



Architectural Engineering Department B.Sc. Program Specifications

A. Basic Information

1. Program Title: Architectural Engineering
2. Program Type: Single Double Multiple
3. Department(s) Offering the Program: Architectural Engineering Department of Nahda University
4. Coordinator: Dr. Eman Shaqour, Head of Architectural Engineering Department
5. External Evaluator:
Prof. Dr. XXXXX
6. Program commencement: 2012-2013

B. Professional Information

1. Program Aims

The Bachelor of Architectural Engineering of the undergraduate program of faculty of Engineering – Architectural Engineering Department – Nahda University aims to prepare students for Making effective use of a range of skills required for an architect and planner such as skills of reading, understanding, analyzing, and expressing creativity. Also its intended to prepare students for a professional career in Architectural engineering with particular emphasis on the constraints of the physical world, historical and cultural dimensions, it should also constantly adapt to a changing social, economic and environmental context nationally, regionally and internationally by Produce designs and plans within the constraints imposed by building regulations.

2. Intended Learning Outcomes (ILOs)

a. Knowledge and Understanding

By the end of this program The graduated students must demonstrate comprehensive knowledge and clear understanding of the core information and be able to demonstrate knowledge and understanding of the following.

- a1. Concepts, Basics of information and communication technology, theories of mathematics and sciences.
- a2. Characteristics of engineering materials, Principles of design including elements and a system related to specific disciplines.
- a3. Methodologies of solving engineering problems, Professional ethics and socio-economical impacts of engineering solutions.

- a4. Business and management principles relevant to Current engineering technologies as related to disciplines.
- a5. Quality assurance systems, codes of practice and standards, health and safety requirements and Contemporary engineering topics.
- a6. Management principles related to engineering projects.
- a7. Up to date engineering subjects.
- a8. Topics related to arts, moral issues, and humanism interests;
- a9. The impact of engineering solutions locally and internationally;
- a10. How to prepare and present building design projects depending on contexts, scale, complexity, and function;
- a11. History, Theories, and legislations of urban and regional planning;
- a12. The concepts, methods and techniques of the structural design associated with building design;
- a13. The concepts, methods and techniques of constructional and engineering problems associated with building design;
- a14. The concepts, methods and techniques of installation of mechanical, sanitary and electric building services including water, sewage, communication and air conditioning...etc systems;
- a15. The effect, processes, and solutions of spatial change in the built and natural environments, depending on both small and large scales
- a16. The significance of urban spaces
- a17. The significance of the interaction between man and the visual elements of the city;
- a18. Identification and defining of the history and theories of architecture;
- a19. The principles of advanced building technologies, including the application of structure, construction, and materials to accommodate human needs;
- a20. The principles of advanced building including technologies environmental design to accommodate human needs;
- a21. Awareness of the values and ethics of practicing the profession of architecture;
- a22. The role and responsibility of the architect and planner in the development of sustainable built environments that directly affects the social, economic and cultural well-being of the society and built up and designed environment.

b. Intellectual Skills

- b1. Select appropriate mathematical and computer-based methods for modeling and analyzing problems.
- b2. Design and/or create a process, component or system to meet specific needs, applying appropriate knowledge and principles
- b3. Select the creative and innovative appropriate solutions for engineering problems based on analytical thinking.
- b4. Assess, evaluate effectively and consider the applicability, performance of components, economy and risk management in design and processes.
- b5. Solve engineering design problems, often on the basis of limited and possibly contradicting information;

- b6. Assess and evaluate effectively the characteristics and performance of components, systems and processes.
- b7. Analyze results of numerical models and evaluate their limitations.
- b8. Use many systems and methods in dealing with new and advancing technology,
- b9. make consideration of balanced costs, benefits, safety, quality, reliability, and environmental impact on projects
- b10. Analyze critical paths and components for systems and processes
- b11. Studying and analysing risks, and using management to avoid and deal with them.
- b12. Select and appraise appropriate information and communication technologies tools to a variety of engineering problems.
- b13. Synthesis of ideas from a range of sources to create new engineering components and processes
- b14. Use software packages serving the discipline to present and benefit in producing projects.
- b15. Design the acoustics in different spaces in architectural designs;
- b16. Ability to a change social, economic and environmental context;
- b17. Adopt innovative and new solutions in solving architectural problems and planning problems.
- b18. Critically appraise alternative architectural, spatial, constructional, structural, and material systems;
- b19. Solve constructional and engineering problems and analyze the elements, materials and methods of execution of buildings;
- b20. Produce innovative design and planning ideas and concepts;
- b21. Develop an ability to analyze and judge the aesthetic values, and a critical awareness of current problems.

