

**University of Tabuk  
Faculty of Engineering  
Civil Engineering Department**



**Operation Plan  
Bachelor of Science in Civil Engineering  
(2022-23)**

**Developed By: Quality Committee**

**August 2022**

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## **1. Introduction**

The department of Civil Engineering (CE) was founded in 2007 and enrollment in the preparatory year started in the academic year 2008. The study is of 5 years' duration including the preparatory year (15 semesters) after which the student obtains a Bachelor of Science in Civil Engineering upon successful satisfaction of program criteria and completion of university requirements. The program serves the goals of Kingdom of Saudi Arabia's development plan for preparing graduates to fit in different job sectors that serve the Saudi society. The program graduated its first cohort of 11 students in spring 2012-2013 and 3 students in summer 2012-2013. Most of the graduates are already employed in a variety of public and private sectors. Program has a mission well aligned with the university and has been following international and national standards to improve the quality of education. Program is awarded with ABET accreditation and planning for NCAAA accreditation in the near future.

## **2. Development of the Operational Plan**

This operational plan is developed by the approved committee to identify and allocate the man power, the financial and physical resources to achieve the strategic goals of the Tabuk university. Each strategic goals of the university are made to satisfy the strategic themes through various initiatives by the college or program. The operation plan for Bachelor in Civil engineering program helps allocating resources, establishing timelines, setting its goals, identifying the risks, and determining the necessary steps to achieve the goals through various initiatives. These initiatives are implemented and measured through various Key Performance Indicators (KPI) (institutional or programmatic) in order to understand the achievements towards the mission to realize the long-term vision. The plan mainly focuses on improving the quality of education, research, and community engagement by developing an attractive educational environment, and effective administrative and organizational environment for a period of five years. However, based on the changes in the program mission or goals, the changes in the and strategic plan of the Faculty of Engineering or the University of Tabuk, the operational plan is revised

### 3. Vision of University, Faculty of Engineering, and Program

#### 3.1 University Vision

A university that is educationally and academically distinguished which cooperated in community service.

#### 3.2 Faculty of Engineering Vision

A distinguished and pioneering college locally and internationally in the field of engineering education, innovative research, and building a knowledge society.

#### 3.3 Department Vision

The department’s vision is innovation and leadership in education, scientific research, and community services.

#### 3.4 Alignment of Vision

The following table gives the alignment of the visions by mapping the keywords of the University of Tabuk with the Faculty of Engineering and Civil Engineering Department (BSc CEP).

Keywords	University of Tabuk	Faculty of Engineering	Department of Civil Engineering
Institution	A <b>university</b> that is <b>educationally</b> and academically <b>distinguished</b> which cooperated in <b>community</b> service	A <b>distinguished</b> and pioneering <b>college</b> locally and internationally in the field of <b>engineering education</b> , innovative research, and building a knowledge <b>society</b>	Innovation and <b>leadership</b> in <b>education</b> , scientific research, and <b>community services</b> .
Distinguished			
Education			
Community			

## 4. Mission of University, Faculty of Engineering, and Program

### 4.1 University Mission

*To offer a distinguished university education that meets the needs of society and the job market through an attractive educational, administrative, and technical environment that supports research and innovation.*

### 4.2 Faculty of Engineering Mission

*To graduate qualified engineers in accordance with the International Academic Standards and prepare them to meet the changing needs of society. These graduates will be able to compete locally and internationally. The Faculty of Engineering is committed to providing excellent education and pursuing relevant scientific research and partnership with industry and governmental societies.*

### 4.3 Civil Engineering Department Mission

*The mission of the department is to support the needs of Tabuk region and the Kingdom of Saudi Arabia (K.S.A) society by providing high quality educational program and contributing to research related to civil engineering profession.*

#### Alignment of Mission

The following table gives the alignment of the missions by mapping the keywords of the University of Tabuk with the Faculty of Engineering and BSc CEP.

Keywords	University of Tabuk	Faculty of Engineering	Department of Civil Engineering
<b>Needs of society</b>	To offer a distinguished university education that meets the <b>needs</b>	To graduate qualified engineers in accordance with the International Academic Standards and prepare them to meet the changing <b>needs of society</b> . These graduates will	to <b>support the needs of Tabuk region</b> and the Kingdom of Saudi Arabia (K.S.A) society by providing
<b>Excellent education</b>	<b>of society</b> and the		<b>high quality educational</b>

	job market through an <b>attractive educational,</b>	be able to compete locally and internationally. The Faculty of Engineering is committed to providing <b>excellent education</b>	program and contributing to <b>research</b> related to civil engineering profession
<b>Research</b>	administrative, and technical environment that supports <b>research</b> and innovation.	and pursuing relevant scientific <b>research</b> and partnership with industry and governmental societies.	

