Architecture ENGINEERING & TECHNOLOGY

PROGRAM SPECTIFICATION

2022-2023

PRGRAM COORDINATOR: ASSOC.PROF. DR. MAGED MONIER GAD

1. Basic Information:

A. **Program Title:** Architecture engineering & technology
B. **Program type:** Single
C. **Departments responsible of the program:**
   a. Department of Architecture Engineering
D. **Date of approval of Program specification by the Institute Council:** Approved on 6/7/2004.
E. **Coordinator:** Assoc.Prof. Dr. Maged Monier Gad, Head of Architecture Engineering department.
F. **Year of operation:** 2022/2023
G. **Date of program regulation approval:**6/7/2004

1.1 External Evaluators:

The most recent program external evaluation has been conducted by: (**Appendix 1)** shows the external evaluators' reports:

External Evaluators	Date of review	Action
Prof. Dr.		All comments were covered

1.2-Professional Information:

1.2.1 Program Mission and Aims

1.2.1.1 Program mission

The mission of Architectural Engineering Department is to Preparation distinguished graduate capable of keep pace with global technological that meet the needs of local and regional markets, and can conduct scientific research and applied through the creation of appropriate conditions for faculty members and their assistants and students, and to provide educational programs and research labs, including sophisticated contribute to community service and to meet its needs.

1.2.1.2 Program Aims

The Aim of the Department of Architecture is to provide design education driven by a professional and technology-oriented focus and highly committed to sustainability. The department is devoted to educating and inspiring future generations of designers who are both technically skilled and ethically professional. The following are the aimed graduate attributes:

1. Enhance the students' awareness of some non-related to their specialization sciences, especially which are related to human sciences to enhance their social involvement.
2. Equip students with the required basic knowledge of basic sciences, engineering sciences, architectural sciences and environmental sciences. In addition to, enhancing the student's interpersonal skills to understand, coordinate with, and lead other engineering disciplines in the architectural profession.
3. Enhance the creativity and critical thinking abilities of students.
4. Augment the intellectual capacity to develop architectural and urban designs based on scientific research, technological innovation and sustainability.
5. Prepare students to acquire the individual skills and ethics required for long-term learning and competent professional practice.

1.2.1.3 The attributes of Architecture engineering & technology program engineers

The graduates should be able to:

1. Master a wide spectrum of engineering knowledge, specialized skills, and can Apply acquired knowledge using theories and abstract thinking in real life situations.
2. Apply analytic critical and systemic thinking to identify, diagnose and solve engineering problems with a wide range of complexity and variation.
3. Behave professionally and adhere to engineering ethics and standards.
4. Work in, lead a heterogeneous team of professionals from different engineering specialties, and assume responsibility for own and team performance.
5. Recognize his/her role in promoting the engineering field and contribute in the development of the profession and the community. Through Demonstrate knowledge of contemporary engineering issues.
6. Value the importance of the environment, both physical and natural, and work to promote sustainability principles.
7. Use techniques, skills and modern engineering tools necessary for engineering practice.
8. Assume full responsibility for own learning and self-development, engage in lifelong learning and demonstrate the capacity to engage in post- graduate and research studies.
9. Communicate effectively using different modes, tools and languages with various audiences; to deal with academic/professional challenges in a critical and creative manner.
10. Demonstrate leadership qualities, business administration and entrepreneurial skills.
11. Consider the impacts of engineering solutions on society & environment.
12. Design robust architectural projects with creativity and technical mastery.
13. Demonstrate investigative skills, attention to details, and visualize/ conceptualize skills.

2. Competencies of the Graduate of Architecture Engineering Program & Intended learning outcomes (LOS)

The Civil Engineering Graduate must be able to:

A- Engineering

A1 Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics.

LO1. Identify complex engineering problems by applying engineering fundamentals, basic science, and mathematics.

LO2. Apply engineering fundamentals, basic science, and mathematics to formulate complex engineering problems.

LO3. Select appropriate methods for solving complex engineering problems by applying engineering fundamentals, basic science, and mathematics.

