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HYSTORY OF ARCHITECTURE FOR CIVIL ENGINEERS

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Abstract

The study of architectural history for civil engineering students at the Technical University of Budapest has certain traditions. Professor Frigyes Pogány was won for teaching the subject who gave 2 hours of splendid slide-illustrated lectures a week to all first year students. After his death chance opened for lecturing History of Architecture again in 1999, as an elective subject. The computer aid was required by the accelerated and enlarged receptivity in pictures, which characterizes our information society. Thus, instead of the traditional 80 slides, a computer aided presentation provides the possibility for illustration with 200–250 figures and pictures. We can be lost in the jungle of works, creators and dates, which can only be avoided by moderation and focusing on the key issues. Therefore we mainly examine the structural plans of growing space and spans, the technical and material background affecting the structure–function–form relation. The interest of students is well demonstrated by the high number of registration: 70–80 students. We find that these students appreciate the subject and enjoy compiling their 15–20 page, illustrated study in the selected topic. It is our target to have students examined a certain building and its structure from their own surrounding. We propose to study certain Hungarian historic buildings or objects from the World Heritage. We provide literature which analyse the relation between building technology and aesthetics, and which do not speak the language of exclusiveness saying that architecture is only an art, is only a science or only a profession, as we are convinced that architecture is a joint of these all.

Keywords: history of architecture, building construction.

The study of architectural history for civil engineering students at the Technical University of Budapest has certain traditions. Decades ago the Faculty of Engineering (that time 'General' Engineering, recently Faculty of Civil Engineering) accepted the principle – important both professionally and culturally – to introduce architectural history lectures to engineering students. Professor Frigyes Pogány was won for teaching the subject, who gave 2 hours of splendid slide–illustrated lectures a week to all first year students, irrespective of their later specialization. After his death although a competent lecturer for the subject could have been found, the management of the faculty that time reduced the hours of architecture–related studies, and cancelled the subject History of Architecture.

Chance opened for lecturing History of Architecture again in 1999, as an elective subject in the Autumn term for upper course students. The faculty has called upon the Department of Building Construction, expecting the enormous material being shrinked, emphasizing the structural–technical elements throughout the examination of styles. Relying on the literature of renowned professors of the

Department of Architectural History and Monuments at the Faculty of Architecture a team of our department has worked out material and requirements of the subject, set up the pictures for illustration, which all was compiled into computer slides for projection by Assistant *Dóra Edelmann*. The computer aid was required by the accelerated and enlarged receptivity in pictures, which characterizes our information society. Thus, instead of the traditional 80 slides, a computer aided presentation provides the possibility for illustration with 200–250 figures and pictures. The active participation of the students is promoted by a sample study issued by the department and with a test. The 14 week program of the subject is as follows:

1. The architecture of Ancient Egypt
2. The architecture of Asia Minor (Mesopotamia)
3. Aegean culture, ancient Greek architecture
4. Roman architecture
5. Ancient Christian, Byzantine and Romanesque architecture
6. Gothic architecture
7. Renaissance architecture
8. Baroque architecture
9. Classicism, Romanticism
10. Eclectic and Secessionist architecture
11. Premodern architecture
12. Test
13. Modern and contemporary architecture
14. Protection of historic buildings

We raise a few theoretical questions before introducing the attitude of the students. Exposing the above topics means a very delicate situation of didactics, even though examining only the architecture of the regions around the Mediterranean Sea. We can be lost in the jungle of works, creators (many of the geniuses are known by name from the Renaissance) and dates, which can only be avoided by moderation and focusing on the key issues. Therefore we mainly examine the structural plans of growing spaces and spans, the technical and material background affecting the structure–function–form relation, the knowledge and profession of the building human. Besides the history of engineering—architecture relation, which was hardly separable in the past, the question is frequently raised nowadays: how is this double and often proprietory profession judged today? That is beyond question that buildings and engineering constructions can theoretically be separated, but practically less and less. Structurally, mechanically demanding architectural works, aesthetic bridges, traffic and other establishments are mixed, and the townscapes born by fantasy early in the 20th century gradually become reality. At the same time – sorry to say – we build using up green areas, and have much difficulty in balancing the principle of sustainability.

