



## **ATTACHMENT 3.**

# **T4. PROGRAM SPECIFICATIONS**

## **Department of Civil Engineering**

For guidance on the completion of this template, please refer to Chapter 2, of Part 2 of Handbook 2 Internal Quality Assurance Arrangement.

### Program Specifications

Institution:	<b>Najran University</b>	Date: <b>19.06.1439 H</b>
College/Department:	<b>College of Engineering / Civil Engineering</b>	
Dean/Department Head:	<b>Dr. Abdullah Saeed Alwadie</b>	

Insert program and college administrative flowchart:

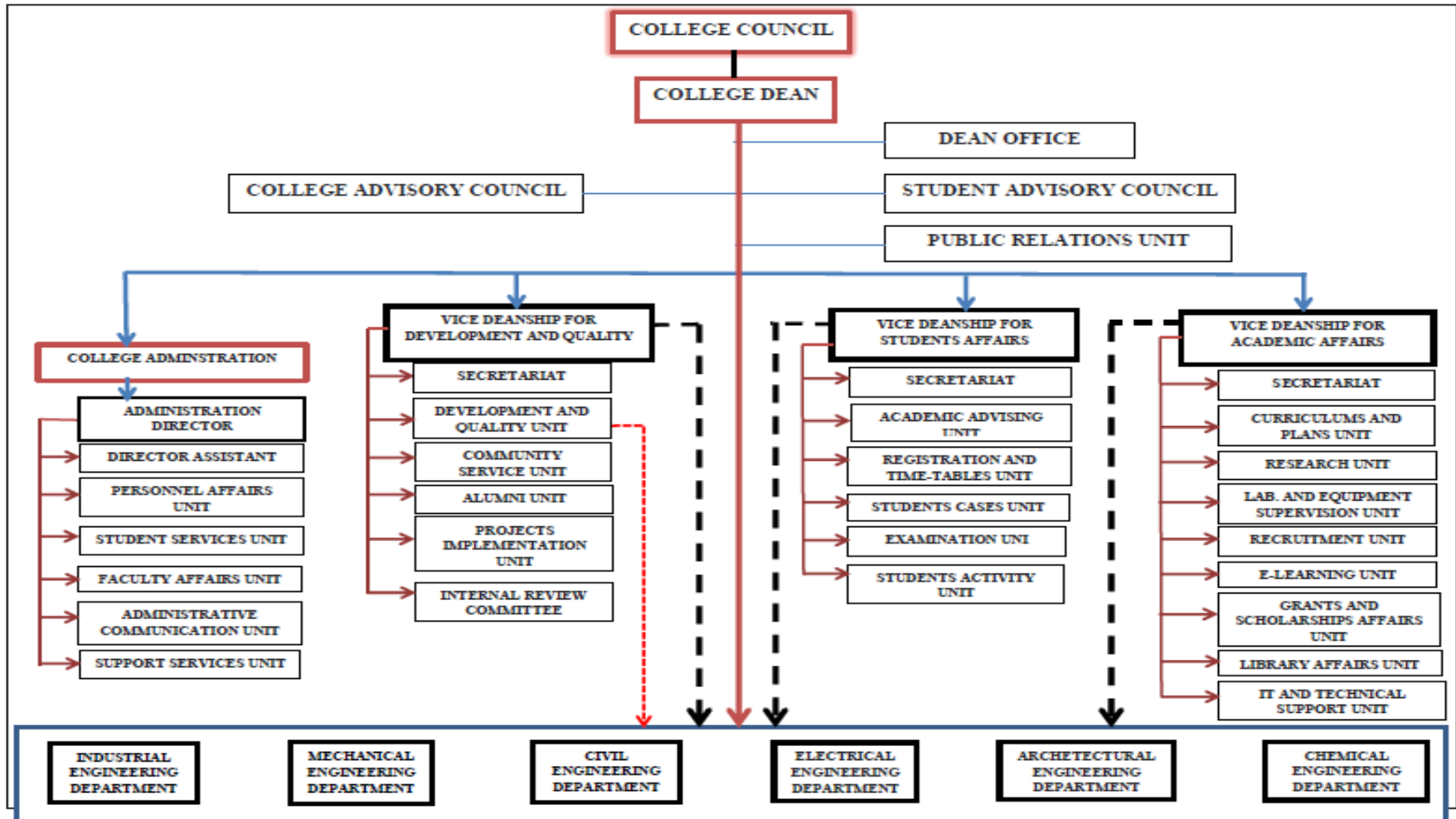


Figure 1: Flow chart for College of Engineering

List all branches offering this program:

**Najran University/ Main Campus.**

Branch 1. \_\_\_\_\_

Branch 2. \_\_\_\_\_

Branch 3. \_\_\_\_\_

Branch 4. \_\_\_\_\_

#### **A. Program Identification and General Information**

1. Program title and code: **Bachelor of Civil Engineering Program and CE**

2. Total credit hours needed for completion of the program: **159 Credits**

3. Award granted on completion of the program: **Bachelor of Civil Engineering**

4. Major tracks/pathways or specializations within the program (eg. transportation or structural engineering within a civil engineering program or counseling or school psychology within a psychology program)  
**One track (Civil Engineering)**

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

**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)

- **Academic fields at universities, colleges and research centers.**
- **Engineer in the Ministry of municipalities.**
- **Engineer in the Ministry of transportation.**
- **Engineer in the Ministry of water and electricity.**
- **Engineer in the other ministries and government agencies in the operation and maintenance sections.**
- **Constructions companies and offices in the implementation, design, surveying, quantity calculations, supervision, and consulting of engineering projects.**

