

PROGRAM AND METHOD OF TEACHING HISTORY OF 20th CENTURY ARCHITECTURE

L. KŁOSIEWICZ

Department of Architecture, Technical University of Warsaw

Let me begin with making some comments on the title of my lecture before expounding its subject.

No program or method of teaching history of modern architecture could be given with a claim to general validity. Also my statements refer to given circumstances prevailing at the given school such as curriculum, location, number of students etc.

My statements deduced from experience made in teaching at various schools, as distant as the Department of Architecture, Technical University of Warsaw, and the Baghdad University, bear the marks of relativity.

20th century architecture as indicated in the title must not be understood too strictly. Modern architecture reaches back into the past century and still farther where relevant comparisons can be made.

Aims of teaching history of modern architecture in a school of architecture

Irrespective of individual differences in program and method of education, basic teaching goals seem rather similar. Stress seems to be laid on events in architecture and on evolution of processes, taking natural environment, social-economical structures, building materials and technology as background of architectural trends and artistic movements.

Rather than to aim at imparting the students a given state of art, this school of architecture attempts to give them a tool of creative architectural design. This is a point of difference between teaching history to art historians and to architects, a fundamental recognizance involved in the program and curricula established since 1955 when the history of modern architecture has been introduced at the Department of Architecture, Technical University of Warsaw. In Annex, examination forms used in the academic year 1975/1976 are presented to illustrate requirements in matters of the subject "History of Contemporary Architecture" and its practical applications in students' designs. There are also questions on certain architectural theories but formulated so as to incite the student to refer to his own design work against this background.

Peculiarities of the history of modern architecture

This subject is peculiar by nature. Speaking of the present time involves relations with both the past and the future. Hence, the subject "History of Contemporary Architecture" is a marginal discipline. Its "history" side vanishes when ideas of shaping our environment of to-morrow are considered, before the "theory" side.

Apparently, there are rather close links between the history of modern architecture, and the future-oriented, creative architectural design. In spite of the frequent underestimation of the importance of history in architectural education, in fact, history widens horizons of thinking, and may facilitate decision making. Modern approach to design much depends on information of what, where, when and how has been built, helping to reduce both time wasting in design, and social losses due to inadequate designs.

These risks seem us to be avoidable by adequately teaching history of architecture. Staff of this Department of Architecture is convinced students profit the most of lectures given by practical design experts who do also research work. Though attitudes may be divergent from teachers of history of architecture by profession, it seems to be granted that history of architecture as delivered by a designing architect fits better architectural education than by an art historian.

History of teaching History of Contemporary Architecture at this Department

1955 to 1975, this subject had been delivered by Prof. Dr. PIOTR BIEGAŃSKI and Assoc. Prof. Dr. IZABELLA WISŁOCKA who both retired early in 1975. The program specified two lessons a week, complemented by two hours of seminar in semesters 7 and 8. In semester 7, lectures surveyed architectural evolution from the Severn Bridge to World War II, while lectures of semester 8 were devoted to recent development in architecture, displayed according to geographical order, both by the teaching staff and by visiting lecturers. Students had a chance to listen to lectures by architects of world reputation such as P. L. NERVI, O. NIEMAYER, KENZO TANGE and others. Lectures had been informative in character, they followed a more or less constant program in semester 7, while the program was modified according to actual needs and possibilities in semester 8.

Seminar programs were based on students' individual work. According to a program established by the staff at the beginning of the semester according to educational aims, students were assigned research problems to be elaborated and reported of before the group meeting, commented by the group members, and submitted for approval. In the 7th semester, students were assigned problems based on a scientific paper. Problems became more complicated in semester 8, requiring more of initiative in collecting references and

in formulating the basic idea for the report. In addition to induce students to get absorbed in a specific problem, an opportunity is given to discuss the given problem before the community of teacher and classmates. Since the academic year 1975/1976, architectural education has been modified to cope with current needs of national economy. The time to graduation is now 4,5 years to "magister" degree in architecture. Post-graduate studies, generally of two years, are offered to those wishing to specialize in a discipline. This alteration affected our programs and curricula. Actually, lectures are delivered in the 6th semester in two lessons and two hours of seminar a week. Also the character of lectures changed from informative to synthetizing and interpretative, information being now available from books recently written by members of the staff. Such a solution would be unimaginable by 1955 when the subject was first introduced to the curriculum of the Department, in lack of proper books on the history of contemporary architecture. Stress is laid instead on the effectivity of seminars. First, a test is made to survey actual knowledge of each student attending the course. The assigned research problems are taken from the study program but fit individual interests. The subject is often taken from that of the studies in architectural design but stress is laid on theoretical features.

