

**KINGDOM OF SAUDI ARABIA**  
*The National Commission for Academic Accreditation & Assessment*  
*(NCAAA)*

**NAJRAN UNIVERSITY**  
**COLLEGE OF ENGINEERING**  
**ARCHITECTURAL ENGINEERING DEPARTMENT**

**T4. Program Specification توصيف البرنامج**  
**Architectural Engineering Program**



*(ARE Ps)-April 2-17*

## T4. Program Specification توصيف البرنامج

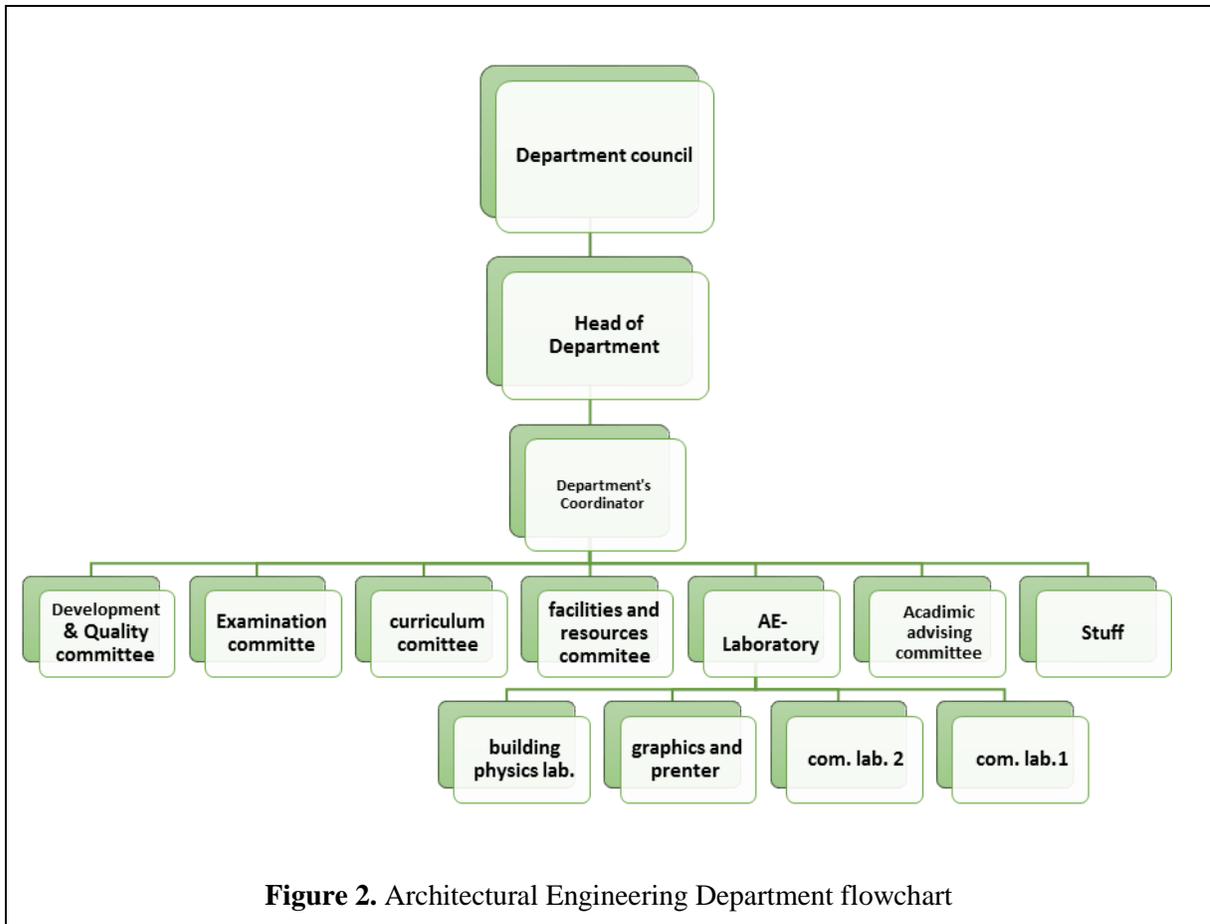
For guidance on the completion of this template, please refer to Chapter 2, of Part 2 of Handbook 2 Internal Quality Assurance Arrangement and to the Guidelines on Using the Template for a Program Specification in Attachment 2 (b).

لمعرفة إرشادات تعبئة هذا النموذج نأمل الرجوع إلى الفصل الثاني من الجزء الثاني من الدليل الثاني "إجراءات ضمان الجودة الداخلية"، وكذلك الرجوع للإرشادات الخاصة باستخدام نموذج توصيف البرنامج الواردة في الملحق 2 (ب).

1. Institution المؤسسة: Najran University	Date التاريخ: April 2017
2. College/Department الكلية/القسم: College of Engineering / Department of Architectural Engineering	
3. Dean/ Department Head العميد/ رئيس القسم: Assoc. Prof. Dr. Abdullah Al-Wadie	
4. Insert program and college administrative flowchart أدرج مخطط الهيكل التنظيمي للبرنامج والكلية:	

The flowchart illustrates the organizational structure of the College of Engineering. At the top is the **COLLEGE COUNCIL**, which oversees the **COLLEGE DEAN**. The Dean's office includes the **DEAN OFFICE**, **STUDENT ADVISORY COUNCIL**, and **PUBLIC RELATIONS UNIT**. The **COLLEGE ADVISORY COUNCIL** also reports to the Dean. The Dean oversees three Vice Deanships: **Development and Quality**, **Students Affairs**, and **Academic Affairs**. Each Vice Deanship has its own Secretariat and several specialized units. The **College Administration** is headed by the **Administration Director** and includes units for personnel, student services, faculty affairs, administrative communication, and support services. At the bottom, six departments are listed: **Industrial Engineering**, **Mechanical Engineering**, **Civil Engineering**, **Electrical Engineering**, **Architectural Engineering**, and **Chemical Engineering**.

**Figure 1. College of Engineering flowchart**



5. List all branches offering this program : انكر قائمة بجميع الفروع التي تقدم هذا البرنامج

Branch1 (1) فرع : **Main campus, Saudi Arabia - Najran - King Abdulaziz Road**

**P.O Box 1988.**

#### A. Program Identification and General Information

1. Program title and code اسم ورمز البرنامج : **Architectural engineering (ARE)**

2. Total credit hours needed for completion of the program إجمالي عدد الساعات المعتمدة المطلوبة لإتمام البرنامج : **135 Credit Hours (Four years), exclusive of the 27 Credit Hours of the Preparatory Year.**

3. Award granted on completion of the program الدرجة الممنوحة عند إتمام البرنامج : **Bachelor of Science in Architectural Engineering (B.Sc)**

4. Major tracks/pathways or specializations within the program (eg. transportation or structural engineering within a civil engineering program or counselling or school psychology within a psychology program):

المسارات الرئيسية أو التخصصات التي يشملها البرنامج (مثال: النقل أو الهندسة الإنشائية ببرنامج الهندسة المدنية؛ أو الاستشارات أو علم نفس المدرسة في برنامج علم النفس):

**One track (Architectural Engineering)**

5. Intermediate Exit Points and Awards (if any) (eg. associate degree within a bachelor degree program):

المخارج التي تتوسط البرنامج والشهادة الممنوحة عندئذ (إن وجدت) (مثال: درجة الدبلوم في برنامج يمنح في نهايته درجة البكالوريوس):

**Not Applicable.**

6. Professional occupations (licensed occupations, if any) for which graduates are prepared. (If there is an early exit point from the program (eg. diploma or associate degree) include professions or occupations at each exit point):

المهن أو الوظائف التي يتم تأهيل الخريجين لشغلها. (في حال كانت هناك مخارج مبكرة من البرنامج، مثال: درجة الدبلوم، فيمكن إدراج المهن والوظائف التي يتأهل لها الطالب عند كل نقطة خروج):

**1) Academic field at universities, colleges and research centres.**

**2) Architectural design (buildings).**

**3) Design building systems such as:**

- *Heating, ventilation and air conditioning (HVAC).*
- *Electrical and lighting systems.*
- *Electro-mechanical systems.*
- *Structural systems.*
- *Acoustical Design.*

**4) Coordinate among multi-disciplinary design team.**

**5) Site Engineer/ Project Manager.**

- *Plan and Schedule Building Projects.*
- *Supervise Bldg. Systems*
- *Monitor Construction Progress*

7. (a) New Program  برنامج جديد  Planned starting date تاريخ البدء

(b) Continuing Program  برنامج مستمر

Year of most recent major program review تاريخ أحدث مراجعة رئيسية للبرنامج

1434/1433-  
2012/2013

Organization involved in recent major review (eg. internal within the institution)

الجهة التي نفذت أحدث مراجعة رئيسية (مثال: مراجعة داخلية داخل المؤسسة)

Accreditation review by نفذت مراجعة الاعتماد بواسطة \_\_\_\_\_

Other آخرون :

**Reviewed by the development and quality assurance Committee of the department of architectural engineering.**

8. Name of program chair or coordinator. If a program chair or coordinator has been appointed for the female section as well as the male section, include names of both.

اسم رئيس أو منسق البرنامج. إذا كان هناك هناك رئيس أو منسق للبرنامج لكل من الجانب النسائي والجانب الرجالي فيجب إدراج الاسمين.

**Program coordinator: Dr. Nedhal Al-Tamimi**

9. Date of approval by the authorized body (MOE)

تاريخ إقرار البرنامج أو الموافقة عليه من الجهة المختصة (وزارة التعليم):

Campus Location موقع المقر الجامعي	Approval By الجهة المانحة للموافقة	Date التاريخ
Main Campus: المقر الجامعي الرئيسي <b>Najran University/College of Engineering</b>	<b>Council of Higher Education</b>	1434/1433- 2012/2013
Branch 1: فرع (1) <b>NA</b>		
Branch 2: فرع (2) <b>NA</b>		
Branch 3: فرع (3) <b>NA</b>		
Branch 4: فرع (4) <b>NA</b>		

## B. Program Context بيئة عمل البرنامج

1. Explain why the program was established وضح سبب انشاء البرنامج:

a. Summarize economic reasons, social or cultural reasons, technological developments, national policy developments or other reasons.

أذكر بإيجاز الأسباب الاقتصادية أو الاجتماعية أو الثقافية، والتطورات التقنية، أو تطورات السياسة الوطنية، أو خلاف ذلك من أسباب.

According to The annual report of Saudi Council of Engineers (SCE, 2013), the number of registered engineers in the engineering disciplines is more than a hundred thousand engineers. The Saudis only make up 6 percent of the total number of engineers registered in the country, (Engineer magazine, 2013). This makes it imperative to work on the expansion of the establishment of engineering education centres, particularly in the southern region because of the large expansion in the construction sector.

Moreover, the architectural engineering program is important to analyse and design the engineered systems that make buildings perform their intended functions in such harsh climate of Saudi. The program areas emphasis on:

- Structural design and analysis,
- Illumination and power systems,
- Building mechanical and energy systems,
- Construction management, and
- A hybrid such as sustainability, acoustics, or fire protection.