A2 Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.

LO4. Develop and conduct appropriate experimentation, analyze, and interpret data, and use statistical analyses engineering judgment to draw conclusions

LO5. Analyze and interpret data using appropriate simulation tools.

A3 Apply engineering design processes to produce cost-effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development.

LO6. Apply engineering design processes to produce cost-effective solutions that meet specified needs

LO7. Illustrate contextual constraints such as global, social, cultural, economic, environmental and sustainability imperatives as an integral part of the design process.

A4 Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.

LO8. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues, and risk management principles.

A5 Practice research techniques and methods of investigation as an inherent part of learning.

LO9. Identifies current developments and technologies related to civil engineering.

LO10. Applies selected research literature in the field of civil engineering.

A6 Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements.

LO11. Apply fundamental systems engineering processes and/or project management tools to the planning, design, simulation, and execution of project work.

LO12. Adapt contextual issues, including financial management into all phases of engineering project work.

A7 Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.

LO13. Functions as an effective member or leader of diverse engineering teams, including those with multi-level, multi-disciplinary and multi-cultural dimensions.

A8 Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.

LO14. Communicate effectively, graphically, verbally and in writing, employing a range of audiences using contemporary tools.

A9 Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.

LO15. Use creative, innovative, and flexible thinking anticipate and respond to new situations.

LO16. Practice entrepreneurial and leadership skills to anticipate and respond to new situations.

A10 Acquire and apply new knowledge; and practice self, lifelong and other learning strategies

LO17. Acquire and apply new knowledge, and practice self, lifelong and other learning strategies.

B- Architecture

B1- Create architectural, urban and planning designs that satisfy both aesthetic and technical requirements, using adequate knowledge of: history and theory, related fine arts, local culture and heritage, technologies and human sciences.

Lo18. Describe Principles of architectural design, and the preparation and presentation of design projects in a variety of contexts, scales, types and degree of complexity, Integrate different forms of knowledge, ideas from other disciplines, and manage information retrieval to create new solutions.

Lo19. Clarify Theories and legislations of urban and regional planning, Integrate community design parameters into design projects .

Lo20. Differentiate Theories and histories of architecture, planning, urban design, and other related disciplines. Predict possible consequences, by- products and assess expected performance of design alternatives.

Lo21. Describe Principles of building technologies, structure & construction methods, technical installations, properties of materials, and the way they may influence design decisions and Integrate relationship of structure, building materials, and construction elements into design process.

Lo22. Use Physical modeling, multi-dimensional visualization, multimedia applications, and computer-aided design and Think three-dimensionally and engage images of places & times with innovation and creativity in the exploration of design.

B2- Produce designs that meet building users' requirements through understanding the relationship between people and buildings, and between buildings and their environment; and the need to relate buildings and the spaces between them to human needs and scale.

Lo23.Produce and present architectural, urban design, and planning projects using an appropriate range of media and design-based software.

Lo24. Reconcile conflicting objectives and manage the broad constituency of interests to reach optimum solutions.

Lo25. Reflect the significance of urban spaces and the interaction between human behavior, built environment and natural environment.

Lo26.select the processes of spatial change in the built and natural environments; patterns and problems of cities; and positive & negative impacts of urbanization.

Lo27. Determine various dimensions of housing problem and the range of approaches, policies, and practices that carried out to solve this problem.

B3- Generate ecologically responsible, environmental conservation and rehabilitation designs; through understanding of: structural design, construction, technology and engineering problems associated with building designs.

Lo28. Use Principles of sustainable design, climatic considerations, and energy consumption and efficiency in buildings and their impacts on the environment.

Lo29. Analyze the range of patterns and traditions that have shaped and sustained cultures and the way that they can inform design process.

Lo30. Provide leadership and education to the client particularly with reference to sustainable design principles.

Lo31.Contribute positively to the aesthetic, architecture and urban identity, and cultural life of the community.

