

ARCHITECTURAL EDUCATION FUTURE EXPERIENCE IN DESIGNING A NEW CURRICULUM FOR UNDERGRADUATE UNIVERSITY EDUCATION IN ARCHITECTURE

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Abstract

In any academic institution, which offers a professional degree in architecture, the question of the relationship between the education provided and the skills required for successful practice, is obviously of paramount importance. Consequently, the design and the overall philosophy of the curriculum has attain a congruency between knowledge provided in the school and the role of the architects in society, where the justification of architecture as a profession will be in providing better environments for contemporary societies.

In recent years, the profession of architecture has changed, but the educational process, especially in Middle Eastern architectural education, has been slow to respond to this change. There appears that there is a growing dissatisfaction with the current situation in Middle Eastern education, since several educators and researcher voiced the thought that architectural education needs to be more responsible to the social demands of contemporary societies. Unfortunately, however, few attempts have been made in this realm.

Where consensus is lacking on the issue of what changes in Middle Eastern architectural education will best support the society's needs and the future of the profession, this research proposes an intellectual framework within which architectural educators can envision the socio-culture demands placed in the profession by society and type of education that satisfies these demands.

This research is divided into several sections. The first is to conceptualize the problem of architectural education in the Middle East. The second is to develop an argument in response to these problems. Such argument is devoted to answer basic questions about what is architecture. What is architectural design? Relationship between architecture and culture? The third describes and analyzes an experience in designing a new curriculum for undergraduate university education in architecture (Misr International University). This curriculum would respond to the problems of the current architectural education, and the needs of the profession and society.

Keywords: Architectural Education, Curriculum, Undergraduate, socio-culture.

1 PROBLEMS OF ARCHITECTURAL EDUCATION IN THE MIDDLE EAST

The dilemmas of Middle East architectural are derived from the previous debate. It can be represented as an argument about the responsibility of architectural education towards the profession and Middle East society at large. The problem lies in the split between the artistic paradigm and the social paradigm. Architecture in Middle East schools is dealt with as a creative act, since the concept of creativity is commonly defined under heading such as talent and intuition. As a result, a number of mental skills are left undeveloped.

There are several problems facing Middle East education and practice. The discussion of those problems might go beyond the focus of this paper. However, four basic dilemmas can be traced to different factors- they are viewing architecture as an art. The lack of knowledge and failure to deal with the realities of professional practice, the lack of research on the education practice of architecture, and the gap between research and design on one hand, and education and practice on the other hand, the following is a dissuasion of these factors.

1.1 Viewing architecture as an art

Evidently, architects give less attention to user needs and social aspects than to formal considerations. The profession has rejected the work of architects.

An examination of the impact of architectural magazines (AIA journal, architectural record) shows that architecture students are encouraged to study those magazines whose concern is directed towards formal consideration, since the written content is centered more on buildings than people, human behavior, and social aspects. The graphic content is virtually devoid of any human content-the photographs of buildings or design projects do not include the inhabitants of those buildings.

The attitude of viewing architecture as an art can be found in Middle East architecture schools, where students are encouraged to study picture books. What makes the situation worse is the influence of western trends that have conquered Middle East architectural education and even the profession crisis has been influenced by western architecture.

Additionally, courses such as history and theory of architecture are directed more towards formal architecture within the work of the pioneers of "modern movement, post modern architecture and recently, deconstructivist architecture". While they have little concern for social issues.

Another aspect in Middle East architecture education can be derived from previous studies, where many schools follow the idea that was developed originally by the Bauhaus, since they precede their programs with an introductory course on abstract visual design. In this regard, it is believed that students will learn the universal principles of visual design like rhythm, proportion scale and balance, in turn, student can manipulate any number of architectural forms. However, one can argue that this idea can distract student's ability. Since it places emphasis on teaching universal grammar independently of any particular language. Thus, it can be argued that where a basic design course expects students to move from the universal and abstract to the particular and specific, the human mind does not seem to acquire and apply knowledge in such a linear sequence.

1.2 The lack of knowledge and the failure to deal with the realities of professional practice

The issue of the lack of knowledge among architects and their failure to deal with the realities of practice is evident in the literature that is concerned with architecture in the Arab Region.