<ul style="list-style-type: none"> <li><b>Engineer in companies, factories, workshops, airports, water treatment plants and private companies.</b></li> <li><b>Environmental protection agencies.</b></li> </ul>																				
7. (a) New Program	<b>NO</b>	Planned starting date <span style="float: right; border: 1px solid black; padding: 2px 10px;"><b>Nil</b></span>																		
(b) Continuing Program	<b>Yes</b>	Year of most recent major program review <span style="float: right; border: 1px solid black; padding: 2px 10px;"><b>9/6/1434 H - 2013</b></span>																		
<p>List recent major review or accreditation contracts.</p> <p><b>1. Internally within the institution by a reviewing committee, included members form the department and the deanship of development and quality.</b></p> <p>2. _____</p> <p>3. _____</p>																				
<p>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.</p> <p><b>Dr. Abdulnoor Jazim Ghanim, Coordinator</b></p>																				
<p>9. Date of approval by the authorized body (MOE).</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 33%;">Campus Location</th> <th style="width: 33%;">Approval By</th> <th style="width: 33%;">Date</th> </tr> </thead> <tbody> <tr> <td>Main Campus: <b>Najran University, Najran</b></td> <td><b>Council of Higher Education</b></td> <td><b>02/06/1428 H</b></td> </tr> <tr> <td>Branch 1:</td> <td></td> <td></td> </tr> <tr> <td>Branch 2:</td> <td></td> <td></td> </tr> <tr> <td>Branch 3:</td> <td></td> <td></td> </tr> <tr> <td>Branch 4:</td> <td></td> <td></td> </tr> </tbody> </table>			Campus Location	Approval By	Date	Main Campus: <b>Najran University, Najran</b>	<b>Council of Higher Education</b>	<b>02/06/1428 H</b>	Branch 1:			Branch 2:			Branch 3:			Branch 4:		
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## B. Program Context

1. Explain why the program was established.

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

**Civil Engineering is an integral part of the engineering education in most universities and colleges worldwide. Realizing its importance in the development and advancement of Saudi Arabia, Najran University established the Program of Civil Engineering as one of the initial programs in the College of Engineering in 1430. The Program was established mainly to:**

- **Compensate the shortage in Civil Engineers due to economic growth and infrastructure development in locally in Saudi Arabia, regionally in the Middle East and internationally worldwide.**
- **Carry out the national policy to the sustainable development plans of the Kingdom.**
- **Carry out the increasing development projects including infrastructure, construction and buildings, water supplying and water treatment, environment, highway and traffic, surveying and quantity surveying in Najran area.**

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

**The mission of the Civil Engineering Program is consistent with the mission of the College of Engineering and the mission of the University, as the University aims at meeting the needs of the Saudi society through programs in education and scientific research. Civil Engineering Program makes a significant contribution to the mission of the university in the civil engineering field.**

The mission statement of Najran University is given below and it is published on the university website <http://portal.nu.edu.sa/en/university-mission>

<b>Mission of Najran University</b>	<b>To provide distinctive education that meets the needs of society and the labor market and contribute effectively to the sustainable development through applied research, the optimal use of modern technologies and the active partnership at the local, regional and global levels.</b>
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The mission of Najran University can be divided into five Key Components (KC) as shown in Table 1 and presented in Figure 2.

**Table 1. Key Component of the mission of Najran University**

Code of Key Component	Key Component of the mission of Najran University
KC1	Provide distinctive education
KC2	Meet the needs of society and the labor market
KC3	Conduct applied research and the optimal use of modern technologies
KC4	Contribute effectively to the sustainable development

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

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

No

√

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

- **The Civil Engineering Program offers number of courses that students in other faculty programs are required to take. All required actions, which are normally taken by the department to assure that these courses, meet the needs of students. These actions include:**

- Preparation of courses plans and strictly adhered to these plans.
- Monitoring performances and continues and regular evaluations.
- All courses out comes conformed to common student outcomes defined by ABET and adopted by the Faculty for all of their programs.
- Joint committees are formed to review the course requirements and learning outcomes attainment periodically.
- At the end of each semester, the course report for those courses is provided to other programs coordinators, and meetings are conducted, to assure that those courses meet the needs of students in the other programs.
- In addition, students can give their opinions about courses taught by other departments through the current student survey and exit survey.

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

Yes

No

√

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

- **The students of Civil Engineering Program are required to take several courses in other departments at the faculty as well as other courses offered by other faculties in Najran University. These courses include mathematics, physics, chemistry, English and Arabic languages, Islamic culture courses, and other Faculty requirements courses. All required actions, which are normally taken by the department to assure that these courses, meet the needs of students. These actions include:**

- All of these courses are well prepared and their descriptions and their learning outcomes are available to the program in order to make sure that they meet the program's needs.
- Moreover, during the program self-assessment process, a review is conducted to ensure that the courses offered by other departments are in line with the learning outcomes of the Civil Engineering Program.
- In addition, the courses specifications and the course reports are collected and assessed for required improvement, which could be discussed through the meetings with other departments.
- In addition, students can give their opinions about courses taught by other departments through the current student survey and exit survey.

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).

☒ Yes ☐ No

**The student who are likely to be enrolled in the Civil Engineering Program should have strong base in English language, mathematics, physics and computing skills. To ensure this, the students who wants to enroll in the program should study one year in the Preparatory Year Program and achieve a minimum GPA of 3.5, before joining the Civil Engineering Program.**

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

**N.A.**



## C. Mission, Goals and Objectives

<p>1. Program Mission Statement (insert).</p> <ul style="list-style-type: none"> <li>○ <b>Civil Engineering Program is committed to:</b> <ul style="list-style-type: none"> <li>• Provide students with an accredited civil engineering education of high quality standards</li> <li>• Generate graduates possessing excellent knowledge and strong competent skills and uphold professional attitudes necessary in fulfilling his responsibilities towards Almighty and society and meet the industry's expectations.</li> <li>• Provide quality education with high professional ethical standards.</li> <li>• Provide innovative solutions for Civil Engineering problems, which contribute to the sustainable development.</li> <li>• Build knowledge society nationally and internationally.</li> </ul> </li> </ul>			
<p>2. List Program Goals (eg. long term, broad based initiatives for the program, if any)</p> <ul style="list-style-type: none"> <li>• To provide high quality Civil Engineering education recognized nationally and internationally.</li> <li>• To conduct excellent applied Scientific Civil Engineering Research that contributes to solve Civil Engineering problems and meet nation's needs.</li> <li>• To make civic engagement and contributions to the Civil Engineering fields, professions and society.</li> </ul>			
<p>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.</p>			
<p><b>Table 6. Mapping of PEOs with key component of the mission</b></p>			
Civil Engineering Program Educational Objectives (CEPEOs)	Civil Engineering Program Goals		
	Provide high quality Civil Engineering education recognized nationally and internationally	Conduct excellence applied scientific Civil Engineering research contribute to solve Civil Engineering problems and meet nation's needs	Civic engagement and contributions to the Civil Engineering fields, professions, and society
PEO1: Technically competent in their respective Civil Engineering field and conceiving, designing and executing broad range of Civil Engineering tasks locally and globally	√		
PEO2: Meet industry expectations in Civil Engineering with excellent communication and leadership skills	√		
PEO3: Contribute to the society through providing innovative solution for Civil		√	

