

Methodology of Assisting and Evaluating the Graduation Project of Architectural Department

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-----ABSTRACT-----

The graduation projects of architectural department could be considered as a conclusion of the educational methodology of all previous years, however it was for general architectural department or specific one such as interior design. The importance of these subjects is that all the universities and colleges try to improve it from time to time. Also they put in their consideration that it could be improvement for the government by making the graduation projects contains ideas that could help in improving the city and solve several problems that faced it. Also all this organizations care about the international and annual architectural competitions of the international union of youth architects. On the other hand the graduation project takes the value of three subjects in the fourth level. This course has been passed through many experiments in examination, supervision and jury.

The architecture education had been started in Egypt since 1908 at the Faculty of Fine Arts and then some of engineering departments and colleges. Especially in Egypt the importance of graduation project depending on the student's education along the four years and it is also the first project to start his career, however many times it did not reach the expected level. The main problem is the education management, starts from choosing the project, the scheduled time and supervision, ending to the jury. Also a lot of departments in Arabian cities suffering from the same problem, because of that this research will show example of graduation projects for architecture department and compare it with international one. Then it can show the regular issues in both of them by the comparison and experiments. Finally this research will give a hypothesis to assist any architecture project, for either local or international one.

Keywords - *Architectural education, architecture design, assessment of graduation projects, jury team.*

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I. INTRODUCTION

The design process is the main aim of architectural education, this aim applied by the design courses and any other courses which can help the student in the design process and design actions throughout the whole five years of their architecture education, until their graduation project. However the other subjects are working on helping the students by improving their thinking and imagination with data which can help in taking right design actions. So it could conceivably design courses in which the student is tasted by his abilities of design and improve it. Also they work on how to deal with such decisions to achieve the desired level. Because of that the education process of design has the main attention from the students and professors, especially because they expect from it;

- a) Provides frequent opportunity for the student to be able to develop the skills of design.
- b) Allow students to apply the theoretical information regarding the design and construction of architectural projects
- c) Give the student the opportunity to develop its capabilities in the presentation, discussion and architectural criticism
- d) Prepare students for working life by simulating architectural office environment within the studio

On the other hand, this educational process suffers in the government and private Arab universities from a number of issues that are related to its teaching process. However to avoid dangerous of generalization, they can discuss the problems from researchers point of view. Also it can be predicted that these problems can be almost universally observed in all the Arab countries to the similarity of culture and teaching methods. This study is the result of long experience and scientific process. With access to a long number of plans and programs

of study, regulations and the laws which governing them, however the importance of the evaluation of graduation project and giving the final objective of final grades, and their positive or negative impact on the students and their knowledge. However there are few scientific studies that focused on the evaluation process, and the suitability of the educational process. (1)

II. PROBLEM DEFINITION

Graduation project is the last preparation project for the students. It has a navy special effect to justify students' direction and it specialize them. However it can test the minimum level of each student. The problem goes from the randomly picking of graduation projects, no balance in scale of projects, and the separation of the graduation project itself from its programming as if each part do not related to the other...etc. Also there is another problem related to the student's decision which will be immersing because they took a lot of views from a large number of supervisors all of them have to give their point of view to each student, and the student has to put his final design according to that. Because of that most of students cannot be follow the time line of the project and they required to submit their projects however the project still need more work on it to be mature project. On the other hand for many years the students took the approval to submit their graduation projects by printed it using digital applications and programs like (AutoCAD, Photoshop, 3D max, Revit...etc.). However this step makes the projects seems similar to each other and each project lost a lot of its identity. Those actions make the graduation project deteriorate each year to another. (1)

III. AIMS AND OBJECTIVES

The study aims to evaluate and improve qualitative education management for graduation project and ongoing development of it, in order to take advantage of the leading testing and adoption of a reference. Oriented system and regulations, plans and programs of study. Also to make the graduation project linked to plans and programs for overall national development. However the main objective of this paper is finding the entrance of the methodology for the evaluation and the development of architectural department. As one of the main outputs of the architect in light of the future vision for the development of architectural education determinants and that is the quality of architectural education to suit the modern era and the local environment and be balanced with the world through the following;

- Recognize the downsides parties to the educational process with finding solutions to some in the near term.
- Emphasize the importance of a faculty member in the educational process experience in determining the direction of the educational development process.
- Combination of old and modern by highlighting the national identity and the sense of contemporary.(1)

IV. HYPOTHESIS

This study is a summary of scientific and practical experiment; many years in the university educated architecture, work three times as a Head of Department (HOD), including working as a team leader or member in preparing and reviewing courses plans of architecture department in the university, in addition to a number of visits to colleges and universities. Also the annual jury of the graduation project supervision, and periodic evaluation of each year, which haunted the adoption of graduation. Although by the descriptive and comparative analysis it was possible to extract insights form, which qualitative upgrading graduation project and the development of the educational process. Also monitoring of some graduation projects through different years and universities, this will be either by public or private, to gain the best result. Then give recommendations to solve some problems for the architecture education in Egyptian universities.