To attain this knowledge, the university of Najran must have the program of architectural engineering that provide the graduate with a good foundation in engineering science and design as these relate to building engineered systems and construction, as well as an appreciation for architectural design and history.

b. Explain the relevance of the program to the mission and goals of the institution.

اشرح علاقة البرنامج برسالة وأهداف المؤسسة.

The mission of Najran University is (posted on its web site at:

<http://portal.nu.edu.sa/en/web/guest/university-mission>

"Offering teaching and learning that address the needs of society and the labor market; effective contribution to sustainable development through conducting applied research and optimal use of modern technologies; and establishing partnerships at the local, regional and global levels".

**The mission of the university (Najran University) focuses mainly on 3 elements as follows:**

1. Offering teaching and learning that address the needs of society and the labor market.
2. Contribute effectively to sustainable development through conducting applied research and optimal use of modern technologies.
3. The active partnership at the local, regional and global levels.

**Table 1.** Mapping Relationship Between Mission of College of Engineering & Mission of the University

Mission of College of Engineering is to:	Main Elements of the Mission of Najran University		
	Offering teaching and learning that address the needs of society and the labor market.	Contribute effectively to sustainable development through conducting applied research and optimal use of modern technologies	The active partnership at the local, regional and global levels.
Provide our students with an accredited engineering education of high quality standards.	X		
Generate graduates possesses excellent knowledge and strong competent skills and uphold professional attitudes necessary in fulfilling their responsibilities towards Almighty, clients and society and meet the industry expectation.	X		
Conduct high quality applied research using the best modern technology		X	
Provide innovative solution which contribute to the sustainable and comprehensive development		X	
Build the knowledge society nationally and internationally.			X

The mission of the program of Architectural engineering is very consistent and supports the mission of the institution. The following matrix shows the alignment between the mission of the program and the mission of the institution:

**Table 1.** Mapping Relationship Between Mission of the program of Architectural Engineering & Mission of the University

The Mission of the ARE Program is to:	Main Elements of the Mission of Najran University		
	Offering teaching and learning that address the needs of society and the labor market.	Contribute effectively to sustainable development through conducting applied research and optimal use of modern technologies	The active partnership at the local, regional and global levels.
Provide students with an accredited Architectural Engineering education of high quality standards.	X		
Generate graduates possessing excellent knowledge and strong competent skills, and uphold professional attitudes necessary in fulfilling his responsibilities towards Almighty, society and meet the industry's expectations.	X		
Conduct high quality of Architectural Engineering research using the best modern technology.		X	
Provide innovative solutions for Architectural Engineering problems, which contribute to the sustainable development.		X	
Build knowledge-based society.			

2. Relationship (if any) to other programs offered by the institution/college/department.

علاقة البرنامج (إن وجدت) ببقية البرامج التي تقدمها المؤسسة / الكلية / القسم.

a. Does this program offer courses that students in other programs are required to take?

هل يقدم هذا البرنامج مقررات دراسية يأخذها طلاب في برامج أخرى؟

Yes نعم

No لا

If yes, what has been done to make sure those courses meet the needs of students in the other programs?

في حال الإجابة بنعم، ما الاجراءات التي اتخذت للتأكد من أن تلك المقررات تلبي احتياجات طلاب البرامج الأخرى؟

b. Does the program require students to take courses taught by other departments?

هل يستلزم البرنامج من طلابه تلقي مقررات دراسية من أقسام أخرى؟

Yes نعم

No لا

If yes, what has been done to make sure those courses in other departments meet the needs of students in this program?

في حال الإجابة بنعم، ما الاجراءات التي اتخذت للتأكد من أن تلك المقررات من الأقسام الأخرى تلبي احتياجات طلبة هذا البرنامج؟

Students need a basic understanding of Islamic studies, **mathematics, physics, natural sciences**, social sciences and humanities to get a well-rounded education. Those are college and university requirement courses. All courses that are taught by other departments contribute to the student outcomes of the program. The course specifications (NCAAA template) including syllabus, descriptions and course learning outcomes of all courses taught by other departments must be available to the program in order to make sure that they meet the program's needs. In addition, all courses' syllabi and reports along with other necessary documents of courses taught by other departments must be reviewed by the Program Curriculum Committee to ensure that they are all working towards the achievements of student outcomes of the architectural engineering program. Moreover, students can give their opinions about courses taught by other departments through the current student survey and exit survey.

In the table of program learning outcomes mapping matrix, we will provide how non-ARE courses are aligned to the student outcomes of the architectural Engineering (ARE) program.

3. Do students who are likely to be enrolled in the program have any special needs or characteristics? (eg. Part time evening students, physical and academic disabilities, limited IT or language skills).

هل لدى الطلبة المتوقع التحاقهم بالبرنامج أية احتياجات أو خصائص معينة مما يجب أخذه في الاعتبار عند التخطيط للبرنامج؟ (مثال: طلبة من فئة الدوام الجزئي المسائي، أو اعاقات جسدية أو صعوبات اكااديمية أو مهارات محدودة في تكنولوجيا المعلومات أو المهارات اللغوية).

Yes نعم

No لا

The students entering the department must have sufficient proficiency in the English language skills, mathematics, physics and skills in computing.

The university is offering a preparatory year, which we expect, will strengthen the students' English language skills, mathematics, and skills in computing. However, The department requires a minimum entry level for students coming from the Preparatory Year.

4. What modifications or services are you providing for special needs applicants?

ما هي التعديلات أو الخدمات التي يتم توفيرها للتعامل مع المتقدمين للبرنامج من ذوي الاحتياجات الخاصة؟

NA

## C. Mission, Goals and Objectives :رسالة وغايات وأهداف البرنامج

Program Mission Statement (insert) اكتب نص رسالة البرنامج:

Architectural Engineering program is committed to:

- Provide students with an accredited Architectural Engineering education of high quality standards.
- Generate graduates possessing excellent knowledge and strong competent skills, and uphold professional attitudes necessary in fulfilling his responsibilities towards Almighty, society and meet the industry's expectations.
- Conduct high quality of Architectural Engineering research using the best modern technology.
- Provide innovative solutions for Architectural Engineering problems, which contribute to the sustainable development.
- Build knowledge-based society.

List program goals (e.g. long term, broad based initiatives for the program, if any)

اذكر غايات البرنامج (بمعنى: المبادرات طويلة المدى ، واسعة النطاق للبرنامج ، إن وُجدت )

The ARE program used mission as a basis for establishment of the program goals. Goals are periodically reviewed and modified, as necessary in the light of changing circumstances to ensure they continue to support the mission.

1. Provide high quality Architectural Engineering education that is recognized nationally and internationally.
2. Conduct excellent Architectural Engineering research that contributes to solve architectural engineering problems and meet nation's needs.
3. Prepare graduates to contribute effectively to the profession and society.

3. List major objectives of the program within to help achieve the mission. For each measurable objective describe the measurable performance indicators to be followed and list the major strategies taken to achieve the objectives.

اذكر قائمة الأهداف الرئيسية للبرنامج والتي تساعد على تحقيق رسالته. لكل هدف قابل للقياس قدم وصفا لمؤشرات الأداء القابلة للقياس الواجب تتبعها وقائمة الاستراتيجيات الرئيسية المتخذة لتحقيق الأهداف.

The Architectural Engineering program objectives are support the mission. They are stated with sufficient clarity to effectively guide planning and decision-making in ways that are consistent with the mission. Objectives are, also, periodically reviewed and modified, as necessary in the light of changing circumstances to ensure they continue to support the mission.

Specific objectives for each goal of the program are consistent with the mission and the broad goals for development. Statements of major objectives are accompanied by specification of clearly defined and measurable indicators that are used to judge the extent to which objectives and the mission are being achieved.

Mapping matrix between the Program Objectives (Obs) and Program Goals is given in the table

below.

Architectural Engineering Program Objectives (Obs)	Architectural Engineering Program Goals		
	Provide high quality architectural engineering education recognized nationally and internationally	Conduct excellent applied scientific architectural engineering research, contribute to solving architectural engineering problems, and	Engage with his profession and community and continue to develop professionally, socially, and personally.
Ob1: Technically competent in their respective fields and conceiving, designing and executing broad range of architectural engineering tasks locally and globally.	X		
Ob2: Meet industry expectations in architectural engineering with excellent communication and leadership skills	X		
Ob3: Contribute to the society through providing innovative solutions for architectural engineering problems and function on multi-disciplinary teams.		X	
Ob4: Able to develop themselves through self-learning and able to pursue post graduate studies in architectural engineering.		X	X
Ob5: Uphold professional and social ethics necessary in fulfilling responsibilities towards the Almighty, clients and the society and contribute to the sustainable development of the kingdom.			X

The following table summarizes the broad goals of the ARE program, the specific objectives supporting each goal, major strategies used, and the associated measurable Key Performance Indicators (KPIs).

Goals and Objectives	Major Strategies	Measurable Performance Indicators
<p><b>Goal #1</b> Provide high quality architectural engineering education recognized nationally and internationally</p> <p><b>Objectives:</b> <b>Ob1:</b> Technically compete in their respective architectural engineering field and conceiving, designing and executing broad range of architectural engineering tasks locally and globally</p> <p><b>Ob2:</b> Meet industry's expectations in architectural engineering with excellent communication and leadership skills</p>	Periodic review and assessment of ARE curriculums in consultation with industry to obtain a distinct study plan.	<ul style="list-style-type: none"> <li>• Satisfaction ratio of students and faculty members and the employers on the mission, educational objectives and students outcomes of the architectural engineering program.</li> <li>• Satisfaction ratio of employers about graduates professional and personal skills.</li> <li>• Levels of attainment for each student's outcomes.</li> </ul>
	Development of staff skills	<ul style="list-style-type: none"> <li>• The number of staff attending training courses</li> </ul>
	Compare ARE curriculums with national and international universities	<ul style="list-style-type: none"> <li>• Percentage of matching between ARE curriculum with national and international universities</li> </ul>
	Recruit qualified staff	<ul style="list-style-type: none"> <li>• Percentage of teaching staff with verified doctoral qualifications.</li> <li>• Number of awards received by the ARE staff</li> <li>• Ratio of students to fulltime teaching staff at the program level.</li> </ul>
	Prepare students to engage in long life learning	<ul style="list-style-type: none"> <li>• Percentage of graduates of Bachelor's degree enrolled in postgraduate study.</li> </ul>
	Obtaining national and international academic accreditation for the ARE program.	<ul style="list-style-type: none"> <li>• Progression percentage of implementing work plan for obtaining national and international accreditations.</li> <li>• Percentage of teaching staff received training or attended workshops for national and international accreditations systems.</li> </ul>
	Enhance the employment rate for the ARE program graduates	<ul style="list-style-type: none"> <li>• Percentage of graduates of Bachelor's degree employed within 6 months of graduation.</li> </ul>
<p><b>Goal #2:</b> Conduct excellent applied scientific architectural engineering research, contribute to solving architectural engineering problems, and meet nation's needs</p> <p><b>Objectives:</b> <b>Ob3:</b> Contribute to the society through providing innovative solutions for architectural engineering problems and function on multi-disciplinary teams</p> <p><b>Ob4:</b> Pursue their architectural engineering professional development through self-learning and advanced graduate studies if qualified and interested.</p>	Research cooperation	<ul style="list-style-type: none"> <li>• Number of joint research and agreement with other research institutions</li> </ul>
	Distinct scientific and academic promotion for students and ARE staff	<ul style="list-style-type: none"> <li>• The ratio of articles published in scholarly journals or presented at conferences to the number of ARE staff</li> </ul>
	Training staff for preparing research proposals	<ul style="list-style-type: none"> <li>• Number of staff attend training courses for research methodology and preparing research proposal</li> <li>• Number of supported research</li> </ul>
	Involve student in research activity conducted by the staff in the ARE program	<ul style="list-style-type: none"> <li>• Number of student enrolled in research activity</li> </ul>
	Planning of research projects	<ul style="list-style-type: none"> <li>• Research plans</li> </ul>
	Start postgraduate program in architectural engineering	<ul style="list-style-type: none"> <li>• Postgraduate program progress development</li> </ul>
<p><b>Goal #3:</b> Engage with his profession and community and continue to develop professionally,</p>	Engagement and involvement of ARE staff and students in professional activities or professional societies	<ul style="list-style-type: none"> <li>• The number of ARE staff and students participating in professional development activities or members in professional societies</li> </ul>