Engineering problems and function on multi-disciplinary team			
PEO4: Pursue their Civil Engineering professional development through self-learning and advanced graduate studies if qualified and interested.		√	
PEO5: 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			√

**Table 7. Shows goals, major strategies & measurable indicators**

Goals	Major Strategies	Measurable Indicators
<b>G1:</b> Provide high quality Civil Engineering education recognized nationally and internationally <b>PEO1:</b> Technically competent in their respective Civil Engineering field and conceiving, designing and executing broad range of Civil Engineering tasks locally and globally. <b>PEO2:</b> Meet industry expectations in Civil Engineering with excellent communication and leadership skills	Periodic review and assessment of CE curriculum 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 civil 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 the CE curriculum with national and international universities	<ul style="list-style-type: none"> <li>○ Percentage of matching between CE 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 CE 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 CE 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 CE program graduates	<ul style="list-style-type: none"> <li>○ Percentage of graduates of Bachelor's degree employed within 6 months of graduation.</li> </ul>
<b>G2:</b> Conduct excellence applied scientific Civil Engineering research contribute to solve Civil	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 CE staff	<ul style="list-style-type: none"> <li>○ The ratio of articles published in scholarly journals or presented at conferences to the number of CE staff</li> </ul>

<p>Engineering problems and meet nation's needs  <b>PEO3:</b> Contribute to the society through providing innovative solution for Civil Engineering problems and function on multi-disciplinary team.  <b>PEO4:</b> Pursue their Civil Engineering professional development through self-learning and advanced graduate studies if qualified and interested.</p>	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 CE 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 civil engineering	<ul style="list-style-type: none"> <li>○ Postgraduate program progress development</li> </ul>
<p><b>G3:</b> Civic engagement and contributions to the Civil Engineering fields, professions, and society.  <b>PEO5:</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>	Engagement and involvement of CE staff and students in professional activities or professional societies	<ul style="list-style-type: none"> <li>○ The number of CE staff and students participating in professional development activities or members in professional societies</li> </ul>
	provided consulting and community service activities	<ul style="list-style-type: none"> <li>○ Number of community service programs conducted by the CE program</li> <li>○ Number of CE staff and student involved in community service programs</li> </ul>
	Strengthen CE program relation with national and international organization partnerships	<ul style="list-style-type: none"> <li>○ Number partnerships with national and international organization</li> </ul>
	Increase the community awareness on the roles and functions of the program	<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

1. Program Description: 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 offers a different study plan).

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.

**Table 8. Curriculum Study Plan**

**Curriculum Study Plan Table of the Preparatory Year**

Course Code	Course Title	Required or Elective	Credit Hours	College or Department
<b>Prep. Year Semester 1</b>				
140TEC-3	Computer Skills	R	3	Prep. Year
140MATH-2	Introduction of Mathematics	R	2	Prep. Year
140SKL-2	Learning, Thinking and Research Skills	R	2	Prep. Year
140ENGG-2	English Language :Reading Skills	R	2	Prep. Year
141ENGG-2	English Language :Writing Skills	R	2	Prep. Year
142ENGG-2	English Language :Listening and Speaking Skills	R	2	Prep. Year
143ENGG-2	English Language :Grammars	R	2	Prep. Year
<b>Prep. Year Semester 2</b>				
150MAN-1	Occupational Ethics	R	1	Prep. Year
150MATH-4	Algebraic Sciences	R	4	Prep. Year
150SKL-2	Communication Skills	R	2	Prep. Year
150ENGG-3	English Language: Speaking	R	3	Prep. Year
151ENGG-2	Report Writing	R	2	Prep. Year

**Curriculum Study Plan Table of the Civil Engineering Program**

<b>1<sup>st</sup> Year Semester 1</b>				
101CHM-3	General Chemistry	R	3	College
104PHIS-4	Principles of Physics	R	4	College
106MATH-3	Introduction to Integration	R	3	College
107MATH-3	Algebra & Analytical Geometry	R	3	College
107ENG-3	Technical Writing	R	3	College
<b>1<sup>st</sup> Year Semester 2</b>				
111ISL-2	Introduction to Islamic Culture 1	R	2	College
101GE-3	Statics	R	3	College

203MATH-3	Advanced Calculus	R	3	College
102GE-2	Introduction to Engineering Design	R	2	College
108ENG-2	Communication Skills for Engineers	R	2	College
105PHIS-4	Advanced Physics	R	4	College
<b>2<sup>nd</sup> Year Semester 1</b>				
112ISL-2	Introduction to Islamic Culture 2	R	2	College
204MATH-3	Differential Equations	R	3	College
GE204-3	Computer Programming for Engineers	R	3	College
CE241-3	Strength of Materials	R	3	Department
261CE-3	Surveying (1)	R	3	Department
203GE-3	Engineering Drawing	R	3	College
<b>2<sup>nd</sup> Year Semester 2</b>				
221CE-3	Soil Mechanics (1)	R	3	Department
211CE-3	Fluid Mechanics	R	3	Department
324STAT-3	Probabilities and Engineering Statistics	R	3	College
201ARAB-2	Arabic Language Skills	R	2	College
205GE-3	Dynamics	R	3	College
251CE-3	Structural Analysis (1)	R	3	Department

<b>3<sup>rd</sup> Year Semester 1</b>				
312CE-3	Hydraulics	R	3	Department
352CE-3	Reinforced Concrete (1)	R	3	Department
254MATH-3	Numerical Methods	R	3	College
342CE-3	Properties and Testing of Materials	R	3	Department
353CE-3	Structural Analysis (2)	R	3	Department
306GE-2	Engineering Economy	R	2	College
<b>3<sup>rd</sup> Year Semester 2</b>				
313CE-3	Hydrology	R	3	Department
371CE-3	Sanitary Engineering	R	3	Department
354CE-3	Reinforced Concrete (2)	R	3	Department
381CE-2	Computer Applications in Civil Engineering	R	2	Department
355CE-3	Steel Structures	R	3	Department
322CE-3	Soil Mechanics (2)	R	3	Department
391CE-0	Cooperation Field Training	R	0	Department

