



" عراقة وجودة" "Tradition and Quality"

and Infrastructure Engineering Department	Study Plan for Bachelor program - Study Plan Development and Updating Procedures/ Civil and Infrastructure Engineering Department	QF09/0407-4.0E
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Course Plan for Civil and Infrastructure Engi	neering (Bachelor Program) No.: (1-2023/2024)							
Approved by Deans Council by decision (29/05/2023-2024) dated (18/12/2023)								
(160) Credit Hours	Study system / hybrid program							

			1	8
Type of specialty	Humanitarian	☑ Scientific/technical		Medical Sciences

Teaching style	Percentage of study plan hours / number	Model used (synchronous: asynchronous)
Complete e-learning courses	17% / number (27) C h	1:1 (For Thur., Sat.)
Blended Learning courses (For Humanity)	40% - 60% Maximum / number() C h	1:1 (For Sun. Tue.) or (Mon. Wed.)
Blended learning courses (for scientific and medical)	33% / number (52) C h	1:1 (For Sun. Tue.) or (Mon. Wed.)
Traditional learning courses (for humanity)	20% Minimum / number () C h	2:0 For all academic divisions
Traditional learning courses (for scientific and medical)	50% / number (81) C h	2:0 For all academic divisions

Important note: (The teaching patterns of the subjects are distributed at all academic levels in the program)

Program vision: Towards a competitive faculty committed to excellence in teaching, innovative research, entrepreneurship and community service.

Program mission and objectives:

1. Pursue careers in civil and infrastructure engineering, implementing technical solution while demonstrating collaborative and communication.

2. Seek higher degrees in Civil and Infrastructure Engineering and embark on lifelong learning.

3. Seek professional licensure, apply their skills ethically, and being aware of the impact of Civil and Infrastructure Engineering projects on society as well as environment.

Program learning outcomes (*(MK= Main Knowledge, MS= Main Skills, MC= Main Competences)*

	Main knowledge						
MK1	Identify, formulate, and solve complex engineering problems by applying principles of engineering,						
	science, and mathematics						
MK2	Acquire and apply new knowledge as needed, using appropriate learning strategies						
MK3	Understand and explain the key concepts used in project management and development, public policy,						
	public administration, leadership principles and licensure						
	Basic skills						
MS1	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						
MS2	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						
MS3	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions						
MS4	Acquire and apply new knowledge as needed, using appropriate learning strategies						
	General competencies						
MC1	An ability to communicate effectively with a range of audiences						
MC2	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						
MC3	Acquire and apply new knowledge as needed, using appropriate learning strategies						
MC4	Understand and explain the key concepts used in project management and development, public policy, public administration, leadership principles and licensure.						





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F Fully electronic learning	learning	g sty Blended	고 Learning	Course No.	Course name	Creatt nour		Theory Hours	Practical Hours	Prerequisite Co-requisite	-	Indica Semester	year
	1.	Rec	quire	ments (27)	Credit Hours								
	1.1	l M	landa	tory requir	ement (21 credit hour)								
•				0420101	Military Sciences	3		3	0			2	5
٠				0420115	Communication Skills in Arabic	3		3	0	Remedial Arabic Langu	iage	1	1
٠				0420122	Communication Skills in English	3		3	0	Remedial English Lang	uage	2	1
٠				0420151	National Education	3		3	0			1	1
•				0420171	Life Skills	3		3	0			1	3
•				0420241	Leadership and Social Responsibility	3		3	0			2	5
•				0420261	Entrepreneurship and Innovation	3		3	0			2	3
	1.2	Un	iversi	ty elective r	requirements(06 credit hour)								
•				0420212	Islamic Culture	3		3	0			1	5
•				0420134	Sport and Health	3		3	0			2	4
•				0420142	Human Civilization	3		3	0			2	4
•				0420155	Law in Life	3		3	0			2	4
•				0420172	Digital Culture	3		3	0	Remedial computer skills		2	4
•				0420201	First Aid	3		3	0			1	5
•				0420253	Development and Environment	3		3	0			1	5
•				0420341	Principles of Garman Language	3		3	0			1	5
•				0420392	Principles of Psychology	3		3	0			1	5
													I
Т	eachin style	g										Indica	ıtive
Fully electronic	Blended	Traditional	Co	ourse No.	Course name	Credit hour	Theory Hours		Practical Hours	Prerequisite Co-requisite		Semester	уеаг
	2.	Fac	culty 1	Requiremen	nts (23) Credit Hours								
		•	(0120121	Calculus I	3	3		0			1	1
		•	(0150101	General Physics Laboratory I	1	0		3	Co. General Physics I		1	1
		•	(0150111	General Physics I	3	3		0			1	1
	•		(0908201	Technical Writing and Professional Ethics	2	2		0	Communication skills in	English	1	2
	•		(0908461	Project Management and Value Engineering	3	3		0	Engineering Economics		1	5
	•		(0909101	Computer Engineering Applications	3	3		0	Remedial Computer Skil	ls	2	1
	•		(0909404	Engineering Economics	3	3		0	Engineering Numerical A	Analysis	1	4
		•	(0911101	Engineering Workshops	2	1		3	-		1	1
		•	(0911102	Engineering Drawing	3	0		6	-		2	1