<p>socially, and personally.</p> <p><b>Objectives:</b>  <b>Ob4:</b> Pursue their architectural engineering professional development through self- learning and advanced graduate studies if qualified and interested.</p> <p><b>Ob5:</b> Uphold professional and social ethics necessary in fulfilling his responsibilities towards the Almighty, clients and the society and contribute to the sustainable development of the Kingdom</p>	<p>provided consulting and community service activities</p>	<ul style="list-style-type: none"> <li>Number of community service programs conducted by the ARE program</li> <li>Number of ARE staff and student involved in community service programs</li> </ul>
	<p>Strengthen ARE program relation with national and international organization partnerships</p>	<ul style="list-style-type: none"> <li>Number partnerships with national and international organization</li> </ul>
	<p>Increase the community awareness on the roles and functions of the program</p>	<ul style="list-style-type: none"> <li>Percentage of members from program advisory board contain representatives from community</li> </ul>

#### D. Program Structure and Organization هيكل وتنظيم البرنامج

##### 1. Program Description وصف البرنامج:

List the core and elective program courses offered each semester from Prep Year to graduation using the below Curriculum Study Plan Table (A separate table is required for each branch IF a given branch/location offers a different study plan).

دون قائمة المقررات الإلزامية والاختيارية التي يقدمها البرنامج في كل مستوى بداية من السنة التحضيرية حتى التخرج مستخدماً الجدول التالي للخطة الدراسية (تستخدم جداول منفصلة لكل فرع في حالة وجود خطط دراسية مختلفة في كل فرع/موقع يقدم فيه البرنامج).

A program or department manual should be available for students or other stakeholders and a copy of the information relating to this program should be attached to the program specification. This information should include required and elective courses, credit hour requirements and department/college and institution requirements, and details of courses to be taken in each year or semester.

ينبغي وجود دليل البرنامج أو للقسم وأن يكون متاحاً للطلبة أو الأطراف المستفيدة، مع إرفاق نسخة من المعلومات المتعلقة بهذا البرنامج مع توصيف البرنامج. ينبغي أن تتضمن هذه المعلومات ذكر المقررات الدراسية الإلزامية والاختيارية، وعدد الساعات المعتمدة المطلوب إتمامها، ومتطلبات القسم/الكلية ومتطلبات الجامعة، وتفصيل المقررات الدراسية التي ينبغي دراستها كل عام أو كل فصل دراسي.

#### جدول خطة المنهج الدراسي Curriculum Study Plan Table

Level المستوى	Course Code رمز المقرر	Course Title اسم المقرر	Required or Elective اجباري أو اختياري	*Prerequisite courses مقررات متطلب سابق	Credit Hours الساعات المعتمدة	College or Department الكلية أو القسم
1	Level 1					

1 <sup>st</sup> Year	Level 2	140TEC-3	Computer Skills	Required	---	3	Prep. Year	
		140MATH-2	Mathematics 1	Required	---	2	Prep. Year	
		140SKL-2	Learning, Thinking and Research Skills	Required	---	2	Prep. Year	
		140ENGG-2	Reading Skills	Required	---	2	Prep. Year	
		141ENGG-2	Writing Skills	Required	---	2	Prep. Year	
		142ENGG-2	Listening and Speaking Skills	Required	---	2	Prep. Year	
		143ENGG-2	Grammar	Required	---	2	Prep. Year	
	Level 2	<b>Level 2</b>						
		150MAN-1	Job Ethics	Required	---	1	Prep. Year	
		140MATH-4	Mathematics 2	Required	---	4	Prep. Year	
		150SKL-2	Communication Skills	Required	---	2	Prep. Year	
		150ENGG-3	General English	Required	---	3	Prep. Year	
		151ENGG-2	Writing Technical Reports	Required	---	2	Prep. Year	
Level 3	<b>Level 3</b>							
	ARAB 201-2	Language Skills	Required	---	2	College		
	121 ARE -2	Architectural Drawing and Presentation	Required	---	2	Department		
	122 ARE -1	Free Hand Sketching	Required	---	1	Department		
	111 ARE -3	Basic Architectural Design Studio	Required	---	3	Department		
	101 CHEM-3	General Chemistry	Required	---	3	College		
	106 MATH-3	Introduction to Integral Calculus	Required	---	3	College		
PHYS 104-4	Principles of Physics	Required	---	4	College			
Level 4	<b>Level 4</b>							
	111 SL -2	Introduction to Islamic Culture	Required	----	2	College		
	131 ARE -2	History of Architecture	Required	----	2	Department		
	123 ARE -2	Shadow and Perspective	Required	121ARE -2 - S	2	Department		
	141 ARE-2	Building Construction (1)	Required	121ARE-2-S	2	Department		
	112 ARE -3	Architectural Design Studio (1)	Required	111ARE-3-S	3	Department		
	107 MATH-3	Algebra and Analytical Geometry	Required	--	3	College		
105 PHYS -4	Advanced Physics	Required	104PHIS-4S	4	College			
2 <sup>nd</sup> Year	Level 5	<b>Level 5</b>						
		233 ARE -2	Theory of Architecture (1)	Required	---	2	Department	
		281 ARE -2	Drawing by Computer (1)	Required	121ARE-2 - S	2	Department	
		242 ARE -2	Building Construction (2)	Required	141ARE -2-S	2	Department	
		213 ARE -3	Architectural Design Studio (2)	Required	112ARE -3- S	3	Department	
		271 ARE -3	Engineering Mechanics	Required	106MATH-3-S	3	Department	
		342 CE -3	Properties and Testing of Material	Required	--	3	College	
	203 MATH-3	Calculus for Engineering Students	Required	106MATH-3-S	3	College		
	Level 6	<b>Level 6</b>						
		112 IS -2	Islamic Culture (2)	Required		2	College	
		234 ARE -2	Theory of Architecture (2)	Required	233ARE -2- S	2	Department	
282 ARE -2		Drawing by Computer (2)	Required	281ARE -2- S	2	Department		
214- ARE 3	Architectural Design Studio (3)	Required	213ARE -3- S	3	Department			

		272 ARE -3	Structural Mechanics	Required	106MATH-3-S	3	Department
		222 CE -3	Geotechnical Engineering	Required	---	3	Department
		204 MATH-3	Differential Equations	Required	203MATH-3- S	3	College
3 <sup>rd</sup> Year	Level 7	<b>Level 7</b>					
		113 IS -2	Islamic Culture(3)	Required	---	2	College
		351 ARE -2	Urban Planning	Required	---	2	Department
		343 ARE -2	Working Drawings	Required	242ARE -2- S	2	Department
		315 ARE -3	Architectural Design Studio (4)	Required	214ARE -3- S	3	Department
		373 ARE -2	Thermo- and Fluid Mechanics	Required	105PHIS-4-S	2	Department
		261 CE -3	Surveying (1)	Required	----	3	College
	MATH 254-3	Numerical Methods	Required	204MATH-3-S	3	College	
	Level 8	<b>Level 8</b>					
		202 ARAB -2	Arabic Writing	Required	-----	2	College
		332 ARE -2	History of Islamic Architecture	Required	131ARE -2- S	2	Department
		353 ARE -2	Climatic Design	Required	105PHIS-4 - S	2	Department
		344 ARE -2	Working Drawing designs	Required	343ARE -2- S	2	Department
		316 ARE -3	Architectural Design Studio (5)	Required	315ARE -3- S	3	Department
348 ARE -2		Electrical Systems in Buildings	Required	105PHIS-4 - S	2	Department	
371 CE -3	Sanitary Engineering	Required	373ARE -2 - S	3	College		
306 GE -2	Engineering Economics	Required	----	2	College		
4 <sup>th</sup> Year	Level 9	<b>Level 9</b>					
		114 IS -2	Islamic Culture (4)	Required		2	College
		452 ARE -2	Housing	Required	351ARE -2- S	2	Department
		447 ARE -2	Illumination and Acoustics	Required	348ARE -2- S	2	Department
		491 ARE -2	Graduation Project (1)	Required	316ARE -3- S	2	Department
		446 ARE -2	Mechanical installations in buildings	Required	373ARE -2- S	2	Department
		351 CE -3	Reinforced Concrete (1)	Required	272ARE -3- S	3	College
	324 STAT -3	Engineering Statistics and Probabilities	Required	204MATH-3-S	3	College	
	Level 10	<b>Level 10</b>					
		463 ARE -1	Professional Practice	Required		1	Department
		461 ARE -2	Contracts, Quantities and Specifications	Required	344ARE -2- S	2	Department
		492 ARE -4	Graduation Project (2)	Required	491ARE -2- S	4	Department
		355 CE -3	Steel Structure	Required	272ARE -3 -S	3	College
407 GE -2	Management of Engineering Projects	Required	306GE-2 - S	2	College		
<b>Level 11 Summer</b>	<b>493 ARE -0</b>	<b>Field Training</b>				<b>Department</b>	

**2. Required Field Experience Component (if any, e.g. internship, cooperative program, work experience).**

مكونات الخبرة الميدانية المطلوبة (إن وجدت) (مثال: سنة الامتياز، البرنامج التعاوني، الخبرة العملية).

Summary of practical, clinical or internship component required in the program. Note: see Field Experience Specification.

موجز بالمكونات العملية (التدريب) أو الإكلينيكية (التدريب على الفحص السريري) أو فترة الامتياز التي يتطلبها البرنامج. ملاحظة انظر: توصيف الخبرة الميدانية.

a. Brief description of field experience activity : وصف موجز لأنشطة الخبرة الميدانية

**A continuous period of 8 weeks of summer working in the industry to gain exposure and appreciation of the Architectural Engineering profession. On-the-job training can be acquired in one of the area related to architectural engineering tat are:**

- Structural design and analysis,
- Illumination and power systems,
- Building mechanical and energy systems,
- Construction management, and
- A hybrid such as sustainability, acoustics, or fire protection.