4 <sup>th</sup> Year Semester 1				
462CE-3	Surveying (2)	R	3	Department
431CE-3	Highway Engineering	R	3	Department
423CE-3	Foundation Engineering	R	3	Department
113ISL-2	Islamic Culture (3)	R	2	College
407GE-2	Management of Engineering Projects	R	2	College
202ARAB-2	Arabic Writing	R	2	College
491CE-2	Graduation Project (1)	R	2	Department
4 <sup>th</sup> Year Semester 2				
114ISL-2	Islamic Culture (4)	R	2	College
414CE-3	Water Resources Planning and Management	R	3	Department
432CE-3	Transportation and Traffic Engineering	R	3	Department
472CE-3	Environmental Engineering	R	3	Department
433CE-2	Construction Equipments and Methods	R	2	Department
492CE-2	Graduation Project (2)	R	2	Department

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

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

### a. Brief description of field experience activity

- **Recognition of the actual Civil Engineering field requirements and problems and experience the real work environment**
- **Working in a team to acquire the character of cooperation and self-integration.**
- **Linking the theoretical learnt background with the practical circumstances.**
- **Get the experience on the new construction techniques and machines.**
- **Learn methods of civil engineering design and the available software for drawing and design.**
- **Learn to deal and understand the engineering drawing and documentation**
- **The expected learning outcomes for the field experience is:**
  - **Communicate effectively with fellow workers and supervisors on issues related to projects undertaken.**
  - **Demonstrate and practice good working ethics and to internalize excellence.**
  - **Demonstrate and practice good organizational skills in enhancing individual and**

<p><b>group effectiveness and productivity.</b></p> <ul style="list-style-type: none"> <li>○ <b>Demonstrate creativity and innovation in solving problems related to real-life projects.</b></li> <li>○ <b>Demonstrate pleasant interpersonal skills in developing understanding and appreciation of individual differences in building self-confidence.</b></li> <li>○ <b>Work independently or under minimal supervision.</b></li> <li>○ <b>Demonstrate good planning, good management, constant monitoring and quality delivery of projects undertaken.</b></li> </ul> <ul style="list-style-type: none"> <li>● <b>The organizations as well as the program will assess trainees. The training is graded on a PASS/FAIL basis. The students will be evaluated based on the followings:</b> <ul style="list-style-type: none"> <li>○ <b>Logbook and Report</b> <ul style="list-style-type: none"> <li>▪ <b>Student Logbook (20%)</b> The logbook must be signed by the supervisor each week and must include daily entry into the summary report and detail documentation of daily activities. The academic advisor will assess the logbook.</li> <li>▪ <b>Student Training Report (20%)</b> Include summary report, which must be type written in English language. Describe how the activities in the practical training have contributed towards each of the course outcomes listed. The report should be written according to the training report guidelines. The placement report will be assessed by the training advisor.</li> </ul> </li> <li>○ <b>Overall Assessment</b> <ul style="list-style-type: none"> <li>▪ <b>Industrial Supervisor 20%</b></li> <li>▪ <b>Faculty Supervisor 20%</b></li> <li>▪ <b>Student Training Report 20%</b></li> <li>▪ <b>Student logbook 20%</b></li> <li>▪ <b>Defense of Training 20%</b></li> </ul> </li> </ul> </li> </ul> $\text{Final Grade} = \text{Summation} \times \frac{\text{attendance days}}{\text{Training Days}} \times 100\%$ <p><b>Students must obtain a minimum of 50% in each of the above component and 60% on the overall assessment in order to pass.</b></p>	<p>b. At what stage or stages in the program does the field experience occur? (e.g. year, semester)</p> <p><b>The students are able to register for field training course at the end of the 8<sup>th</sup> semester level after completion of 90 credit hours.</b></p> <p>c. Time allocation and scheduling arrangement. (e.g. 3 days per week for 4 weeks, full time for one semester)</p> <p><b>Full time for one summer semester (8 weeks) OR 3 day per week for the normal semester (16 weeks).</b></p> <p>d. Number of credit hours (if any)</p> <p><b>Zero credit hours course</b></p>
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### 3. Project or Research Requirements (if any)

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

#### a. Brief description

○ **Graduation project (GP) course is a partial requirement for the fulfilment of the bachelor degree in Civil Engineering Program. The GP provides an opportunity for students to apply concepts, rules, methods and techniques learned in their undergraduate education toward a realistic Civil Engineering project. The main objectives of the graduation project are:**

- **To make the students understand and practice the basic concepts of engineering design for multidisciplinary civil engineering project.**
- **To expose the students to group learning and teamwork by working on a multidisciplinary project.**
- **To improve the oral and written communication skills of the students.**
- **To make students capable of integrated project planning, scheduling, and cost analysis for civil engineering project.**
- **To let the students demonstrate their abilities in all Student Outcomes (SOs) as prescribed by the department.**

**After the graduation projects groups are formed, each group's members are encouraged to meet with their advisor in order to complete a proposal. The proposal preparation should not take more than two week. The advisor should review the proposal and make a decision. At the same time, each group should submit the required forms to their departments. After the advisor approves the proposal, the group should immediately start working on the project and the documentation. During the semester, the whole group should regularly meet with their advisor to discuss both, the completed and the upcoming tasks. At each meeting, the group members are encouraged to complete a discussion minutes form that documents the meeting agreements and to submit a progress report that shows the completed and the upcoming tasks. The group are required to complete the project and to submit its deliverables to their advisor at least one week before the defense day.**

