

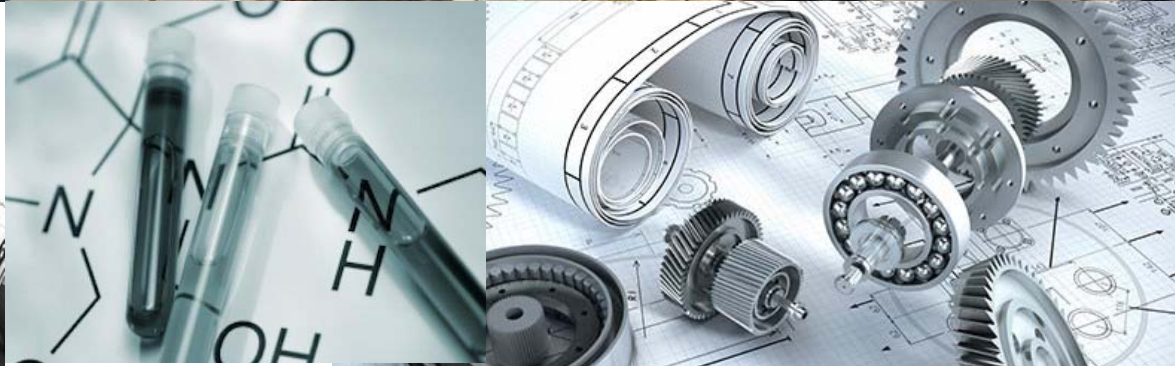
"To meet the international standards  
as a source of excellence in  
engineering learning and center of  
research in the university"

VISION رؤية  
2030  
المملكة العربية السعودية  
KINGDOM OF SAUDI ARABIA



# Civil Engineering Handbook

College of Engineering, King Khalid University, Abha, Kingdom of Saudi Arabia



The Bachelor in Civil Engineering Degree Program is Accredited by the  
Engineering Technology Accreditation Commission of ABET



Engineering  
Accreditation  
Commission

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## DEPARTMENT OF CIVIL ENGINEERING



## **Civil Engineering Program Description**

The faculty of engineering started with six departments: Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemical Engineering, Industrial Engineering and Architecture. The authorized body i.e. MoHE (private institutions and Council of Higher Education for public institutions) has approved the all aforesaid programs via. MoHE/9683 dated 05/08/1426. Until the 1st Semester of 2007 the Bachelor of Science in Civil Engineering program resides in the Department of Civil Engineering. The first batch of students in Civil Engineering graduated in 2012. The needs of the industry and the university's ability to respond to the needs have helped shape the growth of the programs offered by the department. The faculty/staff of the Civil Engineering (CE) Department has implemented many modifications to the CE curricula.

## **Civil Engineering Program Vision**

Providing excellence in Civil Engineering at par the international standards.

## **Civil Engineering Program Mission**

Providing a distinguished education and professional skills in Civil Engineering that enable to use modern technology for societal improvement through professional and ethical practices, innovative research and community services.

## **Program Educational Objectives (PEOs)**

**PEO 1:** Successfully enter the civil engineering profession as practicing engineers and consultants with prominent companies and organizations.

**PEO 2:** Incorporate economic, environmental, social, safety and global considerations when designing and investigating different systems.

**PEO 3:** Pursue professional licensure and engage in continued learning through professional development.

**PEO 4:** Pursue graduate education and research at major research universities in civil engineering.

**PEO 5:** Demonstrate leadership and service within their profession and in their communities through participation in professional societies and community services.

# OLD Curriculum Trimester Plan (1/3)

<b>Department of Civil Engineering</b>	Year 1				
	Level 1				
	Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
	011-ENG-6	Intensive English Program 1	6	12	
	107-CHEM-6	General Chemistry	6	7	
	111-GE-4	Engineering Drawing	4	8	
	<b>Total No. Of Credits/Contact Hrs</b>		<b>16</b>	<b>27</b>	
	Level 2				
	Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
	012-ENG-6	Intensive English Program 2	6	12	011-ENG-6
	119-MATH-5	Differentiation and Integration -1	5	5	
	111-ICI-2	The Entrance to the Islamic Culture	2	2	
	<b>Total No. Of Credits/Contact Hrs</b>		<b>13</b>	<b>19</b>	
Level 3					
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite	
129-PHYS-6	Physics -1	6	7		
129-MATH-5	Algebra and Geometry	5	5	119-MATH-5	
101 CMS-5	Computer Science	5	6		
<b>Total No. Of Credits/Contact Hrs</b>		<b>16</b>	<b>18</b>		

Year 2				
Level 4				
Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
112-ICI-2	Islamic Culture-2	2	2	
218-EE-4	Electric Engineering - 1	4	5	129-PHYS-6 119-MATH-5
219-MATH-5	Differentiation and Integration-2	5	5	119-MATH-5
201-ARAB-3	Language Skills	3	3	
<b>Total No. Of Credits/ Contact Hrs</b>		<b>14</b>	<b>15</b>	
Level 5				
Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
121-ME-4	Production Technology and Workshop	4	7	111-GE-4
211-CE-5	Statics	5	7	129-PHYS-6
225-CE-3	Introduction to Geotechnical Engineering	3	3	
229-MATH-5	Differentiation and Integration-3	5	5	219-MATH-5
<b>Total No. Of Credits/ Contact Hrs</b>		<b>17</b>	<b>22</b>	
Level 6				
Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
224-CE-5	Surveying	5	7	119-MATH-5
223-CE-5	Mechanics of Materials	5	6	211-CE-5
221-GE-3	Computer for Engineers	3	5	101 CMS-5
113-ICI-3	Islamic Culture-3	3	3	
<b>Total No. Of Credits/ Contact Hrs</b>		<b>16</b>	<b>21</b>	

# OLD Curriculum Trimester Plan (2/3)

Year 3				
Level 7				
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
202-ARAB-2	Arabic Writing	2	2	
312-CE-5	Properties and Testin of Materials	5	6	223-CE-5
311-CE-5	Fluid Mechanics	5	7	211-CE-5
319-MATH-5	Differential Equations	5	5	219-MATH-5
<b>Total No. Of Credits/Contact Hrs</b>		<b>17</b>	<b>20</b>	

Level 8				
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
114-ICI-2	Islamic Culture-4	2	2	
321-CE-5	Structural Analysis - 1	5	6	223-CE-5
314-CE-3	Dynamics	3	3	211-CE-5
323-CE-3	Eng. Properties of Soils and their Measurements	3	3	312-CE-5
313-CE-3	Properties and Testin of Concrete	3	4	223-CE-5
<b>Total No. Of Credits/Contact Hrs</b>		<b>16</b>	<b>18</b>	

Level 9				
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
301-ENG-3	Technical Reports Writing	3	3	012-ENG-9
322-CE-5	Hydraulics	5	6	311-CE-5
324-CE-6	Geographic Informatic Systems	6	7	
329-S TAT-3	Principles of Statistic and Probability	3	3	
400-CE-0	Summer Training	0	0	After completing 150 Cre.Hrs.
<b>Total No. Of Credits/Contact Hrs</b>		<b>17</b>	<b>19</b>	