**The student is required to write a brief report about his industrial experience. The report should emphasize duties assigned and completed by the student.**

- **After successfully completing the course, the students will be able to:**
  - a) **Apply the architectural engineering knowledge to solve real life problems.**
  - b) **Integrate themselves in the work environment and develop professional relationships.**
  - c) **Acquire a good understanding of work organization in real-life environment.**
  - d) **Communicate effectively within the working environment.**
  - e) **Work independently and in a team.**
  - f) **Work with people having different backgrounds.**
  - g) **Develop professional skills.**
  - h) **Acquire professional and ethical responsibilities.**
- **During the field experience Students must:**
  - a) **Prepare the plan with the field staff (Supervisor) and send it to the training department.**
  - b) **Spend all their training period (8 weeks) with the organization according to working day times.**
  - c) **Aware for all organization rules and regulations**
  - d) **Submit progress reports in different stages reflected their gained skills and experience.**

- e) **Submit a detailed final report about his work in the company**  
f) **Contact his department and/or field-work training officer regularly.**

b. At what stage or stages in the program does the field experience occur? (eg. year, semester)  
في أية مرحلة أو مراحل من البرنامج تنفذ الخبرة الميدانية؟ (بمعنى: السنة الدراسية أو الفصل الدراسي):

**After the 10<sup>th</sup> level of the Program.**

**The following criteria should be met before a student is considered eligible for**

**Field-work training course:**

- **Student must be completed 90 credit hours or more of his study.**
- **Student preferred to be passed or is currently enrolled in technical writing course.**

**Student preferred to be passed the following courses (316 ARE -3, 345ARE -2, 282 ARE -2)**

c. Time allocation and scheduling arrangement. (eg. 3 days per week for 4 weeks, full time for one semester)

الوقت المخصص للخبرة الميدانية والجدول الزمني. (مثال: 3 أيام أسبوعياً وعلى مدار 4 أسابيع، بنظام الدوام الكامل لمدة فصل دراسي واحد)

**During Summer, After the 10<sup>th</sup> level of the Program, for “8” full-time weeks, from 8:00 am to 3:00 pm). This field summer training course (493 ARE -0) starts in July 1, up to the end of August, every year. Students are required to attend fulltime in accompany following the time schedule of their supervisor.**

d. Number of credit hours (if any) ( إن وجد ) : عدد الساعات المعتمدة

**Zero credit hours**

### **3. Project or Research Requirements (if any) (إن وجدت) متطلبات المشروع أو البحث**

Summary of any project or thesis requirements in the program. (Other than projects or assignments within individual courses) (A copy of the requirements for the project should be attached.)

موجز بمتطلبات أي مشروع أو بحث في البرنامج. (خلاف المشروعات أو المهام المطلوبة ضمن كل مقرر دراسي) (ينبغي إرفاق نسخة من متطلبات المشروع):

a. Brief description : وصف موجز

The Graduation Project demonstrates the students' accumulation of knowledge and experiences throughout their undergraduate education in the department of Architectural Engineering. All the program outcomes are reflected in the graduation project. It is the last step in the preparation of the student for the professional practice after graduation. It requires continuous work and commitment to achieve the required goals. It is recommended that the selected project is an actual project needed by the country and listed in its future development plans. This reflects the obligation of the university to

service the country in general as well as the local community. It is also important that students do not select graduation projects that were designed by the students who graduated in the course of the last two years or projects designed during their previous design studios. Students should be directed to design new and bright architectural projects. These projects should involve the design of one of the following specialities:-

- Mechanical systems.
- Electrical systems.
- Structural systems.
- Construction management.

b. List the major intended learning outcomes of the project or research task.

أكتب مخرجات التعليم الرئيسية – المستهدفة من المشروع أو البحث:

1. To conduct enough literature review in the project domain.
2. To design a system, component or process with defined constraints.
3. To solve engineering problems and implement designed solution.
4. To collect and analyze data, and draw conclusions though experiments while testing a project.
5. To investigate different issues of architectural engineering
6. To use techniques, skills and modern engineering tools necessary for engineering practice.
7. To act responsibly and work effectively as a team member.
8. To act ethically when asked to execute duties.
9. To communicate effectively in oral and practical exercises.

c. At what stage or stages in the program is the project or research undertaken? (e.g. level)

في أي مرحلة أو مراحل من البرنامج يتم تنفيذ المشروع أو البحث؟ (مثال: المستوى)

The Graduation Projects split into two semesters under the name Graduation Project I (GP1: ARE - 491-2), and Graduation Project II (GP2: 492 ARE-4). The students should take the two courses in semester 9 and semester10 respectively as stated in the department study plan.

Year	Course Code	Course Title	College or Department
4th Year Semester 1	491 ARE-2	Graduation Project (1)	316 ARE -3
4th Year Semester 2	492 ARE -4	Graduation Project (2)	491 ARE-2

d. Number of credit hours (if any) (عدد الساعات المعتمدة ( ان وجد ) :

GP is implemented in two semesters, 9 and 10 - GP I & GP II:

GP I: **Two** credit hours.

GP II: **Four** credit hours.

Course Code	Course Title	Credit Hours
-------------	--------------	--------------

491 ARE -2	Graduation Project (1)	2
492 ARE -4	Graduation Project (2)	4

e. Description of academic advising and support mechanisms provided for students to complete the project.

وصف موجز لآليات الإرشاد والدعم الأكاديمي الذي يقدم للطلبة لإكمال المشروع:

The role of the supervisor is to monitor the project group throughout the semester by providing guidance, offering technical help, ensuring that students remain on course, helping mitigate the group troubles.

**The following are a list of tasks that the supervisor should consider**

- A. To meet with the students at least once a week (minimum of 2 hours per student).
- B. Fill in the Logbook after each meeting and return it back to the student.
- C. To verify the work of the group and their documentation.
- D. To make sure that his students are abiding by the events scheduled throughout the semester.
- E. To fill in the Supervisor evaluation forms for both GP1 and GP2 and submit them to the GPC three weeks before the final exams.
- F. To submit student attendance for both GP1 and GP2 to the GP coordinator.
- G. To pass a copy of the student final reports to each examiner.
- H. The student will get disqualified for failing to submit assignments or forms to his supervisor on time. The supervisor should pass the case to the GPC, which will give a verdict on the matter. As for the final exam, if the students' score is marginal, the result will be incomplete. The GP Committee will decide on his case. The supervisor is obliged to continue supervise the student until the re submission is decided.

f. Description of assessment procedures. (including mechanism for verification of standards)

وصف لإجراءات التقويم. (بما في ذلك آلية التحقق من المعايير)

- The graduation project assessment has much more weight than the direct other course assessment because the students are close to graduation and their abilities in all of the Student Outcomes (SOs) are assessed in the graduation project.
- The procedures for graduate project assessment may summarized as follows:
  - Through the graduation project semester the supervisor makes a continuous assessment for the student work and activity and the team work.
  - All the graduation projects' defences will be scheduled in the last week of classes. A complete schedule for all the defences will be announced at an early time. The schedule shows each group's defence time, locations, and examiners.

- In the project's defence, the supervisor and the examiners are going to investigate the project's deliverables with the group. Then, they are going to complete the evaluation forms. These forms evaluate the students in two perspectives; (a) group based; (b) individual based. A final evaluation form is submitted to the department. For each student, the supervisor has 60% of the project's final grade and the two examiners have the remaining 40%.
- The student evaluation will be conducted using the evaluation form for each student for which the form base on rubric that supports reliable grading system, the main dimensions of the rubrics include:
  - Report (General Organization, content, level type, method)
  - The Visual presentation of the project (the content, conclusions, clarity, thoroughness, the language, the degree of literacy, time commitment)
  - The level of knowledge of the contents of the project (answered questions)
  - The overall assessment of the project (the importance of the subject and the degree of difficulty, the amount of effort, integration).

#### 4. Learning Outcomes in Domains of Learning, Assessment Methods and Teaching Strategy

مخرجات التعلم في المجالات التعليمية المختلفة، أساليب التقييم واستراتيجيات التدريس

Program Learning Outcomes, Assessment Methods, and Teaching Strategy work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning and teaching.

تتوافق مخرجات التعلم في المجالات التعليمية المختلفة وأساليب التقييم واستراتيجيات التدريس وتعمل مع بعضها البعض في تناغم كمنظومة واحدة تبلور التوافق بين تعليم وتعلم الطلبة.

The *National Qualification Framework* provides five learning domains. Learning outcomes are required in the first four domains and sometimes are also required in the Psychomotor Domain.

يحدد الإطار الوطني للمؤهلات خمسة مجالات تعليمية، من المطلوب وضع مخرجات تعلم في المجالات الأربع الأولى وأحيانا بعض البرامج والتخصصات تتطلب أيضا وضع مخرجات تعلم تحت المجال الخامس النفسحركي.

On the table below are the five NQF Learning Domains, numbered in the left column.

الجدول التالي يوضح الخمس مجالات تعلم وفقا للإطار الوطني للمؤهلات، وهي مرقمة في العمود الأيسر.

**First**, insert the suitable and measurable learning outcomes required in each of the learning domains. **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each program learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process.

أولاً: ضع مخرجات التعلم المناسبة والقابلة للقياس تحت كل مجال من مجالات التعلم. ثانياً: ضع استراتيجيات التدريس الداعمة التي تتوافق وتتماشى مع أساليب التقييم ومخرجات التعلم المستهدفة. ثالثاً: ضع أساليب التقييم المناسبة التي يمكن أن تقيس بدقة

وتقيم ناتج التعلم. كل ناتج تعلم للبرنامج، طريقة تقييمه ، واستراتيجية تدريسه يجب أن تتناغم وتتكامل معا كجزء من عملية التعلم والتعليم.

Educational practice at the ARE program is designed to be outcomes oriented rather than simply based on input. The ARE program learning outcomes are derived based on well-known US engineering accreditation body ABET a-to-k student outcomes with characterization of those outcomes according to the five learning domains of Saudi Arabia's NQF.