## 5. Goals of University, Faculty of Engineering, and Program

### 5.1 University Goals

- UG1: To provide a distinguished university education that meets the needs of the labor market.
- UG2: To support innovative research to contribute to building a knowledge economy.
- UG3: To promote social responsibility and partnership.
- UG4: Sustainability of infrastructure and technology for an attractive educational environment.
- UG5: Effective governance and management.
- UG6: Diversify innovative financing sources and achieve expenditure efficiency.

### 5.2 Faculty of Engineering Goals

- CG1: To deliver distinguished academic education that meets the needs of the labor market.

- CG2: Providing creative research to contribute to building the knowledge economy of society
  - CG3: Effective involvement to sustainable development and community service.
  - CG4: Offer a stimulating and attractive learning environment.
  - CG5: Develop an effective administrative and organizational environment in the college.
- CG6: Providing innovative financing sources.

### **5.3 Program Goals**

- **PG1:** Graduating qualified civil engineers equipped with essential skills and knowledge to understand and deal with modern civil engineering trends.
- **PG2:** Serve as a source of engineering expertise in the fields of civil engineering to solve engineering problems.
- **PG3:** Performing scientific research and studies, which address local, regional, and international problems.
- **PG4:** Establishing partnerships with local, regional, and international societies to enhance the education process and scientific research.
- **PG5:** Keeping up with the state-of-practice in civil engineering disciplines through continuous review, evaluation, and modification of the study plan

## 5.4 Alignment of Goals

The following table gives the alignment of the goals of the University of Tabuk with the Faculty of Engineering and BSc CEP.

Program Goals	Faculty of Engineering Goals						University of Tabuk Goals					
	CG1	CG2	CG3	CG4	CG5	CG6	UG1	UG2	UG3	UG4	UG5	UG6
PG1	✓			✓			✓			✓		
PG2	✓			✓			✓			✓		
PG3		✓						✓				
PG4			✓						✓			
PG5	✓			✓			✓			✓		

## 6. The Operational Plan of the Program

### 6.1 Program Goal 1

PG1: Graduating qualified civil engineers equipped with essential skills and knowledge to understand and deal with modern civil engineering trends.

Initiatives	Activities	KPI	Target	Responsibility	Implementation Period
1. Develop the Curriculum Plan and the Learning Outcomes to meet the need of the job market	1. Involvement of the stakeholders (Alumni and Employers) in the development of curriculum and learning outcomes	Evaluation of the Program Curriculum and Learning outcomes by the stakeholders	3.75/5	Curriculum Committee & Quality Committee	Annual



		Survey 1 (Q16-Q24)			
2. Encouraging students to prepare and participate in professional and/or national examinations	1. Students' performance in the professional and/or national examinations.	Percentage of students or graduates who were successful in the professional and / or national examinations , or their score average and median (if any)  (KPI-P-06)	75%	Course Instructors	Annual
3. Improving the employability of graduates	1. Graduates' employability and enrolment in postgraduate programs	Percentage of graduates from the program who within a year of graduation were:  a. employed b. enrolled in postgraduate programs during the first year of their graduation to	Joint Target of a+b  50%	Training Unit	Annual

		the total number of graduates in the same year (KPI-P-07)			
	2. Professional Trainings to improve the communication skills and proficiency of students	Employers' evaluation of the program graduate's proficiency (KPI-P-09)	3.75/5	Course Instructors / Training Unit	Annual

## 6.2 Program Goal 2

PG2: Serve as a source of engineering expertise in the fields of civil engineering to solve engineering problems.

Initiatives	Activities	KPI	Target	Responsibility	Implementation Period
1. Provide attractive and adequate learning environment, facilities, and resources to the students	1. Students' Evaluation of quality of learning experience in the program	Average of overall rating of final year students for the quality of learning experience in the program on a five-point scale in an annual survey (KPI-P-02)	3.75/5	Department Council	Annual

	2.Students' evaluation of the quality of the courses	Average students overall rating for the quality of courses on a five-point scale in an annual survey. (KPI-P-03)	3.75/ 5	Department Council	Annual
	3.Average number of students in the class	Average number of students per class (in each teaching session/activity : lecture, small group, tutorial, laboratory, or clinical session) (KPI-P-08)	25	Department Council	Annual
	4. Students' satisfaction with the offered services	Average of students' satisfaction rate with the various services offered by the program (restaurants, transportation, sports facilities, academic advising, ...) on	3.75/ 5	Department Council	Annual

		a five-point scale in an annual survey. (KPI-P-10)			
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### 6.3 Program Goal 3

PG3: Performing scientific research and studies, which address, local, regional, and international problems.