The current architectural education everywhere in the world ill prepares the students for the realities for the world of practice. Students who come out are rather naive about the economic aspects of buildings and the realities of clients.

They have romantic notions of their roles and are quite confused as to how they should behave professionally.

Several studies confirm that there is a lack of knowledge among architects. There are very few buildings in Egypt that can be classified as architecture. With rare exceptions, architects deny functional and aesthetic of people. Their buildings lack concept and language and very few have social relevance. An evaluation study to assess and examine the design and planning of some housing projects. The study reported that there are several design errors pertaining to the concepts of privacy, character circulation and way finding. The different types of activities and the open spaces seem not to have been examined at all.

Another study concluded that there has been no control over the open spaces adjacent to housing blocks. A number of housing projects in Middle East and developing countries has been studied. Such examples point out to the shortcomings of design where people change their environments representing their dissatisfaction. They make alterations and extensions for their homes in order to provide more room and additional facilities. Thus, there is a need to address sociocultural issues, and the interrelationship of the physical environment and people's everyday actions and experiences in architectural education.

1.3 The lack of research on the education and practice of architecture

Apparently, there is a lack of research on the education and practice of architecture. There are three architecture and planning magazines that are published and distributed widely in the Middle East Region. They examined the articles presented in those magazines revealing that they focus more on formal aspects of building rather than on social and cultural concerns. Even when they present issues pertaining to cultural identity and local architectural, the concern is directed toward the forms, shapes, and motives of traditional architecture and how those forms should be adopted in our contemporary

architecture. Although this trend is one of the positive aspect in those publications, the users satisfaction, the meaning of formal architectural, and the cultural differences and the background of people are not of concern.

On the other hand, such magazines can be considered to be research periodicals, since they present subjective view points rather than research findings. However, they have value in terms of increasing the public awareness among Middle East architects.

Additionally, it is apparent that there is a lack of research in the field of architectural education and design teaching practices in the international periodicals that are distributed in Arab Region.

There is a need for research periodicals that present exploratory research and analytical studies-the authors believe that this will improve the architectural product and the quality of education and practice of architecture. This may take place through a continuous process of development, and adaptation.

1.4 The gaps between research (knowledge) and design and education and practice

In Middle East schools of architecture there is a gap between research/knowledge and design. The gap can be traced to several factors. It can be exemplified by the gap between research conducted in post-graduate level and design practices. This gap-to be bridged-should be investigated extensively , since it could be emerged from either denying the validity of research findings in design practice or the research results are not formulated in an appropriate way to be used as pri-design information. Another factor is that the architectural design studio-the backbone of the education of architects rarely includes any research activity. Based on the view that the content of design should be directed toward practical ends. In this concern, one can argue that being content to manipulate formal configurations does not provide in sights toward human experience and cultural values.

Academicians and theorists everywhere voiced the opinion that the variables that influence design practice in architectural education are ignored or over simplified, and that academic teaching does not take into account political, social and cultural aspects, and does not address or simulate the interaction with clients/target groups that characterizes design in professional practice.

Along the same line of previous thoughts, one can state that if the different types of knowledge which architecture requires are ignored the profession will lose its credibility in the eye of society.

2 A RESPONSIVE ARGUMENT

2.1 What is architecture?

People have been planning and building for a long lime. But was it architecture? Certainly, the origins of architecture predate the first architect, who is traditionally taken to have been the designer of a stepped pyramid in Egypt Zoser. Environments as well as human artifacts, are designed, in the sense that they embody human decisions and choices, and specific ways of doing thing. A person clearing a forest, putting up a roadside stand, or laying out a camp is as much a designer as an architect. Such activities the face of the earth and create built environments. In the domain of understanding architecture, there are two main questions:

- Why do people create built environment?
- What are the possible purposes of architecture?

Architecture can provide setting for certain activities, remain people of what these activities are. Signify power, status, or privacy, express and support cosmological beliefs, communicate information, help established individual or group identity. Architecture differentiates between here and there, men and women, front and back, private and public, sacred and profane, and habitable and inhabitable.

Theories about what architecture should accomplish are concerned with identifying the goals that the designer and building should satisfy. Such theories are not only concerned with a way of seeing buildings or interpreting but also with the purposes to which they should be addressed. Goals for architecture usually take two forms, statements about the task of architecture, and statements about the desired relationship between architecture and other phenomena.