NQF Learning Domains and Learning Outcomes مجالات التعلم وفق الإطار الوطني للمؤهلات ومخرجات التعلم		Teaching Strategies استراتيجيات التدريس	Assessment Methods أساليب التقييم
<b>1.0</b>	<b>Knowledge المعرفة</b>		
1.1 (h)	To recognize the broad education necessary to understand the impact of architectural engineering solutions in a global, economic, environmental, and societal context.	<ul style="list-style-type: none"> <li>○ Through a set of structured courses in the different disciplines of architectural engineering including mechanical insulations, electrical systems, structure and project management. The set of these courses are clarified in the program-learning outcome-mapping matrix shown in the table below.</li> <li>○ A combination of lectures, tutorials, assignments and seminars, using printed media and web based materials. Lectures begin with overview of content to be presented linking it to previous information and explaining its significance, and conclude with a review. Tutorials review material presented in lectures to check understanding and provide clarification required before discussing the potential uses of the information. Essay assignments require students to locate and use significant information in the field. Seminars by faculty and invited speakers from industry and academia, and through some course materials.</li> </ul>	<p><b>Direct Methods:</b> Grading analysis and ARE Course learning outcomes analysis using the accreditation software CLOSO.</p> <p>- <b>Indirect Methods</b> These can include the following:</p> <ol style="list-style-type: none"> <li>1. Exit Survey (Each Semester)</li> <li>2. Current Student Survey (Each Semester)</li> <li>3. Graduation Project Assessment.</li> <li>4. Courses Survey (on all courses each semester)</li> <li>5. PAC meetings and discussions (once a year)</li> </ol>
1.2 (j)	To recognize the knowledge of contemporary issues in architectural engineering.		
<b>2.0</b>	<b>Cognitive Skills</b>		

2.1 (k)	To use techniques, skills, and modern engineering tools necessary for architectural engineering practices.	<ul style="list-style-type: none"> <li>○ Through a set of structured courses in the mathematics, physics, chemistry, computer science, basic engineering and different disciplines of architectural engineering including building structure, mechanical systems, electrical systems and building management and construction. The set of these courses are clarified in the program learning outcome mapping matrix shown in the table below.</li> </ul>	<p><b>Direct Methods:</b> Grading analysis and ARE Course learning outcomes analysis using the accreditation software CLOSO.</p> <p>- <b>Indirect Methods</b> These can include the following:</p> <ol style="list-style-type: none"> <li>1. Exit Survey (Each Semester)</li> <li>2. Current Student Survey (Each Semester)</li> <li>3. Graduation Project Assessment.</li> <li>4. Courses Survey (on all courses each semester)</li> <li>5. PAC meetings and discussions (once a year)</li> </ol>
2.2 (a)	To apply knowledge of mathematics, sciences and architectural engineering.	<ul style="list-style-type: none"> <li>○ A combination of lectures, tutorials, assignments and laboratory tasks that apply skills to new problems. Through lectures, the instructor should give the concepts theoretically and their applications to real-world case studies, open the discussion with students, and display their viewpoints. Tutorials should include discussion of issues and problems to which analytical skills taught could be relevant. Assignments should include some open-ended problem solving tasks with students assessed on the appropriateness of investigative processes used.</li> </ul>	
2.3 (b)	To design and conduct experiments, as well as to analyze and interpret data required for solving architectural engineering projects.	<ul style="list-style-type: none"> <li>○ Embed development of some elements of cognitive skills through assignments in all applicable courses.</li> </ul>	
2.4 (c)	To design building system/component to meet desired needs with realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	<ul style="list-style-type: none"> <li>○ Introduce design projects in design courses (design studio, structure, building construction and mechanical and electrical building systems) that promote critical thinking and ability to seek solutions.</li> </ul>	
2.5 (e)	7. To identify, formulate, and solve architectural engineering problems and to evaluate and synthesize information in order to provide best alternative solutions.	<ul style="list-style-type: none"> <li>○ Implement a capstone group design project in graduation project courses to enable students to have an integrated design experience in which analytical skills and theoretical insights developed in the program are</li> </ul>	

		<p>applied to a new issue.</p> <ul style="list-style-type: none"> <li>○ Seminars by faculty and invited speakers from industry and academia.</li> </ul>	
<b>3.0 Interpersonal Skills &amp; Responsibility</b> مهارات التعامل مع الآخرين وتحمل المسؤولية			
3.1 (f)	8. To understand the professional and ethical responsibility in architectural engineering practices.	<ul style="list-style-type: none"> <li>○ Students will be exposed to ethical and professional responsibilities of the architecture engineers through designated courses titled architectural design studio, building structure, building mechanical systems, building electrical systems, Graduate Project and Field Training courses.</li> <li>○ Term papers, laboratory work, and special assignments in relevant courses will require students to search for data and information on their own.</li> <li>○ Seminars by faculty and invited speakers from industry and academia to discuss with students on ethical behaviour in conducting research.</li> <li>○ Students' counselling and advising to make the students alert about the importance of class attendance, timing, commitment, cleanliness, behaviours and manners inside and outside the class.</li> <li>○ Encouraging a self-critical evaluation of student existing knowledge and behaviour pattern in solving problems in classroom.</li> <li>○ Discussion with student about open-ended issues regarding architectural engineering which contribute to strengthen both decisions making skills when choosing among a couple of alternatives and communication skills.</li> </ul>	<p><b>Direct Methods:</b> Grading analysis and ARE Course learning outcomes analysis using the accreditation software CLOSO.</p> <p>- <b>Indirect Methods</b> These can include the following:</p> <ol style="list-style-type: none"> <li>1. Exit Survey (Each Semester)</li> <li>2. Current Student Survey (Each Semester)</li> <li>3. Graduation Project Assessment.</li> <li>4. Courses Survey (on all courses each semester)</li> <li>5. PAC meetings and discussions (once a year)</li> </ol>
3.2 (i)	9. To recognize the need for, and to engage in life-long learning.	<ul style="list-style-type: none"> <li>○ Seminars by faculty and invited speakers from industry and academia to discuss with students on ethical behaviour in conducting research.</li> <li>○ Students' counselling and advising to make the students alert about the importance of class attendance, timing, commitment, cleanliness, behaviours and manners inside and outside the class.</li> <li>○ Encouraging a self-critical evaluation of student existing knowledge and behaviour pattern in solving problems in classroom.</li> <li>○ Discussion with student about open-ended issues regarding architectural engineering which contribute to strengthen both decisions making skills when choosing among a couple of alternatives and communication skills.</li> </ul> <p>Time management and time</p>	

		control by monitoring the time appointed through the different assessment methods	
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b> مهارات الاتصال و تقنية المعلومات والمهارات العددية		
4.1 (d)	10. To function effectively on multi-disciplinary architectural engineering teams.	<ul style="list-style-type: none"> <li>○ Introduce a set of structured courses in communication skills titled; Technical Writing, Communication Skills for Engineers, Arabic Language Skills, Arabic Writing, which learn the students reading, writing, oral presentation, principles of group working, active learning strategy and the ability of expressing themselves, beside the techniques of engineering modeling.</li> <li>○ Introduce two courses in computer for Building design which will prepare students to solve architectural engineering problems and present their design perfectly. These computer applications are: AutoCAD and other 3D building design presentation application.</li> <li>○ A combination of lectures, tutorials, assignments and laboratory tasks <ul style="list-style-type: none"> <li>- Lectures should be prepared using information technology through the use of computer, PowerPoint, smart boards and whiteboard. In addition, lectures should be delivered in a steady pace with a loud voice and clear perfect pronunciation.</li> <li>- Through tutorials students should be allowed to class participation by oral questioning and answering.</li> <li>- Through Laboratories students should be divided into groups and collaborate for the implementation of experiments and data analysis which will help</li> </ul> </li> </ul>	<p><b>Direct Methods:</b> Grading analysis and ARE Course learning outcomes analysis using the accreditation software CLOSO.</p> <p>- <b>Indirect Methods</b> These can include the following:</p> <ol style="list-style-type: none"> <li>1. Exit Survey (Each Semester)</li> <li>2. Current Student Survey (Each Semester)</li> <li>3. Graduation Project Assessment.</li> <li>4. Courses Survey (on all courses each semester)</li> <li>5. PAC meetings and discussions (once a year)</li> </ol>
4.2 (g)	11. To communicate effectively.		

		<p>them to decide independently, and learn more skills to communicate with people.</p> <p>- Assignments should include the use of the internet as a source of information to improve IT skills and required to be typed in proper format. In addition, group assignment may be given in appropriate courses.</p> <ul style="list-style-type: none"> <li>○ Conduct a workshop for students who enroll in the graduation project. This workshop explains to students how to work in a team, how to write a good report, how to conduct an effective presentation, etc.</li> <li>○ Field Training course provides opportunity to students to work in-group.</li> <li>○ The students are asked to give presentations in some topics in appropriate course. The students will engage in working groups to perform graduation projects..</li> </ul>	
<b>5.0</b>	<b>المهارات النفسحركية Psychomotor</b>		
5.1	NA	NA	NA
5.2	NA	NA	NA

### مصنوفة مخرجات تعلم البرنامج Program Learning Outcome Mapping Matrix

Identify on the table below the courses that are required to achieve the program learning outcomes. حدد في الجدول التالي المقررات المطلوبة لإنجاز مخرجات تعلم البرنامج.

Insert the program learning outcomes, according to the level of instruction, from the above table below and indicate the courses and levels that are required to teach each one; use your program's course numbers across the top and the following level scale.

أدرج مخرجات تعلم البرنامج، وفقا للمستوى الدراسي، من أعلى الجدول التالي، وأشر إلى المقررات والمستويات المطلوبة، استخدم رموز المقررات للبرنامج في الجزء العلوي، ومقياس المستويات التالي.

المستويات Levels:

I = Introduction مقدمة أو مدخل

P = Proficient الاجادة والانتقان

A = Advanced متقدم

(see help icon) مراجعة رمز التعليمات





5.2		5 <sup>th</sup> Level							6 <sup>th</sup> Level						
Course Offerings المقررات NQF Learning Domains and Learning Outcomes مجالات التعلم ومخرجات التعلم		ARE 233-2	ARE 281-2	ARE 242-2	ARE 213-3	ARE 271-3	CE 342-3	MATH 203-3	IS 112-2	ARE 234-2	ARE 282-2	ARE 214-3	ARE 272-3	CE 222-3	MATH 204-3
<b>1.0</b>	<b>Knowledge المعرفة</b>														
1.1 (h)	To recognize the broad education necessary to understand the impact of architectural engineering solutions in a global, economic, environmental, and societal context.	P								A			A	P	
1.2 (j)	To recognize the knowledge of contemporary issues in architectural engineering.	P			I					P		I			
<b>2.0</b>	<b>Cognitive Skills المهارات الإدراكية</b>														
2.1 (k)	To use techniques, skills, and modern engineering tools necessary for architectural engineering practices.		A		A						A	A			
2.2 (a)	To apply knowledge of mathematics, sciences and architectural engineering.			P		A									
2.3 (b)	To design and conduct experiments, as well as to analyze and interpret data required for solving architectural engineering projects.													A	
2.4 (c)	To design building system/component to meet desired needs with realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.			A	A	P						A	P		
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility مهارات التعامل مع الآخرين وتحمل المسؤولية</b>				P	I						P			
3.1 (f)	8. To understand the professional and ethical responsibility in architectural engineering practices.														
3.2 (i)	9. To recognize the need for, and to engage in life-long learning.		P								P				
<b>4.0</b>	<b>Communication, Information Technology, Numerical مهارات الاتصال وتقنية المعلومات والمهارات العددية</b>		A								A				
4.1 (d)	10. To function effectively on multi-disciplinary architectural engineering teams.														
4.2 (g)	11. To communicate effectively.														
<b>5.0</b>	<b>Psychomotor المهارات النفسحركية</b>														
5.1															
5.2															
<b>Course Offerings المقررات</b>		<b>7<sup>rd</sup> Level</b>							<b>8<sup>th</sup> Level</b>						