B4- Transform design concepts into buildings and integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery; while having adequate knowledge of industries, organizations, regulations and procedures involved.

Lo32. Clarify out Fundamentals of planning within the constraints of: project financing, project management, cost control and methods of project delivery

Lo33. Clarify out Fundamentals of building acquisition, operational costs.

Lo34. Clarify out Fundamentals of preparing construction documents and specifications of materials, components, and systems appropriate to the building

Lo35. Respect all alternative solutions; changes in original plan of the project, differences in style, culture, experience and treat others with respect.

B5- Prepare design project briefs and documents. While having adequate knowledge of industries, organizations, regulations and procedures involved.

Lo36. Clarify the role of the architecture profession relative to the construction industry and the overlapping interests of organizations representing the built environment.

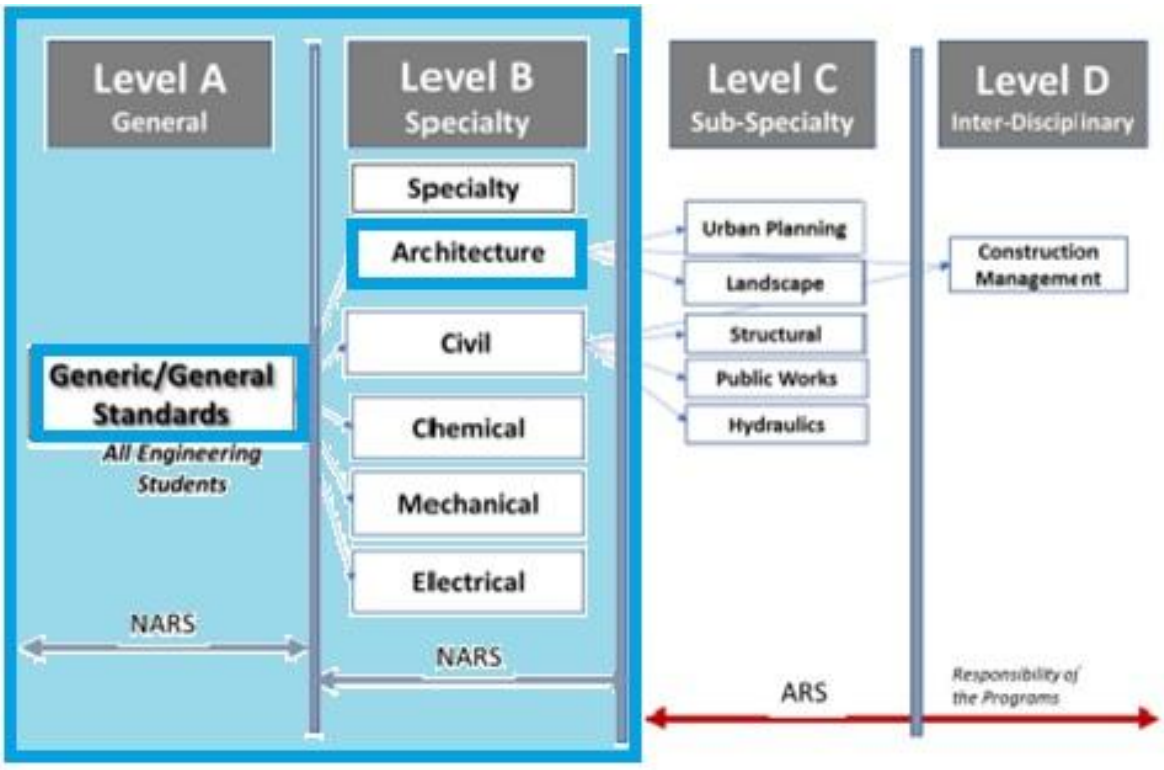
Lo37. Understand the context of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production.

Lo38. Discuss, search and formulate informed opinions appropriate to specific context and circumstances affecting architecture profession & practice.

Lo39.Participate professionally in managing construction processes.