c. Professional and Practical Skills

- c1. Integrate knowledge of mathematics, science, information technology, design, business context and engineering practice to solve engineering problems.
- c2. Employ computational facilities, measuring instruments, workshops and laboratories equipment to design experiments and collect, analyze and interpret results.
- c3. Use a wide range of analytical and Apply numerical modelling methods, technical tools, computational techniques and equipment to find the appropriate solution of engineering problems.
- c4. Merge engineering knowledge and understanding to improve design, products and/or services.
- c5. Perform specialized engineering designs.
- c6. Apply numerical modeling methods and/or appropriate computational techniques to solve engineering problems
- c7. Implement comprehensive engineering knowledge, understanding, and intellectual skills in projects
- c8. Commercialize knowledge and skills to engineering community and industry
- c9. Apply safe systems at work.
- c10. Prepare and present technical material.

- c11. Demonstrate basic organizational and project management skills.
- c12. Appreciate the neatness and aesthetics in design and approach.
- c13. Develop and present architectural and planning projects using an appropriate range of visual, verbal and written media, including both digital and non-digital methods;
- c14. Prepare analytical reports presenting architectural and planning proposals;
- c15. Prepare and interpret technical drawings (architectural, structural, mechanical, engineering, air conditioning, water, sewage, etc.)- using traditional drawing and computer-aided drawings' techniques;
- c16. Use appropriate construction techniques and materials to specify and implement different designs;
- c17. Manage construction processes;
- c18. Locate, analyze, understand and make use of different environmental circumstances and contexts;
- c19. Generate, develop and evaluate creative, innovative and appropriate solutions and proposals for societal problems;
- c20. Display imagination and creativity;
- c21. Work in a multi-professional working environm.

d. General and Transferable Skills

- d1. Use laboratory and field equipment competently safely.
- d2. Observe record and analyze data in laboratory and in the field.
- d3. Demonstrate basic organizational and construction management skills.
- d4. Use appropriate specialized computer software, computational tools and packages.
- d5. Prepare technical drafts and detailed drawings both manually and using CAD.
- d6. Prepare quantity surveying reports and Give technical presentations.

3. Academic Standards

a. External References for Standards (Benchmarks)

National Academic Reference Standards (NARS) for Engineering, National Authority for Quality Assurance and Accreditation of Education (NAQAA), 2nd ed., 2009

b. Comparison of Provision to External References of NARS

Program	Knowledge and Understanding										
	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11
NARS	a	b, c	d, e	h, f	j	h	i	g	k		
NARS Characterization of architecture Engineering										a	b

Knowledge and Understanding											
Program	a12	a13	a14	a15	a16	a17	a18	a19	a20	a21	a22
NARS											
NARS Characterization of architecture Engineering	c	c	d	e	f	f	g	h	h	i	j

Intellectual Skills											
Program	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11
NARS	a	b	c, d	e, f	j	f	h	i	j	k	l
NARS Characterization of architecture Engineering											

Intellectual Skills										
Program	b12	b13	b14	b15	b16	b17	b18	b19	b20	b21
NARS	m	n	o							
NARS Characterization of architecture Engineering				a	b	c	d	e	f	h

Professional and practical skills											
Program	c1	c2	c3	c4	c5	c6	c7	c8	c9	c10	c11
NARS	a	b	c	d	e	f	j	h	i	g	k
NARS Characterization of architecture Engineering											

Professional and practical skills										
Program	c12	c13	c14	c15	c16	c17	c18	c19	c20	c21
NARS	l									
NARS Characterization of architecture Engineering		a	b	c	d	e	f	j	h	i

General and Transferable Skills

Program	d1	d2	d3	d4	d5	d6
NARS	a	c	e	g, h	d, g, i	b, f

4. Curriculum Structure and Contents

a. Program duration

10 main semesters, equivalent to 5 years

b. Program structure

1. No. of total credit hours = 180 credit hours detailed as follows:

	Sem-1	Sem-2	Sem-3	Sem-4	Sem-5	Sem-6	Sem-7	Sem-8	Sem-9	Sem-10
Total	18	18	18	18	17	19	19	18	18	17
Compulsory	18	18	14	16	15	19	17	12	14	5
Elective	-	-	4	2	2		2	6	4	12

	Sem-1	Sem-2	Sem-3	Sem-4	Sem-5	Sem-6	Sem-7	Sem-8	Sem-9	Sem-10
University	1	4	6	1	-	2	-	-	-	-
Univ-Free-Elec	-	-	-	2	2	-	-	-	-	2
Faculty Compulsory	17	14	2	1	2	3	-	2	2	-
Fac-Elec-A	-	-	-	-	-	-	2	-	2	2
Fac -Elec-B	-	-	-	-	-	-	2	4	-	-
Fac -Elect-C	-	-	-	2	2	-	2	-	-	-
Architecture	-	-	14	14	11	16	12	6	8	-
Arch -Elect	-	-	-	-	-	-	-	6	2	2
Field Training	-	-	-	-	-	1	-	1	-	-
Grad Project	-	-	-	-	-	-	-	-	1	5