NQF Learning Domains and Learning Outcomes مجالات التعلم ومخرجات التعلم		IS 113-2	ARE 351-2	ARE 343-2	ARE 315-3	ARE 373-2	CE 261-3	MATH 254-3	ARAB 202-2	ARE 332-2	ARE 353-2	ARE 344-2	ARE 316-3	ARE 348-2	CE 371-3
<b>1.0</b>	<b>Knowledge المعرفة</b>														
1.1 (h)	To recognize the broad education necessary to understand the impact of architectural engineering solutions in a global, economic, environmental, and societal context.		A							P					
1.2 (j)	To recognize the knowledge of contemporary issues in architectural engineering.			P	I								I		
<b>2.0</b>	<b>Cognitive Skills المهارات الإدراكية</b>														
2.1 (k)	To use techniques, skills, and modern engineering tools necessary for architectural engineering practices.		I		A								A		
2.2 (a)	To apply knowledge of mathematics, sciences and architectural engineering.													A	
2.3 (b)	To design and conduct experiments, as well as to analyze and interpret data required for solving architectural engineering projects.										P			P	
2.4 (c)	To design building system/component to meet desired needs with realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.				A						A	A	A		
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b> مهارات التعامل مع الآخرين وتحمل المسؤولية				P								P		
3.1 (f)	8. To understand the professional and ethical responsibility in architectural engineering practices.														
3.2 (i)	9. To recognize the need for, and to engage in life-long learning.														
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b> مهارات الاتصال وتقنية المعلومات والمهارات العددية									P	I				
4.1 (d)	10. To function effectively on multi-disciplinary architectural engineering teams.														
4.2 (g)	11. To communicate effectively.		P									A			
<b>5.0</b>	<b>Psychomotor المهارات النفسحركية</b>														
5.1															
5.2															
<b>Course Offerings المقررات</b>		<b>9<sup>rd</sup> Level</b>							<b>10<sup>th</sup> Level</b>						

NQF Learning Domains and Learning Outcomes مجالات التعلم ومخرجات التعلم		IS114-2	ARE 452-2	ARE 447-2	ARE 491-2	ARE 446-2	CE351-3	STAT 324-3	ARE 463-1	ARE 461-2	ARE 492-4	CE355-3	GE 407-2	....	....
<b>1.0</b>	<b>Knowledge المعرفة</b>														
1.1 (h)	To recognize the broad education necessary to understand the impact of architectural engineering solutions in a global, economic, environmental, and societal context.				P						P				
1.2 (j)	To recognize the knowledge of contemporary issues in architectural engineering.			P	P						P				
<b>2.0</b>	<b>Cognitive Skills المهارات الإدراكية</b>														
2.1 (k)	To use techniques, skills, and modern engineering tools necessary for architectural engineering practices.				P						P				
2.2 (a)	To apply knowledge of mathematics, sciences and architectural engineering.				A	A				P	A				
2.3 (b)	To design and conduct experiments, as well as to analyze and interpret data required for solving architectural engineering projects.			A	A	P					A				
2.4 (c)	To design building system/component to meet desired needs with realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.					A					A				
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b> مهارات التعامل مع الآخرين وتحمل المسؤولية			P	A						A				
3.1 (f)	8. To understand the professional and ethical responsibility in architectural engineering practices.														
3.2 (i)	9. To recognize the need for, and to engage in life-long learning.				P				A	P	P				
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b> مهارات الاتصال وتقنية المعلومات والمهارات العددية				P				P		P				
4.1 (d)	10. To function effectively on multi-disciplinary architectural engineering teams.														
4.2 (g)	11. To communicate effectively.				P						P				
<b>5.0</b>	<b>Psychomotor المهارات النفسحركية</b>														
5.1															
5.2															

## 5. Admission Requirements for the program متطلبات القبول بالبرنامج

Attach handbook or bulletin description of admission requirements including any course or experience prerequisites.

أرفق دليلاً أو نشرة توصيفية لمتطلبات القبول بالبرنامج، بما في ذلك أية مقررات أو خبرة لازمة كمتطلب سابق.

- **Applicant, who may be admitted to be a student in Architectural Engineering Program** at Najran University, should satisfy the following requirements:
- The student shall only be admitted to the University upon the calculation of his average as follows: 30% general aptitude, 30% achievement test and 40% general secondary (academic) if the student wishes to enrol in preparatory year. For all the other specializations, the average shall be calculated as follows: 30% aptitude and 70% general secondary.
- The student should have obtained the general secondary certificate or its equivalent from the Kingdom or abroad.
- No more than two academic years should have elapsed from the date of his obtaining such certificate or its equivalent.
- The student should have a good conduct and proper behaviour.
- The student should successfully pass any exam or personal interview (if found).
- The student should be medically fit.
- The student should obtain approval from his authority to pursue his/her studies, if s/he works for any governmental or private body.
- The student should not have been expelled from Najran University or any other university for academic or disciplinary reasons.
- After the student is admitted, if it is turns out that he has already been expelled for disciplinary or academic reasons, his admission shall be considered as void.
- The student meeting the requirements should present the documents stipulated by the Deanship of Admission and Registration at the University.
- The student should not be enrolled for another university degree at the same university or at another university and should not have already obtained such degree.
- Files of students who are late for admission tests (if found) shall be ruled out.
- Files of students who are late for personal interviews (if found) and do not present an acceptable excuse shall be ruled out.
- Students who are late in carrying out the admission procedures within the deadline set by the University, and who do not present an excuse acceptable by the Deanship of Admission and Registration shall have cancelled their admission.

Source: <http://portal.nu.edu.sa/web/guest/admission-requirements>

## 6. Attendance and Completion Requirements متطلبات الحضور وإتمام البرنامج

أرفق دليلاً أو نشرة توصيفية تحوي متطلبات كل من : Attach handbook or bulletin description of requirements for

a. Attendance الحضور.

The students should attend at least 75% of the lectures, tutorials, and practical and laboratory lessons in regular courses. Students failing to meet this requirement in any of his registered courses will be prohibited from attending the final examination of those courses and will have F grades that are zero grades for those courses.

b. Progression from year to year الانتقال من العام إلى العام الذي يليه.

The academic system for Bachelor Degree in architectural Engineering Program is driven by different levels. The program is divided into eight levels; the duration of a single level is one semester. A student can move from one level to the next; and the success in each level is determined by the guidelines of advancing from one level to another as following:

- 1- The student may advance to the next level if the student successfully passes all the requirements of the course at a particular level.
- 2- The student is considered struggling if the student fails to succeed in completing the requirements of a particular course level; and the student shall remain in the same level until it is successfully completed.
- 3- The minimum number of credits registered will be 12 units in a semester. The maximum number of credit units would be according to what is determined in the study plan.
- 4- The student may register up to two levels from their current registered level. If the student fails in one or more courses they should study the course in which they failed in accordance with the following guidelines:
- 5- If the student fails in the minimum aggregate of the credit hours or in more than one course, they should repeat only the failed courses.
- 6- If the student fails in less than the minimum credit hours they should repeat the courses in which they failed along with enrolling in additional courses of the levels following his current level. However, the registration must be made for courses in accordance with the restrictions of the academic calendar and schedules.
- 7- The student is registered to the next levels and the academic burden of the student is related to their Cumulative grade, ensuring that the number of registered credit hours is not less than the minimum number of credits allowed.
- 8- When unable to register to the courses of the next level because of feeling overwhelmed due to contradiction or not fulfilling the previous requirement or finishing all courses at the current level, the student should complete the work from the current level before moving to the next. If the student still fails to complete their credit hours, then the available credit hours should be considered as sufficient even if its number is less than the minimum limit.

c. Program completion or graduation requirements إتمام البرنامج ومتطلبات التخرج.

The student may graduate after successfully fulfilling the graduation requirements in accordance with the study plan provided that the cumulative grade must be between 2.0 and 5.0.

## E. Regulations for Student Assessment and Verification of Standards

اللوائح التنظيمية لتقويم الطلبة والتأكد من تحقق المعايير:

What processes will be used for verifying standards of achievement (e.g. verify grading samples of test or assignments? Independent assessment by college from another institution) (Processes may vary for different courses or domains of learning.)

ما الإجراءات التي تستخدم للتحقق من معايير الإنجاز؟ (مثلاً: مراجعة التصحيح لعينة من الاختبارات أو التكاليفات؟ ، تقييم مستقل بواسطة عضو هيئة تدريس من مؤسسة تعليمية أخرى) (مع ملاحظة أن إجراءات التحقق قد تختلف من مقرر إلى آخر ومن مجال تعلم إلى مجال تعلم آخر.

1. A dedicated faculty member is assigned as a course coordinator.
2. Course is assigned to more than one instructors allowing them to share their experiences and ensuring equivalent levels of evaluation of students.
3. Knowledge groups are responsible to review exams and the grading schemes and levels of complexities in assessment methods.
4. Periodic exchange and remarking of a sample of assignments and exams with faculty members.
5. Periodic revision of the course learning outcomes and their alignment with student outcomes.
6. Ensure that the assessment methods are designed to know the achievement of each one of the course learning outcomes.
7. Assessing the course learning outcomes for each course.
8. Using rubrics to ensure unbiased evaluations for complex questions.
9. Course Assessment planning that shows the assessment methods for each one of Course Learning Outcomes (CLOs).
10. Direct and Indirect assessment methods are used to evaluate and improve the levels of student learning outcomes.
11. The program curriculum committee reviews all course files by the end of each semester.

## F Student Administration and Support إدارة شؤون الطلبة والدعم الطلابي

### 1. Student Academic Counselling الإرشاد الأكاديمي للطلبة

Describe the arrangements for academic counselling and advising for students, including both scheduling of college office hours and advising on program planning, subject selection and career planning (which might be available at college level).

قم بوصف عمليات الإرشاد الأكاديمي للطلبة، بما في ذلك وضع جداول الساعات المكتبية لأعضاء هيئة التدريس، وتقديم المشورة بشأن التخطيط للبرنامج واختيار التخصص والتخطيط المهني (وهو ما قد يتوفر على مستوى الكلية).

Academic advising committee of our program aimed to provide absolute guidance to our students through efficacious counselling regarding students' academic and personal difficulties.

- However, students at Najran University have all means for knowing their own academic standing and the study requirements according to the University and College standards and regulations. The acceptance and registration deanship publishes and distributes the new student before the beginning of each semester automatically and the student could online check the student academic portal for the name and time schedule for his approved advisor.
- The advising system at Najran University has changed in the last years from an advisor-based

to a student-based system. Students now can perform early-registration, registration, drop and add courses, without the need to consult their academic advisors. In specific circumstances, however students must consult with their respective advisors or the Chairman to get approval for special requests.

