# General Information:

Name of Course: Descriptive Geometry 1.

Course Code: EPE123AN

Semester: 1st

Number of Credits: 4

Allotment of Hours per Week: 2 Lecture and 2 Practical Lessons /Week

Evaluation: Exam

Prerequisites: -

Responsible lecturer: Dr. Erika VÖRÖS, assistant professor

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Teachers:

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Nicolas Ramos Gonzalez, doctoral student

Iroda: 7624 Magyarország, Pécs, Boszorkány u. 2. É81

## General Course Description

## Within the framework of the course, students will learn the basics, rules and graphic criteria of two- and three-dimensional representation of architectural/geometric design, and they will learn making physical model.

## Learning Outcomes

## The correct technique of representation is a common language between student and teacher, and within the profession, the mastery of which is an essential, indispensable competence alongside oral professional communication.

## Subject content

## The subject matter of the course is designed to provide students with all the necessary knowledge in the field of graphic design, the practical benefits of which can be used to the maximum in the understanding and implementation of other design subjects. During the course of the subject, students will acquire the knowledge with which to interpret the drawing documents issued in connection with design tasks and to be able to present their own ideas in a professional manner.

## The lectures will search for and answer the questions What\_Why\_How in the architectural aspect of geometric design and representation with the help of architectural examples and explanatory diagrams. The lectures will show what each form of representation is used for, how each detail is represented and how much is represented according to the scale and representation.

## The presentations will show how three-dimensional designs are represented in two dimensions and vice versa. Students will make sense of the views, projections and sections, and learn what can be shown through them. The lectures will introduce and make sense of a toolbox of representations from which students can confidently choose to present their own designs.

## Practical lessons will apply the theoretical knowledge acquired. In group sessions, students will interpret the two- and three-dimensional representational context by modelling and drawing the example buildings provided. Drawing and modelling tools will be used in the practical sessions.

## 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://international.pte.hu/sites/international.pte.hu/files/doc/TVSZ%202022\_06\_23\_ENG.pdf*](https://international.pte.hu/sites/international.pte.hu/files/doc/TVSZ%202022_06_23_ENG.pdf)

(Neptunban: Oktatás/Tárgyak/Tárgy adatok/Tárgytematika/Számonkérési és értékelési rendszere rovat)

**Attendance**

In accordance with the Code of Studies and Examinations of the University of Pécs, Article 45 (2) and Annex 9. (Article 3) a student may be refused a grade or qualification in the given full-time course if the number of class absences exceeds 30% of the contact hours stipulated in the course description..

Method for monitoring attendance: attendance sheet

**Assessment**

*Course-unit with final examination (PTE TVSz 40§(3))*

**Mid-term assessments, performance evaluation and their weighting as a pre-requisite for taking the final exam**

|  |  |  |
| --- | --- | --- |
| **Type** | **Assessment** | **Ratio in the final grade** |
| Final submission | max 100 points | 100 % |

**Requirements for the end-of-semester signature**

***Re-takes for the end-of-semester signature*** *(PTE TVSz 50§(2))*

**Type of examination** (written,)

The exam is successful if the result is minimum 40%

**Calculation of the grade (TVSz 47§ (3))**

The mid-term performance accounts for 50%, the performance at the exam accounts for 50% in the calculation of the final grade.

**Calculation of the final grade based on aggregate performance in percentage**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Grade: | 5 | 4 | 3 | 2 | 1 |
|  | A, excellent | B, good | C, avarage | D, satisfactory | F, fail |
| Performance in % | 85%-100% | 70%-84% | 55%-69% | 40%-54% | 0-39% |

**The subject supervisor and/or the lecturer of a given subject has the right to offer a grade to a student in a given subject, which, if accepted by the student, will be recorded in the Neptun. The student does not have to apply for an exam to have the grade offered and accepted by the student recorded in the Neptun.**

## Readings and Reference Materials

In order of relevance. (In Neptun ES: Instruction/Subject/Subject details/Syllabus/Literature))

Required:

Lesson notes, helps, sample tasks, examples given, TEAMS

Architectural graphing <https://issuu.com/pte_mik_english_edu_material/docs/architectural_graphing_k>

[Ching, F. Architecture: form, space, & order](http://joom.ag/mLhb)

[Ching, F. Architectural graphics](http://joom.ag/mLhb)

Ching, F. Introduction to architecture

Recommended:

