

General Information:

Name of Course:

Descriptive Geometry 2.

Course Code:

EPE133ANEA

Semester:

2nd

Number of Credits:

4

Allotment of Hours per Week:

2 Lecture and 2 Practical Lessons /Week

Evaluation:

Exam

Prerequisites:

-

Responsible lecturer:

Erika VÖRÖS, assistant professor

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General Subject Description

This lecture and practical based course aims to develop the skills of architecture students regarding the following topics, in frame of descriptive geometry: Application of imagery methods used in architecture and by related branches of building industry and civil engineering, internalizing of switching among these in frame of the descriptive geometry. Detection and application of relation of sizes regarding projected elements by use of geometrical constructions and imagery.

The studied imagery methods of this course are bases of the conventional axonometric projections, central projection like central axial collineation, orthogonal projections like Monge-system and multi view orthographic projection as well as bases of the contour map system.

Learning Outcomes

The course will focus on architectural drawing types, like Monge-system, axonometric views and the connection of these projection types. Students have to learn the rules of technical drawing, understand the spatial objects based on these drawings and be able to apply their knowledge in architectural framework.

Subject content

Students are required to complete homework, 2 presentations and 1 midterm task. Students have to participate on classes. They learn the theoretical bases on lecture, create drawings and consult about their midterm task on the practical lessons. The participation on the lectures and practices is necessary to pass the course.

Examination and evaluation system

In all cases. Annex 5 of the Statutes of the University of Pécs, the Code of Studies and Examinations (CSE) of the University of Pécs shall prevail. <https://english.mik.pte.hu/codes-and-regulations>

Requirements in study period:

The effective and active participation on the classes is obligatory. The maximum amount of the missed practical classes is 3 per semester due to the Study and Examination Regulations.

The exercises and scores of the semester:

Mid-term presentation:	30 points
Final presentation:	60 points
Attitude:	10 points
(Bonus:	10 points)

Mid-term task:

Presentation: maximum 30 points

Retake maximum: 25 points

Instruction:

Concept sketches

Site plan *1 M 1:200

Floor plans *min 2 M 1:200

Physical model of massing and surroundings M 1:200

Format: Sketch paper cut into A4 size, landscape layout

Final presentation:

Presentation: maximum 60 points

Retake maximum: 50 points

Instruction (minimal requirement):

Site plan *1 M1:200

Floor plans *min. 2 M 1:200

Sections *min.2 M 1:200

Elevations *4 M 1:200

3D view * 4 different axonometric projections M 1:200

Physical model with nice details M1:200

Format: 2-3 mm paper board covering

Sketch paper for drawings

Normal A4 paper for back-ups

Landscape layout and left side binding

Attitude:

Maximum 10 points based on students' participation on classes.

Bonus:

Maximum 10 points based on students' weekly work.

Grading Scale for the offered grade:

Numeric Grade:	5	4	3	2	1
	A, excellent	B, good	C, average	D, satisfactory	F, Fail
Evaluation in points:	85%-100%	71%-84%	60%-70%	50%-59%	0-49%

Requirements in exam period:

If the student fulfills every requirement in the study period, and accepts the offered grade they have no other task in the semester.

If a student does not fulfill the tasks during the semester they have one opportunity to replace it in the 15th week.

Readings and Reference Materials

Minor Clyde Hawk, Schaum's Outline of Theory and Problems of Descriptive Geometry
Julia McMorrough, Drawing for Architects
Francis D. K. Ching, Architecture – Form, Space and Order
Philip Jodidio: Architecture Now! 2001 Taschen
Schittich, C.2000. Single family houses: concepts, planning, construction Basel: Birkhauser
Janáky, I. 1999. A hely. Budapest: Műszaki kiadó
Le Corbusier, C.1981. Újépítészettel. Budapest: Corvina
Gausa, M. 2001. Szabadonállós családiház: a magánélettere. Budapest Terc
dr. Reischl Antal: Lakóépületek tervezése, Budapest 1976 Tankönyvkiadó
Ernst Neufert; Építés- és tervezéstan, Budapest Pécs 1999. Dialóg Campus Kiadó
Bitó János: Lakóházak tervezése, Lap- és Könyvkiadó kft 2004 [html] [pdf] [epub]
Könyv az építésről-A tervezés gyakorlata I. Pécs 1998 Pécsi Tanoda Alapítvány
Philip Jodidio: Architecture Now! 2001 Taschen
Schittich, C.2000. Single family houses: concepts, planning, construction Basel: Birkhauser
Julia McMorrough: Drawing for Architects
Antony Radford : A modern építészet elemei
BIG: yes is more
Ching, F. (1996). Architecture: form, space, & order (2nd ed). New York: Van Nostrand Reinhold
Julius Panero, Martin Zelnick (1979) Human Dimension and Interior Space: A Source Book of Design
Reference Standards ISBN 0823072711. Watson-Guptill
Francis D. K. Ching (2002) Architectural Graphics Fourth (4th) Edition. JOHN WILEY & SONS, INC.