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Fully electronic	Blended	Traditional	Course No.	Course name	Credit hour	Theory Hours	Practical Hours	Prerequisite Co-requisite	Indica Semester	ative year		
. 1	3.	Majo	r Requiren	nents (110) Credit Hours								
3.1	Mand	latory	requireme	ents (88) credit hours	-	<u> </u>		Station				
		•	0908203	Strength of Materials	3	3	0	Statics	2	2		
		•	0908204	Strength of Materials Laboratory	1	0	3		2	2		
	•		0908205	Probability and Statistics for Engineers	3	3	0	Calculus I Conoral Physics I	1	2		
		•	0908206	Statics	3	3	0	Station	2	2		
	-		0908207	Dynamics	3	3	0	General Chemistry for Engineering	1	2		
	•		0908221	Engineering Geology	3	3	0	Students	1	2		
		•	0908224	Engineering Geology Laboratory	1	0	3	Co. Engineering Geology	1	2		
		•	0908310	Applied Mathematics	3	3	0	Linear Algebra	2	3		
		•	0908311	Applied Mathematics Laboratory	1	0	3	Co. Applied Mathematics	2	3		
	•		0908326	Material Science	2	2	0	Engineering Geology	1	3		
	•		0908327	Concrete Technology	3	3	0	Material Science		3		
		•	0908328	Concrete Technology Laboratory	1	0	3	Co. Concrete Technology		3		
		•	0908331	Structural Analysis I	3	3	0	Strength of Materials		3		
		•	0908332	Structural Analysis II	3	3	0	Structural Analysis I		3		
	•		0908337	Fluid Mechanics for Civil Engineering	3	3	0	Statics	1	3		
		•	0908341	Surveying	3	3	0	Calculus I	1	2		
		•	0908342	Surveying Laboratory	1	0	3	Co. Surveying	1	2		
	•		0908345	Linear Algebra	3	3	0	Calculus I	1	3		
		•	0908353	Hydraulics	3	3	0	Fluid Mechanics for Civil Engineering	2	3		
		•	0908356	Water and Environmental Laboratory	1	0	3	Co. Water and Environmental Engineering	1	4		
	•		0908359	CAD in Civil Engineering	3	3	0	Engineering Drawing	2	2		
		•	0908361	Geotechnical Engineering	3	3	0	Strength of Materials	2	3		
		•	0908362	Geotechnical Engineering Laboratory	1	0	3	Co. Geotechnical Engineering	2	3		
		•	0908401	Engineering Practical Training	3	0	9	Passing 115 Credits for 8 weeks (2	30 Hrs.))		
		•	0908433	Reinforced Concrete I	3	3	0	Structural Analysis I	1	4		
		•	0908434	Reinforced Concrete II	3	3	0	Reinforced Concrete I	2	4		
		•	0908435	Steel Structures Design	3	3	0	Structural Analysis II	2	4		
		•	0908441	Traffic and Transportation Engineering	3	3	0	Surveying		4		
		•	0908454	Engineering Hydrology	3	3	0	Hydraulics	2	4		
	•		0908457	Water and Environmental Engineering	3	3	0	Hydraulics	1	4		
		•	0908462	Foundation Engineering	3	3	0	Geotechnical Engineering	1	4		
	•		0908501	Graduation Project I	1	0	3	Passing Engineering Practical Training	1	5		
	•		0908502	Graduation Project II	2	0	6	Graduation Project 1	2	5		
		•	0908547	Highway and Pavement Design	3	3	0	Traffic and Transportation Engineering	2	4		
		•	0908548	Highway and Pavement Laboratory	1	0	3	Co. Highway and Pavement Design	2	4		
		•	0908571	Specifications and Quantity Surveying	3	3	0	Reinforced Concrete I	1	5		





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3.2 I	Electiv	ve req	uirements	(9) credit hours						
	•		0908503	Special Topics	3	3	0	Project Management and Value Engineering	5 th year	r level
	•		0908523	Infrastructure Systems	3	3	0	Project Management and Value Engineering	5 th year	level
	•		0908533	Pre-Stressed Concrete	3	3	0	Reinforced Concrete I	5th year	level
	•		0908535	Flood Risk Management	3	3	0	Engineering Hydrology	5 th year	level
	•		0908539	Introduction to Earthquake Engineering	3	3	0	Reinforced Concrete I	5 th year	level
	•		0908545	Highway Maintenance	3	3	0	Highway and Pavement Design	5 th year	level
	•		0908552	Water and Wastewater Networks Design	3	3	0	Hydraulics	5 th year	level
	•		0908563	Advanced Geotechnical Engineering	3	3	0	Geotechnical Engineering	5 th year	level
	•		0908586	Building Maintenance	3	3	0	Reinforced Concrete I	5 th year level	
	•		0908587	Geographic Information System (GIS)	3	3	0	Surveying	5 th year level	
	•		0908588	Advanced Construction Management	3	3	0	Project Management and Value Engineering	5 th year level	
	•		0908589	Intelligent Transportation System (ITS)	3	3	0	Traffic and Transportation Engineering	id Transportation 5 th year	
	•		0908593	Green Buildings and Sustainable Construction	3	3	0	Project Management and Value Engineering	5 th year level	
3.3 Sı	ippor	ting r	equiremen	ts (13) credit hours						
		•	0101104	Calculus II for Engineering Students	3	3	0	Calculus I	2	1
		•	0101273	Ordinary Differential Equations I	3	3	0	Calculus II for Engineering Students	2	2
		•	0201143	General Chemistry for Engineering Students	3	3	0	-	2	1
		•	0201144	General Chemistry Laboratory for Engineering Students	1	0	3	Co. General Chemistry for Engineering Students	2	1
	•		0911366	Engineering Numerical Analysis	3	3	0	Calculus II for Engineering Students	1	3

(The end of the study plan for the major students)

Subjects taught in the major for students of other majors (university requirements, college requirements, major family requirements, support requirements)

Tea	ching st	yle					н	
Fully electronic learning	Blended learning	Traditional learning	Course No.	Course name		Theory Hours	ractical Hours	The type of requirement and the recipient
	•		0908201	Technical Writing and Professional Ethics	2	2	0	Faculty Requirements
	•		0908461	Project Management and Value Engineering	3	3	0	Faculty Requirements