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:Birkhhauser

Janáky, I. 1999. A hely. Budapest:Műszakikiadó

Le Corbusier, C.1981. Újépítészetfelés. Budapest: Corvina

Gausa,M. 2001. Szabadonállócsaládiház: a magánélettere. Budapest Terc

dr. ReischlAntal:Lakóépületek tervezése, Budapest 1976 Tankönyvkiadó

Ernst Neufert; Építés- éstervezéstan, Budapest Pécs 1999. Dialóg Campus Kiadó

BitóJános: Lakóházaktervezése, Lap- ésKönyvkiadókft 2004[[html](https://t.umblr.com/redirect?z=http%3A%2F%2Ftajvedelem.hu%2FTankonyv%2FBito%2Findex.html&t=ZjNhMmZmODE4ZTQ5Mjk5ODM3NWEyODJiZTllZDNmZDJlMGYzN2Y4OCwwMkxxOWU0UA%3D%3D&b=t%3ApHPYZ9y4GLNwksXyQtLwvQ&p=http%3A%2F%2Fdigitalistananyagok.tumblr.com%2Fpost%2F65626660259%2Flakohazak&m=1)] [[pdf](https://t.umblr.com/redirect?z=http%3A%2F%2Ftajvedelem.hu%2FTankonyv%2FBito%2FBito_konyv.pdf&t=ZWI0OTljM2JmYzFiMmRmZTlkN2VkYzFhOTYyOWI3OWM5ZjMyMGU4ZSwwMkxxOWU0UA%3D%3D&b=t%3ApHPYZ9y4GLNwksXyQtLwvQ&p=http%3A%2F%2Fdigitalistananyagok.tumblr.com%2Fpost%2F65626660259%2Flakohazak&m=1)] [[epub](https://t.umblr.com/redirect?z=http%3A%2F%2Ftajvedelem.hu%2FTankonyv%2FBito%2FBito_konyv.epub&t=MTYxNzFmZmQ1ZGM2MmZhMWMxZTdiOWVjZDA4MTljOTA0NzM5Njg2MywwMkxxOWU0UA%3D%3D&b=t%3ApHPYZ9y4GLNwksXyQtLwvQ&p=http%3A%2F%2Fdigitalistananyagok.tumblr.com%2Fpost%2F65626660259%2Flakohazak&m=1)]

Könyv az építészetről-A tervezés gyakorlata I. Pécs 1998 PécsiTanodaAlapítvány

Philip Jodidio:Architecture Now! 2001 Taschen

Schittich, C.2000. Single family houses: concepts, planning, construction Basel:Birkhhauser

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](http://joom.ag/mLhb)

[Julius Panero, Martin Zelnick (1979) Human Dimension and Interior Space: A Source Book of Design Reference Standards ISBN 0823072711. Watson-Guptill](http://joom.ag/WYhb)

[Francis D. K. Ching (2002) Architectural Graphics Fourth (4th) Edition. JOHN WILEY & SONS, INC.](http://joom.ag/DLhb)

<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 continuous communication between teachers and students.

Method:

1. continuous consultation during class time, according to the syllabus announced in the detailed course programme

2. independent work during class time according to the semester timetable announced in the detailed course programme

3. independent work at home

4. independent research, data collection, analysis

**Methodological aspects:**

In the practical class and at home, you will work continuously according to the instructions given in the previous practical class. The student will have the opportunity to master different graphic representation techniques of freehand technical illustration, in addition to presenting the building in an accurate and correct way. In the production of physical models, the student will become familiar with the technical concepts of modelling and the different types of cardboard.

There are two main criteria for assessing work:

-correct drawing and modelling representation

-demanding (specific) graphic and modelling presentation

Active work at home, drawing and modelling assignments for exercises are essential to complete the semester. Therefore, the lecturer may award plus and minus points for each assignment presented in each practice.

## Students with Special Needs

Students with a disability and needs to request special accommodations, please, notify the Deans Office. Proper documentation of disability will be required. All attempts to provide an equal learning environment for all will be made.

*Detailed requirements and schedule of the Course*

**Tasks and their requirements**

Processing of a schematic building on a fictitious slopy terrain presented in a practical lesson in the form of a model and drawings.

The work in the practical lessons will familiarise you with the mass of the building and its relationship to the terrain.

-In the first phase, each student will create a physical model of the building and terrain through classroom and home work. Students will learn the techniques and materials of physical modelling.

-In the second phase, based on the completed model, architectural drawings of the building (site plans, floor plans, sections, fasades and axonometries) are made.

-In the third phase, the students design openings and facade cladding for the building

In the fourth phase, the students finalise the drawings and the modell with the openings and cladding they have designed, and they also visualise environmental elements (people, vegetation).

**Minimum requirements for the form and content of the assignment to be submitted:**

**Models and drawings made in the practical class and at home.**

**Final submission:**

-Site plan M 1:500

-Site plan M 1:200

-Floor plans (2 pieces) M 1:200

-Sections (2 pieces) M1:200

-Facades (4 pieces) M1:200

-Axonometry (4 different axonometric projections ) M1:200

-Physical model with nice details (openings, slabs, textures) M1:200

**Standard format for the assignment to be submitted:**

-Modell: M 1:200 scale, made of the materials specified (1mm thick white wood cardboard and 1mm thick micro cardboard).