3-Academic Standards:

The National Academic References Standards (NARS 2018) referenced academic References Standards of the civil engineering program. National Authority set NARS 2018 for Quality Assurance and Accreditation of Education in Egypt (http://cmp.eng.cu.edu.eg/wp-content/uploads/sites/8/cmp1/2014/EngineeringNARS18.pdf). It was enhanced and adopted as academic standards to be suitable for the program (Institute council No. 1) on 8/2003, Program ILOs vs. NARS, Program ILOs vs. Program aims and Program ILOs vs. Program courses association matrices were constructed (Appendices 1and 2).



4- External Reference Standards and benchmarks:

Not present

5-Program Structure and components:

a. Program duration: **Five academic years**.
b. Curriculum structure:

- Credit hours: 300 contact hours
- Theoretical and practical hours distribution

Theoretical hours:	128	Tutorial / Lab/ Workshop hours:	172	Total	300

- Mandatory and elective credit hours distribution

Mandatory hours:	282	Elective hours:	18	Total	300
Institute	60	Department	240	Total	300

c. Program structure:

		Contact hours	%	NARS %
1	Humanities and Social Sciences	29	9.6%	9-12%
2	Mathematics and Basic Sciences	60	20%	20-26%
3	Basic Engineering Sciences (Institute/Spec. Req.)	69	23%	20-23%
4	Applied Engineering and Design	66	22%	20-22%
5	Computer Applications and ICT*	27	9%	9-11%
6	Projects* and Practice	25	8.4%	8-10%
7	Discretionary (Institution character-identifying) subjects	24	8%	6-8%

d. Program Levels:

Study level	Student level	Percentage of the earned credit hours	
		Elective	Mandatory
1	Freshman	0 %	20 %
2	Sophomore	0 %	20 %
3	Junior	0 %	20 %
4	Senior 1	2 %	18 %
5	Senior 2	4 %	16 %

e. Program course

institute Requirements (General Engineering)

First year – General Engineering

الفرقة الأولى – هندسة عامة

Course Code	Course Name	First Semester						Second Semester						Total Marks	اسم المقرر
		Hrs/Week		Maximum Marks			Exam Period	Hrs/Week		Maximum Marks			Exam period		
		Lect	Ex/ Lab	Final Exam	Year work	Oral		Lect	Ex/ Lab	Final Exam	Year Work	Oral			
BAS 111	Mathematics (1)	4	2	100	50		3							150	رياضيات (1)
BAS 121	Physics (1)	3	2	90	30	30	3							150	الفيزيقا (1)
BAS 151	Drawing & Projection Engineering		4	70	30		3							100	الرسم والإسقاط الهندسي
ELE 131	An Introduction to computers & Information	2	3	60	20	20	3							100	مقدمة الحاسبات ومعالجة المعلومات
MEC 141	Production Engineering & Manufacturing	4	2	90	30	30	3							150	هندسة الإنتاج والتصنيع
HUM 171	English Language (1)	2	2	30	20		3							50	لغة إنجليزية (1)
BAS 112	Mathematics (2)							4	2	100	50		3	150	رياضيات (2)
BAS 122	Physics (2)							3	2	90	30	30	3	150	الفيزيقا (2)
BAS 131	Mechanics							3	2	100	50		3	150	ميكانيكا
BAS 141	Chemistry							2	2	60	20	20	3	100	كيمياء
BAS 152	Engineering Drawing								4	70	30		3	100	الرسم الهندسي
ELE 141	Computer Programming (1)							2	2		60	40	3	100	برمجة الحاسب
HUM 151	Technology & society							2		30	20		2	50	التكنولوجيا والمجتمع
	Total Hrs /week	15	15					Total Hrs /week		16	14			Total Marks	1500
		30						30							