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

**Table 9. Intended Learning Outcomes**

Intended Learning Outcomes	
<b><i>Knowledge skills:</i></b>	
1	Ability to describe the economic and environmental impact and contemporary issues of the project2 and various alternative solutions
<b><i>Cognitive skills:</i></b>	
2	Ability to identify, formulate and solve the analytical and numerical problems



	associated with the project
3	Ability to plan, design and conduct the laboratory or numerical experiments required for the project and to analyze and interpret the data
4	Ability to design a system, component or process with defined constraints of the project
<b>Interpersonal skill &amp; responsibility:</b>	
5	Ability to understand the codes and local laws regulating various aspects of the project and apply the codes wherever possible
6	Ability to identify and analyze a situation involving professional ethics and to make a decision
7	Ability to collect data and information required to complete the project from Library and Internet resources
<b>Communication and Information Technology skills:</b>	
8	Ability to function as a member of a multi-disciplinary team
9	Ability to prepare an engineering report of the project and present it demonstrating engineering communication skills
<b>Psychomotor skill:</b>	
	None

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

**The graduation project is divided into two course**

- **Graduation project (1) CE 491, which is in the 9<sup>th</sup> semester level, the student may register for it after the completion of 90 credit hours out of 132.**
- **Graduation project (2) CE 492, which is in the 10<sup>th</sup> final semester level, the student may register for it after successful completion of the graduation project 1.**
- **Both of these courses are main requirements to be graduated.**

d. Number of credit hours (if any)

- **Graduation project (1) CE 491, has two credit hours.**
- **Graduation project (2) CE 492, has two credit hours.**

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

- **Each graduation project student group will be assigned a faculty member from the same department to serve as an advisor for the project to guide them throughout their work. The courses are counted towards the supervisor's teaching load.**
- **A department-level coordinator is assigned to manage the courses. His duties include advising students on rules and procedures.**
- **At the first meeting, the advisor should determine the duration between the subsequent meetings. The group should continuously keep their advisor up to date with their progress and the obstacles that they face.**

- Aiding the students to suggest a plan for the project steps including a time schedule
- Provision of IT facilities, Computers, related software programs, Labs and hardware components and device.
- A graduation project guidelines manual is available for the graduation projects students.

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

- 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 teamwork.
  - 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.
  - Each student group should submit all the defence committee members a copy from their final graduation project report at least three days before the defence day.
  - In the project's defence, the advisor 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 1) group based 2) individual based. Finally, a final evaluation form is submitted to the department. For each student, the advisor has 60% of the project's final grade and the two examiners have the rest 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

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.

The **National Qualification Framework** (NQF) provides five learning domains. Learning outcomes are required in the first four domains and some programs may also require the Psychomotor Domain.

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

**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.

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	<b>Knowledge</b>		
1.1	To recognize the broad education necessary to understand the impact of engineering solutions to economic, environmental and society and to improving quality of life. (h)	<ul style="list-style-type: none"> <li>○ Through a set of structured courses in the different disciplines of civil engineering including water resources and environment, structure, geotechnical, highway and transportation, project management and surveying engineering. The set of these courses are clarified in the program-learning outcome-mapping matrix shown in the table below.</li> </ul>	<ul style="list-style-type: none"> <li>○ A system of ongoing assessment is conducted by the CE program to continuously improve the effectiveness of the program. For this purpose, direct and indirect assessment and analysis is conducted.</li> </ul>
1.2	To recognize the knowledge of contemporary issues in planning, designing, constructing, and rehabilitating civil engineering infrastructures. (j)	<ul style="list-style-type: none"> <li>○ A combination of lectures, tutorials, assignments and seminars, using printed media and web based materials.</li> </ul>	<ul style="list-style-type: none"> <li>○ Direct assessments include:               <ol style="list-style-type: none"> <li>1- Student outcomes attainment assessment.</li> <li>2- Courses outcomes achievement assessment through a combination of written exams, homework, oral presentation, testing of the project work, research and literature search assignments and summary reports of seminars attended by the students.</li> <li>3- Assessment of the adopted program performance indicators.</li> </ol> </li> </ul>
1.3	Teaching strategies to be used to develop that knowledge	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	
1.4	Methods of assessment of knowledge acquired		<ul style="list-style-type: none"> <li>○ Indirect assessments</li> </ul>

		information in the field. o Seminars by faculty and invited speakers from industry and academia, and through some course materials.	include: 1- student survey 2- Exist survey 3- Alumni survey. 4- Employer survey.
2.0	Cognitive Skills		
2.1	Cognitive skills to be developed and level of performance expected	<ul style="list-style-type: none"> <li>Each student or group of students is expected to prepare a topic related to each course and present it for the whole class.</li> <li>Topics are to be selected by the respective lecturer/course coordinator, then to be distributed to students and each student/group of students is to prepare the material by discussing with the course coordinator for each topic and to present it for the whole class.</li> <li>Evaluation of the topics prepared by student/group of students according to the content, arrangement, and covering of the topic.</li> <li>Engage students in classroom interaction with questions and answers.</li> </ul>	<ul style="list-style-type: none"> <li>Frequent assignments during the term.</li> <li>Assignment topics are also selected by the respective lecturer/course coordinator &amp; distributed to the students.</li> <li>Evaluation of the student preparations/presentation by a standardized check list/tool.</li> <li>Quizzes</li> <li>midterm examinations, and final examination</li> </ul>
2.2	Teaching strategies to be used to develop these cognitive skills		
2.3	Methods of assessment of students cognitive skills		
2.4	Correlate the Experimental outcomes with the practical applications		
3.0	Interpersonal Skills & Responsibility		
3.1	To act professionally and ethically and recognize the impact of liability issues in civil engineering projects and constructions. (f)	o Students will be exposed to ethical and professional responsibilities of the civil engineers through designated courses titled Introduction to Engineering Design, Reinforced	o A system of ongoing assessment is conducted by the CE program to continuously improve the effectiveness of the program. For this purpose, direct and