2. No. of total credit hours of mathematics and basic sciences courses = 51 (28.3%)
3. No. of total credit hours of social sciences and humanities courses = 32 (17.7%)
4. No. of total credit hours of Architecture engineering major courses = 47.2 (48.3%)
5. No. of total credit hours of Architecture engineering specialized courses = 10 (5.5%)
6. No. of total credit hours of Practical/Field Training courses = 2 (1.1%)
 - Field Training-1 after student completes sophomore (2nd) level*
 - Field Training-2 after student completes junior (3rd) level**
7. Program levels = 5
 - Freshman (1st) level, up to 36 credit hours
 - Sophomore (2nd) level, from 36 up to 72 credit hours
 - Junior (3rd) level, from 72 up to 108 credit hours
 - Senior-1 (4th) level, from 108 up to 144 credit hours

- Senior-2 (5th) level, from 144 up to 180 credit hours

University Compulsory Courses (14 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
ENG 111	English-1	1	1	-	-	-	لغة إنجليزية-1
ENG 112	English-2	1	1	-	-	ENG 111	لغة إنجليزية-2
ENG 113	English-3	2	2	-	-	ENG 112	لغة إنجليزية-3
HUM 101	Human Rights	3	3	-	-	-	حقوق الإنسان
REM 101	Scientific Thinking	3	3	-	-	-	التفكير العلمي
ETS 101	Professional Ethics	1	1	-	-	-	أخلاقيات المهنة
MGT 101	Principles of General Management	3	3	-	-	-	مبادئ الإدارة

University Free Electives (6 credit hours)

Student freely selects 3 new courses (2 credit hours each) from all university, college or discipline courses

Engineering Compulsory Courses (45 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
MTH 111	Mathematics 1	3	2	2	-	-	رياضيات 1
MTH 121	Mathematics 2	3	2	2	-	MTH 111	رياضيات 2
STA 321	Statistics & Probability Theory	3	2	2	-	-	احصاء ونظرية احتمالات
PHY 112	Physics 1	3	2	1	2	-	فيزياء 1
PHY 122	Physics 2	3	2	1	2	PHY 112	فيزياء 2
MEC 113	Mechanics-1	3	2	2	-	-	ميكانيكا-1
MEC 126	Mechanics-2	3	2	2	-	MEC 113	ميكانيكا-2
CHE 123	Engineering Chemistry	3	2	1	2	-	كيمياء هندسية
CSK 116	Computer Skills	3	2	-	2	-	مهارات الحاسب الآلي
EVI 412	Environmental Impact of Projects	2	2	-	-	-	الأثر البيئي للمشروعات
DRW 114	Engineering Drawing & Projection-1	2	1	3	-	-	الرسم الهندسي والإسقاط-1
DRW 124	Engineering Drawing & Projection-2	2	1	-	3	DRW 114	الرسم الهندسي والإسقاط-2
HET 115	History of Engineering & Technology	1	1	-	-	-	تاريخ الهندسة والتكنولوجيا
MAN 125	Principles of Manufacturing	2	1	1	1	-	مبادئ هندسة التصنيع
PRM 512	Project Management	2	2	1	-	-	إدارة مشروعات
QCS 226	Monitoring & Quality Control Systems	1	1	-	-	-	نظم المراقبة وضبط الجودة
IEN 351	Engineering Economics	2	2	1	-	-	اقتصاد هندسي
TRW 215	Technical Report Writing	2	1	2	-	ENG112	إعداد التقارير الفنية
FTR 329	Field Training 1	1	-	-	6	-	تدريب ميداني 1
FTR 429	Field Training 2	1	-	-	6	-	تدريب ميداني 2

Faculty Elective Courses A (6 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
HUM 112	Music Appreciation	2	2	-	-	-	التذوق الموسيقي
HUM 113	Introduction to the History of Electrical izations	2	2	-	-	-	مقدمة فى تاريخ الحضارات
HUM 114	Trends In Contemporary Arts	2	2	-	-	-	الاتجاهات الفنية المعاصرة
HUM 115	Recent Egypt's History	2	2	-	-	-	تاريخ مصر الحديث
HUM 116	Heritage of Egyptian Literature	2	2	-	-	-	التراث الادبي المصري
HUM 117	Arab &Islamic Electrical ization	2	2	-	-	-	الحضارة العربية والإسلامية
HUM 118	Literary Appreciation	2	2	-	-	-	التذوق الأدبي