V. THE CONCEPT OF GRADUATION PROJECT RESULTS

It's understanding the process of design as a result of clear objectives for architectural education. While the jury of this graduation projects consider as a very critical moment at this point. This experience put the architectural education in a special place compared with other departments and universities. Also make the architectural student specially compared with any other student because of this experience. (Figure 1)

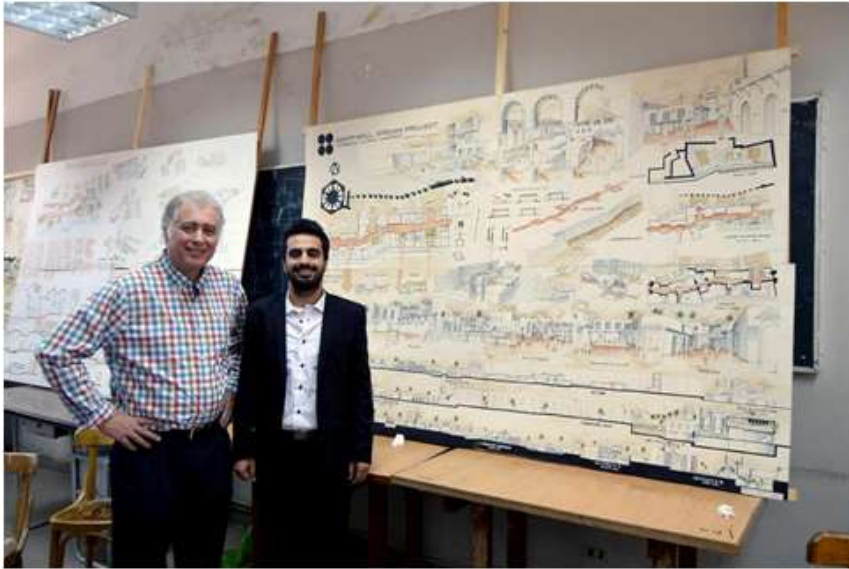


Figure 1: (jury, faculty of fine arts, 2016)

VI. DISCUSS THE METHODS OF ARBITRATION AND GRADUATION PROJECTS FOR STUDENTS IN THE FINAL PHASE OF ARCHITECTURAL EDUCATION

It is universally recognized in the most of architectural schools that most of architectural education using specific methods and approaches in the evaluation process of graduation projects. Although the final presentation of the project is an important indication about the student and the variability of educational work. (2) (Figure 2)



Figure 2: (student after jury and his graduation project. Faculty of fine arts, 2016)

VII. THE MAIN OBJECTIVE OF GRADUATION PROJECT'S STUDIO IN SCHOOL OF ARC

It is a place where architectural design courses have been teaching. However there is no clear agreed from a lot of architecture researchers and designers, also there are huge difference between the education process, the content and type of architectural teaching. Although most of researchers shows a lot of similarities in their aims of teaching. (3)

VIII. DESCRIPTION OF ARCHITECTURE EDUCATION IN STUDIO

The architectural education in the studio can be described that it is threaded a social unit and creating a learning group by the direct contact between students and their professors. While many researchers believed that

the studio has a direct impact on the education, but some criticize it at the same time of being a thinking tool to openness and power of expression. Because it is in the field of specific training, without any treatment for thinking refining and it consider as personal fun education. (4) (Figure 3)

The studio is the place which educates students to “think architecturally” it is the place which educates the student a new language as the language in which it becomes drawing and speaking are one unit, because the education through drawing aims to discovery and connection of thoughts. This special way of thinking is due to the characteristics of the problems and solutions that characterize this decision, developing student skill and potential in design directly related to the development potential in the understanding of the design and evaluate the output. Researchers in the field of educational group behavior agreed that the architecture studio represents a coherent social unit, also it constitute a common educational goals set, where the professor is the role of critic of architecture and the main arbitrator of the project where he directs his attention towards the final product through the process of evaluating and accurate follow up is used which means learning represented in multiple entrances and models to expand the knowledge base of the students. Also they describe many of these approaches in the architecture studio. (5)



Figure 3: (working inside the studio, faculty of fine arts, 2016)

The work inside the studio is a main feature of architectural education which is suitable for individual and group work. Although it is the effective environment for the education of art and architecture design in terms of participation among the staff and the students without interfere the direction of student’s skills but just follow-up and give the guidance to them.