3.2	<p>To recognize the need in life-long learning and to engage in continuing education of professional/engineering skills. (i)</p>	<p>Concrete, Steel Structure, Highway Engineering, Management of Engineering Projects, Graduate Project and Field Training courses.</p> <ul style="list-style-type: none"> <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 behavior in conducting research.</li> <li>○ Students' counselling and advising to make the students alert about the importance of class attendance, timing, commitment, cleanliness, behaviors and manners inside and outside the class.</li> <li>○ Encouraging a self-critical evaluation of student existing knowledge and behavior pattern in solving problems in classroom.</li> <li>○ Discussion with student about open-ended issues regarding civil engineering which contribute to strengthen both decisions making skills when choosing among a couple of alternatives and communication skills.</li> <li>○ Time management and time control by monitoring the time appointed through the different assessment methods.</li> </ul>	<p>indirect assessment and analysis is conducted.</p> <ul style="list-style-type: none"> <li>○ Direct assessments include:               <ol style="list-style-type: none"> <li>1- Student outcomes attainment assessment.</li> <li>2- Assessment of the adopted program performance indicators.</li> <li>3- Courses outcomes achievement assessment through a combination of written exams, homework, quizzes, laboratory performance and reports, oral presentation, testing of the project work, research and literature search assignments and summary reports of seminars attended by the students.</li> </ol> </li> <li>- Through exams performing, the student should learn to manage the time and respect deadlines.</li> <li>- Assessment of group assignments within the relevant courses that have elements of interpersonal skills should include an individual component for the contribution of each student.</li> <li>- The individual project assignments in relevant courses should contain independent study skills and include this element in the assessments of those assignments.</li> <li>- Assessments of assignments include portion of grade for effectiveness of investigation processes.</li> <li>- In field training, assessment is evaluated by the training firm, training</li> </ul>
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			<p>committee and the supervisor.</p> <ul style="list-style-type: none"> <li>○ Indirect assessments include: <ul style="list-style-type: none"> <li>1- student survey</li> <li>2- Exist survey</li> <li>3- Alumni survey.</li> <li>4- Employer survey.</li> </ul> </li> </ul>
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
4.1	To function effectively in multi-disciplinary construction project/civil engineering teams. (d)	<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> </ul>	<ul style="list-style-type: none"> <li>○ A system of ongoing assessment is conducted by the CE program to continuously improve the effectiveness of the program. For this purpose, direct and indirect assessment and analysis is conducted.</li> </ul>
4.2	To communicate effectively prepare professional written materials, graphical communications and deliver professional oral and written presentations. (g)	<ul style="list-style-type: none"> <li>○ Introduce two courses in information technology titled; computer programming for engineering and computer application in civil engineering, which will prepare students to develop simple programs to solve civil engineering problems and use available software such as; AutoCAD, Proken, Stad, Etabs and Sap.</li> <li>○ Introduce courses in numerical and statistics titled, Numerical Methods and Probability and Engineering Statistics, which will provide the necessary foundation for the students to apply techniques in solving engineering problems.</li> <li>○ A combination of</li> </ul>	<ul style="list-style-type: none"> <li>○ Direct assessments include: <ul style="list-style-type: none"> <li>1- Student outcomes attainment assessment.</li> <li>2- Assessment of the adopted program performance indicators.</li> <li>3- Courses outcomes achievement assessment through a combination of written exams, homework, oral presentation, design projects, lab reports, and term papers, research and literature search assignments and summary reports of seminars attended by the students.</li> <li>- Oral skills will be tested in the oral presentation of the projects.</li> <li>- IT included as component of assessment in all student assignments.</li> </ul> </li> <li>○ Indirect assessments include:</li> </ul>

		<p>lectures, tutorials, assignments and laboratory tasks</p> <ul style="list-style-type: none"> <li>- Lectures should be prepared using information technology using computer, PowerPoint, smart boards and blackboard. 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 them to decide independently, and learn more skills to communicate with people.</li> <li>- 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.</li> </ul> <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.</li> <li>○ The students will engage</li> </ul>	<ul style="list-style-type: none"> <li>1- student survey</li> <li>2- Exist survey</li> <li>3- Alumni survey.</li> <li>4- Employer survey.</li> </ul>
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		in working groups to perform graduation projects.	
<b>5.0</b>	<b>Psychomotor</b>		
5.1	Description of the psychomotor skills to be developed and the level of performance required	<ul style="list-style-type: none"> <li>The students are expected to know the respective skills specifically for each course as demanding.</li> <li>Knowledge and understanding of various Civil Engineering techniques.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation &amp; Interpretation of assessment findings.</li> <li>Part of the final evaluation will be performed by the course coordinator.</li> </ul>
5.2	Teaching strategies to be used to develop these skills		

#### Program Learning Outcomes Mapping Matrix

Identify on the table below the courses that are required to achieve the program learning outcomes. 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. Levels: I = Introduction P = Proficient A = Advanced (see help icon)





**Table 10. Mapping Student/Program Outcomes with Civil Engineering Curriculum**

[illegible]

		5 <sup>rd</sup> Level						6 <sup>th</sup> Level					
		112ISL	204Math	204GE	24ICE	26ICE	203GE	22ICE	21ICE	324Stat	201Arab	205GE	25ICE
<b>Knowledge skills:</b>													
3h	Recognize the broad education necessary to understand the impact of engineering solutions to economic, environmental and society and to improving quality of life.												
3j	Recognize the knowledge of contemporary issues in planning, designing, constructing, and rehabilitating civil engineering infrastructures. (j)												
<b>Cognitive skills:</b>													
3k	Use techniques and skills using modern engineering methods and tools needed in civil engineering practices. (k)			√	√	√	√	√	√			√	√
3a	Identify and apply knowledge of mathematics and sciences and engineering in civil engineering problems (a)		√	√	√	√	√	√	√	√		√	√
3b	Design and conduct experiments, as well as to analyze and interpret data required for solving civil engineering projects. (b)					√		√	√				
3c	Design optimum system/component of civil engineering facilities/infrastructures to meet desired needs using realistic constraints. (c)												
3e	Identify, formulate, and solve civil engineering problems and to evaluate and synthesize information in order to provide best alternative solutions. (e)		√		√	√	√	√	√	√		√	√
<b>Interpersonal skill &amp; responsibility:</b>													
3f	Act professionally and ethically and recognize the impact of liability issues in civil engineering projects and constructions. (f)	√											
3i	Recognize the need in life-long learning and to engage in continuing education of professional/engineering skills. (i)												
<b>Communication and Information Technology skills:</b>													
3d	Function effectively in multi-disciplinary construction project/civil engineering teams. (d)					√		√	√				
3g	Communicate effectively prepare professional written materials, graphical communications and deliver professional oral and written presentations. (g)	√				√	√	√	√		√		
<b>Psychomotor skill:</b>													
	None												