Faculty Elective Courses B (6 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
ARB 111	Arabic Language	2	2	-	-	-	اللغة العربية
CPS 112	Communication & Presentation Skills	2	1	2	-	-	مهارات الاتصال والعرض
RES 113	Analysis & Research Skills	2	1	2	-	-	مهارات البحث والتحليل
NGO 114	Principles of Negotiation	2	2	-	-	-	مبادئ التفاوض
ACC 115	Introduction to Accounting	2	2	-	-	-	مقدمة في المحاسبة
BUS 116	Business Administration	2	2	-	-	-	إدارة الأعمال

Faculty Elective Courses C (6 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
CIV 211	Principles of Construction & Building Engineering	2	2	1	-	-	مبادئ هندسة التشييد والبناء
ARC 212	Arts & Architecture	2	2	1	-	-	الفنون والعمارة
ELP 213	Principles of Electrical Engineering	2	2	1	-	-	مبادئ الهندسة الكهربائية
ELE 214	Principles of Electronic Engineering	2	2	1	-	PHY 122	مبادئ الهندسة الإلكترونية
MED 215	Principles of Design & Manufacturing Engineering	2	2	1	-	-	مبادئ هندسة التصميم والتصنيع
MEP 216	Principles of Mechanical Power Eng	2	2	1	-	-	مبادئ هندسة القوى الميكانيكية

Architecture Engineering Compulsory Courses - Major (87 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
STR 213	Structural Analysis 1	3	2	2	-	-	1تحليل انشائي
RCF 311	Reinforced Concrete & Foundations	3	2	2	-	-	خرسانة مسلحة واساسات
DST 321	Design of steel Structures 1	3	2	2	-	STR 213	1تصميم المنشآت المعدنية
BMT 227	Behavior of Materials	3	2	-	3	-	خواص مواد
SRV 222	Engineering Surveying	3	2	-	2	-	المساحة الهندسية
SAN 322	Sanitary Installations In Buildings	2	2	1	-	-	التركيبات الصحية في المباني
TFR 212	Visual Training & Freehand Drawing	3	1	4	-	-	تدريب بصري ورسم حر
SCP 211	Sciagraphy & Perspective	3	1	4	-	-	ظل ومنظور
AHT 214	History & Theory of Architecture 1	2	2	-	-	-	1تاريخ ونظريات عمارة
AHT 224	History & Theory of Architecture 2	2	2	-	-	AHT 214	2تاريخ ونظريات عمارة
AHT 314	History & Theory of Architecture 3	2	2	-	-	AHT 224	3تاريخ ونظريات عمارة
AHT 324	History & Theory of Architecture 4	2	2	-	-	AHT 314	4تاريخ ونظريات عمارة
BLD 215	Building Construction 1	3	1	4	-	-	1إنشاء معماري
BLD 225	Building Construction 2	3	1	4	-	BLD 215	2إنشاء معماري
BLD 315	Building Construction 3	3	1	4	-	BLD 225	3إنشاء معماري
WDR 414	Working Drawings 1	3	-	6	-	BLD 315	1تصميمات تنفيذية
WDR 424	Working Drawings 2	3	-	6	-	WDR 414	2تصميمات تنفيذية
ENV 325	Environmental Control	3	2	2	-	-	تحكم بيئي
ACO 326	Acoustics & Illumination	2	1	2	-	-	صوتيات وإضاءة
DAR 223	Architectural Design 1	3	-	6	-	TFR 212	1تصميم معماري
DAR 313	Architectural Design 2	3	-	6	-	DAR 223	2تصميم معماري

Architecture Engineering Compulsory Courses - Minor (4 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
CRA 417	Architectural Criticism & Projects Evaluation	2	2	-	-	-	نقد معماري وتقييم مشاريع
ECB 418	Building Economics	2	2	-	-	-	اقتصاديات البناء
ATI 419	Advanced Technical installations	2	2	-	-	-	تركيبات فنية متقدمة في المباني

Architecture Engineering Elective Courses (6 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
CAP 514	Computer Applications in Architecture	3	1	2	3	-	تطبيقات الحاسب في العمارة
DIN 515	Interior Design	3	1	4	-	-	تصميم داخلي
SUS 516	Sustainable Architecture	3	1	4	-	-	العمارة المستدامة
URB 517	Urban Renewal	3	1	4	-	-	تجديد وارتقاء عمراني
CUR 518	Conservation of Urban Heritage	3	1	4	-	-	الحفاظ على التراث العمراني



Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
DEX 521	Execution Documents	3	2	2	-	WDR 424	مستندات التنفيذ
CAP 514	Computer Applications in Architecture	3	1	2	3	-	تطبيقات الحاسب في العمارة
DIN 515	Interior Design	3	1	4	-	-	تصميم داخلي
SUS 516	Sustainable Architecture	3	1	4	-	-	العمارة المستدامة
URB 517	Urban Renewal	3	1	4	-	-	تجديد وارتقاء عمراني
CUR 518	Conservation of Urban Heritage	3	1	4	-	-	الحفاظ على التراث العمراني
DEX 521	Execution Documents	3	2	2	-	WDR 424	مستندات التنفيذ
CAP 514	Computer Applications in Architecture	3	1	2	3	-	تطبيقات الحاسب في العمارة

Architecture Engineering Graduation Project (6 credit hours)

Code	Course Title	CrH	LC	TE	TL	Prerequisites	اسم المقرر بالعربية
PRJ 513	Project 1	1	-	2	-	DAR 423	1مشروع
PRJ 522	Project 2	5	-	10	-	PRJ 513	2مشروع

Architectural Engineering Program Course-ILOs Matrix

A- Knowledge and Understanding																	ILOs	Code	#					
a22	a21	a20	a19	a18	a17	a16	a15	a14	a13	a12	a11	a10	a9	a8	a7	a6	a5	a4	a3	a2	a1	اسم المقرر Course Title	رمز المقرر Code	م #
																						كيمياء هندسية Engineering Chemistry	CHE123	1
																						الرسم الهندسي والإسقاط 1 Engineering Drawing & Projection-1	DRW114	2
																						الرسم الهندسي والإسقاط 2 Engineering Drawing & Projection-2	DRW124	3
																						تاريخ الهندسة والتكنولوجيا History of Engineering & Technology	HET115	4
																						مبادئ هندسة التصنيع Principles of Manufacturing	MAN125	5
																						ميكانيكا 1 Mechanics-1	MEC113	6
																						ميكانيكا 2 Mechanics-2	MEC126	7
																						اعداد التقارير الفنية Technical Report Writing	TRW215	8
																						رياضيات 1 Mathematics 1	MTH111	9
																						رياضيات 2 Mathematics 2	MTH121	10
																						فيزياء 1 Physics 1	PHY112	11
																						فيزياء 2 Physics 2	PHY122	12
																						احصاء ونظرية الاحتمالات statistics and probability theory	STA321	13
																						مهارات الحاسب الالى Computer Skills	CSK 116	14
																						نظم المراقبة وضبط الجودة Monitoring & Quality Control Systems	QCS 226	15
																						اقتصاد هندي Engineering Economics	IEN351	16
																						تدريب ميداني 1 Field Training 1	FTR 329	17
																						تدريب ميداني 2 Field Training 2	FTR 429	18
																						الآثر البيئي للمشروعات Environmental Impact of Projects	EVI 412	19
																						إدارة مشروعات Project Management	PRM 512	20
																						مبادئ هندسة القوى الميكانيكية Principles of Mechanical Power	MEP216	21
																						مبادئ هندسة التصميم والتصنيع Principles of Design & Manufacturing Eng	MED 215	22
																						مبادئ الهندسة الكهربائية Principles of Electrical Engineering	ELP213	23
																						تحليل نشأى 1 Structural Analysis 1	STR 213	24
																						خرسانة مسلحة واساسات Reinforced Concrete & Foundations	RCF 311	25
																						تصميم المنشآت المعدنية 1 Design of steel Structures 1	DST 321	26
																						خواص مواد Behavior of Materials	BMT 227	27
																						المساحة الهندسية Engineering Surveying	SRV 222	28
																						التركيبات الصحية فى المباني Sanitary Installations In Buildings	SAN 322	29