Department of Civil Engineering

Year 4				
Level 10				
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
412-CE-5	Structural Analysis - 2	5	6	321-CE-5
414-CE-6	Soil Mechanics	6	8	223-CE-5
411-CE-6	Transportation Engineering	6	7	224-CE-5
<b>Total No. Of Credits/Contact Hrs</b>		<b>17</b>	<b>21</b>	

Level 11				
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
413-CE-5	- Reinforced Concrete 1	5	6	321-CE-5
421-CE-6	Environmental Engineering	6	8	322-CE-5
425-CE-6	Highway Engineering	6	7	311-CE-5
<b>Total No. Of Credits/Contact Hrs</b>		<b>17</b>	<b>21</b>	

Level 12				
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
422-CE-3	Water Chemistry	3	3	322-CE-5
423-CE-5	- Reinforced Concrete 2	5	6	413-CE-5
419-MATH-5	Numerical Analysis	5	5	319-MATH-5
424-CE-5	Foundation Engineering - 1	5	6	414-CE-6 413-CE-5
<b>Total No. Of Credits/Contact Hrs</b>		<b>18</b>	<b>20</b>	

# OLD Curriculum Trimester Plan (3/3)

Year 5				
Level 13				
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre-requisite
519-CE-0	Graduation Project*	4	4	Passing 188 credit hours
511-CE-3	Pavement design and Materials 1	3	3	411-CE-6 321-CE-5
	Elective 2	4	5	
	Elective 1	3	3	
<b>Total No. Of Credits/Contact Hrs</b>		<b>14</b>	<b>15</b>	
Level 14				
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre-requisite
523-CE-5	Design of Steel Structures	5	6	412-CE-5
	Elective 3	4	4	
512-CE-5	Hydrology	5	6	311-CE-5
<b>Total No. Of Credits/Contact Hrs</b>		<b>14</b>	<b>16</b>	
Level 15				
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre-requisite
561-CE-3	Industry and the Environment	3	3	
582-CE-3	Construction Engineering	3	3	
311-IE-3	Engineering Economy	3	3	
	Elective 4	4	4	
<b>Total No. Of Credits/Contact Hrs</b>		<b>13</b>	<b>13</b>	

Department of Civil Engineering

## New Curriculum Trimester Plan (1/3)

<b>Department of Civil Engineering</b>	Year 1					Year 2				
	Level 1					Level 4				
	Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite	Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
	011-ENG-6	Intensive English Program 1	6	12		111-GE-4	Engineering Drawing	4	8	
	107-CHEM-6	General Chemistry	6	7		218-EE-4	Electric Engineering - 1	4	5	129-PHYS-6 219-MATH-5
	201-ARAB-2	Language Skills	2	2		229-MATH-5	Differentiation and Integration-3	5	5	219-MATH-5
	<b>Total No. Of Credits/Contact Hrs</b>		<b>14</b>	<b>21</b>		211-GE-3	Learning Skills	3	3	
						<b>Total No. Of Credits/ Contact Hrs</b>				
						<b>16</b>				
						<b>21</b>				
	Level 2					Level 5				
	Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite	Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
	012-ENG-6	Intensive English Program 2	6	12	011-ENG-6	221-ME-4	Production Technology and Workshop	4	7	111-GE-4
	119-MATH-5	Differentiation and Integration -1	5	5		211-CE-5	Statics	5	7	129-PHYS-6
	111-ICI-2	The Entrance to the Islamic Culture	2	2		219-PHYS-6	Physics-2	6	7	129-PHYS-6
<b>Total No. Of Credits/Contact Hrs</b>		<b>13</b>	<b>19</b>		113-ICI-2	Islamic Culture-3	2	2		
					<b>Total No. Of Credits/ Contact Hrs</b>					
					<b>17</b>					
					<b>23</b>					
Level 3					Level 6					
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite	Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite	
112-ICI-2	Islamic Culture -2	2	2		224-CE-5	Surveying	5	7	119-MATH-5	
219-MATH-5	Differentiation and Integration -2	5	5	119-MATH-5	223-CE-5	Mechanics of Materials	5	6	211-CE-5	
129-PHYS-6	Physics -1	6	7		221-GE-3	Creativity and Innovation	3	3		
104 CMS-3	Computer Science	3	5		319-MATH-5	Differential Equations	5	5	219-MATH-5	
<b>Total No. Of Credits/Contact Hrs</b>		<b>16</b>	<b>19</b>		<b>Total No. Of Credits/ Contact Hrs</b>		<b>18</b>	<b>21</b>		