The educational reform as implemented at this Department is another illustration how programs and teaching methods can be changed, keeping education goals unaltered.

Experience on teaching history of modern architecture at the Department of Architecture, University of Baghdad

Contemporary Iraq, heir to great civilizations of Ancient Mesopotamia and Caliphs of Baghdad is a quite different background to teach history of modern architecture than Europe. While European modern architecture can be considered as issuing by (more or less) continuous evolution from Greek and Roman architecture, Iraq followed a different way.

The information matter in history of modern architecture to be assimilated by Iraqi and European students is essentially the same. Different local traditions result, however, in different modes of understanding. While European students learn evolution of modern architecture from the analysis of various stages of 19th and early 20th architecture as first cast iron structures, green-houses, sport stadiums, department stores etc., coherent with European and American 19th century civilization, the same seen by an Iraqi student in his country is a kind of "foreign product".

Nevertheless, to lecture on modern architecture in Baghdad may become an extremely interesting experience combined with the search for ancient traditions at home between Tigris and Euphrates, hidden as sources of architectural and structural ideas developed later in European culture.

First of all, traces of old, millenary architectural concepts are seen to subsist in local vernacular architecture, spanning between ancient and modern times. Second, a look at the huge tent roof over the Munich Olympic Stadium and at a beduin tent, or at a modern pneumatic air structure vault and at a reed hutch from Southern Iraq reveals their fundamental relation. Similarly, close relations can be found between the flexible uses of space in an oriental house, and modern tendencies of flexible planning, or the idea of Le Corbusier to utilize roof area as living and sleeping space is quite self-evident under the summer nightly sky of Baghdad.

This correspondence between contemporary architecture and local traditions seems to be more convincing and inspiring for Iraqi students than lectures and publications in chronological order on modern architecture from its outset of cast iron structures and the first industrial revolution.

Conclusion

Experience of teaching history of modern architecture in various schools may confirm that program and method of teaching have always to adopt local circumstances.

For the sake of raising the teaching standard, exchange of views between teaching staffs seems to be advisable.

I cannot but highly appreciate the idea of this Conference and the organizational work by the Institute of History and Theory of Architecture, Technical University, Budapest. I feel this initiative of a co-operation is worth of being continued. As member of the teaching staff of the Institute for Basic Problems of Architectural Development, Technical University of Warsaw, I am entitled to say that we should be very glad if lecturers of the Universities of Budapest, Dresden and Prague could come to our Institute as visiting professors to participate in the course on history of modern architecture by lecturing on problems of architectural development in their countries.

In addition to teaching problems, co-operation in common research could be made on the contribution of our national architectures to the contemporary world architecture. This would fill a gap, namely publications by many — mostly western — authors refer at most incidentally to processes of remodelling spatial structures taking place in our countries upon requirements of socialist societies.

Thanking again organizers of the Conference for the initiative and their hospitality, let me express my conviction of the usefulness of co-operation between our Institutes, and of the friendly relations at University level between our neighbouring countries.

Annexe 1

Department of Architecture
 Technical University of Warsaw

Examination Form
 (English translation)

Research Institute for Development of Architecture

History of Modern Architecture and Town Planning

7th semester, academic year 1975/6

Note: In addition to the questionnaire, drawings of plans and sections of several buildings were shown students on slides during examination.

Date:
 Student's Name:
 Group:

To each of the questions given below, three alternative answers may be given, but only one of them is true. Please underline the right one.

1. Architecture is: A space forming art; design ability; three dimensional composition depending on circumstances.
2. The Commune — a political event in France: — 1789/1848/1871.
3. Activity of Praesens group (the Polish modernist movement): 1920—25/1905—6/1928—30.
4. Reinforced concrete hangar in Ortello by P. L. Nervi: 1901/1936/1926.
5. The first CIAM meeting: 1920/1928/1937.
6. The first iron bridge was built in: 1779/1812/1848.
7. Eiffel Tower was built in: 1880/1889/1909.
8. Warsaw Department of Architecture was founded in: 1920/1915/1931.
9. R. Maillart was: an artist; an engineer; an architect.
10. Who designed Einstein Observatory? Mies van der Rohe; W. Gropius; E. Mendelson.
11. East-West highway through Warsaw was built in: 1945/1965/1949.
12. Crystal Palace in London was built in: 1891/1887/1851.
13. Reinforced concrete was invented by: Monier; Maillart; Perret.
14. Bibliothèque S. Geneviève in Paris was built in: 1901/1850/1872.
15. Structure of the Bibliothèque S. Geneviève: Reinforced concrete and steel; iron; masonry and iron.
16. S. Giedion has written: *Vers une Architecture*; *Culture of Cities*; *Space, Time and Architecture*.
17. L. Mumford has written: *Culture of Cities*; *Technique and Civilization*; *Vers une Architecture*.
18. *Towards the Idea of Social-Residential Neighbourhood Unit* has been written by: Le Corbusier; H. Syrkus; B. Brukalska.
19. Otto Wagner was: a composer; a novelist; an architect.
20. Adolf Loos was an architect: Dutch; German; Austrian.
21. Crown Hall M.I.T. — Chicago has been designed by: Gropius; Saarinen; Mies van der Rohe.
22. What is the tendency of modern architecture represented in Paul Rudolph designs: Constructivism; Functionalism; New Historicism.
23. The span of Severn Bridge by A. Derby was: 20, 30, 50 m.
24. The diameter of the dome of US Pavilion at the International Exhibition in Montreal in 1967 was: 50/70/60 m.
25. Garden City idea was originated by: P. Berlage; T. Garnier; E. Howard.
26. Dipoli students' club at Technical University of Helsinki — Otaniemi has been designed by: A. Aalto; R. Pietilä; E. Saarinen.
27. What a design philosophy is represented by this building: rationalism; organic architecture; international style.
28. Which one of these cities has some connections with "Plan Voisin": London; Paris; Moscow.
29. Lenin Mausoleum has been designed by: Rudniev; Shchusiev; Melnikov.
30. Who designed "Prairie Houses": Sullivan; Richardson; Wright.
31. Who designed "People's Hall" (or "Centenary Hall") in Wrocław: H. Poelzig; J. Hryniewiecki; M. Berg.
32. Which one of the International Competitions has been won by Polish architects? Redevelopment of Dublin University; Amsterdam City Hall; Toronto City Hall.

Annexe 2

Department of Architecture
Technical University of Warsaw

Examination form
(English translation)

Research Institute for Development of Architecture
7th semester, academic year 1975/6

Date:
Student's Name:
Group:

1. Please give a title of your design problem now under elaboration in architectural design class:
2. Outline the main idea of your design (indicated above) in terms of function, structure, and aesthetics.
3. Mention three other architectural solutions known from the course in History of Modern Architecture, which coincide with, or contradict the design philosophy, presented in your scheme according to the requirement under 2, and provide them with the appropriate comments.
4. Indicate the title of the book on History of Modern Architecture which you have read last year:
5. Give some comments on the book mentioned under 4.
6. What an art or architectural exhibition recently displayed in Warsaw have you visited?
7. Could you make some comments on the exhibition under 6?
8. Which of the books on architecture recently displayed on the International Book Fair has drawn your particular attention and why?
9. Write down everything you can on the buildings seen on the screen (slide projection).

Note: Answers on questions 2, 3, 5, 7, 8, 9 are given on separate sheets.

Annexe 3

Department of Architecture
Technical University of Warsaw

The Introductory Test
(English translation)

Research Institute for Development of Architecture
The History of Modern Architecture and Town Planning

Student's Name:
semester: group
academic year

1. List please design problems encountered during your studies in architectural and town planning design classes:

_____	_____
_____	_____
_____	_____

2. Particular interest within the scope of architectural studies:
3. Visited countries:
4. Foreign languages:
5. Describe in brief what you have learned from former courses in history of architecture. Illustrate please particular stages of evolution in architecture with carefully selected examples. Provide your illustration (sketches) with short comments:

Note: Time given to answer the questionnaire — two hours.

Annexe 4

20th Century Architecture — Concept, Sphere, Objectives, Education Methods

The course in modern architecture belongs to theoretical subjects with the collective denomination "Evolution of Architectural and Town Planning Approach" delivered by the Institute for Basic Problems of Architectural Development. The curriculum is divided according to historical periods such as ancient, mediaeval, modern architecture, matched by the course program. This is not to mean, however, a strict timely division. Often periods are over-bridged to clear relations and continuity.

Namely, chronological division and "parallel" consideration of different, simultaneous events may blur the overall picture likely to facilitate understanding of the consecution of changes in architectural theory and practice. Therefore timely divisions are rather conventional, especially as concerns modern architecture. Students at the course of modern architecture, are backed by at least two years of studies in theoretical and practical subjects of architecture, among others by examinations in subjects of the cycle "development of thinking". Thus implementation of study methods in modern architecture for past achievements seems to be justified. Therefore lecturing in this subject involves to frequently recall the past, even the very remote past to better understand *this* time and to help visualizing possible future forms of architecture.

Program of the course includes historical and theoretical problems of changes in the 19th and 20th-century architecture in connection with actual architectural design and construction.

The course presents and interprets phenomena of modern architecture, to lay deep foundations of creative design, as the most important incentive of architectural studies and practice.

Training involves lectures and seminar such as 15 hours of lectures in semester 5, 30 hours of seminars each in semesters 5 and 6.

Rather than to transfer knowledge available through special literature, lectures aim at explaining ideas and events. In addition to a well-founded knowledge, seminars strive to make one practiced in forming and expounding his stand-point, in discussing and defending one's work before numerous listeners.

Written and graphic display of topics helps to exercise a systematic, concise, clear-cut formulation of ideas and opinions.

This skill is as important for the architect as to be acquainted with the purport in merit of the subject. Knowledge, understanding and correct evaluation of past events and processes lends proficiency to future-oriented design work.

In conformity with the program, seminars on modern architecture are held in two lessons a week in semesters 5 and 6* before student groups.

During seminars, students guided by the seminar leader report on topics previously selected in common by the seminar leader and the students, based on the overall program issued by the staff of the Department of Modern Architecture, and involving problems of changes intervened in architectural theory and practice in the 19th and 20th centuries.

The seminar program is centered around two main scopes such as:

a) Activity of outstanding architects, architectural schools and tendencies, and social-economical and technical analysis of architectural achievements.

b) Design and construction trend variations in special topics such as architecture of housing estates, services, industrial premises, utilization of new building materials and technologies and their effect on the development of architectural forms.

The first of these scopes is seminar subject in semester 5, the second in semester 6 (and 7 in this academic year).

All students taking part in the seminar must elaborate a topic, lecture on it, discuss it, and finalize it in writing and in drawing.

* Program changes in this academic year specify parallel seminars in modern architecture in semester 7.

General Notes on the Department of Architecture, Technical University of Warsaw

The Department of Architecture, Technical University of Warsaw has been founded in 1915. Since that time to now, education at the Department has been uninterrupted. During World War II (1939 to 1945) teaching was continued clandestinely.

Presently Warsaw's Department of Architecture is one of the seven ones existing at other Technical Universities in the country. Each of these departments has about 400 students. There are also five departments of interior design at Fine Arts Academies.

Architectural studies in Poland extend over 4.5 years. Graduates are granted a degree of "magister" in architecture — about corresponding to MSc.

Post-graduate studies are open to those having diplomas of "magister" and an appropriate professional experience.

The Department of Architecture, Technical University of Warsaw offers post-graduate courses in:

Architecture and Country Planning.

Physical Planning,

Town Planning,

Housing,

Health Service Building Design.

Preservation of Architectural Legacy,

Industrial Design.

There is also a seminar facilitating research work leading to PhD in architecture.

Warsaw's Department of Architecture consists of four Institutes. The Institutes doing educational and research work, are:

Institute for Basic Problems of Architectural Development.

(Theory and History of Town Planning and Architecture, History of Civilization, Sociology, Preservation of Architectural Legacy, Arts.)

Institute of Architectural Design.

(Singled out studies within the Institute of Architectural Design deal with particular aspects of design work such as: Introduction to Architectural Design and Planning, Building Construction, Building Statics, Theory of Structures, Structural Design, Building Services, Design Economics, as well as with specialized design problems such as Housing, Public Use Buildings, Industrial and Sport Architecture, Landscape etc.)

Town and Country Planning Institute.

Institute for Rural Architecture and Planning.

General subjects are delivered by Institutes belonging to other Departments of the University (Physical Training, Philosophy, Political Economics, Languages, Mathematics).

Curriculum of the Department puts special emphasis on integration of various aspects of design work like Town and Country Planning and Architecture.

All students, disregarding specialization which comes during the last year of studies, are assigned design problems of different scale ranging from regional planning via urban scale to interior and structural details.

Thesis design is elaborated under supervision of a particular institute (depending on the given problem) and studio, as well as under individual and personal tutorship of the concerned professor.

School has made remarkable contribution towards reconstruction of the country not only by the very fact of educating generations of architects after both World Wars, but also through collecting building records, and surveys of historical buildings made by students during the summer training since the early twenties.

Department of Architecture
Technical University of Warsaw
Curriculum 1975-1976

4.5-year program leading to magister (MSc) degree in architecture
(List of subjects and number of hours per week)

1st year*	1st semester			2nd semester		
	T	P	E	T	P	E
Subject:						
Physical Training	—	2	—	—	2	—
Foreign Language (Russian)	—	2	—	—	2	—
Foreign Language — Western (English, French, German, or Italian — freely chosen by the student)	—	2	—	—	2	—
Political Economics	1	2	—	2	2	E
Mathematics	2	2	E	2	2	E
Descriptive Geometry	2	2	—	2	2	E
Introduction to Architectural Design and Town Planning	1	5	—	—	5	—
Drawing, Painting and Sculpture	—	5	—	—	5	—
History of Architecture and Town Planning (ancient and mediaeval)	2	2	—	2	2	—
Building Construction and Statics	2	2	—	2	2	—

Library

5 hours per semester — general instruction
about collections and catalogues

Summer training on a building site — 4 weeks

Summer training — vernacular architecture — 2 weeks

T = theoretical classes (lectures)

P = practical classes (seminars, studio work, laboratories in groups of 6, 12, or 25 students
depending on subject)

E = examination

2nd year	3rd semester			4th semester		
	T	P	E	T	P	E
Subject:						
Physical Training	—	2	—	—	2	—
Foreign (Western) Language	—	2	—	—	2	—
Philosophy (Marxist)	1	2	—	1	2	—
Architectural Design	—	5	—	—	5	—
Town Planning	1	1	—	1	1	—
Design of Rural Settlements	1	2	—	1	2	—
Drawing, Painting and Sculpture	—	3	—	—	3	—
History of Architecture and Town Planning (European 16th to 18th cent.)	2	2	—	2	2	E
Building Construction, and Building Physics	2	3	E	2	3	—
Theory of Structures	3	4	—	2	4	E

Architectural Survey

— 2 weeks summer training after the 4th
semester

Town Planning Survey

— 2 weeks summer training after the 4th
semester

Drawing and Painting Studies in Open Air

— 2 weeks summer training after the 4th
semester

* GCE required + entry competition examination in Mathematics Arts, and Foreign
Language.

3rd year	5th semester			6th semester		
	T	P	E	T	P	E
Subject:						
Physical Training	—	2	—	—	2	—
Foreign (Western) Language	—	2	—	—	2	—
Computer Programming	—	—	—	1	—	—
Political Economics	2	2	—	1	2	E
Architectural Design	—	6	—	—	6	—
Town Planning	2	3	—	2	4	—
History of Architecture and Town Planning (19th and 20th cent.)	3	3	—	2	2	—
Design of Rural Settlements	—	—	—	—	2	—
Architectural Design and Planning Economics	—	—	—	1	1	—
Building Services	1	2	E	—	—	—
Theory of Structures	—	2	—	—	2	E

6 weeks of summer training in a design office and in a building site after the 6th semester

4th year	7th semester			8th semester		
	T	P	E	T	P	E
Subject:						
Physical Training	—	2	—	—	2	—
Foreign (Western) Language	—	2	—	—	—	—
Work Science	1	1	—	1	1	—
Mathematics	1	1	—	—	—	—
Computer Programming	1	1	—	—	2	—
Architectural Design	—	6	—	—	6	—
Planning (Urban)	—	5	—	—	—	—
Regional Planning	2	—	E	1	6	—
Rural Settlements Planning	—	—	—	—	3	—
History of Architecture and Town Planning (19th and 20th cent.)	2	2	E	—	—	—
Preservation of Architectural Legacy	—	—	—	2	2	—
Sociology	1	—	—	—	—	—
Design Economics	1	1	—	1	2	E
Structural Design	—	2	E	—	2	—
Thesis Design (architecture, planning, rural planning, or pre- servation of architectural legacy)	—	4	—	—	4	—
4 weeks of summer training in a design office						

5th year	9th semester			10th semester		
	T	P	E			
Subject:						
Structural Design	—	2	—			
Country and Regional Planning	2	—	E			
Design Economics	1	2	E			
History of Civilization	1	2	—			
Optional Subjects (depending on thesis subject)	4	3	E			
Practical Training — individual program in con- nection with the thesis problem	—	3 weeks	—			
Thesis Design	—	16	—			
						Final Examination and Open Jury MSc. in Architecture

Summary

Purpose and method of teaching 20th century architecture are analyzed by comparing and summarizing work done at the Departments of Architecture of the Technical University of Warsaw and of the Baghdad University, outlining Author's relevant experience at this latter. Education in modern architecture and development of design approach are interrelated, history of architecture has its peculiar character. Study programs of lectures during three semesters and seminars during two semesters are presented in annexes. Annexes No. 1 and 2 are test papers, No. 3 is a questionnaire for students registering for the seminar of history of modern architecture, No. 4 is a detailed description of education, while No. 5 is the curriculum for the academic year 1975/76 of the Department of Architecture, Technical University of Warsaw.

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Prof. Dr. LECH KŁOSIEWICZ, Politechnika Warszawska
Plac Jedności Robotniczej 1,
Warsaw, Poland