Initiatives	Activities	KPI	Target	Responsibility	Implementation Period
1. Encouraging faculty for joint research collaborations and publications	Encouraging faculty for research collaborations and publications	Percentage of full-time faculty members who published at least one research during the year to total faculty members in the program. (KPI-P-14)	80%	Research Unit	Annual
		Rate of published research	1	Research Unit	Annual

		per faculty member (KPI-P-15)			
2. Encouraging faculty to publicize their published research on open-source research platforms	Encouraging faculty to publicize their published research platforms such as google scholar and ResearchGate	Citations rate in refereed journals per faculty member (KPI-P-16)	5	Research Unit	Annual
3. Encouraging faculty to apply for research projects and grants	Encouraging faculty to apply for research projects and grants	No. of research projects and grants applied by the program in a calendar year	2	Research Unit	Annual

**6.4 Program Goal 4**

PG4: Establishing partnership with local, regional, and international societies to enhance the education process and scientific research.

Initiatives	Activities	KPI	Target	Responsibility	Implementation Period
1. Establishing partnership with local,	2. Increasing the research projects in collaboration with other	Percentage of full-time faculty members who	60%	Research unit	Annual

regional, and international societies	colleges/universities	jointly published articles during the year to total faculty members in the program			
2. Enhancing the education process and scientific research	1. Students Completion Rate	Proportion of undergraduate students who completed the program in minimum time in each cohort. (KPI-P-04)	60%	Department Council	Annual
	2. First-year students retention rate	Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year. (KPI-P-05)	100%	Program Chair	Annual
	3. Ratio of students to teaching staff	Ratio of the total number of students to the total number of full-time and	20:1	Program Chair	Annual

		full-time equivalent teaching staff in the program. (KPI-P-11)			
	4. Percentage of teaching staff distribution	Percentage of teaching staff with doctoral qualification. (KPI-P-12)	75%	Program Chair	Annual
	5. Proportion of teaching staff leaving the program	Proportion of teaching staff leaving the program annually for reasons other than age retirement to the total number of teaching staff. (KPI-P-13)	0	Program Chair	Annual

### 6.5 Program Goal 5

PG5: Keeping up with the state-of-practice in civil engineering disciplines through continuous review, evaluation, and modification of the study plan

Initiatives	Activities	KPI	Target	Responsibility	Implementation Period
1. Continuous review, evaluation,	Involvement of the stakeholders	Evaluation of the Program	3.75/5	Curriculum Committee &	Annual

and modification of the study plan	(Alumni and Employers) in the development of curriculum	Curriculum and Learning outcomes by the stakeholders Survey 1 (Q16-Q24)		Quality Committee	
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## 7. Analysis of the Operational Plan Indicators

The bachelor of Civil Engineering program is committed for keeping all records to understand the extent to which the goals are achieved. The civil engineering program annually measures the KPIs and is recorded in annual report (APR). Five program goals have been identified and assessed through various Key Performance Indicators (KPIs) specific to the program. The program has developed specific KPIs and used NCAAA KPIs for the quality assessment of educational excellence, research productivity, and community engagement through direct and indirect measurements. The plan will be regularly reviewed and updated to ensure the department maintain the quality and continues to improve over time. This way this operational plan represents a comprehensive and integrated strategy to understand the achievement of the strategic goals of Tabuk university.

## 8. Action Plan for Improvement

The BSc CEP identifies the actions to be taken to improve in the subsequent year in the following table.

One Year Action Plan for Improvement				
Source: Analysis of Operational Plan KPIs				
Action	Responsibility	Time frame		Notes
		Start	Complete	
1.				
2.				
3.				



4.				
5.				

The action plan for improvement is added to the program development plan in the APR.

## 9. Follow-up Plan to Monitor the Progress of Action Plan

The BSc CEP follows up the implementation of the action plan and the effectiveness of the actions by a follow-up plan given in the following table.

Follow-up Plan to monitor the Progress towards Actions Taken					
Reference: Action Plan for Improvement Based on the Analysis of Operational Plan KPIs					
Actions to Be reviewed	Responsibility Follow-up	to	Time frame		Notes
			Start	Complete	
1.					
2.					
3.					
4.					
5.					

The follow-up is done by the department council in its meetings under the guidance of the program chair. The resources required for the implementation of the action plan for improvement are provided and hence the quality Loop is closed to achieving the program goals and mission and progress towards continuous improvement.

## 10. Approval of the Operational Plan

	Prepared by	Approved by
	QUALITY COMMITTEE	CIVIL ENGINEERING DEPARTMENT COUNCIL
Date:	MARCH 2023	MARCH 2023
Reference No.:	3.0	5.0