## New Curriculum Trimester Plan (2/3)

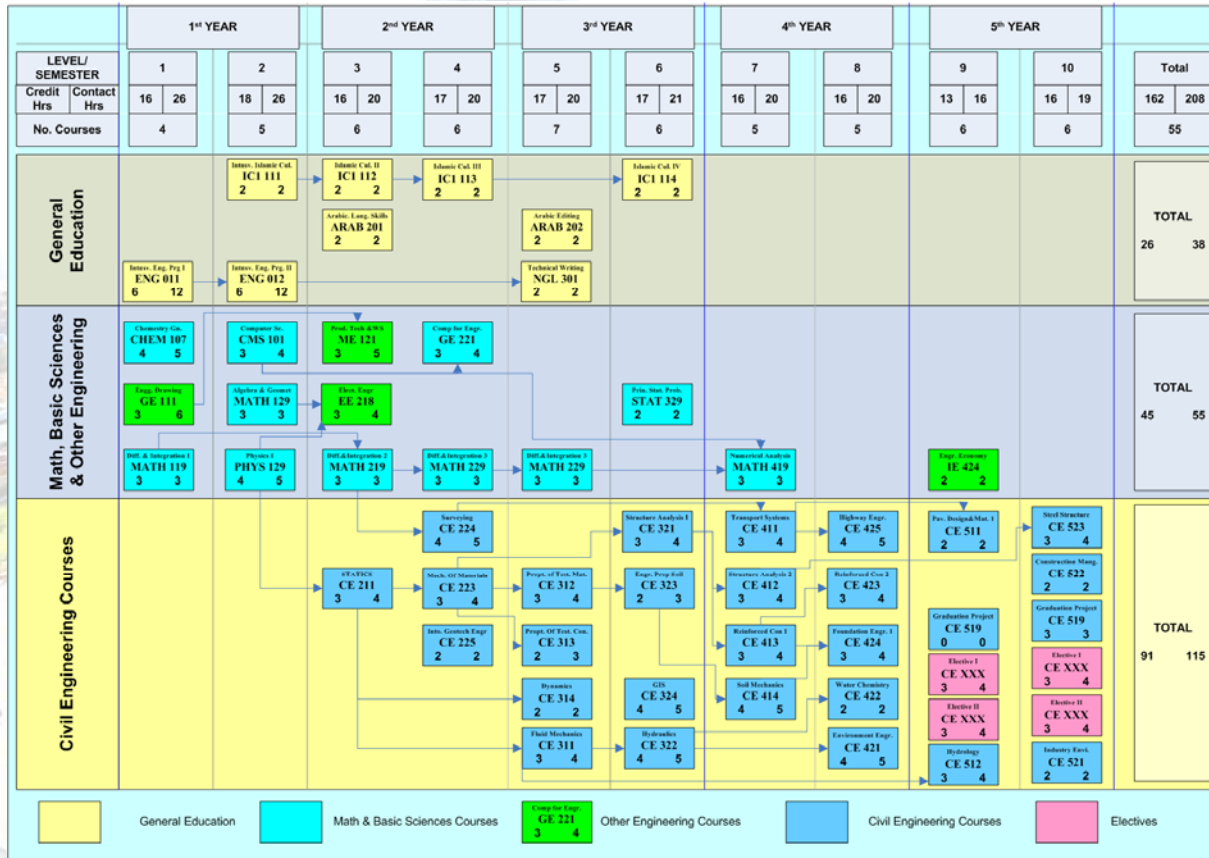
<b>Department of Civil Engineering</b>	Year 3				
	Level 7				
	Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
	202-AR-AB - 2	Arabic Writing	2	2	
	312-CE-5	Construction Materials	5	6	223-CE-5
	314-CE-3	Dynamics	3	3	211-CE-5
	329-MATH- 4	Linear Algebra	4	4	
	<b>Total No. Of Credits/Contact Hrs</b>		<b>14</b>	<b>15</b>	
	Level 8				
	Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
	114-ICI-2	Islamic Culture-4	2	2	
	321-CE-5	Structural Analysis - 1	5	6	223-CE-5
	311-CE-5	Fluid Mechanics	5	7	211-CE-5
		Elective 1 (Soft Skills)	3	3	
	<b>Total No. Of Credits/Contact Hrs</b>		<b>15</b>	<b>18</b>	
Level 9					
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite	
301-ENG-3	Technical Reports Writing	3	3	012-ENG-6	
322-CE-5	Hydraulics	5	6	311-CE-5	
324-CE-6	Geographic Information Systems	6	7		
329-STAT-3	Principles of Statistics and Probability	3	3		
400-CE-0	Summer Training	0	0	After completing 130 Cre.Hrs.	
<b>Total No. Of Credits/Contact Hrs</b>		<b>17</b>	<b>19</b>		
	Year 4				
Level 10					
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite	
412-CE-5	Structural Analysis - 2	5	6	321-CE-5	
414-CE-6	Soil Mechanics	6	8	223-CE-5	
419-MATH-5	Numerical Methods	5	5	319-MATH- 5	
<b>Total No. Of Credits/Contact Hrs</b>		<b>16</b>	<b>19</b>		
Level 11					
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite	
413-CE-5	- Reinforced Concrete 1	5	6	321-CE-5	
422-CE-4	Civil Engineering Drawing	4	6	111-GE-4	
423-CE-5	Hydrology	5	6	311-CE-5	
411-GE-3	Professional Ethics and Practice	3	3		
<b>Total No. Of Credits/Contact Hrs</b>		<b>17</b>	<b>21</b>		
Level 12					
Course N <sup>o</sup> and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite	
421-CE-6	Transportation Engineering	6	7	224-CE-5	
425-CE-5	Design of Steel Structures	5	6	412-CE-5	
424-CE-5	Foundation Engineering - 1	5	6	414-CE-6 413-CE-5	
<b>Total No. Of Credits/Contact Hrs</b>		<b>16</b>	<b>19</b>		

## New Curriculum Trimester Plan (3/3)

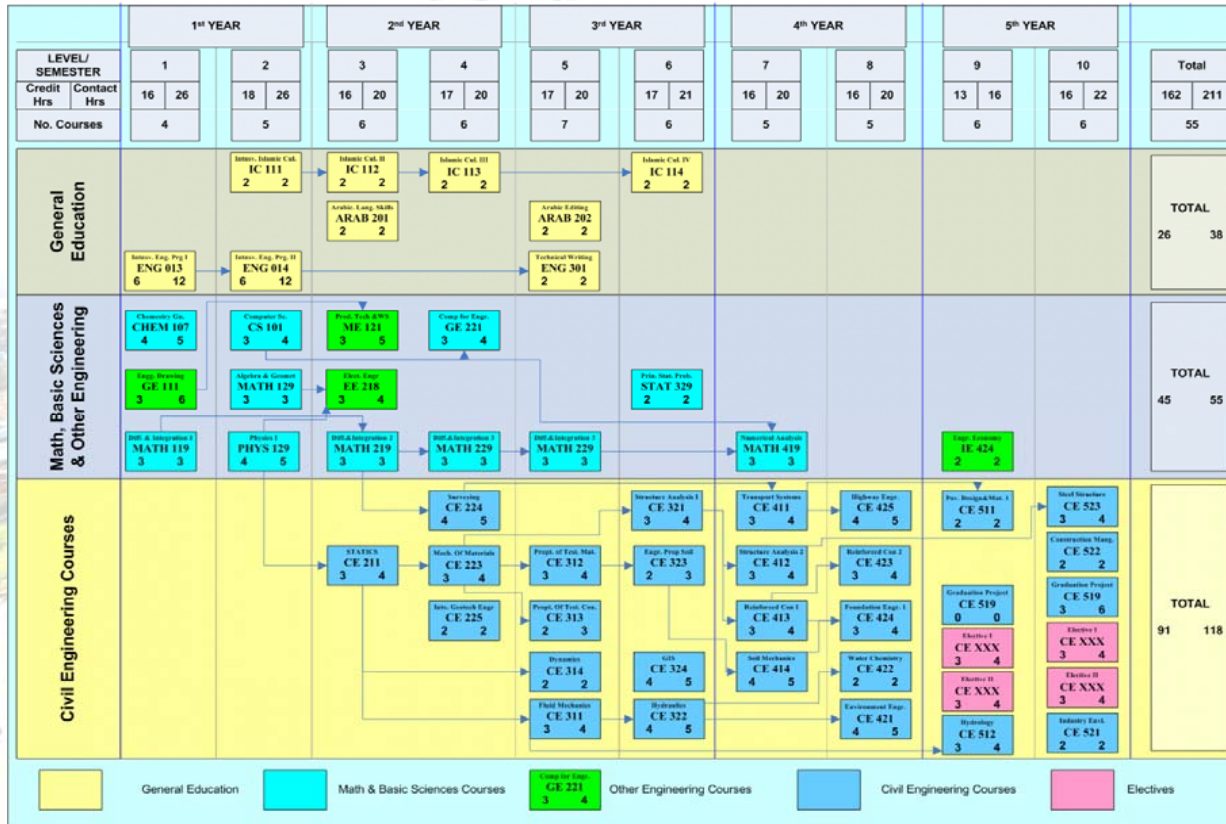
Year 5				
Level 13				
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
598-CE-4	Senior Design Project	4	4	Passing 1/4 credit hours
501-CE-5	Reinforced Concrete - 2	5	6	413-CE-5
	Elective - 2	4	5	
Total No. Of Credits/Contact Hrs		13	15	
Level 14				
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
591-CE-4	Special topics	4	4	
581-CE-3	Construction Management	3	3	
	Elective - 3	4	5	
	Elective - 4	4	5	
Total No. Of Credits/Contact Hrs		15	17	
Level 15				
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
561-CE-3	Industry and the Environment	3	3	
582-CE-3	Construction Engineering	3	3	
	Elective - 5	4	5	
311-IE-3	Engineering Economy	3	3	
Total No. Of Credits/Contact Hrs		13	14	