Architecture has been defined by many theorists as follows:

- Architecture is a discipline, a profession and a state of mind (Antony Antoniades)
- Architecture is the masterly, correct, the magnificent play of masses brought together in light (Le Corbusier)
- A building must meet the following standards to qualify as architecture: it must conveniently serve the purpose for which it was built, it must be structurally sound, it must be beautiful. Architecture in this sense, can be defined as commodity, firmness and delight at the right time and at the right cost (Marcus Vitruvius Pollio)
- The reality of the building does not consist of walls and roofs but in the space within (Lao Tze)
- Architecture is a very special functional art, it confines space so we can dwell in it. It creates a framework around our lives (Steen Eiler Rasmussen)
- Architecture makes tangible meanings: it creates metaphors of the ideals and beliefs of a group (Amos Rapoport)
- Architecture is a cultural index that takes different forms in different civilizations and political settings (Antony Antoniades)
- Architecture safeguards life, health, and property, and promotes public welfare (AIA Board)

2.2 What is architectural design?

Literature on design as an activity, and its underlying processes, indicates that there is a wide variation of interpretations in the work of researchers and theorists.

The main task of architects is to create a meaningful environment. The primary concern of designers is to create three-dimensional structures of spaces and form to accommodate related human activities. This involves designing built environments which support, enhance, and celebrate human activities.

Design as a mental activity has been defined by different theorists as follows:

- Decision making in the face of uncertainty, with high penalties for errors. (Asimov 1962)
- Stimulating what we want to make before we make it as many times as may be necessary to feel confident in the final result (Booker 1964).
- Relating product with situation to give satisfaction (Gregory 1966).
- Initiating change in man-made environment (Jones 1970).

The previous definitions imply that they refer not only to the outcome of design, but to its ingredients as well. Concomitantly, the authors envisioned a set of related definitions of architectural design that can be exemplified as follows:

- Design is an activity of linking theory with particular problems.
- Design is an intuitive and reasoning activity.
- Design is an activity of exploring solutions.
- Design is an activity that designers are engaged in intellectually and socially, shifting between analytic, and evaluative modes of thinking.
- Design is an activity that links the problem in hand with past experiences.
- Design is an activity that includes political and economic trends.
- Design is a creative problem-solving activity.
- Design is not an activity of innovation.
- Design is an activity of verbal, numerical, and form exploration.
- Design is an activity of gathering information about, social and functional needs of a group of people.

It would appear that none of the preceding definitions can be dealt with separately. They should be conceived as an integrated set of components that provides comprehensive understanding of architectural design.

2.3 Culture and architecture

The term culture has several key components. It refers to beliefs and perceptions, values and norms, customs and behaviors of a group of people. The term is used to indicate that cognitions, feelings, and behaviors are shared among a group of people in a consensual way.

Culture is certainly the basic point that architecture is about. If architecture is made to serve humans, it will have to address it self to society and its environment in a certain frame of time. Basically, this is what defines the relationship between culture and architecture, or what at least is what makes culture different from one society to the other.

Consequently, if architecture and architectural education are meant to be sincere in satisfying human needs in a certain society, it will have to address it self to all cultural aspects. In this sense, it does not become universal, but it will have to be local or at least regional.

The conception of the world as a global village in a new system of communication should not deprive the sense of cultural identity. Architecture also, being influenced by science and technology, should not be international or universal since it influences and is influenced by culture. If we talk about architecture being related and adapted to the local environmental conditions, then culture will reflect itself on architecture.

In our respect to culture, we again will have to see the cultural differences from one society to the others. This, in turn, can very well be reflected in architectural products and the physical environment as a whole. The argument has always been that architecture of today should not reflect the past but it should reflect the present social cultures and their underlying features. Of course, the interpretation of a person is different from the other and this what makes the built environment is varied and dynamic, not standard and static.

In what sense does such respect for culture can be reflected in architectural education? And to what degree? The answers of these questions can be conceived by identifying topics and courses related to history, social, behavioral, and environmental aspects, as well as architectural heritage in its broadest sense. Such courses have been introduced in MIU curriculum and can be conceptualized as follows:

- Human factors in Design.
- History of Art & Architecture.
- History of Architecture.
- History of Islamic Architecture.
- Appropriate Building Technology.
- Research Methods in Architecture & Urban Design.
- Design Methods and Theories.
- Socio behavioral studies in Architecture & Urban Design.
- Housing and Urban renewal.
- Community Design.
- Environmental Perception.
- Social Factors Analysis in Spatial Organization.
- Indigenous Architecture of the Mediterranean.
- Historic Preservation.
- Restoration and Conservation Strategies.
- Documentation of Historic Architecture.
- Environmental Evaluation.

3 UIA/UNESCO CHARTER OF ARCHITECTURAL EDUCATION

The following is a selected set of crucial issues that are related to cultural aspects. Such issues have been stressed heavily in the charter.

We, the architects, concerned by the future development architecture in a fast changing world believe that everything, influencing the way in which the built environment is made, used, furnished, landscaped, and maintained, belongs to the domain of the architects. We, being responsible for the improvement of the education of future architects to enable them to work for a sustainable development in every cultural heritage, declare.

3.1 General Considerations

1. That the era will bring with it grave and complex challenges with respect to social and functional degradation of many human settlements, characterized by a shortage of housing and urban services for millions of inhabitants and by the increasing exclusion of the designer from projects with a social content. This makes it essential for projects and research conducted in academic institutions to formulate new solutions for the present and the future.
2. That architecture, the quality of buildings the way they relate to their surroundings, the respect for the natural and built environment as well as the collective and individual cultural heritage are matter of public concern.
3. That there is, consequently, public interest to ensure that architects are able to understand and to give practical expression to the needs of individuals, social groups and communities, regarding spatial planning, design organization, construction of buildings as well as conservation and enhancement of the built heritage, the protection of the natural balance and rational utilization of available resources.
4. Those methods of education and training for architects are very varied; this constitutes a cultural richness which should be preserved.
5. That the vision of the future world, cultivated in architectural schools, should include the following goals:
 - A decent quality of life for all the inhabitants of human settlements.
 - A technological application which respects the people social, cultural and aesthetic needs.
 - An ecologically balanced and sustainable development of the built environment.
 - An architecture which is valued as the property and responsibility of everyone.

3.2 Education and objectives

1. Since architecture is created in a field of tension between reason, emotion and intuition, architectural education should be regarded as the manifestation of the ability to conceptualize, coordinate and execute the idea of building rooted in human traditions.
2. Architectural education involves the acquisition of the following:
 - An ability to create architectural designs that satisfy both aesthetic and technical requirements.
 - An adequate knowledge of the history and theories of architecture and the related arts, technologies and human science.
 - An adequate knowledge of the fine arts as an influence on the quality of architectural design.
 - An understanding of the relationship between people and buildings, and between buildings and their environment and of the need to relate buildings and the spaces between them to human needs and scale.

- An understanding of the profession of architecture and the role of the architect in society, in particular in preparing briefs that take account of social factors.
 - An understanding of the methods of investigation and preparation of the brief for a design project.
 - An understanding of the structural design constructional and engineering problems associated with building design.
 - An adequate knowledge of physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate.
 - The necessary design skills to meet the buildings users' requirements within the constraints imposed by cost factors and building regulations.
 - An adequate knowledge of the industries, organizations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.
3. Architectural students should be made critically aware of the political and financial motivations behind clients' briefs and building regulations in order to foster an ethical framework for decision making within the built environment. Young architects should be encouraged to assume responsibilities as professionals within society.
 4. In order to benefit from the wide variety of teaching methods, exchange programs for teachers, and students at advanced level, will be desirable. Ideally final projects should be shared among schools as a means of facilitating comparison between results and self-evaluation of teaching establishments, through a system of international awards and exhibitions.
 5. Issues related to the architecture and the environment should be introduced as part of a general education at schools, because an early awareness of architecture is important to both future architects and the users of buildings.

3.3 Some criteria of architectural education

In order to achieve the above mentioned goals, the following aspects should be taken into account:

1. Educational establishments are advised to create systems for self-evaluation and peer-review conducted at regular intervals, including in the review panel, teachers from other schools and practicing architects.
2. Each teaching institution must adjust the number of students according to its teaching capacity. Criteria for the selection of students shall be in relation to the aptitudes required for a successful training in architecture and will be applied by means of an appropriate selection process, organized by the schools at the point of entry in the program.
3. Modern personalized computer technology and the development of specialized software make it imperative to teach the use of computers in all aspects of architectural education. Adequate laboratories, facilities for research, advanced studies information and data exchanges for new technologies should be provided at schools of architecture.
4. The creation of a network, on a world-wide basis, for the exchange for information, teachers and senior students, is necessary in order to promote a common understanding and to raise the level of architectural education.
5. Continuous interaction between practice and teaching of architecture must be encouraged and protected.
6. Research should be regarded as an inherent activity of architectural teachers. This architectural research must be founded on project work, construction methods, as well as academic disciplines. Specific review panels are to be created to evaluate architectural research and architects must be included in the general evaluation research commissions.

7. Individual project work with direct teacher student dialogue must form a substantial part of the learning period and must occupy half of the curriculum.

It should be noted that this charter was created on the initiative of the UIA and UNESCO, with the ability of being applied by any architectural school on the international and national levels.

We hope that this charter could be used for the creation of a global network of architectural education within which individual achievements can be shared by all.

We hope that this charter in its appeal to the whole world, can help in the understanding that architectural education constitutes both the socio-cultural and professional challenges of the contemporary world, and needs the guarantee of protection, development and urgent action.

4 DEVELOPING AN UNDERGRADUATE PROGRAM OF ARCHITECTURE: MISR INTERNATIONAL UNIVERSITY

Based on the argument development in response to the problems facing Architectural Education in the Middle East, and based on the recommendations of the UIA charter of architectural education, the authors have adopted, adapted and envisioned an educational philosophy that would match the local conditions of the Middle East as a region, and would fit the needs of the contemporary society in Egypt. The undergraduate program of architecture in Misr international University can be described in terms of educational philosophy, goals and objectives, the academic program, basic educational concepts, and the curriculum.

4.1 Educational Philosophy

The department of architecture aims at providing students with a broad base of knowledge and understanding of interrelationships of human and their environment as well as basis for developing the fundamental design methodology and technique required to respond to those needs of society that demand some form of design product.

The program investigates social, technological, and historical paradigms relevant to the making of architecture and urbanism. Course work focuses on the synthesis of culture, history, environmental conditions, and social aspiration into a program for architecture. Students are given the opportunity to experiment with ideas and methods, as socially responsible individuals, to develop attitude towards architectural and urban design.

A core syllabus of sequential design studios cover a broad spectrum of investigation, ranging in scale from distinct building types to urban design. The program offers an excellent opportunity for exploring issues of sustainability and urban renewal and rehabilitation, placing emphasis on the basic human needs and assuring relevance with local, regional, and global contexts.

4.2 Goals and objectives

The institutional goals of the department of architecture, faculty of arts and engineering science at Misr International University are teaching, research, and community service. The teaching goals are to prepare students to assume positions of leadership in the profession of architecture and environmental design to actively and effectively participate in the development of the middle Eastern Region. The department is committed to research, especially in those areas pertaining to solutions of environmental and urban problems. The community service that the department renders is intended to contribute to the development of the building industry and poor communities within the nation as a whole.

- Mastering skills and techniques of architectural and urban design.
- Acquiring a perspective on architectural theories of past and with emphasis on those of Middle Eastern culture.
- Learning to think critically about the role of architecture in stimulating or inhibiting cultural behavior and attitudes.

- Understanding building technology and acquiring the necessary skills in engineering sciences.
- Learning about management of professional practice different culture.
- Gaining an understanding of related fields of urban planning, landscape architecture, and interior design.
- Understanding principles of science as they relate to environmental design.
- Understanding and identifying culture values and traditions.
- Communicating professionally in English as well as in Arabic.
- Thinking logically and developing skills of analysis, synthesis and application.
- Learning to think globally and to act locally
- Learning to work effectively as individuals and in teams

4.3 Program

The purpose of architecture is to satisfy the physical, social, and aesthetic needs of society. Architects have an ethical responsibility to society, their clients, and their colleagues. The academic program prepares students who are:

- Able to advance their knowledge of the art and science of architecture.
- Responsible for the social and environmental impacts of their professional activities.
- Able to provide unprejudiced and unbiased judgment when performing professional service.
- Able to uphold the integrity and dignity of the profession and respects the rights and professional aspiration and contributions of their colleagues.

In realizing the special requirements of an architect in Egypt, and in recognizing the increasing mobility of architects between different countries, the department is committed to preparing students to succeed in various professional tasks, through a system of integrated instruction in the classrooms and design studio, over a sequence of ten semesters, each is about 15 weeks. The program is divided into three stages as follows:

Introductory Courses: One year (Two Semesters)

This courses aims at developing students abilities of understanding and evaluating several issues related to art, architecture, and Engineering, and providing an academic preparation in which a student gets acquainted with the nature of architectural studies.

Core Course: Three Years (Six Semesters)

This stage provides the student with the knowledge of architecture and inter-relationship between the physical and social environment. The objective is to provide the student with adequate and different opportunities to develop his/her own skills in relation to the urban environment and human needs. During this stage, students develop their architectural design skills, and their capabilities of handing structural, constructional, and environmental problems relating to buildings. Their knowledge of history and theory of architecture and urbanism is reinforced and enhanced. Students are also introduced to the discipline of design economics and project management. Training courses in architecture and urban design are offered in order for students be able to participate effectively in the development of urban environment and in shaping the future of our cities.

Specialized/Professional Courses: One Year (two Semesters)

This final stage aims at offering several specialization as minor studies underlying architecture. Specialization is derived from the development plans in Egypt and the Middle East well. The program consist of one year during in which the students takes professional courses. Design projects become more complex and culminate in a comprehensive professional project (Design Thesis) in which the student must show evidence of his capability to synthesize the various disciplines studies over the whole period of the course and to demonstrate skills in presenting his/her project. Four minors are available in which students can conduct their final projects. Courses supporting the minor are available as elective in the last four semesters. The student can select one of the following minors:

- Minor1: Community Design
- Minor2: Urban Design
- Minor3: Design and building Technology
- Minor4: Architectural Heritage

These minors provide architecture students a professional area of concentrating which supplements the general requirement of the program. Each minor consist of group of courses in architecture and related disciplines.

4.4 The Curriculum

The curriculum is divided into several group of courses that aim at providing students with broad knowledge in different fields related to the discipline of architecture:

1 st Semester				First Year				
	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Engineering Drawing & Production Tech.	GEN111	3	5	1	4	3	
2	Mathematics (1)	GEN112	3	4	2	2	2	
3	Chemistry	GEN113	3	4	1	3	2	
4	Elective from faculty requirement.	GEN	2	3	1	2	2	
5	Elective from Uni. Requirement (1).	-----	3	4	3	2	2	
6	English for Academic Purposes	ENG100	3	3	3	0		
Total			17	23				
No. of Courses		6						
No. of credit hours		17						
No. of contact hours		23						

2nd Semester

First Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Physics (1)	GEN114	3	4	2	2	2	
2	Mechanics (1)	GEN115	3	4	1	3	2	
3	Statistics & Probabilities	GEN116	2	3	2	0	2	GEN112
4	Architectural Drawing	ARC110	3	5	1	4	4	GEN111
5	History and Theory of Ancient Architecture	ARC111	3	3	3	0	3	
6	Freshman (1)	ENG101	3	3	3	0		
Total			17	21				

No. of Courses 6
No. of credit hours 17

No. of contact hours 21

1st Semester

Second Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Aesthetics in Arch.	ARC211	3	3	3	0	3	
2	Architecture Design (2A)	DES200	4	6	1	5	----	ARC110
3	Intro. To Building Construction	BLD200	3	4	2	2	4	ARC110
4	History and Theory of Medieval Arch.	ARC201	3	3	3	0	3	
5	Structural Engineering	CIV200	3	4	2	2	3	GEN115
6	Modeling and Design Fundamentals.	ARC202	3	4	1	3	----	ARC110
Total			19	24				

No. of Courses 6
No. of credit hours 19
No. of contact hours 24

2nd SemesterSecond
Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Architecture Design (2B)	DES201	4	6	1	5	----	ARC110
2	Building Construction	BLD210	3	4	2	2	4	ARC110
3	History and Theory of Islamic Arch.	ARC210	3	3	3	0	3	
4	Shade, Shadows and Perspective	ARC200	3	5	1	4	4	ARC110
5	Basic Computer Application in Arch.	CSA210	3	4	2	2	3	
6	Testing & Chemical Properties of Materials	CIV210	2	3	1	2	2	
Total			18	25				

No. of Courses 6
No. of credit hours 18
No. of contact hours 25

1st Semester

Third Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Architecture Design (3A)	DES300	4	6	1	5	----	DES201 DES200
2	Working Drawing & Detailing	BLD300	3	4	2	2	6	BLD200 BLD210
3	Theories & criticism in Arch.	ARC300	3	3	3	0	3	ARC111
4	Advanced Computer Applications in Arch.	CSA300	3	4	2	2	3	CSA210
5	Design of Concrete Structures	CIV300	3	4	2	2	3	CIV200
6	Introduction to Research Methods (Univ. Reeq.)	REM200	3	3	3	0	3	
Total			19	24				

No. of Courses 6
No. of credit hours 19
No. of contact hours 24

c 2nd Semester

Third Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Architecture Design (3B)	DES301	4	6	1	5	----	DES201 DES200
2	Shop Drawing for Environmental Arch.	BLD310	3	4	2	2	6	BLD200 BLD210
3	Elective from faculty requirement	GEN---	2	2	2	0	2	
4	Univ. Requirement (2)	-----	3	3	3	0	3	
5	Univ. Requirement (3)	-----	3	3	3	0	3	
6	Design of Steel Structures	CIV311	3	4	2	2	3	CIV200
Total			18	22				

No. of Courses 6
No. of credit hours 18
No. of contact hours 22

1st Semester

Fourth Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Architecture Design (4A)	DES400	4	6	1	5	----	DES300 DES301
2	Working Drawing & Integrated System	BLD400	3	5	1	4	6	BLD300
3	Design Methods & Architecture Research	ARC401	2	3	1	2	3	
4	Landscaping & Site Design	DES411	3	5	1	4	5	DES201 DES200
5	Engineering Economics	GEN117	2	2	2	0	2	
6	Engineering History & Technology	GEN118	2	2	2	0	2	
Total			16	23				

No. of Courses 6
No. of credit hours 16
No. of contact hours 23

2nd Semester

Fourth Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Architecture Design (4B)	DES401	4	6	1	5	----	DES301 DES300
2	Working Drawing & Tender Doc.	BLD410	2	4	1	3	4	BLD300
3	Urban Design Theories	ARC410	3	4	2	2	3	DES201 DES200
4	Shop Drawings for Technical Installations	BLD411	3	4	2	2	6	
5	Project Management	GEN119	2	2	2	0	2	
6	Environmental Impact on Engineering Projects	GEN120	2	2	2	0	2	
Total			16	22				

No. of Courses 6
No. of credit hours 16
No. of contact hours 22

1st Semester

Fifth Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Sustainable Building Design	DES500	3	5	1	4	----	DES301 DES300
2	Urban Design	ARC500	3	5	1	4	----	DES301 DES300 ARC410
3	Elective from Department Req.	ELC001	3	3	3	0	3	
4	Elective from Department Req.	ELC002	3	3	3	0	3	
5	Management & Marketing	GEN121	2	2	2	0	2	
6	Site management & Building Regulations	BLD500	2	2	2	0	2	BLD300
Total			16	20				

No. of Courses 6
No. of credit hours 16
No. of contact hours 20

1st Semester

Fifth Year

	Course Name	Course Code	Credit Hours	Weekly contact hours			Exam hours	Prerequisite Course Code
				Total	Lecture	Tutorial		
1	Graduation Project	ARC510	7	13				DES401 DES400 ARC500 DES500

No. of Courses 1
No. of credit hours 7
No. of contact hours 13

Total No. of Courses 55
No. of credit hours Total 163
Total No. of contact hours 217

5 CONCLUSION

The intent of this paper was to how architectural education can be approached in relation to architecture, architectural design, and culture. A brief analysis of problems that face architecture schools has been conceived based on several studies and surveys. A responsive argument has been developed in response to these problems. It has included some principles and basic issues relating to architecture as a discipline, architectural design and its nature that involves processes and products, and the relationship between culture, and architectural education. Based on the perceived argument, a summary of MIU undergraduate program of architecture has been presented, illustrating its major underlying components and the way in which they are responding the change that is needed to confront the new challenges placed in the profession of architecture by contemporary societies.

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