		7 <sup>th</sup> Level						8 <sup>th</sup> Level						
		312CE	352CE	254Math	342CE	353CE	306GE	313CE	371CE	354CE	381CE	355CE	322CE	391CE
Knowledge skills:														
3h	Recognize the broad education necessary to understand the impact of engineering solutions to economic, environmental and society and to improving quality of life.		√				√	√	√					√
3j	Recognize the knowledge of contemporary issues in planning, designing, constructing, and rehabilitating civil engineering infrastructures. (j)		√					√						√
Cognitive skills:														
3k	Use techniques and skills using modern engineering methods and tools needed in civil engineering practices. (k)	√			√	√	√	√	√	√	√	√	√	√
3a	Identify and apply knowledge of mathematics and sciences and engineering in civil engineering problems (a)	√	√	√		√	√	√	√	√		√	√	
3b	Design and conduct experiments, as well as to analyze and interpret data required for solving civil engineering projects. (b)				√			√	√				√	√
3c	Design optimum system/component of civil engineering facilities/infrastructures to meet desired needs using realistic constraints. (c)		√				√	√	√	√		√		√
3e	Identify, formulate, and solve civil engineering problems and to evaluate and synthesize information in order to provide best alternative solutions. (e)	√	√	√		√	√	√	√		√	√	√	√
Interpersonal skill & responsibility:														
3f	Act professionally and ethically and recognize the impact of liability issues in civil engineering projects and constructions. (f)		√								√	√		√
3i	Recognize the need in life-long learning and to engage in continuing education of professional/engineering skills. (i)		√				√	√	√			√		√
Communication and Information Technology skills:														
3d	Function effectively in multi-disciplinary construction project/civil engineering teams. (d)							√	√					√
3g	Communicate effectively prepare professional written materials, graphical communications and deliver professional oral and written presentations. (g)										√			√
Psychomotor skill:														
	None													

		9 <sup>th</sup> Level						10 <sup>th</sup> Level						
		462CE	431CE	423CE	113ISL	407GE	202Arab	491CE	114ISL	414CE	432CE	472CE	433CE	492CE
<b>Knowledge skills:</b>														
3h	Recognize the broad education necessary to understand the impact of engineering solutions to economic, environmental and society and to improving quality of life.			√		√		√		√		√		√
3j	Recognize the knowledge of contemporary issues in planning, designing, constructing, and rehabilitating civil engineering infrastructures. (j)							√		√		√		√
<b>Cognitive skills:</b>														
3k	Use techniques and skills using modern engineering methods and tools needed in civil engineering practices. (k)	√	√	√				√		√	√	√	√	√
3a	Identify and apply knowledge of mathematics and sciences and engineering in civil engineering problems (a)	√	√	√		√		√		√	√	√	√	√
3b	Design and conduct experiments, as well as to analyze and interpret data required for solving civil engineering projects. (b)		√					√		√		√		√
3c	Design optimum system/component of civil engineering facilities/infrastructures to meet desired needs using realistic constraints. (c)		√	√				√			√	√	√	√
3e	Identify, formulate, and solve civil engineering problems and to evaluate and synthesize information in order to provide best alternative solutions. (e)	√	√			√		√		√	√	√	√	√
<b>Interpersonal skill &amp; responsibility:</b>														
3f	Act professionally and ethically and recognize the impact of liability issues in civil engineering projects and constructions. (f)							√	√			√	√	√
3i	Recognize the need in life-long learning and to engage in continuing education of professional/engineering skills. (i)					√		√				√	√	√
<b>Communication and Information Technology skills:</b>														
3d	Function effectively in multi-disciplinary construction project/civil engineering teams. (d)	√						√		√				√
3g	Communicate effectively prepare professional written materials, graphical communications and deliver professional oral and written presentations. (g)				√		√	√	√	√			√	√
<b>Psychomotor skill:</b>														
	None													

## 5. Admission Requirements for the program

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

- Applicant, who may be admitted to be a student in Civil 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/her 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 turns out that he/she has already been expelled for disciplinary or academic reasons, his/her 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

Attach handbook or bulletin description of requirements for:

a. Attendance.

**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.

- The academic system for Bachelor Degree in Civil 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 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.

**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**

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

- Assessment committee proposed a second examiner for each course and then proposed to the department counsel for approval, after which the department inform all the lecture of the courses for their corresponding examiner.
- Before the assessments are conducted, the second examiner check the exams paper, grading schemes, timing, level of complexities and verify that the exam measure the targeted course outcomes, and the lecturer will review the exam based on the notes from the examiner and finally sign the checklist from the second examiner.
- After the assessments are conducted, the lecturer mark the answers for all class assessment methods, after which, the second examiner will select a random 10% sample from each assessment method, remark the samples, and compare it to mark from the lecturer for verifying the standards of assessment. If significant differences are found, the course are second marked with different colour and differences resolved by the Department chair.
- For each course the lecturer should analyse the results and a assess the level of achievement for the course out comes and evaluate the results. Then a revision of the course outcomes and their alignment with student outcomes is done.
- A course assessment planning that shows the assessment methods for each one of the course outcomes is prepared at the beginning of the semester.
- Direct and Indirect assessment methods are used to evaluate and improve the levels of student learning outcomes attainment.
- The program curriculum committee review all course files by the end of each semester.

## F Student Administration and Support

### 1. Student Academic Counseling

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

- **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

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

- Civil Engineering Program is serious about creating an honest and ethical learning environment. Dishonest actions such as cheating and plagiarism, or disruptive behavior that violates its rules and conduct expectations will not tolerate. Offenders will be subject to punishment in accordance with student disciplinary regulations as issued by the University Council.
- Student may submit their appeals or suggestions through the appeal box, which are distributed in different places in the department. The appeal boxes checked regularly every week by the student affairs committee. The appeals are handled according to the procedures specified in the suggestions and appeals regulations.
- Students' academic appeals are mainly categorized by the form of 'Add/drop courses, absent excuses, Rechecking of exams and Make up exams'.
- The student is accountable to place an appeal through his academic advisor using case specific appeal form. All appeal forms are available on the Faculty's website from where student can fetch. These forms are also 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 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 and college rules and program requirements.
- 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**

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?

- 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 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 bookstore 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.