<https://www.archdaily.com/>
<https://www.designboom.com/architecture>
<https://www.dezeen.com/architecture/>
<https://www.domusweb.it/en/architecture.html>
<https://divisare.com/>

Methodology

The course is based on lectures and practical lessons. The students have to solve tasks on the practice on their own.

Task introduction:

GRID TASK:

On a predefined, fictitious design site, a composition with a given size and number of masses is to be designed so that the building mass reacts to the given natural site without compromise. The ideal, conscious form between the masses and the spaces bounded by the masses must be found. The form created must respond to the given natural effect (forest, water, wind)

The function: camping accommodation for a family of 4.

As the function is camping accommodation, there does not need to be a closed space connection between the main functions. (e.g.: there is no need for a closed space from the bedrooms to the living room)

The mass composition consists of about 4-6 masses. Cohesion between masses is important, i.e. the organisation of the courtyard between masses.

The functions:

- Living room
- Kitchen dining room
- Parents' bedroom and bathroom
- Bedroom for 2 children and bathroom
- Stairs
- Terrace
- Hobby and more

The site has a 1.5 * 1.5 m grid. There is no exit from this grid. Trees placed on the site may not be felled, so no masses may touch their trunks. Masses may be placed on the water surface of the site where justified.

Mass compositions must be made up of small elements (1.5m*1.5m*1.5m) and large elements (3m*3m*3m).

Any number of small elements can be used, but the size of one must always be 1.5m.

Use of large elements for large functions (living room, kitchen, dining room, bedroom)

Use of small elements for small functions (bathroom, storage, staircase if enclosed, walkway if enclosed, fence)

It is recommended to use 6 to 10 large elements and a maximum of 3 can be assembled into a single mass on one level.

Small elements can be used to vertically increase the height of large elements (4.5m height)

All compositions must have an upper level.

An important part of the task is to furnish the floor plans.

An important part of the composition is to determine the material of the masses, which is coherent with the natural influence (water, forest, wind). (maximum 2 materials). Use of materials per mass.

Structural thicknesses:

- wall: 30cm
- slab: 30cm
- covering: 30 cm

Schedule

Classes in the semester 2021/2022. II:				
Code	Teacher	Day/time	Place	Note
Lecture	Tianyu Zhao	Monday 11:15-12:45	A302	
Practice 1	Tianyu Zhao	Tuesday 11:15-12:45	A215	
Practice 2	Tianyu Zhao	Tuesday 13:15-14:45	A215	
Practice 3	Noémi Kókai	Tuesday 11:15-12:45	A306	
Practice 4	Hajnalka Juhász	Tuesday 13:15-14:45	A306	

Schedule of the semester		
week	LECTURE	PRACTICE
1.	/	Introduction of the semester task
2.	Lecture	Consultation
3.	/	Consultation
4.	Lecture of conceptual design	Consultation
5.		Consultation
6.	NATIONAL HOLIDAY	
7.	/	Consultation
8.	MID-TERM presentation (Tuesday)	

9.	/	Consultation and retake of the mid-term (max: 25)
10.	Graphic technique and axonometric projection	Consultation
11.	SPRING BREAK	
12.	Graphic technique and axonometric projection	Consultation
13.	/	Consultation
14.	FINAL presentation	
15.	Retake of the final presentation (max: 50)	

We reserve the right to make changes to the details of this course syllabus (date / location / clarifications), which will be communicated to the students. In case of questions and problems that arise during the semester contact the responsible lecturer or the study program coordinator.

Dr. Erika Vörös
Tianyu Zhao
responsible lecturer

Pécs, 27.01.2022