																						تدريب بصري ورسم حر Visual Training & Freehand Drawing	TFR 212	30
																						ظل ومنظور Sciagraphy & Perspective	SCP 211	31
																						إنشاء معماري 1 Building Construction 1	BLD 215	32
																						إنشاء معماري 2 Building Construction 2	BLD 225	33
																						إنشاء معماري 3 Building Construction 3	BLD 315	34
																						تاريخ ونظريات عمارة 1 History & Theory of Architecture 1	AHT 214	35
																						تاريخ ونظريات عمارة 2 History & Theory of Architecture 2	AHT 224	36
																						تاريخ ونظريات عمارة 3 History & Theory of Architecture 3	AHT 314	37
																						تاريخ ونظريات عمارة 4 History & Theory of Architecture 4	AHT 324	38
																						تصميمات تنفيذية 1 Working Drawings 1	WDR414	39
																						تصميمات تنفيذية 2 Working Drawings 2	WDR424	40
																						تصميم معماري 1 Architectural Design 1	DAR 223	41
																						تصميم معماري 2 Architectural Design 2	DAR 313	42
																						تصميم معماري 3 Architectural Design 3	DAR 323	43
																						تصميم معماري 4 Architectural Design 4	DAR 413	44
																						تصميم معماري 5 Architectural Design 5	DAR 423	45
																						تصميم معماري 6 Architectural Design 6	DAR 514	46
																						تنسيق مواقع وتصميم عمراني Landscape & Urban Design	URB 312	47
																						تاريخ ونظريات التخطيط History & Theory of Planning	PLA 327	48
																						التحكم البيئي Environmental Control	ENV 325	49
																						صوتيات وإضاءة Acoustics & Illumination	ACO 326	50
																						تكيف الهواء فى المباني Air Conditioning in Buildings	AIR 416	51
																						إسكان Housing	HOS 511	52
																						مشروع 1 Project 1	PRJ 513	53
																						تشريعات معمارية وعمرانية Architectural & Urban Legislations	LEG 421	54
																						مشروع 2 Project 2	PRJ 522	55
																						تطبيقات الحاسب الالى فى العمارة Computer Applications in Architecture	CAP 514	56
																						تصميم داخلي Interior Design	DIN 515	57
																						تأهيل وصيانة المباني Maintenance of buildings	MBD425	58
																						اقتصاديات البناء Building Economics	ECB 418	59
																						دراسات جدوى المشروعات Feasibility Studies of Urban Projects	FES 426	60
																						تاريخ مصر الحديث Recent Egypt's History	HUM 115	61
																						مقدمة فى تاريخ الحضارات Introduction to the History of Civilizations	HUM 113	62
																						التراث الادبي المصري Heritage of Egyptian Literature	HUM 116	63
																						حقوق الإنسان Human Rights	HUM101	64
																						التفكير العلمي Scientific Thinking	REM101	65
																						مبادئ الإدارة Principles of General Management	MGT101	66
																						لغة انجليزية 1 English-1	ENG111	67
																						لغة انجليزية 2 English-2	ENG112	68
																						لغة انجليزية 3 English-3	ENG113	69
																						اخلاقيات المهنة Professional Ethics	ETS101	70
																						مهارات البحث والتحليل Analysis & Research Skills	RES113	71
																						مبادئ التفاوض Principles Of Negotiation	NGO 114	72
																						مهارات الإتصال والعرض Communication & Presentation Skills	CPS 112	73