The staff members have a main impact inside the studio; they have to do several actions such as;

- a) They have to improve individual student skills through individual oriented studies or studies for new issues didn’t discussed or solved before. That is through (self-direct study) or (self-initiated study).
- b) They must set up the measuring tool for assessment- summarize and diagnosed until there are a clear foundation for the development.
- c) The evaluation strategies should support students understanding for the stages of education and facilitate the steps of their studies.
- d) It should allow the assessment strategy of self-assessment as an effective dynamic within all levels of education.
- e) The evaluation criteria should be given to each student accurately for student individual or group work. However they should put in their considerations the standards and nature of the education process outputs.
- f) They must follow the retrieval and review of previous work evaluating and discuss the reasons of its assessment; this is a very important process in teaching art and architecture.
- g) Students should be prepared on the ability of oral presentation and explanation besides supporting the ability of writing, comment and criticize his work.

IX. JURY OF GRADUATION PROJECT

Jury proceeding begin by its traditional form in most of architectural universities by;1st listening to the student explaining the project, then the jury members during that scans the drawings and the attached models, 3rd they compile the information in a quick mental process based on the background of the juries’ and their experience, finally they give an information’s of knowledge and lessons relevant directly to the subject or design problems shown, which determines the degree and observations on the basis of re-feeding the information.

Although it considered that communication is part of the educational process for the architectural design ranging underneath an addresses, the most important of it; the design education, group behavior, creativity, studio rules and the leadership of the group. (6)

X. THE TECHNIQUES OF ARCHITECTURAL PROJECT JURY

Trying to figure out the meaning of judging the graduation projects, it was necessary to recognize the methods of graduation projects jury and evaluation, which can be discussed in several ways depending on its relationship to the subject of the evaluation. However it can be classified b four ways are directly related to the topic of architectural projects which evaluated by committees various arbitration; either to be a judgmental opinion to express building or group of buildings, or to be specific judgment for the quality of the building or its design, or maybe to be judge for future projects or finally fall within the scope of the architectural circles that granted to outstanding projects.(7)

Although in the context of a search that no matter how varied forms of graduation project jury techniques it will have a future reflection on architecture generally, and this is what happened with a lot of researchers and critics, writers and architects in the identification and classification other entire modern architectural movement.

XI. THE CHARACTERISTICS OF GRADUATE STUDENTS IN THE FIELD OF ARCHITECTURE AT FACULTY OF FINE ARTS

a) Architectural features of an architecture department graduate;

- Have the ability to understand and analyze the architectural problems in a systematic way, and design a creative project.
- To be fully aware of the science and technology related to the field of building and constructions.
- To be able to view the data collection skills and knowledge of all the details and the ability to shoot and show architectural thought by using the latest tools and techniques either for manual drawing or three dimensional work and sculpture.
- To be able to apply the acquired knowledge to gain access to architectural solutions, creative and innovative. Also to be able to adopt solve an mysterious or complex problems completely through different designs and scenarios based on collaborative and integrated team and to be able to tradeoff between them to reach a solution that fits with social, cultural and economic context of the community.
- To be fully aware of the role of architect and able to demonstrate knowledge of cultural diversity and differences, the basic of practicing the profession and associate ethics, and the impact on design of building community character and identity.
- To be able to define the issues of urban planning and community needs of the design process.
- To be able to accommodate the integration of systems in the field of architecture and planning business, and recognize the responsibility and the role of architect as a the design project leader, which has the ability to understand assemble and coordinate all disciplines to create a sustainable environment.
- The ability of the assay preparation work, standards and specific amount of work according to the integrated drawings and put in his consideration the other studies and various engineering majors. (14)

b) Engineering characteristics for architectural graduate in faculty of fine arts