e.2 Program Requirements

Second Year - Architecture Engineering -

الفرقة الثانية - هندسة العمارة -

Course Code	Course Name	First Semester						Second Semester						Total Marks	اسم المقرر
		Hrs/Week		Maximum Marks				Hrs/Week		Maximum Marks					
		Lect	Ex /Lab	Final Exam	Year Work	Oral	Exam Period	Lect	Ex /Lab	Final Exam	Year Work	Oral	Exam Period		
CIV 222	Strength of Materials & Testing	3		60	40		3							100	خواص واختبار المواد
CIV 263	Surveying	1	2	60	40		3							100	المساحة
ARC 211	Architectural Drawing & Design		8	75	125									200	الرسم والتصميم المعماري
ARC 213	Basic Design	1	3	60	40		3							100	أسس التصميم
ARC 221	Building Construction (1)	2	6	60	90		5							150	الإنشاء المعماري (1)
ARC 231	History & Theory of Architecture (1)	4		60	40		3							100	تاريخ ونظريات العمارة (1)
CIV 212	Theory of Structures							2	2	60	40		3	100	نظرية منشآت
ARC 212	Architectural Design (1)								8	75	125			200	التصميم المعماري (1)
ARC 222	Building Construction (2)							2	6	60	90		5	150	الإنشاء المعماري (2)
ARC 232	History & Theory of Architecture (2)							4		60	40		3	100	تاريخ ونظريات العمارة (2)
ARC 242	Computer Applications in Architecture							1	2	60	40		3	100	الحاسب الآلي في العمارة
ARC 243	Architectural Modeling & Presentation							3		60	40		3	100	التمثيل والإظهار المعماري
		11	19					12	18						
	Total Hrs/ Week	30						30						Total Marks	1500

Third Year - Architecture Engineering -

الفرقة الثالثة - هندسة العمارة -

Course Code	Course Name	First Semester						Second Semester						Total Marks	اسم المقرر
		Hrs/Week		Maximum Marks				Hrs/Week		Maximum Marks					
		Lect	Ex /Lab	Final Exam	Year Work	Oral	Exam Period	Lect	Ex /Lab	Final Exam	Year Work	Oral	Exam Period		
CIV 314	Reinforced Concrete	1	3	60	40		3							100	منشآت خرسانية
ARC 311	Architectural Design (2)		8	75	125									200	التصميم المعماري (2)
ARC 321	Building Construction (3)	2	6	60	90		5							150	الإنشاء المعماري (3)
ARC 331	History & Theory of Architecture (3)	4		60	40		3							100	تاريخ ونظريات العمارة (3)
ARC 333	Human Factors in Architecture	3		60	40		3							100	العوامل الإنسانية في العمارة
ARC 371	Environmental Control	3		60	40		3							100	التحكم البيئي
MEC 331	Gaseous & Liquid Fittings							3		60	40		3	100	التمديدات الغازية والسائلة
CIV 315	Structural Steel							1	3	60	40		3	100	منشآت معدنية
ARC 312	Architectural Design (3)								8	75	125			200	التصميم المعماري (3)
ARC 322	Execution Design (1)							2	6	50	100			150	التصميمات التنفيذية (1)
ARC 323	Construction Technology							3		60	40		3	100	تكنولوجيا البناء
ARC 332	History & Theory of Architecture (4)							4		60	40		3	100	تاريخ ونظريات العمارة (4)
		13	17					13	17						
	Total Hrs/ Week	30						30						Total Marks	1500

