

### BASIC INFORMATION

LECTURER	Prof. Attila BÖLCSKEI PhD	
TOPIC	Overview: Projections and their properties. Monge projection. Orthogonal and oblique axonometric projections. The perspective. Shadow constructions. Introduction to representation with elevations: lines, planes, mutual position. Metric problems. Topological surfaces, notions of important elements. Construction of terrains and different fieldworks.	
LECTURE (WEEKLY)	1 x 1 hours (45' min)	6 credits
CONSULTATION (WEEKLY)	1 x 2 hours (90' min)	
EXAM /TESTS /TASK	1/1/4	

### OUTLINE FOR THE SEMESTER

	LECTURE	CONSULTATION	DEADLINE
1	Classification and properties of projection systems	Monge projection – objects from different viewpoints	
2	Orthogonal and oblique axonometric projections	Axonometric view of polyhedral bodies (houses).	
3	Projection of a circle in different systems	Curved surfaces in Monge and axonometric projections.	1. task
4	The perspective system.	Houses and inner spaces in perspective.	
5	Theory of shadow construction	Shadow construction of some objects	
6	Midterm Test	Midterm Test	2. task
7	Introduction into projection with elevations.	Planes, lines and their mutual position.	
8	Incidence, intersection.	Metric problems: rotation, determine the real distance and angle.	
9	Topographic surfaces.	Contour lines, saddle, bergstrichs, profile and their construction.	3. task
10	Intersection of surfaces.	Surfaces of constant slope and their construction.	
11	Construction of a horizontal site on an ideal terrain I.	Construction of a horizontal site on an ideal terrain II.	
12	Construction of a straight roadbed on a general terrain I.	Construction of a straight roadbed on a general terrain II.	
13	Construction of curved road and curves of transition I.	Construction of curved road and curves of transition II.	4. task

### TASK / EXAM

	DESCRIPTION	TO HAND IN	SCORE
1. task	Representation of a building in Monge/axonometry	3. week	10
2. task	Shadow construction of a structure of complex shape.	6. week	10
3. task	Problems: intersection and determine metric in projection with elevations	9. week	10
4. task	Construction of a fieldwork	13. week	10
TEST	3 problems for 135 minutes: objects with shadow in different projection systems		40
EXAM	3 problems for 135 minutes: projection with elevations		40
TOTAL			<b>120</b>

### EVALUATING

0-54 points	55-74 points	75-94 points	95-104 points	105-120 points
<b>1 - FAILED</b>	<b>2 - SUFFICIENT</b>	<b>3 - SATISFACTORY</b>	<b>4 - GOOD</b>	<b>5 - EXCELLENT</b>