- Apply knowledge of concepts of math, science and engineering in solving engineering problems.
- Developing the design process for a system or sub-system or any operational activities to fulfill the requirements in a reliable way.
- Design and conduct laboratory experiments with the ability to analyze and inter data.
- Identify, formulate and solve problems in a right engineering way.
- The use of techniques, skills and appropriate engineering tools which required for engineering field and project management professionally.
- Work effectively in a group with different specializations.
- Communicate with others, manage communication tools effectively and professionally leads to the success of the project or the engineering work.
- Study the implication of all engineering solutions and the design dissentions on society and environment.
- The ability to understand and process the knowledge tools for all contemporary engineering affairs.
- The ability to know all the professional and ethical responsibilities and realize the context of engineering work within any system.
- The ability to engage in self-knowledge process to keep up with the rapped development in all engineering aspects.

- Knowledge and expertise in all engineering, architectural and technical terminology in English so that they can keep with the evolution and compatibility with the work inside and outside Egypt. (14)

c) Artistic and creative features for the architectural graduates of fine arts

- Innovation, artistic creativity, applying to develop and upgrading the artistic sense and the beauty with keeping the identity.
- Perform their role in the society from artistic concept and innovative designs in all its various fields.
- Characterized with caring about architectural environment and valuable historical monuments.
- Combining between theoretical and practical work, with cognitive development in architectural and urban design. (14)
- Use available resources and raw materials efficiently.
- Respect the rules and ethics of the job and accept accountability and realizing the importance of the development in various fields of fine arts; however it shouldn't be limited only on architecture.
- Criticize and judging things and accept this from others to get the benefit from identifying areas of strength and weaknesses of these provision.
- Commitment, integrity, credibility and respect for professional ethics.
- Proficiency of skills and the use of technological means and communication appropriate in the exercise of artistic and innovation.
- To be update with the developments in the field of his work.
- Initiative an artistic and intellectual solutions that fit the emerging changes in the surrounding environment in order to serve the community and contribute to the development and upgrading. (14)

XII. REFERENCES MEASUREMENTS AND EXPECTED LEVEL FOR UNDERGRADUATE ACHIEVEMENT

It is a description of the situation that the undergraduate students in art and architecture should achieve. These measurements determine the minimum acceptable achievement must be collected by the student during his whole architecture study.

The student in architecture department should be capable to the following qualifications;

- a) The ability to clarify or demonstrate or review their ideas individually or in group.
- b) Efficiency of observation, verification and questioning, reconnaissance and visualization.
- c) The possibility of develop the ideas and show them to others and use materials and link it to the environment.
- d) Possibility of linking between the architectural design intentions and achievement, methods, outputs and media. (14)

XIII. GRADUATION PROJECT

Graduation Project is an important part of every engineering and computer science discipline at undergraduate level. The main purpose of these projects is to encourage students to apply the knowledge acquired during their studies. Students are also expected to show how proficient they are in solving real world problems with certain constraints for the outcome-based evaluation suggested by ABET and ACM/IEEE Computing Curricula 2001.(9)

Many students deem the Graduation Project course very different from normal lecture-based courses because it demands independent objective formulation, activity planning and time management. Hence, a structured template and lifecycle for Graduation Project is essential for this course. (10)

It can help students to know the standards which are necessary to be followed to obtain a high quality Graduation project course. (11) Also the graduation project presentation made by the students considering as a reflection of the student ability to use all the knowledge they have already studied to achieve design reflect their understanding. That would be presented by using the manual experience or using computer applications (figure,4) to present the final outcome of their projects



Figure 4: (student using computer application to present his work. Faculty of Fine Art, 2016)

1- Gradation project description

The following table will include the description of the course of graduation project according to faculty of fine arts; (12)

Table 1: the description of the course of graduation project according to faculty of fine arts