- Each faculty member will be assigned a group of students for counselling and advising. A student will be required to meet his academic advisor at least twice a semester, and a student file is prepared for each student. This file should be kept and maintained by academic advisor as that student's record. This file should reflect student progress mainly concerning on student's results. The academic advisors should write a summary report on each student progress at the end of each semester.
- Each faculty member will be asked to post his office hours during which a student can visit for receiving counselling and advising.
- Orientation week about the offered program should be conducted at the beginning of the academic semester.
- Students also get some guidance and advice through the university website.

## 2. Student Appeals دعوى الطلبة

Attach the regulations for student appeals on academic matters, including processes for consideration of those appeals.

ارفق اللوائح التنظيمية الخاصة بتظلمات الطلاب المتعلقة بالمسائل الأكاديمية، وتشتمل على إجراءات التعامل مع تلك التظلمات.

For our program, students' academic appeals are mainly categorized by the form of 'Add/drop courses, Absent excuses, Rechecking of exams and Make up exams'. Apart from these academic appeals, other appeals are also considered by the academic advising units by an adopted mechanism.

Regulations for handling student appeals are listed below.

- Each student is accountable to place an appeal through his academic advisor using case specific appeal form. All appeal forms are available with academic advisors.
- Academic advisors are accountable to consult with the student in detail to spot students' need and provide guidance to fill out the appeal form. During this consultation process, academic advisors are responsible to fetch necessary record from corresponding student file to support his opinion.
- When an appeal has been finalized and submitted by the student, academic advisors are accountable to attach necessary supporting documents with this appeal and forward this appeal to the academic advising unit through the University's correspondence tracking system (<https://cts.nu.edu.sa/NajranCTS/start>) for further evaluation.
- The coordinator of academic advising unit is accountable to check completeness and to verify the ground of each appeal based on university's regulations (available at, <http://edugate.nu.edu.sa/nu/files/admissionpoliciesforunistudy.pdf>).

- If an appeal complies with all requirements, it has been carry forwarded to the decision-making authority; else, it has been returned to the correspondent academic advisor. The decision making authority provides decision on the majority appeal cases by 10 days.

Successful appeal for rechecking of exam is forwarded to the program coordinator. Program coordinator is accountable to form an evaluation committee and send the review request to that committee. The evaluation committee should consist of at least three people (i.e. Program coordinator, subject coordinator, member of that subject's knowledge group) and is accountable to provide the outcome within 3 days.

### G. Learning Resources, Facilities and Equipment مصادر التعلم والمرافق والتجهيزات

1a. What processes are followed by faculty and teaching staff for planning and acquisition of textbooks, reference and other resource material including electronic and web based resources?

ما العمليات المتبعة من قبل أعضاء هيئة التدريس والفريق القائم بالتدريس للتخطيط وحيازة الكتب المقررة والمراجع، وغير ذلك من المصادر الأخرى بما فيها المصادر الإلكترونية والمصادر المعتمدة على الانترنت؟

- The requirements of textbook and other materials for teaching are identified by the instructor teaching the course.
- The instructor's requirements and suggestions are submitted through the course report by the end of each semester in which he should evaluate the resources and textbooks allocated for the course, also give recommendations regarding the improvement of the resources including textbooks and references.
- The criteria for chosen the textbook should consider the followings:
  - Cover the topics listed in the syllabus of the course.
  - The material in the textbook is written in a simple scientific language.
  - The book is published by international publisher, which may provide solution manual, presentation notes and additional illustration examples.
  - Availability of the book in the book store and the University library.
  - Cost of the book.
  - Textbook is adopted by other benchmark university.
  - Available recent editions updated of the book.
  - Submit justifications for the chosen textbook
- The course reports are reviewed by department curriculum committee. The information on the new textbook is brought to the notice of the committee so that they can make good judgments about the value and usefulness of the textbook and approve it.
- A list containing titles and numbers of the approved recommended texts, references and other materials will be submitted to the program chair for approval to make available by the beginning of the next semester.
- The department then requests the Purchasing Department to procure the requirements.
- Faculty members ensure that the library subscribes to the necessary databases that give students access to the journals that they need.

The college through the university administration has provided the faculty members' and students access to the international databases of journals, papers, and books for updated information which

could be useful to enhance the teaching and research.

1b. What processes are followed by faculty and teaching staff for planning and acquisition resources for library, laboratories, and classrooms.

ما العمليات المتبعة من قبل أعضاء هيئة التدريس والفريق القائم بالتدريس للتخطيط وحيازة المصادر الخاصة بالمكتبة والمعامل وقاعات المحاضرات؟

Facilities and Resources Committee (FRC) with other committees in the department evaluate the adequacy of resources and classrooms through surveys and discussions with faculty members and students once a year. According to the evaluation results, a report is then sent to college's administration unit for further action.

2. What processes are followed by faculty and teaching staff for evaluating the adequacy of textbooks, reference and other resource provisions?

ما العمليات التي يتبعها أعضاء هيئة التدريس والفريق القائم بالتدريس لتقييم مدى كفاية الكتب والمراجع والمصادر الأخرى المتاحة للبرنامج؟

Facilities and Resources Committee (FRC) with other committees in the department evaluate the adequacy of resources and classrooms through surveys and discussions with faculty members and students once a year. According to the evaluation results, a report is then sent to college's administration unit for further action.

3. What processes are followed by students for evaluating the adequacy of textbooks, reference and other resource provisions?

ما العمليات التي يتبعها الطلبة لتقييم مدى كفاية الكتب والمراجع والمصادر الأخرى المتاحة للبرنامج؟

Facilities and Resources Committee (FRC) with other committees in the department evaluate the adequacy of resources and classrooms through surveys and discussions with faculty members and students once a year. According to the evaluation results, a report is then sent to college's administration unit for further action.

4. What processes are followed for textbook acquisition and approval?

ما العمليات المتبعة لحيازة الكتب المقررة والمراجع والموافقة عليها؟

Students have the opportunity to evaluate adequacy of textbooks, reference and other learning resources through university course online survey for courses, which they enrolled in every semester. Therefore, they may give their opinions whether the textbooks are consistent with the objectives and outcomes of the course or not, also if they are well organized and contain the appropriate graphical representation, in addition to the availability in the library of university.

## H. Faculty and other Teaching Staff أعضاء هيئة التدريس وغيرهم من طاقم التدريس

### 1. Appointments التعيينات

Summarize the process of employment of new faculty and teaching staff to ensure that they are appropriately qualified and experienced for their teaching responsibilities.

أوجز عملية توظيف طاقم التدريس الجديد بما يضمن ملاءمتهم من حيث مؤهلاتهم وخبراتهم للقيام بمسؤوليات التدريس.

The process of employment of new faculty to ensure that faculty are appropriately qualified and experienced for their teaching responsibilities may be summarized as the followings:

- The specializations which need more faculty members are identified by the department Chairman and then a request will be sent to the Dean requesting a number of new Hiring. The Dean will forward the request to the Vice Rector of Higher Studies and Research asking for the vacant positions approval.
- After approval, announcement for faculty members are published in newspapers and on the university website.
- Complete regulations for employment are provided with full position descriptions and conditions of employment, together with general information about the institution and its mission and programs, and full details about the particular program for which they are being considered are given on the university and college web sites.
- The applicants are requested to provide complete resumes and application forms, along with photocopies of official transcripts/degrees, list of publications, and at least 2 referees with their complete address and email address.
- The applications are investigated carefully by a committee consisting of the head of the department and two of the expert faculty members.
- The committee checks the adequacy of the applicants to the required jobs by:
  - Identifying the field of specialization of the M.Sc. & Ph.D. degrees.
  - Identifying the field of research interest from the published work.
  - Investigating the teaching experience and courses' list that have been taught.
  - Investigating the student graduation projects list which has been supervised by the faculty.
  - Investigating the research theses which have been supervised.
  - Investigating the publications list that has been done.
  - Identifying the books that have been written or translated.
- The initially chosen faculty member is, then, interviewed by a committee consisting of the dean and a managing staff.
- References are checked, and claims of experience are verified before appointments are made.
- The Department Council discusses the case, and then the Chairman in consultation with the Dean of the College submits the request to the Vice Rector for Academic Affairs who will advise the Dean of the College and Personnel Affairs to complete the recruitment process. The recommended application files along with the proposed academic ranks, salary ranges and teaching responsibilities are then forwarded to the Rector for final approval.
- Qualification certificates and documents are checked by the university faculty affairs office. The certificates should have been endorsed and certified.
- All the new faculty members are given an effective orientation to the institution to ensure familiarity with the institution and its operating procedures, services and priorities for development through meeting with the head of the department.
- New teaching staff is given a thorough orientation to the program to ensure they have a thorough understanding of the program as a whole, of the contributions to be made to it through the courses they teach, and of the expectations for coordinated planning and delivery of courses and evaluation and reporting requirements through meeting with the head of the department.

## 2. Participation in Program Planning, Monitoring and Review

المشاركة في تخطيط البرنامج، ومتابعته ومراجعته:

a. Explain the process for consultation with and involvement of teaching staff in monitoring program quality, annual review and planning for improvement.

اشرح الاجراءات المتبعة للتشاور مع هيئة التدريس واشراكهم في متابعة جودة البرنامج، والمراجعة السنوية، والتخطيط لتحسين جودته.

- The department conducts its affairs through a number of standing committees in the department; each committee is entrusted with some duties and responsibilities regarding planning, monitoring and reviewing.
- All faculty members are distributed in the standing committees, so that all participate in the academic affairs of the department.
- The recommendations of these committees and all decisions of the department are discussed in the Department Council meetings for approval.
- Participation of department faculty members in the program's periodic report and periodic surveys.
- Discuss faculty members in the results of surveys of the students about the program.
- Participation of faculty members in the preparation of a plan to improve the program
- The quality of program is reviewed by the Program Steering Committee.

Program chair compiles an annual report on the strengths and weaknesses of the program and recommendations for improvement

b. Explain the process of the Advisory Committee (if applicable)

اشرح اجراءات مشاركة اللجنة الاستشارية (إذا بنطبق)

The architectural Engineering Industrial Advisory Council (ARE -IAC) composed of members with 10 to 20 years of industrial experience in the building architecture and Architectural , mechanical and electrical Engineering sectors of Saudi Arabia. The Council members are leading professionals selected from a variety of backgrounds and industries that traditionally seek graduates of the architectural Engineering Program. The ARE -IAC members not only understand the needs of potential employers of our students, but they are also interested in career and academic issues associated with architectural engineering education in general. The council meets at least once a year.

The input from ARE -IAC has been primarily in the form of critiques/advice on issues related to the learning atmosphere, cooperation with the industry, as well as the research activities of the department. The ARE -IAC provides feedback about the program's graduates. Meeting with the council usually concentrated on more systematic reflection on program educational objectives, program learning outcomes, current challenges facing the architectural engineering industry, assessment and improvement of the academic program, and curriculum issues in the program and other accreditation related activities. POE's provides guidance to ARE -IAC to determine if the graduates from the program will be adequately prepared for the career in architectural Engineering area.