We often face the situation, when non–professionals know better the architecture of the past – by interest or by their trips – than engineers. Publishers make use of this interest: issue colourful, illustrated albums at stiff prices – these mostly

Fig. 1. Pyramide analogies: A) Gizeh stone pyramides (Ancient Egypt, 4*th* dynasty)
B) I. M. Pei: The glass pyramide of the Louvre

Fig. 2. The Pantheon in Rome: A) Structural section and plan (Renaissance drawing) B) Main façade

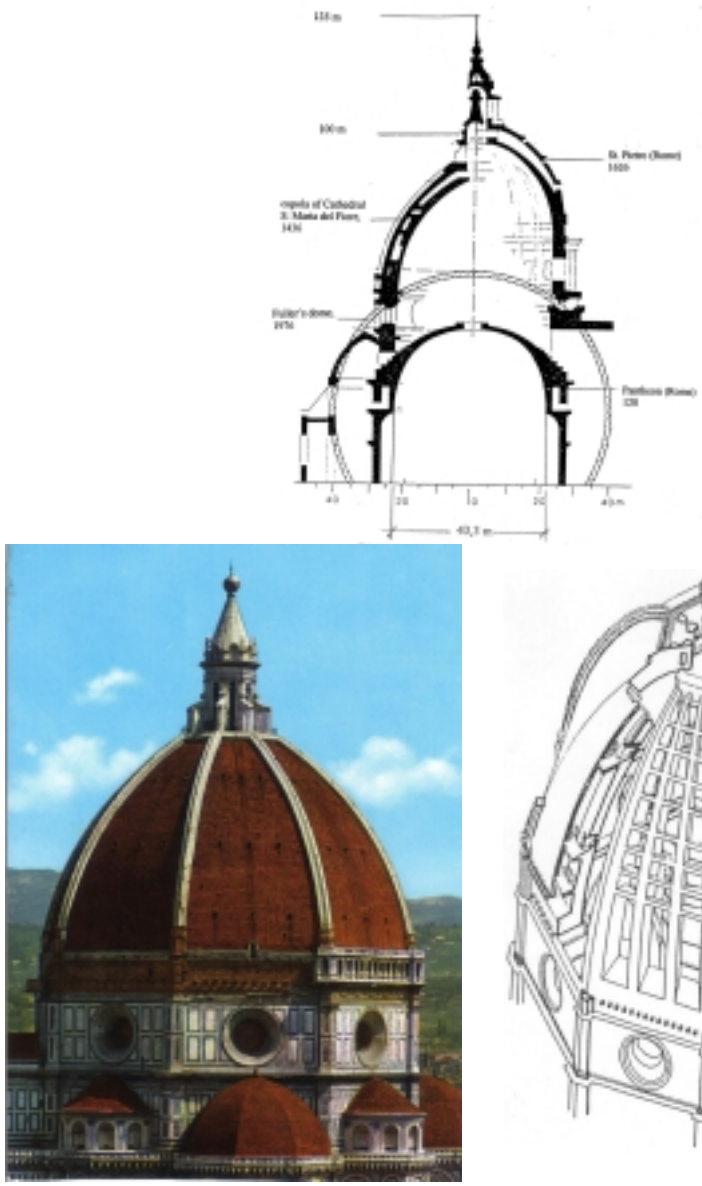

Fig. 3. Historic domes: A) Sections of famous domes (PORR. Nachr. 1987) B) Picture and structural drawing of the dome of the Cathedral in Firenze (Sta Maria del Fiore)

mean holiday presents. Shall we fill this mental vacuum? There is much more. The civil engineering students who elect the subject Architectural History for a more complex view, feel and understand it well. Even more, students ask for lecturing this subject in both semesters.

The interest of students is well demonstrated by the high number of registration: 70–80 students. We find that these students appreciate the subject and enjoy compiling their 15–20 page, illustrated study in the selected topic. Majority of the increasing number of these valuable studies fit in library of the department. At the beginning the studies covered the full spectrum of a style or a country's architecture (Egypt, Rome, Bauhaus, etc.). These days papers summing up life–work of a famous architect (LE CORBUSIER, ALVAR AALTO, ANTONI GAUDI, etc.) are popular. It is our target to have students examined a certain building and its structure from their own surrounding. We encourage students to study certain Hungarian historic buildings or objects from the World Heritage.

We advise the students on useful special literature. The small number of lectures makes individual research a must for those being interested. We mostly propose comprehensive books of architectural history available in the department library or in the central library, as the number of issues related to this topic is almost endless. Apart from the university books mentioned we provide literature which analyse the relation between building technology and aesthetics, and which do not speak the language of exclusiveness saying that architecture is only an art, is only a science or only a profession, as we are convinced that architecture is a joint of these all.

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