1- Data of the course :		
Code : ARC\ 428	Name of the course: Graduation project	Year of study: 4th year
Program : Becalour of Architecture Department : Architecture	Credit hours: lecture section	
2- The aim of the course	This course aim to give the student more information's and skills related to; <ul style="list-style-type: none"> Applying all of design skills, theoretical subjects and practical ones which they studied to create a complete design. 	
3- The aim of teaching this course: In the end of this course the student should be able to;		
A- Information's and perceptions	A.1- Having the knowledge of principles of architectural design, the history of architecture and urban and regional planning, preparation of presentation and design project and present it.	
	A.6- Understanding the architectural and urban problems and different dimensions of housing problems.	
B- Mental skills	B.2- Thinking in three dimensional manners and the ability to retrieve images from reality and history through innovation and creativity to generate the concept of design process.	
	B.7- Evaluate the special and aesthetic, technical and social design of a wider environment.	
	B.11- Conclusion of appropriate solutions to the problems of urban, architectural and engineering based on analytical thinking.	
	B.14- Investigation of the components and the vocabulary of architecture and urban design to determine the cause of the failure and to avoid it in the future.	
	B.15- Solving urban, environmental and engineering problems through creative and innovative design.	
C- Professional skills	B.17- The integration of social, economic and environmental dimensions and the ability to manage risks during the design, implementation and operation.	
	C.1- production and delivery of architectural design and projects of planning drawings using traditional techniques and new computer technology.	

	C.2- proof of professional competence in the development of innovative and appropriate solutions to the problems of architecture and urban.		
	C.3- Showing imagination and creativity in an easy and understandable w for everyone.		
	C.4- Leadership ability, learning and interaction with the client without losing the lead.		
	C.5- Respond effectively to a wide circle of criteria and variables familiarity with social, ethical and technical concerns.		
	C.6- The development and innovation of architectural and urban design in the context of precision, beauty and efficiency in the operating.		
D- General skills	D.7- The ability to search and collect data and information's, and integration along their career in self education.		
4- Course content	weeks	Titles	E d u c a t i o n a l o u t p u t t a r g e t
	1	Submit basic theories of design theme	A 1 . C 1 6
	2	Submit studies of site analysis	A 1 . B 2
	3	The main ideas for project (1st exercise)	A 1 . B 2
	4	Identify alternatives design	A 6 . B 7
	5	Analysis of alternative designs	A 6 . B 1 1
	6	Choose the best alternative for the project (2nd exercise)	B 1 . C 4
	7	Individual development	A

			1 , C 7
	8	Individual development	A 1 , C 7
	9	Individual development	A 1 , C 7
	10	Submit the final project (3rd exercise)	A 1 , B 1
	11	Drafting	A 1 , B 1 5
	12	Drafting	A 1 , B 1 5
	13	Drafting the project	A 1 , B 1 7
	14	Internal evaluation	A 6 , B 1 7
	15	Jury(external evaluation)	B 1 , C 4
5- Teaching and learning methods	5.1. Site visits		
	5.2. Preliminary studies		
	5.3. Contact working groups for the use of similar projects		
6- Teaching and learning methods for students with limited abilities	6.1. Intensification of office hours		
	6.2. Focus on oral discussion		
	6.3. Do an extra research		
7- Students preparation			
7.1. Using methods	7.1.1. Individual and group researches		
	7.1.2. Applied exercises		
	7.1.3. Oral presentation and discussion in groups		
	7.1.4. Individual submission		
7.2. Timing	Week	Submission	
	2	The research	
	3	1st exercise	
	6	2nd exercise	

	10	3rd exercise
	7	Oral submission
	8 & 9	Individual submission
7.3. Distribution of grades	Theoretical research	10%
	1st exercise	20%
	2nd exercise	20%
	3rd exercise	20%
	Oral submission	10%
	Individual submission	20%
	Total	100%
8- References		
8.1. Time- saver standards		
8.2. http:// www.GreatBuildings.com		
8.3. http:// www.DesignArchitecture.com		

Also according to fine arts in Helwan University, Architectural department, the next table will discuss the course report of graduation project course; (13)

Table 2: the description of the course of graduation project according to Helwan University, Architectural department

A. Basic information's :			
1- Name of course and code number	Graduation project ARC / 428		
2- Department	Architectural department		
3- Semester	4th year		
4- Credit hours	() lectures + () sections		
5- The system used for the selection of exams committee			
6- External audit systems for the exams	() available () not available		
7- Number of stuff	() doctors () assistants		
B- Specific information's:			
1- Specifications			
• Number of students in this course			
• Number of students attend the exam			
• Exam results	Passed () ()% failed () ()%		
• Percentage of the passed students according to their GPA	Excellent () V. Good () Good () Fair ()		
2- Teaching the course			
• Topics that have been taught			
• % of what has been taught from the primary content of decision			
• The extent of the commitment of those who teach the content of the scheduled.	60 > () 60-84 () 85 < ()		
• The extent of covering the exam to all the subjects of the course	60 > () 60-84 () 85 < ()		
• Teaching and learning methods	Theoretical lectures () sections () Analysis () Quarterly activities ()		
• Methods of evaluate the students	Theoretical lectures () sections () Oral () Quarterly activities ()		
3- Possibilities for teaching			
• Scientific references	Available () Available but limited () Not available ()		
• Supplies and raw materials	Available () Available but limited () Not available ()		
4- Administrative and regulatory restrictions			
Rules of studios			
5- The results of evaluating this course from students			
6- Notes of external auditors.			
7- What has been implemented of development proposal from previous year?			
8- What has not been implemented of development proposal from previous year?			
9- The development plan for next year.			
Field of development	Characterization of the development	Time of the development	Responsible for implementation
	A new addition	Inside the university	Student