Department of Civil Engineering

# FLOWCHART FOR OLD CURRICULAM (Semester)



# FLOWCHART FOR NEW CURRICULAM (Semester)



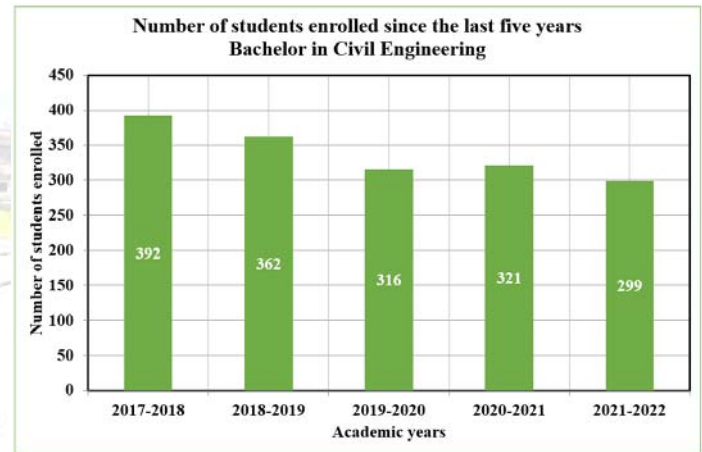
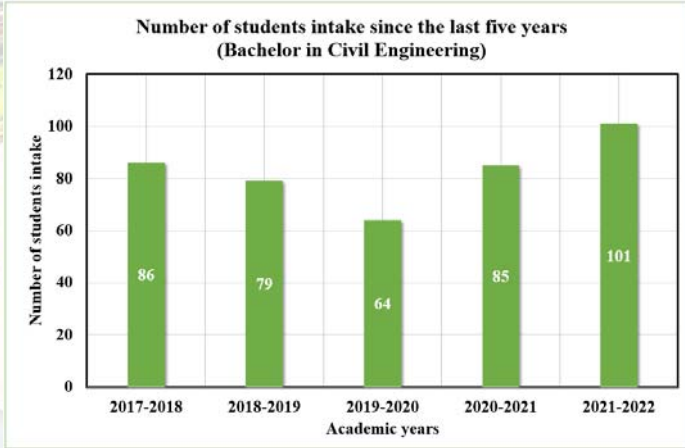
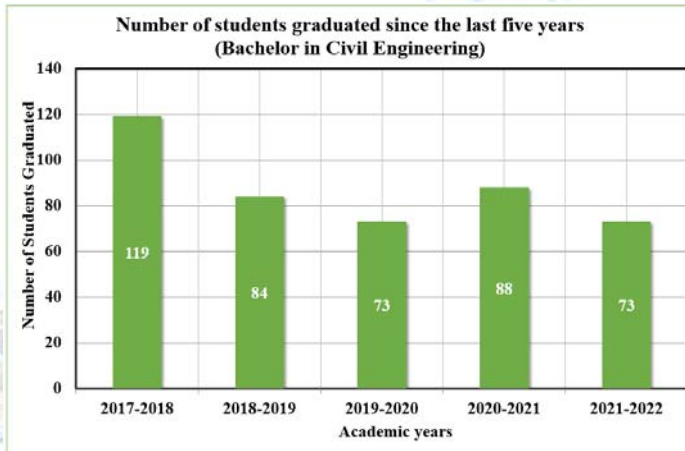
# FLOWCHART FOR OLD CURRICULAM (Trimester)

Level/Trimester	First Year			Second Year			Third Year			Fourth Year			Fifth Year			Total																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15																		
Credit hrs. No. Courses	18 3	13 3	18 3	14 4	17 4	22 4	18 4	21 4		17 4	20 4		17 3	21 3	18 4	20 4	14 4	16 3	14 3	18 4	13 3	13 4	286 66	284									
General Education	The Entrance to the Islamic Culture 111-ENG-2 2   2			Islamic Culture 112-IG-2 2   2			Islamic Culture 113-IG-3 3   3			Islamic Culture 114-IG-3 2   2						Total 28   41																	
Math, Basic Sciences & Other Engineering	General Chemistry 107-CHEM-5 5   7			Physics -1 129-PHYS-5 5   7			Production Technology and Workshop 214-IE-4 4   7			Principles of Statistics and Probability 329-STAT-3 3   3						Engineering Economy 434-IE-3 2   2			Total 88   81														
Core Engineering Courses	Engineering Drawing 117-GE-4 4   5			Computer Science 101-CMS-5 5   5			Electric Engineering -1 218-EE-4 5   5			Computer for Engineers 221-GE-3 3   5									Total 138   142														
	Differentiation and Integration -1 119-MATH-5 5   5			Algebra and Geometry 129-MATH-5 5   5			Differentiation and Integration -2 219-MATH-5 5   5			Differentiation and Integration -3 229-MATH-5 5   5			Numerical Analysis 419-MATH-5 5   5																				
				Statics 211-CE-5 5   7			Surveying 224-CE-5 5   7			Fluid Mechanics 311-CE-5 5   7			Dynamics 314-CE-3 3   3			Hydraulics 322-CE-5 5   6			Soil Mechanics 414-CE-5 5   5			Environmental Engineering 421-CE-5 5   5			Water Chemistry 422-CE-3 3   3			Elective 2 3   3					
				Introduction to Geotechnical Engineering 228-CE-3 3   3			Mechanics of Materials 223-CE-5 5   6			Properties and Testing of Materials 312-CE-5 5   5			Eng. Properties of Soils and their Measurements 323-CE-3 3   3			Structural Analysis -1 412-CE-5 5   5			Reinforced Concrete -1 413-CE-5 5   5			Foundation Engineering -1 434-CE-5 5   5			Elective 1 4   5			Elective 3 4   4			Industry and the Environment 521-CE-3 3   3		
				Structure Analysis -1 321-CE-5 5   5			Geographic Information Systems (GIS) 324-CE-6 6   7			Properties and Testing of Concrete 313-CE-3 3   3			Summer Training 400-CE-5 5   5			Transportation Systems 411-CE-5 5   7			Highway Engineering 425-CE-5 5   7			Reinforced Concrete -2 423-CE-5 5   5			Design of Steel Structures 523-CE-5 5   5			Elective 4 4   4					
																Graduation Project 519-CE-0 4   4			Hydrology 512-CE-5 5   5			Constructive Engineering 522-CE-3 3   3			Elective 4 4   4			Pavement design and Materials 1 511-CE-3 3   3					

