wykreślna</i> , PWN 1977	
	eResources addresses		
Example issues/ example questions/ tasks being completed	1. Construct the intersection of polyherdra and plane		
	2. Construct the line of intersection of two given polyhedra		
	3. In axonometry defined by axes x, y, z contruct a polyhedron and its own shadow and the shadow cast on the planes of projection		
Practical activites within the subject	Not applicable		

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