However Russian university (Kazan State University for Architecture and Civil Engineering, 2015-2016) discusses the assessment criteria for course module as following; (15)

Module:

EV6134 Final Year Integrated Building Design Project

Student should develop a project to pass a module:

Table 3: Module - Final Year Integrated Building Design Project

No	Title	Demonstration of the skills	Assessment
1	Dissertation	9000 word dissertation:	100%*
		1.1. <u>Project of Residential or Public Building</u>	90
		1.2. Presentation of the project (15 min.)	10

*Final mark consists of 90% for design of residential or public building and 10% for presentation of the project.

Module assessment:

- 35-39 %: failure
- 40-49 %: third class
- 50-59 %: lower second class
- 60-69 %: upper second class
- 70 и более %: first class

The pass mark on all the module is 40%

EV6131 Architectural Design and Construction of Large Public Buildings

General Objectives:

- 1.1. Design of the residential or public building.
- 1.2. Demonstration of knowledge in architectural and constructive design.
- 1.3. Evaluate the construction and structural context of the project and demonstrate an awareness of the requirement to promote sustainable development.
- 1.4. Apply construction and architectural principles and standards for health & safety risk.
- 1.5. Define complex problems in building design and other aspects, and apply appropriate knowledge and skills for their solutions.
- 1.6. Use of computer software for analysis, design and details (AutoCAD, Rhino, Revit, Sketch Up, Adobe Photoshop, CorelDraw and etc.)

2. Passing indicators:

- 2.1. 9000 word dissertation consist in two main chapters: (a) architectural proposal, (b) construction proposal.
- 2.2. Dissertation has to be formed as a text of design proposal and additional portfolio (images and drawings of architectural and constructive proposals).
- 2.3. Oral presentation of the project.

GENERAL CONTENT AND REQUIREMENTS FOR FINAL YEAR INTEGRATED PROJECT:

- a) 9000 word dissertation – Executive Summary of the project in format of A4 paper size (.pdf format, not more than 5 Mb).
- b) Portfolio of images and drawings for architectural and construction proposals including the final layout of presented project – format of A3 paper size for proposals and format of A1 for layout (.pdf format, not more than 15 Mb).
- c) Oral presentation of the project – max. 15 mins (presentation in .ppt format (PowerPoint) or .pdf format.

Content of the module’s task:

EV6134 Final Year Integrated Building Design Project

Table 4: Content of the module’s task

1.	Development of urban planning solution for location of the designed object in the territory
1.1.	Task 1: Analyze the designing area to locate the designed object on the site
1.1.1.	Make a scheme of transport-pedestrian area analysis of the designed territory
1.1.2.	Make a scheme of landscaping of the designed territory

1.1.3.	Perform a functional analysis of the territory
2.1.	Task 2: Design the location of the designed object in the territory taking into account a solution of functional issues
2.2.1.	Generate a territory with the main porch to the building, auxiliary entrances, household areas, landscaping and improvement of public services
2.2.2.	Calculate and design a sufficient number of parking spaces
2.2.3.	Develop the system of passages to the porches, the system of sidewalks and playgrounds
2.2.4.	Develop the system of fire access to the designed object
2.	Development of architectural solutions on building design
2.1.	Task 1: Develop functional planning solutions of the designed object
2.1.1.	Develop a scheme of functional zoning of the entire object, of floor functional zoning
2.1.2.	Develop planning solutions of floors with stairs and elevator providing safe evacuation
2.1.3.	Develop nonrecurring floor plans
2.1.4.	Develop planning solutions of an underground floor with parking (if available)
2.1.5.	Develop architectural sections through the building
2.2.	Task 2: Develop imaginative solutions and facades
2.2.1.	Search of analogues
2.2.2.	Find analogues and develop the concept of imaginative solutions and