03-Aug-03

Table No (15) جدول رقم

Fourth Year - Architecture Engineering -

الفرقة الرابعة - هندسة العمارة -

Course Code	Course Name	First Semester						Second Semester						Total Marks	اسم المقرر
		Hrs/Week		Maximum Marks				Hrs/Week		Maximum Marks					
		Lect	Ex /Lab	Final Exam	Year Work	Oral	Exam Period	Lect	Ex /Lab	Final Exam	Year Work	Oral	Exam Period		
ELE 483	Electrical Systems	3		60	40		3							100	نظم كهربائية
ARC 411	Architectural Design (4)		8	75	125									200	التصميم المعماري (4)
ARC 421	Execution Design (2)	2	6	50	100									150	التصميمات التنفيذية (2)
ARC 431	History & Theory of Architecture (5)	4		60	40		3							100	تاريخ ونظريات العمارة (5)
ARC 451	City Planning (1)	2	2	60	40		3							100	تخطيط مدن (1)
ARC 4x1	Elective Course (1)	3		100			3							100	مقرر اختياري (1)
ARC 412	Architectural Design (5)								8	75	125			200	التصميم المعماري (5)
ARC 413	Landscape Design							1	3	60	40		3	100	تنسيق مواقع
ARC 422	Execution Design (3)							2	6	50	100			150	التصميمات التنفيذية (3)
ARC 452	City Planning (2)							2	2	60	40		3	100	تخطيط مدن (2)
ARC 481	Professional Practice							3		60	40		3	100	الممارسة المهنية
ARC 4x2	Elective Course (2)							3		100			3	100	مقرر اختياري (2)
		14	16					11	19						
	Total Hrs/ Week	30						30						Total Marks	1500

1st Semester Elective Courses المقررات الاختيارية للفصل الأول

CIV 444	Project Management	إدارة المشروعات
ARC 415	Scientific Research	البحث العلمي
ARC 453	Comprehensive & Sustainable Development	التنمية الشاملة والمتواصلة
ARC 461	Historic Building Revitalization	إحياء التراث المعماري

2nd Semester Elective Courses المقررات الاختيارية للفصل الثاني

CIV 445	Quality Management	إدارة الجودة
ARC 416	Architectural Criticism	النقد المعماري
ARC 454	Environmental Assessment	التقييم البيئي
ARC 462	Building Inspection, Maintenance & Repair	فحص المنشآت وصيانتها

Fifth Year - Architecture Engineering -

الفرقة الخامسة - هندسة العمارة -

Course Code	Course Name	First Semester						Second Semester						Total Marks	اسم المقرر
		Hrs/Week		Maximum Marks				Hrs/Week		Maximum Marks					
		Lect	Ex /Lab	Final Exam	Year Work	Oral	Exam Period	Lect	Ex /Lab	Final Exam	Year Work	Oral	Exam Period		
ARC 599	Project								18			350		350	المشروع
ARC 511	Architectural Design (6)		8	75	125									200	التصميم المعماري (6)
ARC 512	Interior Design	1	3	60	40		3							100	التصميم الداخلي
ARC 521	Quantity Survey & Specifications	2	2	60	40		3							100	كميات ومواصفات بنود الأعمال
ARC 551	Urban Upgrading	2	6	50	100									150	الارتقاء بالعمران
ARC 5x1	Elective Course (3)	3		100			3							100	مقرر اختياري (3)
ARC 5x2	Elective Course (4)	3		100			3							100	مقرر اختياري (4)
HUM 511	Technical Report Writing							3		100			3	100	كتابة تقارير فنية
HUM 541	Feasibility Studies							3		100			3	100	دراسات جدوى
ARC 5x3	Elective Course (5)							3		100			3	100	مقرر اختياري (5)
ARC 5x4	Elective Course (6)							3		100			3	100	مقرر اختياري (6)
		11	19					12	18						
	Total Hrs/ Week	30						30						Total Marks	1500

1st Semester Elective Courses المقررات الاختيارية للفصل الأول

CIV 544	Project Financial Management	الإدارة المالية للمشروعات
ARC 513	Meaning in Architecture	المعاني في العمارة
ARC 541	Virtual Reality & Multimedia	نظم التمثيل التخيلي والوسائط المتعددة
ARC 543	Sensing Systems	نظم الاستشعار
ARC 552	Urban Economics	اقتصاد عمراني
ARC 561	Technical Installation	التركيبات الفنية
ARC 581	Cutting Edge Knowledge	معلومات حديثة

2nd Semester Elective Courses المقررات الاختيارية للفصل الثاني

CIV 545	Management of Human Resources	إدارة الموارد البشرية
ARC 514	Arts & Architecture	الفنون والعمارة
ARC 542	Information Systems	نظم المعلومات
ARC 544	Programming	برمجيات
ARC 553	Urban Sociology	اجتماع حضري
ARC 562	Building Classification & Registration	التصنيف وتسجيل المباني
ARC 582	Cutting Edge Knowledge	معلومات حديثة

Contact Hours

Total contact hours 300

f. Courses Contents:

As mentioned in courses specifications and bylaw.