- Faculty and staff members generally follow the procedures, which typically start by submitting their requests in appropriate forms through their department heads.
- The department has a committee (Facilities and Laboratory Committee) that has the responsibility to evaluating and planning for the requirement of resources including classrooms, laboratories, library and other resources through surveys submitted to

**students and staff. 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?

- **Faculty and staff members generally follow the procedures, which typically start by submitting their requests in appropriate forms through their department heads.**
- **The department has a committee (Facilities and Laboratory Committee) that has the responsibility to evaluating and planning for the requirement of resources including classrooms, laboratories, library and other resources through surveys submitted to students and staff. 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?

- **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.**

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

- **Textbooks are made available to students through the University Library.**
- **Departments submit their revised textbook lists to be made available by beginning of following year.**

## H. Faculty and other Teaching Staff

### 1. Appointments

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

**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 have 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 Faculty 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 a 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**

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

- **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 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)

- **The Civil Engineering Industrial Advisory Council (CE-IAC) composed of members with 10 to 20 years of industrial experience in the Civil 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 Civil Engineering Program. The CE-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 Civil Engineering education in general. The council meets at least once a year.**
- **The input from CE-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 CE-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 civil 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 CE-IAC to determine if the graduates from the program will be adequately prepared for the career in Civil Engineering area.

### 3. Professional Development

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

a. Improvement of skills in teaching and student assessment?

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 will be conducted in the college.
4. 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?

- 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 members have access to highly specialized research database (Journals, Periodicals, Confs.,...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 members are encouraged to have a joint research work with others in another institutions.

#### 4. Preparation of New Faculty and Teaching Staff

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.

- The Deanship of scientific research provides support to all the faculty members in the university through:
  - g. Research projects grants and administration.
  - h. Web-based Resources (research administration guide, policies, and forms).
  - i. Participation financial support in international conferences.
  - j. Workshop, seminars and training programs.
  - k. Teaching performance evaluation.
  - l. Provides several workshops related to research aspects.
- Faculty & teaching staff members have access to highly specialized research database (Journals, Periodicals, Confs.,...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 & teaching staff members are encouraged to have a joint research work with others in another institution.



## 5. Part Time and Visiting Faculty and Teaching Staff

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

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

## I. Program Evaluation and Improvement Processes

### 1. Effectiveness of Teaching

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

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The Following is a summary of main points used to evaluate and improve the strategies for developing learning outcomes in Civil 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 characteristics:
  - 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.

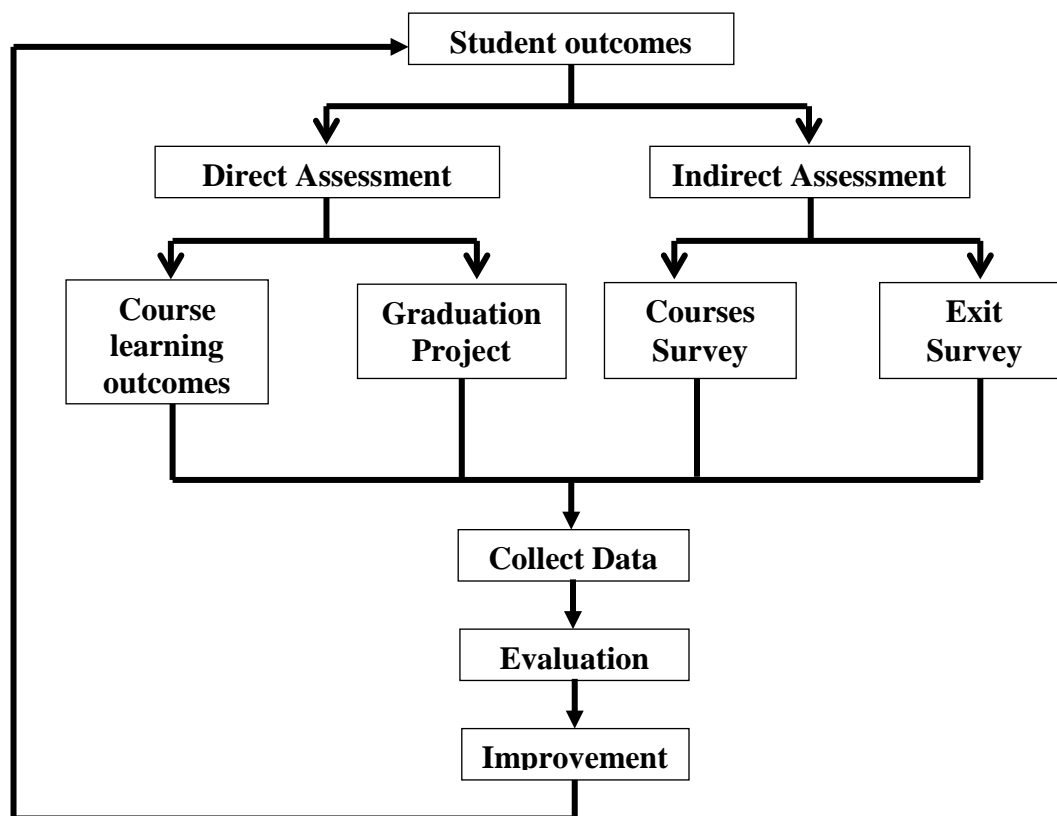
- The assessment of CLOs is based on the actual scores (marks) obtained by students in exams and other assessment tools used to evaluate their learning. We do not believe in using adjusted (curved) scores for outcome assessment as they can obscure actual student performance that is the basis of our outcome 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).
- Civil 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.



The Assessment Plan.

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

- 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**

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:

(i) from current students and graduates of the program?

- **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)?.

- **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 Civil Engineering Industrial Advisory Council.**

(iii) from employers and other stakeholders.

- **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.**

**Attachments:**

1. **Copies of regulations and other documents referred to in template preceded by a table of contents.**
2. **Course specifications for all program courses including field experience specification if applicable.**

**Authorized Signatures**

Dean/Chair	Name	Title	Signature	Date
<b>Program Dean or Program Chair Main Campus</b>				
<b>Program Chair Branch 1</b>				
<b>Program Chair Branch 2</b>				
<b>Program Chair Branch 3</b>				
<b>Program Chair Branch 4</b>				

