UNIVERSITY OF PÉCS POLLACK MIHÁLY FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY
INSTITUTE OF ARCHITECTURAL ENGINEERING
2014/2015/ 1.

BASICS OF ARCHITECTURE MODULE 'C' as in construction

Copies of the approved Course Syllabus are located at:
www. pmmik.pte.hu

Catalog information:
ECTS credits: 3
course number:PMRESNE10A
prerequisites: -
allotment of hours per week: 2 L, 0 P

Instructor:
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General Course Description:[1]

Brief Syllabus: This subject provides a basis for later courses and introduces the following topics: dealing with building constructions, presenting basic construction structures and their location in buildings, and the fundamentals of the requirements and application fields of building constructions. Building is considered as an arrangement of spaces enclosed by surfaces of various functions and this subject implies that building design, construction and operation are interrelated and that an integral approach is necessary. Types of plan and the characteristics of block plans and detail drawings are also presented.
To complement the main objective students learn about the expert use of drawing tools, letter-scripts, scales, different plans and the objectives of documents, defining building structures, structure encyclopaedia and constructional skills, preparation and utilizing studies and research.

In their semester assignment, students present the analysis of some contemporary buildings – approved by the lecturer - considering the process of choosing materials, form and construction. At the end of the term a test with short definitions and exemplary drawings will be used for controlling the basic knowledge.

Methods:

1. analyzing planning methods in the field of building construction design
2. visual methods, reviews
3. sustainability in building constructions
4. constructions developed in a practical way, continuous communications

Learning Objectives:
Upon completion of this course the student should be able to:

1. **interpret, recognize and understand**
    - **a.** the main structures of a building,
    - **b.** planning techniques of building constructions,
    - **c.** the usage and consequences of building materials,
    - **d.** the sustainable aspects of building constructions
2. **apply** and **employ** their knowledge about technical details
3. **analyze** constructions and structures of buildings – as historical as contemporary
4. **design** a small scale building with a reasonable construction

[1] az akkreditációs anyag rövidleírása

Process:
In this course students will focus on the constructions in building design. The main purpose of the course is to develop skills in correct and critical approach of choosing building materials and structures.

Students analyze a series of various buildings by their synthesis in form, material and structure through the semester. Academic lectures will support understanding of building construction design.

The lectures show a summary of constructional phrases and terms in constructional design. Students will write a paper (25p) of a building structure of their choice (approved by the tutor) and prepare a complete documentation on a chosen small scale building. At midterm, students will present a draft plan; at the end of term, they will present the completed project (floor plan, section, façade – 50p).

The academic topics are highlighted by reviews and discussions; the skills are developed with personal communication between the lector and students. The continuous and personal communication is key aspect in the subject.

Required Reading and Other Materials will be equivalent to:
Required Reading:

DEPLAZES, Andrea - (2008). *Constructing Architecture – materials processes structures – A handbook* - Birkhäuser Verlag AG, ISBN 978 3 7643 8631-3

Other Materials:

1. CHING, Francis D.K. : *A Visual Dictionary of Architecture*, Publisher: John Wiley & Sons, Pte. Ltd. ISBN: 9780470648858
2. NEUFERT, Ernst – NEUFERT Peter (2000). *Architect's Data*, Wiley, ISBN: 9780632037766
3. Malcolm Millais (2005*) Building Structures: From Concepts to Design*, Taylor & Francis, ISBN: 978-0415336239

Schedule:

I. Introduction - Experiencing Architecture
   - A. Cohesion of structure, material and shape
   - B. Interrelation of structure, space and function
   - C. Architectural synthesis

II. Structures
   - A. Loadbearing walls
   - B. Frame construction
   - C. Column-and-slab systems, Prefabrication

III. Materials
   - A. Masonry
   - B. Concrete
   - C. Timber
   - D. Steel

IV. Sustainability
   - A. Insulation concepts
   - B. low energy houses

V. Technical drawings

Evaluation of Student Performance:

1. Critique and evaluation of students' projects, papers, drawings and presentations. Quality of the drawings. Grading will follow the course structure with the following weight: paper on the analysis of a building structure – preferably on the example of the building of students' choice 30p, portfolio of the drawings of the building 35p, test 30p
2. Class participation, class activity (5p). Any unexcused absence will negatively affect your grade; 3 unexcused absences will result in failing the class. If you need to miss a class for any reason, please notify your professor by email prior to the start of that class.

Grading scale

Grade	5	4	3	2	1
Numeric Grade	100-86	85-76	75-66	65-56	55-0
	Outstanding work	High quality work	Satisfactory work	Less than satisfactory work	Unsatisfactory work

Students with special needs:

Students with special physical needs and requesting classroom accommodation must first register with the Dean of Students Office, all application to provide an equal learning environment for all will be guaranteed.