# FLOWCHART FOR NEW CURRICULAM (Trimester)

Level/Trimester	First Year						Second Year						Third Year						Fourth Year						Fifth Year						Total			
	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15			280-281		
Credit Hrs	14		21		15		18		16		18		14		16		17		18		19		16		18		15		14		280			
Combort Hrs	21		28		18		21		17		21		16		18		17		19		18		16		17		15		281					
No. Courses	3		3		3		4		4		4		4		4		4		5		5		5		4		4		63					
General Education	The Entrance to the Islamic Culture 111-HO-2 2   2		Islamic Culture 2 112-HO-2 2   2		Islamic Culture 3 113-HO-2 2   2		Creativity and Innovation 221-GE-3 3   3		Islamic Culture 4 114-HO-2 2   2		Professional Ethics and Practice 411-GE-3 3   3																				Total			
	Language Skills 201-ARAB-2 2   2						Learning Skills 211-GE-3 3   3				Arabic Writing 202-ARAB-2 2   2		Elective 1 (Soft Skills) 3   3																		88   81			
	Intensive English Program 1 211-ENG-5 6   12		Intensive English Program 2 212-ENG-4 6   12										Technical Reports Writing 301-ENG-3 3   3																					
Math, Basic Science & Other Engineering	General Chemistry 107-CHEM-5 5   7		Physics -1 129-PHYS-6 6   7		Engineering Drawing 111-GE-4 4   5		Production Technology and Workshop 221-ME-4 6   7				Linear Algebra 329-MATH-4 4   4		Principles of Statistics and Probability 329-STAT-3 3   3												Engineering Economy 311-EE-3 3   3						Total			
			Computer Science 104-CAS-3 3   5		Electric Engineering-1 219-EE-4 4   5		Physics -2 229-PHYS-6 6   7																										88   81	
			Differentiation and Integration 119-MATH-5 5   5		Differentiation and Integration 219-MATH-5 5   5		Differentiation and Integration 329-MATH-5 5   5				Differential Equations 319-MATH-5 5   5																							
Civil Engineering Courses					Statics 211-GE-5 5   7		Surveying 234-CE-5 5   7		Dynamics 314-CE-3 3   3		Fluid Mechanics 322-CE-5 5   7		Hydraulics 332-CE-5 5   6		Soil Mechanics 414-CE-6 6   8		Hydrology 423-CE-5 5   6		Design of Steel Structures 425-CE-5 5   6								Construction Management 581-CE-3 3   3						Total	
									Mechanics of Materials 223-CE-6 5   6		Construction Materials 312-CE-5 5   6		Structural Analysis -1 321-CE-5 5   6		Geographic Information Systems (GIS) 334-CE-5 5   7		Structural Analysis -2 412-CE-5 5   6		Reinforced Concrete -1 413-CE-5 5   6		Foundation Engineering -1 424-CE-5 5   6						Senior Design Project 598-CE-4 4   4		Special Topics 591-CE-4 4   4		Construction Engineering 582-CE-3 3   3		828   148	

# Students Enrollment and Graduation statistics



## Master Program -Construction Project Management (CPM)

### PROGRAM VISION STATEMENT:

The Construction Project Management program is a distinguished academic program foster towards quality education and scientific research thereby promoting a sustainable infrastructural development of the Kingdom.

### PROGRAM MISSION STATEMENT:

Construction Project Management Graduates with high level of competence in academic excellence, modern technology, scientific research, and service to the community.

### PROGRAM OBJECTIVES (POs):

The Construction Project Management program focuses on the following objectives:

- To equip graduates with diverse knowledge and skills that makes them capable of coping with the complex environment of construction project management.
- To equip graduates for professional advancement, societal values, and leadership responsibility in their respective organizations.
- To prepare graduates to pursue advanced degrees or seek professional certification in construction Engineering and Management or related field.
- To prepare graduates to actively participate in professional and scientific activities relevant to Construction Project Management.



# Master Program -Construction Project Management (CPM)

## PROGRAM LEARNING OUTCOMES (PLOs):

- In-depth knowledge and comprehension of processes, materials, techniques, practices, conventions and/or terminology of Construction Management.
- Knowledge and comprehension of research methodology and inquiry techniques
- An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- An ability to communicate effectively with a range of audiences
- An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
- An ability to conduct sound research in Construction Project Management by utilizing appropriate research methods.
- An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

# Master Program -Construction Project Management (CPM)

## 1. Study Plan Structure

Program Structure		No. of Courses	Credit Hours	Percentage
Course	Required	7	28	62
	Elective	2	8	18
Graduation Project (if any)		--	--	--
Thesis (if any)		1	9	20
Field Experience (if any)		--	--	--
Others (.....)		--	--	--
Total		10	45	100

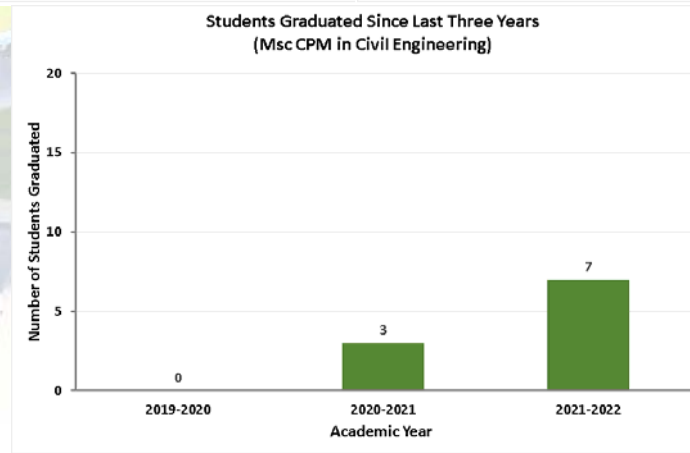
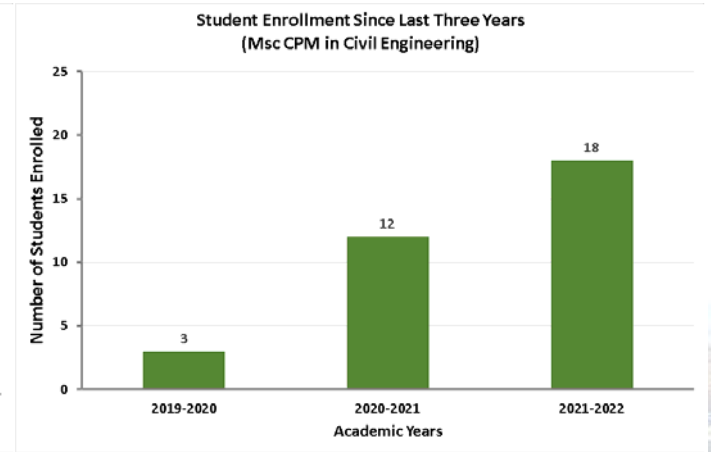
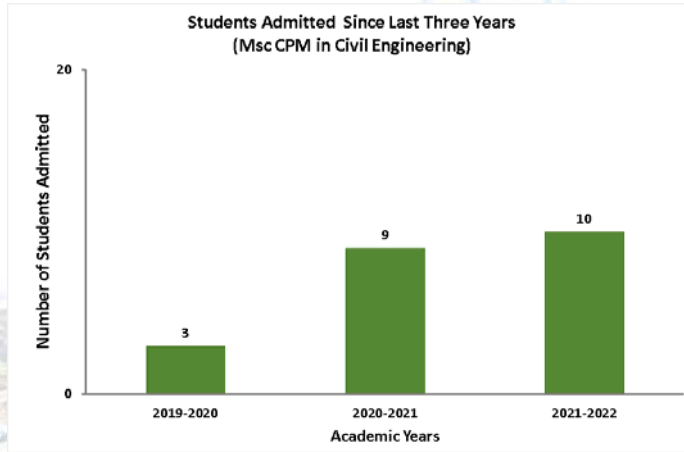
## 2. Program Courses

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours
Year 1	Level 1	CE781	Construction Planning and Control	Required	NA	4
		CE783	Research Methodology	Required	NA	4
	Level 2	CE782	Quality Project Management	Required	NA	4
		CE785	Risk management in construction	Required	NA	4
	Level 3	CE784	Construction Contracts and Procurement	Required	NA	4
		CE786	Project Financial Management	Required	NA	4
Year 2	Level 4	CE788	Value Engineering	Required	NA	4
		CE799	Master's thesis	Required	NA	9
	Level 5	CEXXX	Elective 1	Elective	NA	4
		CE799	Master's thesis	Required	NA	9
	Level 6	CEXXX	Elective 2	Elective	NA	4
		CE799	Master's thesis	Required	NA	9

### 3. Elective Courses

	Course Code	Course Title	Credit Hours
<b>Elective 1</b>	787 CE-4	Computer applications in construction	4
	789 CE-4	Infrastructure Development and Management	4
	790 CE-4	Quality and Safety in Construction	4
<b>Elective 2</b>	791 CE-4	Sustainable Materials and Green Buildings	4
	792 CE-4	Building Services and Maintenance Management	4
	793 CE-4	Construction Practices and Equipment	4

# Students Enrollment and Graduation statistics for Master Program -Construction Project Management (CPM)



## Civil Engineering Laboratories

- Soil Mechanics and Foundation Laboratory
- Surveying Laboratory
- Fluid Mechanics and Hydraulics Laboratory
- GIS Laboratory
- Concrete and Structural Laboratory
- Highway and Building Materials Laboratory
- Environmental Engineering Laboratory

More Information related to the laboratories: <http://civil.engineering.kku.edu.sa/en/content/473>

## Project titles of Senior design Project (graduation project) of Year 2021-2022 (1/3)

Title	Supervisor
Traffic Impact study for King Khalid University	Dr. Saeed Alqadhi
Study and design of a drinking water distribution network in the city of Abha	Dr. Hamdi Ayed
Hydrological and hydraulic study for the design of a reinforced concrete beam bridge	Dr. Hamdi Ayed
Design of a combined structure using Cobiax System	Dr. Mohamed Hecmi El Ouni
Design and Modelling of Smart retaining wall for rockfall prediction in Al Sulbat road	Dr. Khaled Khedher
Determination of Soil properties for Sandy Soils using Laboratory testing in Aseer Region	Dr. Ahmed Babaker
Characterization of Aseer Region Sabkha Soil	Dr. Mohd Ahmed

## Project titles of Senior design Project (graduation project) of Year 2021-2022 (2/3)

Title	Supervisor
Compressive strength index of Fibre Concretes	Dr. Siva Kumar
Design of a Waste Water Treatment Plant for Abha City	Dr. Mohammad Abul Hasan
Groundwater potential mapping using AHP & Geoinformatics: A Case study of Abha-Khemis Watershed	Dr. Javed Mallick
Prioritizing region restoration management and development based on hydrochemical characteristic of surface water within Bisha watershed of Saudi Arabia	Dr. Javed Mallick
Design of industrial structural steel building	Dr. Yasser Alashker
Design of Airplane Structural steel building	Dr. Yasser Alashker
Structural design of a reinforced concrete administrative building	Dr. Khalid Al Hadi



## Project titles of Senior design Project (graduation project) of Year 2021-2022 (3/3)

Title	Supervisor
Techniques of strengthening structural member in reinforced concrete structures	Dr. Khalid Al Hadi
Design of a high rise building subjected to wind loads	Dr. Mohamed Hecmi El Ouni
Development of Interlocking bricks using desert sand	Dr. Jameel Mohammed
Design and Analysis of polymer-based absorbent to enhance infiltration rate of sandy soil in Abha, Saudi Arabia	Roohul Abad Khan
Design and analysis for enhancement of water retaining capacity of soil in Semi-Arid region of Abha, Saudi Arabia	Roohul Abad Khan
Design of Cantilever retaining wall along Prince Sultan Road	Saiful Islam
Design of counterfort retaining wall along Talal Abha Road	Saiful Islam

## Thesis allotted for Master Program -Construction Project Management (CPM) for academic year 2020-2021

Title	Student Name	Supervisor
The Impact of Total Quality Management implementation on Saudi Arabia Construction industry	Bandar Ali Abdullah Alqahtani	Dr. Jameel Mohammed Sardar Ali
Status of the National Project Guide Implementation and its Impact on the Infrastructure Projects in Saudi Arabia	Yazeed Abdullah Alragabah	Dr. Mohad Ahmed
Intelligent Decision Support System for safe and sustainable construction site in a mountainous region: GIS Based Machine Learning techniques	Abdulaziz Awadh Ibnatiq	Dr. Javed Mallick

## Thesis allotted for Master Program -Construction Project Management (CPM) for academic year 2021-2022

Title	Student Name	Supervisor	Co-Supervisor
Construction phase analogy and materials resource allocation using smart management tools	Hadi Mesfer Ali	Dr. Sivakumar Anandan	Dr. Mohammed Abdullah Dahem

Smart construction sites in KSA: challenges and prospects	Ahmad Mohammad Sharqi	Dr. Mohamed Hechmi El Ouni	Dr. Salah Essoulamy
Productivity based method for forecasting cost and time of earthmoving operations using GPS and GIS tools: Case study in Aseer province	Ali Yahya	Dr. Khaled Khedher	Dr. Salah Essoulamy
The integrated management system for quality, environment, health and safety in small, medium sized enterprises and industries in Saudi Arabia	Abdulelah Nasser Almuoetah	Dr. Hamdi Ayed	Dr. Ibrahim Falqi
Sustainable waste management for the kingdom of Saudi Arabia	Khaled Saleh Jelhan	Dr. Mohd Abul Hasan	Dr. Mohammed Abdullah Dahem
Implementation of total quality management (TQM) in Saudi companies	Majed Alzahrani	Dr. Jameel Mohammed Sardar	Dr. Ibrahim Falqi
The consultant's contract in its current form and its impact on the delay of projects	Mohammed Saad Abdullah Al Zahrani	Dr. Mohammed Abdullah Dahem	Dr. Wael Shabaan

## Faculty

The Civil Engineering department has a mechanism for hiring the excellent faculty, for continuous professional development and for facilitating the research work of faculty. The Civil Engineering department comprises of faculty with high academic achievements and a rich experience of teaching in various countries of the globe. In addition to academic experience, many faculty have experience in industry, consultancy, and professional organizations. The Civil Engineering faculties have also administrative experience at the college and the university levels. One of the Civil Engineering faculty has been appoint recently as a Dean of the college. The department head of the academic program is responsible for all aspects of management of the program, including curriculum development, instructional delivery, student assessment, schedule of classes and accreditation matters coordination. The department head discharges its duties through the various academic committees formed of specialized faculties for different aspects of management of the program. The department head is not responsible for personnel matters. The department head reports to the Dean of the college. The Dean is the administrative position responsible for all aspects of the academic process in the college.

## Faculty Workload

The assigned workload of the faculty is as per the university current regulations and it is according to the academic rank of the faculty. Based on the rank and regulation, the teaching load assigned to the faculty without any extra remunerations are as given below.

1. Professor: 10 credit hours
2. Associate Professor: 12 credit hours
3. Assistant Professor: 14 credit hours
4. Lecturer: 16 credit hours

The faculty have the administrative responsibilities, in addition to academic, assigned lesser teaching load. The teaching load assigned is in line to support the faculty professional development, educational quality improvement activities and for facilitating their research work. The working hours assigned for Saudi faculty are 35 hours per week and for faculty on yearly contract, the working hours are 40 hours per week. The working hours are meant for teaching, research, academic advising, laboratory supervision, and any other tasks assigned to them.

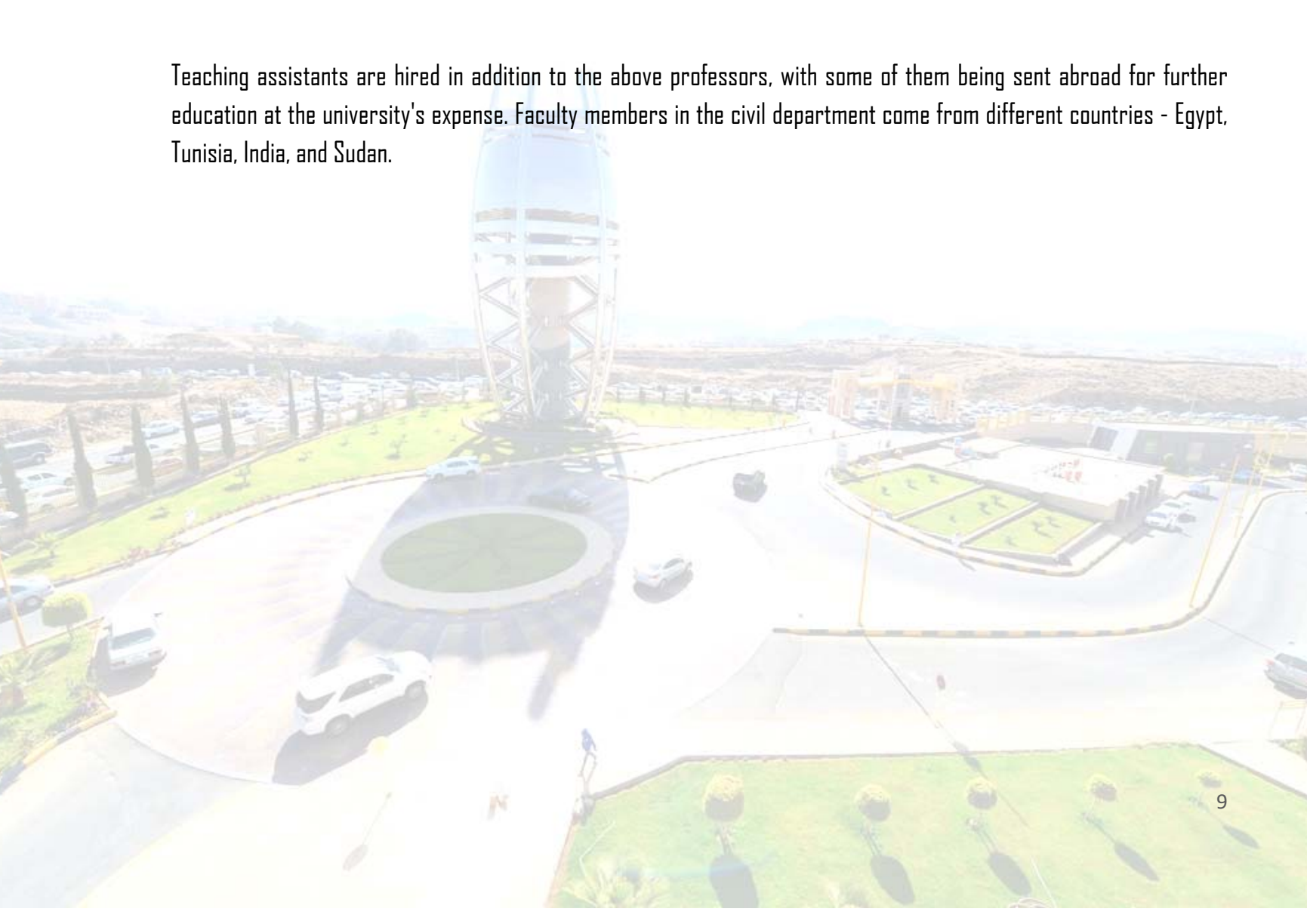
## Faculty Size

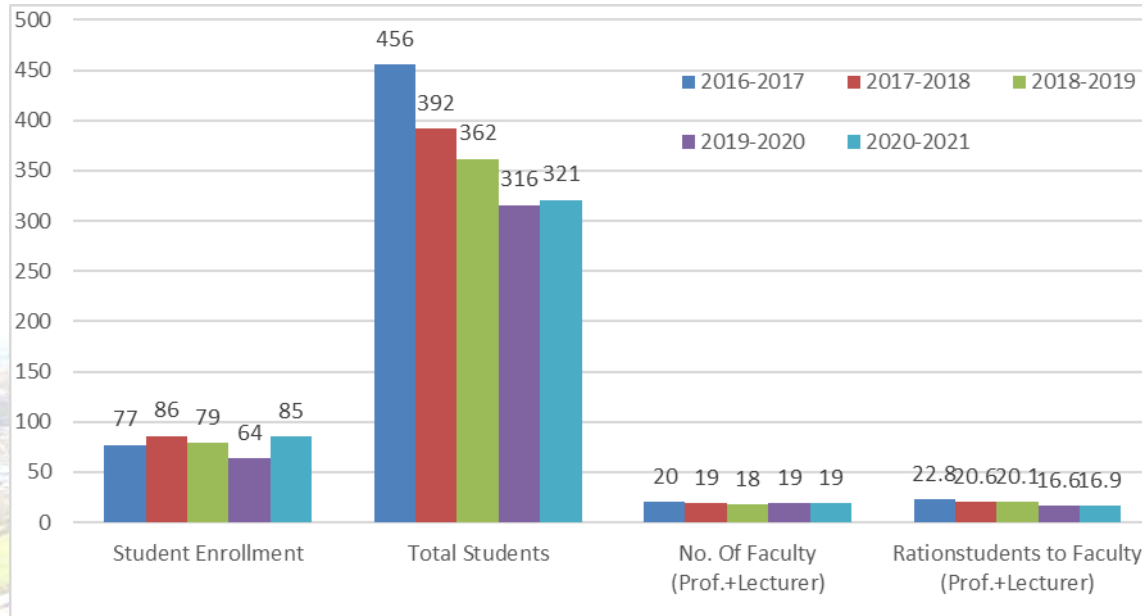
There are currently 17 PhD academics (2 full professor, 6 associate professors, and 9 assistant professors) and 2 M.Sc. teachers and 1 teaching assistant at the Department of Civil Engineering. In the Civil Engineering degree, there are approximately 321 students enrolled (Spring 2021).

Figure shows the number of teachers and staff members, as well as their distribution, for the years 2017 to 2021, as well as the number of students enrolled in the Civil Engineering program. The current faculty-to-student ratio for professors and lecturers is 16.9. (one faculty member for every 17 students). In 2012-2013, student enrollment was at an all-time high as a result of government initiatives encouraging working professionals to enroll in order to upgrade their abilities.

The current faculty and student-to-faculty ratios are more than adequate to meet the needs of students, including teaching (introducing sections based on class size) with a reasonable number of students in each, reserving reasonable office hours for students, advising, and other tasks and duties, as well as allowing faculty members to perform other administrative, research, committee participation, professional development, and other tasks and duties.

Teaching assistants are hired in addition to the above professors, with some of them being sent abroad for further education at the university's expense. Faculty members in the civil department come from different countries - Egypt, Tunisia, India, and Sudan.





**Graphical representation of faculty and students size during the different years**



**Table: Faculty Details**

<b>Faculty Name</b>	<b>Designation</b>	<b>Academic Position</b>	<b>Email</b>	<b>ResearchGate link</b>
Dr. Ibrahim Idrees A. Falqi	--	Associate Professor	<a href="mailto:ifalqi@kku.edu.sa">ifalqi@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Ibrahim_Falqi">https://www.researchgate.net/profile/Ibrahim_Falqi</a>
Dr. Mohammed Abdullah Dahim	Vice President	Associate Professor	<a href="mailto:madahim@kku.edu.sa">madahim@kku.edu.sa</a>	-
Dr. Majed Al Subih	Vice Dean of Academic Affairs	Assistant Professor	<a href="mailto:malsubih@kku.edu.sa">malsubih@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Majed-Alsubih">https://www.researchgate.net/profile/Majed-Alsubih</a>
Dr. Saed Dhafer M. Alqadhi	Vice Dean of Higher Studies and research	Assistant Professor	<a href="mailto:sdalqadi@kku.edu.sa">sdalqadi@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Saed-Alqadhi">https://www.researchgate.net/profile/Saed-Alqadhi</a>
Dr. Nabil Ben Kahla	Chairman	Associate Professor	<a href="mailto:nbohlal@kku.edu.sa">nbohlal@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Nabil-Ben-Kahla">https://www.researchgate.net/profile/Nabil-Ben-Kahla</a>
Dr. Siva Kumar Anandan	Coordinator Quality and Development Committee	Professor	<a href="mailto:ksiva@kku.edu.sa">ksiva@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Sivakumar-Anandan">https://www.researchgate.net/profile/Sivakumar-Anandan</a>
Dr. Mohammed Jameel	Coordinator Higher Studies for Masters and Research Committee	Professor	<a href="mailto:jamoali@kku.edu.sa">jamoali@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Mohammed-Jameel-3">https://www.researchgate.net/profile/Mohammed-Jameel-3</a>

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Javed Mallick	Member in Higher Studies for Masters and Research Committee	Associate Professor	<a href="mailto:jmallick@kku.edu.sa">jmallick@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Javed_Mallick">https://www.researchgate.net/profile/Javed_Mallick</a>
Dr. Khalid Al Hadi	Coordinator Academic Guidance and Student Affairs Committee	Assistant Professor	<a href="mailto:kalhdi@kku.edu.sa">kalhdi@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Khalid_Alhadi">https://www.researchgate.net/profile/Khalid_Alhadi</a>
Dr. Mishal Qablan	Member in Timetable and Examination Committee	Assistant Professor	<a href="mailto:mgalqhtani@kku.edu.sa">mgalqhtani@kku.edu.sa</a>	
Dr. Mohamed Elouni	Coordinator, Plan and Curricula committee	Assistant Professor	<a href="mailto:melouni@kku.edu.sa">melouni@kku.edu.sa</a>	<a href="https://www.researchgate.net/researcher/2049974602_M_H_El_Ouni">https://www.researchgate.net/researcher/2049974602_M_H_El_Ouni</a>
Dr. Mohd Abul Hasan	Member in Quality and Development Committee	Associate Professor	<a href="mailto:mahasan@kku.edu.sa">mahasan@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Mohd_Hasan6">https://www.researchgate.net/profile/Mohd_Hasan6</a>
Dr. Mohd. Ahmed	Member in Quality and Development Committee	Associate Professor	<a href="mailto:moahmed@kku.edu.sa">moahmed@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Mohd_Mohd3">https://www.researchgate.net/profile/Mohd_Mohd3</a>
Dr. Yasser Alashker	Coordinator Educational Services Committee	Assistant Professor	<a href="mailto:yalashqr@kku.edu.sa">yalashqr@kku.edu.sa</a>	<a href="https://www.researchgate.net/researcher/2050378350_Yasser_Alashker">https://www.researchgate.net/researcher/2050378350_Yasser_Alashker</a>

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Ahmad Babakar	Member in Academic Guidance and Student Affairs Committee	Assistant Professor	<a href="mailto:abalhaj@kku.edu.sa">abalhaj@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Ahmed-Elhag/contributions">https://www.researchgate.net/profile/Ahmed-Elhag/contributions</a>
Dr. Khaled Mohamed Khedher	Coordinator, Community Service Committee	Assistant Professor	<a href="mailto:kkhedher@kku.edu.sa">kkhedher@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Khaled-Khedher">https://www.researchgate.net/profile/Khaled-Khedher</a>
Dr. Hamdi Alhadi Ayed	Coordinator Timetable and Examination Committee	Assistant Professor	<a href="mailto:hayed@kku.edu.sa">hayed@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Ayed-Hamdi-2">https://www.researchgate.net/profile/Ayed-Hamdi-2</a>
Engr. Saiful Islam	Member in Educational Services Committee	Lecturer	<a href="mailto:sfakrul@kku.edu.sa">sfakrul@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Saiful-Islam6">https://www.researchgate.net/profile/Saiful-Islam6</a>
Engr. Roohul Abad	Member in Community Service Committee	Lecturer	<a href="mailto:rakhan@kku.edu.sa">rakhan@kku.edu.sa</a>	<a href="https://www.researchgate.net/profile/Roohul-Khan">https://www.researchgate.net/profile/Roohul-Khan</a>
Amer Tarahib Ayedh Alkhamash	--	Teaching Assistant	<a href="mailto:aalkhamash@kku.edu.sa">aalkhamash@kku.edu.sa</a>	---
Engg. Abdul Aziz Mohammad Alagmi	--	Teaching Assistant	<a href="mailto:aalagmi@kku.edu.sa">aalagmi@kku.edu.sa</a>	
Engg. Mohannad Riyadh	--	Teaching Assistant	<a href="mailto:mraasiri@kku.edu.sa">mraasiri@kku.edu.sa</a>	
Engg. Abdullah Asiri	--	Teaching Assistant	<a href="mailto:anmasiri@kku.edu.sa">anmasiri@kku.edu.sa</a>	

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Mohammad Mahdy Almasabi	--	Lecturer	<a href="mailto:mmahmadl@kku.edu.sa">mmahmadl@kku.edu.sa</a>	---
Abdullah Fayez Al Asmari	--	Lecturer		---
Engg. Dhafar Alqahtani	--	Lecturer	<a href="mailto:dhafar@kku.edu.sa">dhafar@kku.edu.sa</a>	
Salman Fahad Khedher	--	Teaching Assistant		