Physical model of the various facade claddings with cutter.

-Drawings showed in the booklet :

-Booklet design: horizontal A4 format, front and back 2mm thick grey cardboard, with black plastic rails on the shorter side

- The drawings are produced in A4 format (landscape layout) on sketch paper using a freehand technique.

The drawings can be made using: pencil (various thicknesses), pen (various thicknesses), brush pen (specific colour range)

-each drawing is separated by a sheet of A4 plain white paper

-scale: M 1:200

**Deadline of the submission:** Week 13, (Practice time and place)

Task scores:

Maximum score: 100

Minimum score: 40

**Deadline of the re-submission:** Week 14, (Thursday, 11:00), Building É81.

Task scores to be submitted:

Maximum score: 100

Minimum score: 40

**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 14th week.

## Readings and Reference Materials

**Task introduction:**

In a practical lesson, a schematic building on a fictitious sloping terrain is presented in model and drawing form.

Through the work in the practical lessons, we will learn about the mass of the building and its relationship to the terrain.

-As a final phase, each student will create a physical model of the building and terrain through classroom and home work. Students will learn the techniques and materials of physical modelling.

-In the second phase, based on the completed model, architectural drawings of the building (site plans, floor plans, sections, facades and axonometries) are made.

-In the third phase, the students design openings and facade cladding for the building, which is still solid.

In the fourth phase, the students finalise the drawings and the mock-up with the openings and cladding they have designed, and they also visualise environmental elements (people, vegetation).

The drawings will be done on landscape A4 sketch paper using freehand techniques.

The drawings can be made using: pencil (various thicknesses), felt-tip pen (various thicknesses), brush felt (specific colour range)

Physical model material: 1mm thick white wood cardboard and 1mm thick micro cardboard

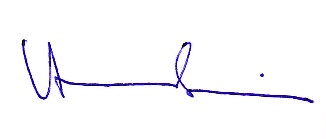
On the physical model, the different facade claddings shall be formed by scrapping.

## Program :

Lecture notes: dr. Erika Vörös: Architectural graphing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Lectures | | | | |
| week | **Topic** | **Compulsory reading; page number**  **(from … to …)** | **Required tasks (assignments, tests, etc.)** | **Completion date, due date** |
| 1. | - |  |  |  |
| 2. | Introduction of the semester task |  |  |  |
| 3. | Tools | 1.Chapter (Tools) |  |  |
| 4. | Site plan | 2.Chapter (Site plan) |  |  |
| 5. | Floor plan | 3.Chapter (Floor plan) |  |  |
| 6. | Section | 4.Chapter (Section) |  |  |
| 7. | Lecture repetition | 1.2.3.Chapter |  |  |
| 8. | **BREAK** |  |  |  |
| 9. | Fasade | 5.Chapter (Fasade) |  |  |
| 10. | Axonometry | 6.Chapter (Axonometry) |  |  |
| 11. | Architectural film |  |  |  |
| 12. | Lecture repetition | 5.6.Chapter |  |  |
| 13. | - |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Practice | | | | |
| week | **Topic** | **Compulsory reading; page number**  **(from … to …)** | **Required tasks (assignments, tests, etc.)** | **Completion date, due date** |
| 1. | - |  |  |  |
| 2. | Introduction of the semester task./ Modelling |  | home work | next practice |
| 3. | Modelling | 1.Chapter (Tools) | home work | next practice |
| 4. | Drawing / site plan | 2.Chapter (Site plan) | home work | next practice |
| 5. | Drawing / floor plan | 3.Chapter (Floor plan) | home work | next practice |
| 6. | Drawing / floor plan | 3.Chapter (Floor plan) | home work | next practice |
| 7. | Drawing / section | 4.Chapter (Section) | home work | next practice |
| 8. | Drawing / section | 4.Chapter (Section) | home work | next practice |
| 9. | Drawing / fasade | 5.Chapter (Fasade) | home work | next practice |
| 10. | Drawing / fasade | 5.Chapter (Fasade) | home work | next practice |
| 11. | Drawing / axonometry | 6.Chapter (Axonometry) | home work | next practice |
| 12. | Drawing / axonometry | 6.Chapter (Axonometry) | home work | next practice |
| 13. | **DEDLINE OF THE SUBMISSION** |  |  | **During practice time** |
| 14. | **DEDLINE OF THE RE-SUBMISSION** |  |  | **Thursday 11:00, É81** |

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.

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Pécs, 28.08.2023

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Dr. Erika Vörös

course director