C- Intellectual Skills																			ILOs		Code	#	
b20	b19	b18	b17	b16	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	اسم المقرر	Course Title	رمز المقرر	#
																				كيمياء هندسية	Engineering Chemistry	CHE123	1
																				الرسم الهندسي والإسقاط 1	Engineering Drawing & Projection-1	DRW114	2
																				الرسم الهندسي والإسقاط 2	Engineering Drawing & Projection-2	DRW124	3
																				تاريخ الهندسة والتكنولوجيا	History of Engineering & Technology	HET115	4
																				مبادئ هندسة التصنيع	Principles of Manufacturing	MAN125	5
																				ميكانيكا 1	Mechanics-1	MEC113	6
																				ميكانيكا 2	Mechanics-2	MEC126	7
																				اعداد التقارير الفنية	Technical Report Writing	TRW215	8
																				رياضيات 1	Mathematics 1	MTH111	9
																				رياضيات 2	Mathematics 2	MTH121	10
																				فيزياء 1	Physics 1	PHY112	11
																				فيزياء 2	Physics 2	PHY122	12
																				احصاء و نظرية الاحتمالات	statistics and probability theory	STA321	13
																				مهارات الحاسب الآلي	Computer Skills	CSK 116	14
																				نظم المراقبة وضبط الجودة	Monitoring & Quality Control Systems	QCS 226	15
																				اقتصاد هندسي	Engineering Economics	IEN351	16
																				تدريب ميداني 1	Field Training 1	FTR 329	17
																				تدريب ميداني 2	Field Training 2	FTR 429	18
																				الأثر البيئي للمشروعات	Environmental Impact of Projects	EVI 412	19
																				إدارة مشروعات	Project Management	PRM 512	20
																				مبادئ هندسة القوى الميكانيكية	Principles of Mechanical Power	MEP216	21
																				مبادئ هندسة التصميم والتصنيع	Principles of Design & Manufacturing Eng	MED 215	22
																				مبادئ الهندسة الكهربائية	Principles of Electrical Engineering	ELP213	23
																				تحليل انشائي 1	Structural Analysis 1	STR 213	24
																				خرسانة مسلحة واساسات	Reinforced Concrete & Foundations	RCF 311	25
																				تصميم المنشآت المعدنية 1	Design of steel Structures 1	DST 321	26
																				خواص مواد	Behavior of Materials	BMT 227	27
																				المساحة الهندسية	Engineering Surveying	SRV 222	28
																				التركيبات الصحية في المباني	Sanitary Installations In Buildings	SAN 322	29
																				تدريب بصري ورسم حر	Visual Training & Freehand Drawing	TFR 212	30
																				ظل ومنظور	Sciagraphy & Perspective	SCP 211	31
																				انشاء معماري 1	Building Construction 1	BLD 215	32
																				انشاء معماري 2	Building Construction 2	BLD 225	33
																				انشاء معماري 3	Building Construction 3	BLD 315	34
																				تاريخ ونظريات عمارة 1	History & Theory of Architecture 1	AHT 214	35
																				تاريخ ونظريات عمارة 2	History & Theory of Architecture 2	AHT 224	36
																				تاريخ ونظريات عمارة 3	History & Theory of Architecture 3	AHT 314	37
																				تاريخ ونظريات عمارة 4	History & Theory of Architecture 4	AHT 324	38
																				تصميمات تنفيذية 1	Working Drawings 1	WDR414	39
																				تصميمات تنفيذية 2	Working Drawings 2	WDR424	40
																				تصميم معماري 1	Architectural Design 1	DAR 223	41
																				تصميم معماري 2	Architectural Design 2	DAR 313	42
																				تصميم معماري 3	Architectural Design 3	DAR 323	43
																				تصميم معماري 4	Architectural Design 4	DAR 413	44
																				تصميم معماري 5	Architectural Design 5	DAR 423	45
																				تصميم معماري 6	Architectural Design 6	DAR 514	46
																				تنسيق مواقع وتصميم عمراني	Landscape & Urban Design	URB 312	47
																				تاريخ ونظريات التخطيط	History & Theory of Planning	PLA 327	48
																				التحكم البيئي	Environmental Control	ENV 325	49
																				صوتيات وإضاءة	Acoustics & Illumination	ACO 326	50
																				تكيف الهواء في المباني	Air Conditioning in Buildings	AIR 416	51
																				إسكان	Housing	HOS 511	52
																				مشروع 1	Project 1	PRJ 513	53
																				تشريعات معمارية وعمرانية	Architectural & Urban Legislations	LEG 421	54
																				مشروع 2	Project 2	PRJ 522	55
																				تطبيقات الحاسب الآلي في العمارة	Computer Applications in Architecture	CAP 514	56
																				تصميم داخلي	Interior Design	DIN 515	57
																				تأهيل وصيانة المباني	Maintenance of buildings	MBD425	58
																				اقتصاديات البناء	Building Economics	ECB 418	59
																				دراسات جدوى المشروعات	Feasibility Studies of Urban Projects	FES 426	60
																				تاريخ مصر الحديث	Recent Egypt's History	HUM 115	61
																				مقدمة في تاريخ الحضارات	Introduction to the History of Civilizations	HUM 113	62
																				التراث الأدبي المصري	Heritage of Egyptian Literature	HUM 116	63
																				حقوق الإنسان	Human Rights	HUM101	64
																				التفكير العلمي	Scientific Thinking	REM101	65
																				مبادئ الإدارة	Principles of General Management	MGT101	66
																				لغة الإنجليزية 1	English-1	ENG111	67
																				لغة الإنجليزية 2	English- 2	ENG112	68
																				لغة الإنجليزية 3	English-3	ENG113	69
																				اخلاقيات المهنة	Professional Ethics	ETS101	70
																				مهارات البحث والتحليل	Analysis & Research Skills	RES113	71
																				مبادئ التفاوض	Principles Of Negotiation	NGO 114	72
																				مهارات الإتصال والعرض	Communication & Presentation Skills	CPS 112	73