	facades of the designed object
3.	Development of constructive solutions for building design
3.1.	Develop a plan of foundations and do calculations
3.2.	Develop a plan of floors and do calculations
3.3.	Develop a floor plan
3.4.	Develop constructive sections through the building
4.	Development of a 3D image(s) of the designed object and constructions of the building Develop perspective pictures of the designed object and constructive 3D images of the object and scan designs
5.	Implementation and execution of the project
5.1.	Task 1: Perform a title page, develop an explanatory note to all sections of the project
5.2.	Task 2: Make the composition of the projections of the building including the following architectural drawings
5.2.1.	Town planning analyzes
5.2.2.	General plan
5.2.3.	Plans of public buildings
5.2.4.	Plan of an underground floor
5.2.5.	Sections along the building
5.2.6.	Facades
5.2.7.	3D images of the designed object
5.3.	Task 3: Include to the composition the following constructive designs
5.3.1.	Foundation plan
5.3.2.	Bricklaying plan
5.3.3.	Plan of floors
5.3.4.	Cover plan
5.3.5.	Constructive components and parts

MARKING GRADES FOR FINAL ORAL PRESENTATION
Module EV6134 Final Year Integrated Building Design Project

Table 5: MARKING GRADES FOR FINAL ORAL PRESENTATION

NN	Oral presentation of the project and dissertation by the student to the Assessment Panel	max 100
1.	Urban survey and analysis	10
2.	Urban design approach and suggestion (master plan)	10
3.	Architectural design approach	5
4.	Architectural design suggestion (plans, facades, sections)	20

5.	Construction design solution (foundation, framing, roof)	20
6.	Environmental and ecological condition	5
7.	Building services	5
8.	Health and Safety	5
9.	Architectural visualization (3D models, street views, panoramas)	10
10.	Level of oral presentation and report	10

On the other hand Umm Al-Qura University in 2011 put a plan for graduation project to develop a standardized framework for undergraduate students. The next chart will discuss their High level overview of Graduation Project Process.(8)

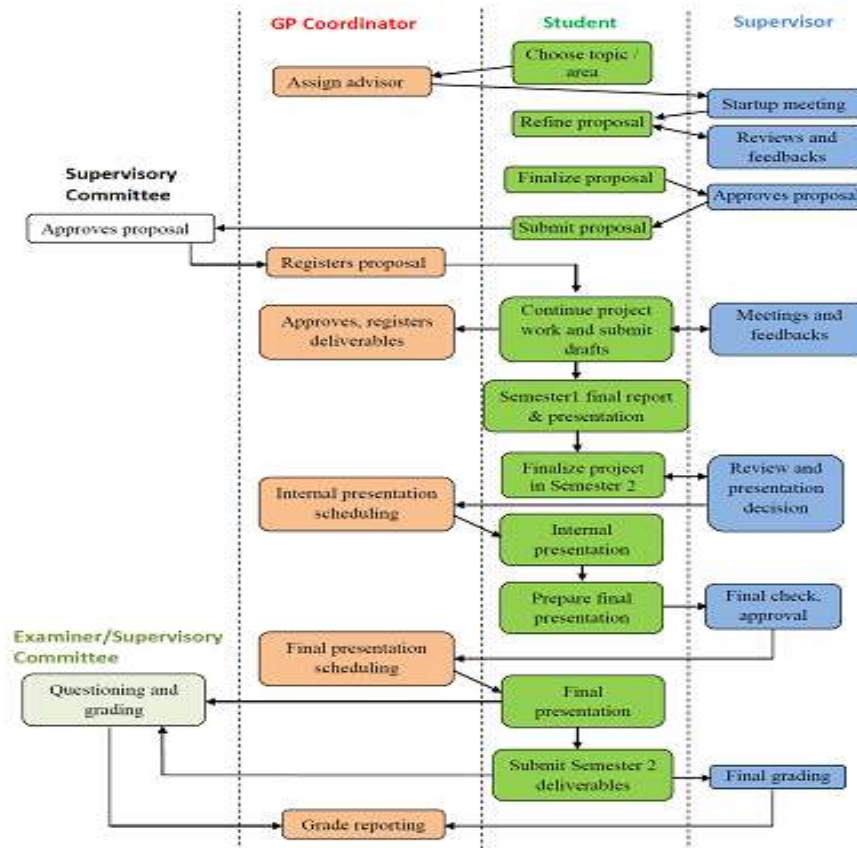


Figure 5: (High level overview of Graduation Project Process: Umm Al-Qura University, 2011)