## 3. Professional Development التطوير المهني

What arrangements are made for professional development of faculty and teaching staff for:

ما الترتيبات المتبعة للتطوير المهني لأعضاء هيئة التدريس، ومن في حكمهم فيما يخص:

a. Improvement of skills in teaching and student assessment.

تحسين مهارات التدريس ومهارات تقييم الطلبة

1. The Deanship of Development and Quality in the university offer number of workshops and

seminars every semester regarding the effective teaching, effective assessments and the newest technique of teaching and learning that ensure the staff remain up to date with latest development in their field.

2. The Quality and Development unit in the college also conduct a number of different seminars and workshops from time to time regarding the professional development activities.
3. Along the academic semester there are several engineering public lectures are conducted in the college.

Survey report on faculty professional development is used to evaluate the need and the involvement of faculty members in professional development activities each year.

b. Other professional development including knowledge of research?

أنشطة التطوير المهني الأخرى بما في ذلك الاطلاع على الأبحاث.

- The Deanship of scientific research provides support to all the faculty members in the university through:
  - a. Research projects grants and administration.
  - b. Web-based Resources (research administration guide, policies, and forms).
  - c. Participation financial support in international conferences.
  - d. Workshop, seminars and training programs.
  - e. Teaching performance evaluation.
  - f. Provides several workshops related to research aspects.
- Faculty staff have access to highly specialized research database (Journals, Periodicals, Conferences..etc)
- Through seminars and lectures/talks delivered by the invited experts from the academia and industries.
- Recently, the College has assigned agreements with international established universities for cooperation on postgraduate studies and joint researches.

Faculty staff are encouraged to have a joint research work with others in another institution

#### 4. Preparation of New Faculty and Teaching Staff إعداد طاقم تدريس الجدد

Describe the process used for orientation and induction of new, visiting or part time teaching staff to ensure full understanding of the program and the role of the course(s) they teach as components within it.

قم بوصف الاجراءات المتبعة في عملية التهيئة وادماج أعضاء هيئة التدريس الجدد أو الزائرين أو بالدوام الجزئي، لضمان فهمهم الكامل للبرنامج ودور المقرر أو المقررات الدراسية التي يدرسونها كمكونات للبرنامج.

- The new faculty member is given an orientation course and provided with the handbooks of the University and College's internal regulations and a list of Higher Education rules which contains all information about the duties and responsibilities of the faculty, including the rights, privileges and code of conduct.
- A new faculty will be in contact with the program coordinator who will help new faculty to assign the course time schedule, text book, writing exam rules, assessment procedure, grading

system, students graduation projects guidelines, academic advising systems, research activities, ... etc. In addition, he will arrange for a tour through the university, college and department to become familiar with people, places and programs.

- The Development and Quality Unit arranges and organize workshops and training program activities periodically, mostly for the newly recruited faculty members through which they will get very specific information about vision-mission-learning outcomes of the program, rules and regulations about teaching, preparing course learning outcomes (CLOs), course and program specifications, course file contents, assessment plan, development and quality unit activities at program and college level.
- The new faculty students' evaluation will be closely monitored to see that there is no problem with his teaching.

## 5. Part Time and Visiting Faculty and Teaching Staff جزئي أو بدوام جزئي الأساتذة الزائرين

Provide a summary of Program/Department/College/institution policy on appointment of part time and visiting teaching staff. (ie. Approvals required, selection process, proportion to total teaching staff, etc.)

قدم موجزاً لسياسة البرنامج/القسم/الكلية/المؤسسة الخاصة بتعيين أساتذة زائرين أو بدوام جزئي . (الموافقات المطلوبة، عملية الاختيار، نسبتهم مقارنة بإجمالي عدد هيئة التدريس... إلخ

- The department, for the time being, relies fully on the full time faculty member. However, part time and visiting faculty are allowed to participate in the teaching process according to the institution rules.
- All part time or visiting faculty should be specialized and with a high contribution in their field. An ad hoc committee in the department reviews the C.V., conduct an interview and check the references.
- An approval is required from the university administration.

## I. Program Evaluation and Improvement Processes تقييم البرنامج وعمليات التحسين

### 1. Effectiveness of Teaching فعالية العملية التدريسية

a. What QA procedures for developing and assessing learning outcomes?

ما هي اجراءات ضمان الجودة لوضع وتقييم مخرجات التعلم؟

The Following is a summary of main points used to evaluate and improve the strategies for developing learning outcomes in Architectural Engineering Program:

- The continuous improvement cycle (assessment, evaluation, and improvement) is split into two parts with assignment of responsibilities for each to different parties:
  - Assessment is assigned to a dedicated committee in the department level, called the

Assessment and Evolution Committee.

- Evaluation and improvement are assigned to assessment stakeholders such as course instructors, program heads, and curriculum committees.
- Assessment has the following main characteristic:
  - It relies on a combination of direct and indirect measurements to produce and corroborate evidence. The assessment plan is shown in the figure below.
    - 1- Direct method: It starts from observable actions by students at the course level, so called course learning outcomes (CLO).
      - Course Learning Outcomes (CLOs) are the basis of all direct assessments of Students Outcomes (SOs).
      - Each course has a set of well-prepared outcomes called “Course Learning Outcomes” or CLOs. The CLOs of a course describe the abilities to be attained at the end of the course. The CLOs for each course are specified so that they are non-overlapping and are as few as possible still covering the specified syllabus of the course. The curriculum committee is responsible for updating and revising the CLOs based on the recommendations of the Course Coordinators.
      - The assessment of CLOs is based on the actual scores (marks) obtained by students in exams and other assessment tools used to evaluate their learning. We do not believe in using adjusted (curved) scores for outcome assessment as they can obscure actual student performance that is the basis of our outcome performance assessment.
    - 2- Indirect method: Is achieved through exit survey and course-wise survey.
      - Exit survey is conducted for all graduating students just before the final examinations of each semester. The survey conducted to measure the SOs attainment for graduating students by their self.
      - For each course, CLOs satisfaction survey is done. The instructor distributes the survey form to the students at the end of each semester before the final examination. The survey conducted to measure the CLOs attainment for students by their self.
  - For each course, CLOs are mapped with the SOs. If a CLO significantly helps in attaining an ability related to a SO, we include the SO otherwise, we do not include it. It is consistent that if the CLOs are attained to the required level of satisfaction, the relevant SOs are also assumed to be attained to the required level of satisfaction.
  - Another essential element of the SO assessment and evaluation process is the “Program Satisfaction Criterion” or PSC. It specifies the percentage of students that must attain a certain level of ability represented by their percentage marks in each CLO and SO. If the satisfaction level for a CLO or SO in a course is lower than the PSC (specified by the department) it will trigger the alarm for the instructor to prepare Course Continuous Improvement Plan (CCIP).
  - Architectural Engineering Program has specified a satisfaction criterion of 60% students attaining the ability represented by 60% marks (i.e. D grade) for previous academic years. It was realized that this triggered the “alarm” for CCIP in very few courses.

- In response to the feedback received from the SOs assessment program, the department is engaged in an ongoing program of self-improvement.
- On the other side the evaluation and improvement, strategies also consider the following continuous improvement reports to be filed as follows.
  - End of semester, Course, Course Coordinator, Course file, Presented at the first Department Council in following semester.
  - End of year, Program, ABET and NCAAA Committees, Program report, Presented at first Department Council of academic year.
- The dean and the chair of the program meet with students once a year to discuss their opinion about the learning outcomes of the program.
- Meeting with program student council that represents students from all levels of the program.

b. What processes are used for evaluating the skills of faculty and teaching staff in using the planned strategies?

ما هي العمليات التي تستخدم لتقييم مهارات طاقم التدريس في استخدام استراتيجيات التدريس المخطط لها؟

- Student course evaluation through online course survey at the end of each semester after final examination.
- Course file and course report assessment.
- Feedback from the faculty himself (self-assessment).
- Course coordinator comments and observations on the faculty teaching skills in the planned strategies.
- Department head observations on the faculty teaching skills in using the planned strategies.
- Peer assessment.
- Student Course evaluation survey.
- Student program evaluation.
- Employers' surveys.
- Exit survey.

## 2. Overall Program Evaluation التقييم الكلي للبرنامج

a. What strategies are used in the program for obtaining assessments of the overall quality of the program and achievement of its intended learning outcomes:

ما هي الاستراتيجيات التي تستخدم في البرنامج للحصول على تقويمات للمستوى العام لجودة البرنامج ومدى تحقق مخرجات تعلم البرنامج المستهدفة.

(i) From current students and graduates of the program من طلبة البرنامج الحاليين ومن الخريجين

- The strategies that are used in the program for obtaining assessments of the overall quality of the program and achievement of its intended learning outcomes from current students and graduates based on both direct and indirect assessment methods.
- Direct assessment is mainly based upon the assessment of Course Learning Outcomes every semester through the actual scores (marks) obtained by students in exams and other

assessment tools used to evaluate their learning.

- Indirect assessment include the followings:
  - Exit survey for the graduating students before the final examinations of each semester, to receive feedback on the program and their learning experience. The department will note their concerns and suggestions for the improvement of the program and the method of teaching and learning.
  - Course-wise survey at the end of each course before final examination.
  - Internet open forum to get student feedback.
  - Employers survey to get the employers satisfaction about the competence of our graduates, which is a key measure.
  - Having feedbacks from the student advisory committee.

(ii) From independent advisors and/or evaluator(s) من استشاريين مستقلين و/أو مقيمين مستقلين

- Mainly through seeking relevant national and international accreditation for program.
- Self-Assessment report reviewed by external experts. Every five years, a team of independent evaluators will be invited to evaluate the program based on an on-site visit for which the course files of all courses. Such an assessment may require inspection of laboratories, equipment, classrooms and interviews with faculty staff and students for a comprehensive evaluation of the program, facilities and the learning environment. The findings and recommendations of the evaluating team will be used for the improvement of the program.
- Feedback during annual meetings with the Architectural Engineering Industrial Advisory Council.

(iii) From employers and/or other stakeholders من أرباب العمل و/أو أصحاب المصلحة الآخرين

Primarily through employer surveys, and consultation with members of the members of the Industrial Advisory Board who are selected to represent relevant community and employer stakeholders.

#### المرفقات Attachments:

1. Copies of regulations and other documents referred to template preceded by a table of contents.

نسخ من اللوائح وغيرها من الوثائق المشار إليها في النموذج يسبقها جدول المحتويات.

2. Course specifications for all program courses including field experience specification if applicable.

توصيفات جميع مقررات البرنامج بما في ذلك توصيف الخبرة الميدانية إذا انطبقت.

التوقيعات المعتمدة Authorized Signatures

Dean / Chair العميد / رئيس	Name الاسم	Title المسمى الوظيفي أو المنصب	Signature التوقيع	Date التاريخ
<b>Program Dean or program chair Main Campus</b> عميد أو رئيس البرنامج بالمقر الجامعي الرئيس	Dr. Nedhal Al- Tamimi	Assistant professor		28-11-2017
<b>Branch 1</b> الفرع 1	NA	NA	NA	NA