D-General Skills					B-Practical and Professional skills													ILOs		Code	#									
D6	D5	D4	D3	D2	D1	c21	c20	c19	c18	c17	c16	c15	c14	c13	c12	c11	c10	c9	c8	c7	c6	c5	c4	c3	c2	c1	Course Title	رمز المقرر	م	
																											كيمياء هندسية	CHE123	1	
																												الرسم الهندسي والإسقاط1	DRW114	2
																												الرسم الهندسي والإسقاط2	DRW124	3
																												تاريخ الهندسة والتكنولوجيا	HET115	4
																											مبادئ هندسة التصنيع	MAN125	5	
																											ميكانيكا1	MEC113	6	
																											ميكانيكا2	MEC126	7	
																											اعداد التقارير الفنية	TRW215	8	
																											رياضيات1	MTH111	9	
																											رياضيات2	MTH121	10	
																											فيزياء1	PHY112	11	
																											فيزياء2	PHY122	12	
																											احصاء ونظرية الاحتمالات	STA321	13	
																											مهارات الحاسب الآلي	CSK 116	14	
																											نظم المراقبة وضبط الجودة	QCS 226	15	
																											اقتصاد هندي	IEEN351	16	
																											تدريب ميداني 1	FTR 329	17	
																											تدريب ميداني 2	FTR 429	18	
																											الأثر البيئي للمشروعات	EVI 412	19	
																											إدارة مشروعات	PRM 512	20	
																											مبادئ هندسة القوى الميكانيكية	MEP216	21	
																											مبادئ هندسة التصميم والتصنيع	MED 215	22	
																											مبادئ الهندسة الكهربائية	ELP213	23	
																											تحليل انشائي 1	STR 213	24	
																											خرسانة مسلحة واساسات	RCF 311	25	
																											تصميم المنشآت المعدنية 1	DST 321	26	
																											خواص مواد	BMT 227	27	
																											المساحة الهندسية	SRV 222	28	
																											التركيبات الصحية في المباني	SAN 322	29	
																											تدريب بصري ورسم حر	IFR 212	30	
																											ظل ومنظور	SCP 211	31	
																											النشاء معماري 1	BLD 215	32	
																											النشاء معماري 2	BLD 225	33	
																											النشاء معماري 3	BLD 315	34	
																											تاريخ ونظريات عمارة 1	AHT 214	35	
																											تاريخ ونظريات عمارة 2	AHT 224	36	
																											تاريخ ونظريات عمارة 3	AHT 314	37	
																											تاريخ ونظريات عمارة 4	AHT 324	38	
																											تصميمات تنفيذية 1	WDR414	39	
																											تصميمات تنفيذية 2	WDR424	40	
																											تصميم معماري 1	DAR 223	41	
																											تصميم معماري 2	DAR 313	42	
																											تصميم معماري 3	DAR 323	43	
																											تصميم معماري 4	DAR 413	44	
																											تصميم معماري 5	DAR 423	45	
																											تصميم معماري 6	DAR 514	46	
																											تنسيق مواقع وتصميم عمراني	URB 312	47	
																											تاريخ ونظريات التخطيط	PLA 327	48	
																											التحكم البيئي	ENV 325	49	
																											صوتيات وإضاءة	ACO 326	50	
																											تكيف الهواء في المباني	AIR 416	51	
																											إسكان	HOS 511	52	
																											مشروع 1	PRJ 513	53	
																											تشريعات معمارية وعمرانية	LEG 421	54	
																											مشروع 2	PRJ 522	55	
																											تطبيقات الحاسب الآلي في العمارة	CAP 514	56	
																											تصميم داخلي	DIN 515	57	
																											تأهيل وصيانة المباني	MBD425	58	
																											اقتصاديات البناء	ECB 418	59	
																											دراسات جوي للمشروعات	FES 426	60	
																											تاريخ مصر الحديث	HUM 115	61	
																											مقدمة في تاريخ الحضارات	HUM 113	62	
																											التراث الايبى المصري	HUM 116	63	
																											حقوق الإنسان	HUM101	64	
																											التفكير العلمي	REM101	65	
																											مبادئ الإدارة	MGT101	66	
																											لغة الإنجليزية 1	ENGI11	67	
																											لغة الإنجليزية 2	ENGI12	68	
																											لغة الإنجليزية 3	ENGI13	69	
																											أخلاقيات المهنة	ETS101	70	
																											مهارات البحث والتحليل	RES113	71	
																											مبادئ التفاوض	NGO 114	72	
																											مهارات الإتصال والعرض	CPS 112	73	



6. Program Admission Requirements

See Bylaws and Study Regulations, Section 3, Articles 15 -20

7. Regulations for Progression and Program Completion

See Bylaws and Study Regulations, Sections 2 - 5

8. Evaluation of Program Intended Learning Outcomes

Evaluator	Tool	Sample
1- Senior students 2- Alumni 3- Stakeholders (Employers)	1. Survey 2. Personal meeting	
4-External Evaluator(s) (External Examiner(s))	1. Review academic regulations 2. Review course specifications & reports 3. Review course files 4. Meet with course coordinators 5. Meet with students 6. Examine resources 7. Meet with administration 8. Prepare an evaluation report	

Annex-1: Course Specifications

Coordinator: Dr. Eman Shaqour, Head of Architectural Engineering Department

Signature:

Date: