



Building Design 4

Transmission:
'Blue' School in a
Former Mining Area

Building Design 4

Course Code:	PMRTENE020A
Semester:	5th
Number of Credits:	5
Allotment of Hours per Week:	2 Lectures and 3 Practical Lessons /Week
Evaluation:	Signature (with grade)
Prerequisites:	Completed Building Design 3, and Building Constructions 3.
Instructors:	Dr. Peter ZILAHÍ, Assistant Professor Office: 7624 Hungary, Pécs, Boszorkány u. 2. E-mail: zilahi.peter@gmail.com

Introduction, Learning Outcomes:

The Building Design 4. Course is studio work in the Master of Architecture program, and is carried out as an individual design project during the mid - term of the programme. The course focuses on the design procedure of a public building, students have to define the client, establish the program, propose and develop the design, schedule the work.

The finished and accepted project is shown and present at the end of the semester at the front of a Lecturer's Group for demonstrate the acquired architectural knowledge and abilities.

The course will focus on:

- Developing the ability to think intuitively and creatively
- Examine and exploring of meaning and rules of 'publicity' in Architecture
- Bring questions and examine aspects of planning, human resources and legal concerns, all in direct relation to the specifics of design.
- Clear architectural communication at the presence of Professor's Group
- Carrying out within a specified time

General Course Description and Main Content:

Students are required to complete design work relating to public buildings and an actual building site. Students are required to submit all their plans documenting their work on the design and are assessed on the following aspects: architectural design, development concept, functionality, volume forming and space composition. For the preliminary and final plans only free-hand graphics can be used. Students are also required to complete a model of the final plan in a material of their choice. The following aspects of public building design are covered: design work of specified types of public buildings, content programmes, optimal layout of the designed content on the floor plan, external appearance of the building (deviation from residential buildings and emphasis on the differences), volume design practice, methods of representation, and preparation of colour designs. This subject includes an architectural design project in the practical part (marked with a P) where students can practice and further develop the content of the lectures (marked with an L).

The Course includes:

- Regular (weekly) supervisions by teacher of the Architectural Institute. There are generating feedbacks by Main Supervisor after consultations and exams.
- Process Dairy Booklet (Scheck Book) which is assessed as part of the regular supervision by the Teacher contains sketches, ideas, the design process etc.
- 'Project Documentation' for planning permission of the designed building, as the summarise of the engineering working drawings documentation (ground plans, sections, elevations 1:100, 1:200), and paper models (1:200). The drawing tasks must be backed up and attached on CD/DVD.
- Examinations in two stages (after the Schedule of the Course).

Methodology:

The course is based on individual architectural skills with regular consultations and presentations.

The studio will provide an opportunity through the semester-long design problem for you to engage disciplinary discussions of structure (form/force/material) and skin (layering/articulation/performance) as the basis for a formal design project.

Schedule:

The semester is divided into two principle periods and attendant exercises.

The rough outline of the schedule is as follows:

Week 1-7: Draft Plan (conception)

3 – 4 week: Design Phase 1. Site Analysis and Preliminary Design Exercise

5 – 6 week: Design Phase 2. Diagrammatic Schematic Design Alternatives

7 week: Design Phase 3. Draft Level Development Phase

Week 8: Midterm Jury. PROJECT PRESENTATION 01. – CONCEPT DESIGN

- Required contain presented with printed posters:

- o Analyses of the Chosen Function (inspirations, examples, conditions, relationships in space, needs requirements, etc.)
- o Architectural Program (type, scale, use, form ideas, architectural ideas, materials, primer structures, functioning)
- o Site Plan with Building's Surrounding (1:500) (with built and natural environment)
- o Plans of Each Different Levels (1:500 or 1:200) (with openings, names and measures of spaces, and main structural measures)
- o Plot and Building's Surrounding Paper Modell (1:1000)

Week 9-14: Project (developing, completing)

10 – 12 weeks: Detailed Development Phase

13 – 14 weeks: Revision and Completion of Projects

Week 15: Final Review. PROJECT PRESENTATION 02. – FINAL DESIGN PROJECT

- Required contain presented with printed posters:

- o Site Plan (1:500) a./ the building site's boundaries, fences, gates, parking places b./ the contour lines of the slope, the main level heights c./ the connecting road system inside and outside the plot d./ the cardinal points e./ the planned buildings and objects of the plot with their names, main measures, and height dates f./ the sign and names of roads, covered and green areas, the main level heights g./ the height of ledge and ridge, the number of storeys h./ tracks of the public utilities i./ the circulation of

vehicles, transportation, people with different signs j./ eventual possible extension

o Plans of Each Different Levels (1:200) a./ beyond the main dimensions contain the measures of each room b./ doors with opening direction, windows with subdivisions c./ marking the functional necessary installation d./ the names, measures and coverings of the rooms e./ marking the close surroundings

o Sections (1:200, in necessary number for understanding) a./ the typical height measures and the plan measures of the axis b./ the level heights c./ the names of the structures and materials, the order of layers d./ the main equipment with greater need of space

o Elevations of Each Different Side (1:200)

o Views (in necessary number for understanding, min. 3 about the inner and 3 about the outer spaces), in high quality design and graphic

Studio Culture:

The course is based on through collaboration, participation and discussions through lessons. This is an interaction between Students and Faculty; used the teaching methods like 'Problem-based learning' and 'learning-by-doing'. The communication and work should be reflect a respect for fellow students and their desire to work with regard to noise levels, noxious fumes, etc. – from each site of participants.

Attendance:

Attending is required all classes, and will impact the grade (max. 10%). Unexcused absences will adversely affect the grade, and in case of absence from more than 30% of the total number of lesson will be grounds for failing the class. To be in class at the beginning time and stay until the scheduled end of the lesson is required, tardiness of more than 20 minutes will be counted as an absence. In the case of an illness or family emergency, the student must present a valid excuse, such as a doctor's note.

The highest possible grade on the late project (after Study Period before Exam Period) is '2'.

Evaluation + Grading

Grading will follow the course structure with the following weight: Project Presentation - 01, 30%, Project Presentation 02, 60%. The remaining 10% will be assessed according to participation, progress, effort and attitude. Please note that attendance will adversely affect one's grade, both in direct grade reduction and in missing work in the development of a project. The final grade will be based on the following guidelines:

5. Outstanding work. Execution of work is thoroughly complete and demonstrates a superior level of achievement overall with a clear attention to detail in the production of drawings, models and other forms of representation. The student is able to synthesize the course material with new concepts and ideas in a thoughtful manner, and is able to communicate and articulate those ideas in an exemplary fashion in.

4. High quality work. Student work demonstrates a high level of craft, consistency, and thoroughness throughout drawing and modelling work. The student demonstrates a level of thoughtfulness in addressing concepts and ideas, and participates in group discussions. Work may demonstrate excellence but less consistently than an '5' student.

3 Satisfactory work. Student work addresses all of the project and assignment objectives with few minor or major problems. Graphics and models are complete and satisfactory, exhibiting minor problems in craft and detail.

2. Less than satisfactory work. Graphic and modelling work is substandard, incomplete in significant ways, and lacks craft and attention to detail.

1. Unsatisfactory work. Work exhibits several major and minor problems with basic conceptual premise, lacking both intention and resolution. Physical representation in drawing and models is severely lacking, and is weak in clarity, craft and completeness.

Grading Scale:

Numeric Grade:	5	4	3	2
Evaluation in points:	89%-100%	77%-88%	66%-76%	55%-65%

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.

Readings and Reference Materials:

Required:

1. Ching, F. (1996). Architecture: form, space, & order (2nd ed). New York: Van Nostrand Reinhold

More:

1. Clark, R.H. and Pause M. (1996). Precedents in architecture (2nd ed). New York: Van Nostrand Reinhold.
2. Davies, C. (2006). Key houses of the twentieth century: plans, sections and elevations. London: Laurence King.
3. Laseau, P. (2001). Graphic thinking for architects & designers (3rd ed). New York: J. Wiley
4. Pressman, A. (1993). Architecture 101: a guide to the design studio. New York: Wiley.
5. Unwin, S. (2003). Analysing architecture (2nd ed). New York: Routledge.

PROJECT DESCRIPTION

TRANSMISSION: BLUE SCHOOL IN A FORMER MINING AREA, PÉCSBÁNYA

The Project for the semester will be design a school for the youngest generation to learn and practice a more sustainable lifestyle. There is a thesis of Mr. Gunther Pauli, who said we can realize a low carbon, resource-efficient, and competitive economy in the 21st century. They largely depend on allowing nature to do the work it does best: innovate, manufacture, use and recycle—over and over, for the longest of times. Pauli's book (**The Blue Economy**) demonstrates that we can find ways of utilizing physics, chemistry, and biology with renewable materials and sustainable practices just as ecosystems do.

According to Gunther Pauli's thesis, the course will go along the following principles:

- The Blue Economy respond to basic needs of all with what you have, introducing innovations inspired by nature, generating multiple benefits, including jobs and social capital, offering more with less.
- Solutions are first and foremost based on physics. Deciding factors are Pressure and Temperature as found on site.
- Natural systems cascade nutrients, matter and energy – waste does not exist. Any by-product is the source for a new product.
- Gravity is main source of energy, solar energy is the second renewable fuel.
- Nature only works with what is locally available. Sustainable business evolves with respect not only for local resources, but also for culture and tradition.
- Nature is efficient. So sustainable business maximizes use of available material and energy, which reduces the unit price for the consumer.

GENERAL BUILDING / SITE PROGRAM:

lobby / reception / atrium:

initial space for orientation and gathering as well as public events, this space can connect private and shared portions of the program and should have a distinct spatial character. Direct connection to the exterior and parking are necessary.

auditorium:

a space to accommodate 30-50 people for public lectures, symposiums, screenings, etc. This space should be easily, publicly accessible at all times. Long-span structure and greater sectional height ($\pm 30'$) will be necessary, as will acoustical treatment. Storage for stage facilities should be provided.

rooms:

the school will give space for summer camps as well. These spaces have to be well-separated and silence. It is necessary to distinguish rooms for the childrens and for the teachers as well. The rooms have to have connections with bathrooms.

kitchen/kitchenette:

it is expected to design a place where 30-40 student can eating at the same time. it is necessary to design a kitchen or a kitchenette to serve the lunch time.

utility spaces:

comprises electrical, mechanical, communications and equipment rooms, janitorial, storage, loading, trash, etc. Usually functionally driven, but can be used wisely in good planning and even to produce strong architectural effects.