6. Program Admission Requirements

a. Secondary Egyptian Schools Graduates.
b. Secondary School Certificate Graduates of other countries are eligible to join this program if they met the minimum grades set by Admission Office of the Ministry of Higher Education.
c. The study begins with a preparatory year for all students before specialization in Architecture Engineering. Students' departmental allocation is in accordance with the institute Council regulations.

1. Graduation requirements (Completion of program):

a- The student is considered successful if he passes the examinations in all courses of his class.

b- The student is promoted to the next higher level if he fails in not more than two subjects of his class or from lower classes,

c- In addition to the two subjects mentioned in the previous item, the student who fails in two subjects in humanities and social sciences, whether from his class or from lower classes, is admitted to the transfer to the consecutive higher level. Passing successfully in all courses before obtaining the B.Sc. degree is a prerequisite.

d- The referred student has to sit the examination in the courses in which he has failed together with the students studying the same courses. The student gets a pass grade when he passes the examination successfully. In case the student was considered absent with acceptable excuse in a course, he gets the actual grade

f- The grades of the successful student in a course and in the general grade are evaluated as follows:

1. Distinction: from 85% of the total mark and upwards
2. . Very good: from 75% to less than 85% of the total mark.
3. Good from: 65% to less than 75% of the total mark
4. Pass: from: 50% to less than 65% of the total mark

g-The grades of a failing student in a course are estimated in one of' the following grades: Weak: from 30% to less than 50% of the total mark Very weak: less than 30% of the total mark.

h- The B.Sc. general grade for students is based on the cumulative marks obtained during all the years of study. The students are then arranged serially according to their cumulative sum

i - The student is awarded an honor degree in his cumulative sum is distinction or very good provided that he gets a grade not less than very good in any class of study other than the preparatory year. Moreover, he should have not failed in any examination he has sat in any class other than the preparatory year.

8- Graduation Minimum contact Hours Required

The minimum number of credit hours required for graduation as specified in the bylaw is 300 contact hours.

9- Academic degree Requirements

The curriculum of all academic programs in the institute includes the following group of courses:

(a) institute requirements (Mandatory general engineering): Is a group of 60 contact hours courses to develop the personality of students. They must be completed by all students as part of the graduation requirements for the chosen field of specialization.

(b) Program requirements (Mandatory Architecture engineering): are 222 contact hours group courses to develop the specialty of students according to Architecture Engineering discipline

(b) Program requirements (Elective Architecture engineering): are 18 contact hours group courses to develop the specialty of students according to Architecture Engineering discipline.

10-Student Assessment (Methods and rules for student assessment)

Intended Learning Outcomes	Assessment methods								
	Written exam	Online exam	Oral Exam	Mid Term Exam	Attendance	Project	Report and sheet	Laboratory exam	Quiz
A-Knowledge and Understanding	√	√	√	√		√	√	√	√
B- Intellectual Skills	√	√	√	√		√	√	√	√
C-Practical and Professional Skills	√	√	√	√		√	√	√	√
D-General and Transferable Skills			√		√	√	√		

11. Program Evaluation Methods:

	Evaluator	Method	Sample
1	Senior Students	Questionnaire and brain storming	40 %
2	Alumni	Questionnaire	20 -30
3	Stakeholders	Questionnaire, meetings and discussions	Representative sample
4	External evaluator	Provide reports after site visit and document examination	1
5	Internal evaluators for courses	Provide reports after document examination	1

Program Coordinator and
Assoc.Prof. Dr. Maged Monier Gad
Signature:
Date: 1/ 9/2021

Institute Dean
Prof. Dr. Essam Khalifa
Signature:

Prepared concerning NAQAAE form No. 13