XIV. EXAMPLES OF GRADUATION PROJECT

Faculty of fine art example:



Figure 6: (Helwan Courts Complex, 2015-2016)

Kazan university example:



Figure 7: (Multifunctional trading and entertainment complex in Annapolis, 2015-2016)

The next table will compare between the two examples according to criteria of assessing the graduation project

Table 5: Compare between the two examples according to criteria of assessing the graduation project

Design considerations	Fine art example	Kazan example
<ul style="list-style-type: none"> • Circulation elements 	Strong and clear	Very clear
<ul style="list-style-type: none"> • Clearance of entrances 	Direct and clear	Direct entrances
<ul style="list-style-type: none"> • The engineering module 	He used the engineering module strongly according to the project function	Clear structure and architectural module
<ul style="list-style-type: none"> • The idea of the design 	It has been used in ancient Egyptian architecture style facades and elevations without exaggeration in the display while maintaining the equilibrium in the project.	<ol style="list-style-type: none"> 1. Design of the hotel trade and entertainment complex. 2. Placing objects in the selected area of temporary stay. 3. Development of social functions. 4. Creating an enabling environment, recreation areas, parks and soon. 5. Creating conditions for attracting people. 6. Establishment of retail space
<ul style="list-style-type: none"> • Clearance of the design 	Good, clear and direct	Good, clear and direct
<ul style="list-style-type: none"> • Functions relationships (direct or indirect or no relation between them) 	Good separation of unrelated functions (spaces)	Good separation of unrelated functions (spaces)
<ul style="list-style-type: none"> • The clearance of the internal spaces 	Blocks shows the main spaces	Form shows the spaces clearly
<ul style="list-style-type: none"> • The control of the design elements on project 	There is clarity in design elements; plans and elevations	There is clarity in design elements; plans, section and elevations
<ul style="list-style-type: none"> • Unique forms 	Unique form with simplicity in elements	Unique form with simple and modern elements
<ul style="list-style-type: none"> • Architectural presentation 	Humble but it is compatible with the era that it will built in	Good
<ul style="list-style-type: none"> • Structure 	Strong use of module columns and places seem clear	Strong use of module in structure
<ul style="list-style-type: none"> • Orientation of spaces 	Most of them north oriented	Spaces oriented according to the weather
<ul style="list-style-type: none"> • Site considerations 	Compatible with the site	Projected area adjacent Technology Park, which will Create a functional link with the projected complex. Also identified and cons: <ol style="list-style-type: none"> 1. The city at this stage is under developed 2. Lack of recreation in the city structure.
<ul style="list-style-type: none"> • Environment considerations 	The project use environmental	Don't clear

	treatments Such as (open courts and use of blocks itself to create shaded places and control the temperature inside the building)	
• The best use of the spaces	He use it in the right way	He use it in the right way
• The artistic vision in all project elements	The blocks are clear The 3D shots with reasonable scale, The display not impressive enough, The scale of all drawings are reasonable, Spaces and circulation are clear.	The blocks are clear The 3D shots with reasonable scale, The scale of all drawings are reasonable, Spaces and circulation are clear.

XV. CONCLUSION

There are basics and design criteria for assessing the graduation project

Table 5: Basics and design criteria for assessing the graduation project

Design considerations (project evaluation)	Excellent- very good- good- medium- fair	Analysis
• Circulation elements		
• Clearance of entrances		
• The engineering module		
• The idea of the design		
• Clearance of the design		
• Functions relationships (direct or indirect or no relation between them)		
• The clearance of the internal spaces		
• The control of the design elements on project		
• Unique forms		
• Architectural presentation		
• Structure		
• Orientation of spaces		
• Site considerations		
• Environment considerations		
• The best use of the spaces		
• Spaces scales		
• Distribution of elements of the project		
• The artistic vision in all project elements		

However the comparison between the projects will be through;

1. The project selection.
2. Experience of the supervisors.
3. Architectural design.
4. Freedom of the student in the design thought.
5. The clarity of the project elements.
6. Promote teamwork.
7. Gaining experience from students around him.
8. Agreed the idea of the project with the market, education and modern realism.
9. Consideration of the project for environmental aspects.
10. Presentation.

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