

Program Name: Civil Engineering
Qualification Level : Bachelor of Science Degree
Department: Civil Engineering
College: Engineering
Institution: Jouf University

Program Study Plan (Regular Track)

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours (LT, LB, TU)	Type of requirements (Institution, College or Department)
First Year	Level 1	ENGL 001	English Language (1)	Required	-----	6 (5,5,10)	University
		MTH 101	Introductory Mathematics	Required	-----	3 (2,0,2)	College
		CIS 101	Computer Skills	Required	-----	3 (2,2,0)	University
		EDU 101	University Life Skills	Required	-----	2 (2,0,0)	University
		Total Credit Hours				14 (11,5,12)	
	Level 2	ENGL 002	English Language (2)	Required	ENGL 001	6 (5,5,10)	University
		MTH 102	Differential Calculus	Required	MTH 101	3 (2,0,2)	College
		CHM 103	Chemistry	Required	-----	3 (2,2,0)	College
		CIS 102	Problem Solving and Programming	Required	CIS 101	3 (2,2,0)	College
		Total Credit Hours				15 (11,9,12)	
Second Year	Level 3	ARB 100	Arabic Language Skills	Required	-----	2 (2,0,0)	University
		ISL 103	Islamic Economic System	Required	-----	2 (2,0,0)	University
		PHS 101	General Physics (1)	Required	-----	4 (3,2,0)	College
		MTH 101	Engineering Drawing	Required	-----	2 (1,2,0)	College
		MEC 102	Engineering Design (1)	Required	-----	3 (2,2,0)	College
		MEC 103	Engineering Economy	Required	MTH 102	2 (2,0,0)	College
		MTH 203	Integral Calculus	Required	MTH 102	3 (2,0,2)	College
		Total Credit Hours				18 (14,6,2)	
	Level 4	ISL 107	Professional Ethics	Required	-----	2 (2,0,0)	University
		MEC 104	Engineering Design (2)	Required	MEC 102	2 (1,2,0)	College
		MEC 105	Basics of Engineering Technology	Required	MEC 101	2 (1,2,0)	College
		PHS 202	General Physics (2)	Required	PHS 101	4 (3,2,0)	College
		MTH 204	Advanced Calculus	Required	MTH 203	3 (2,0,2)	College
		MTH 281	Statistics and Probabilities	Required	MTH 203	3 (2,0,2)	College
		CVE 101	Engineering Mechanics (Statics)	Required	MTH 203, PHS 101	2 (2,0,1)	Department
		Total Credit Hours				18 (13,6,5)	
Third Year	Level 5	ARB 102	Writing Skills	Required	ARB 100	2 (2,0,0)	University
		ISL 10X	University Elective (1)	Elective	----	2 (2,0,0)	University
		MTH 305	Differential Equations	Required	MTH 204	3 (2,0,2)	College
		CVE 201	Computer Drawing	Required	MEC 101	3 (1,4,0)	Department
		CVE 211	Strength of Materials	Required	CVE 101	3 (2,2,0)	Department
		CVE 221	Geology for Civil Engineers	Required	PHS 101	2 (2,0,0)	Department
		CVE 251	Surveying	Required	MTH 204, MEC 101	3 (2,2,0)	Department
		Total Credit Hours				18 (13,8,2)	
	Level 6	ISL 10X	University Elective (2)	Elective	----	2 (2,0,0)	University
		MTH 382	Numerical Methods	Required	MTH 305	3 (2,0,2)	College
		CVE 202	Integrated Course for Civil Engineers	Required	CVE 201, PHS 202	3 (2,2,0)	Department
		CVE 212	Structural Analysis (1)	Required	CVE 211	3 (3,0,0)	Department
		CVE 213	Materials of Construction	Required	CVE 211	3 (2,2,0)	Department
		CVE 241	Fluid Mechanics	Required	MTH 204, PHS 101	3 (3,0,0)	Department
		Total Credit Hours				17 (14,4,2)	
Fourth Year	Level 7	CVE 311	Structural Analysis (2)	Required	CVE 212	3 (3,0,0)	Department
		CVE 312	Reinforced Concrete Design (1)	Required	CVE 212, CVE 213	3 (3,0,0)	Department
		CVE 321	Geotechnical Engineering (1)	Required	CVE 221	3 (2,2,0)	Department
		CVE 341	Hydraulics	Required	CVE 241	3 (2,2,0)	Department
		CVE 342	Hydrology and Water Resources Engineering	Required	CVE 241	3 (3,0,0)	Department
		Total Credit Hours				15 (13,4,0)	

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours (LT, LB, TU)	Type of requirements (Institution, College or Department)
Fifth Year	Level 8	CVE 313	Design of Steel Structures	Required	CVE 311	3 (3,0,0)	Department
		CVE 314	Reinforced Concrete Design (2)	Required	CVE 312	3 (3,0,0)	Department
		CVE 322	Geotechnical Engineering (2)	Required	CVE 321	2 (1,2,1)	Department
		CVE 331	Construction Management	Required	CVE 312	3 (3,0,0)	Department
		CVE 361	Transportation and Traffic Engineering	Required	CVE 251	3 (3,0,0)	Department
		CVE 371	Sanitary Engineering	Required	CVE 341	3 (3,0,0)	Department
		Total Credit Hours				17 (16,2,1)	
	Level 9	CVE 421	Foundation Engineering	Required	CVE 322	3 (3,0,0)	Department
		CVE 431	Construction Engineering and Sustainability	Required	CVE 312	2 (2,0,0)	Department
		CVE 441	Design of Hydraulic Structures	Required	CVE 341	3 (3,0,0)	Department
		CVE 4XX	Department Elective (1)	Elective	Department approval	3	Department
		CVE 491	Senior Project	Elective	Pass 110 Credits	4 (2,4,0)	Department
		Total Credit Hours				15	
	Level 10	EDU 102 BUS 101	University Elective (3)	Elective	----	2 (2,0,0)	University
		CVE 461	Highway Engineering	Required	CVE 361	3 (2,2,0)	Department
		CVE 4XX	Department Elective (2)	Required	Department approval	3	Department
		CVE 4XX	Department Elective (3)	Elective	Department approval	3	Department
		CVE 492	Special Topics in Civil Engineering	Required	Department approval	2 (2,0,0)	Department
		CVE 493	Field Training*	Required	Pass 110 Credits	2	Department
		Total Credit Hours				15	

Program Study Plan (Cooperative Track)

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours (LT, LB, TU)	Type of requirements (Institution, College or Department)
First Year	Level 1	ENGL 001	English Language (1)	Required	-----	6 (5,5,10)	University
		MTH 101	Introductory Mathematics	Required	-----	3 (2,0,2)	College
		CIS 101	Computer Skills	Required	-----	3 (2,2,0)	University
		EDU 101	University Life Skills	Required	-----	2 (2,0,0)	University
		Total Credit Hours					14 (11,5,12)
	Level 2	ENGL 002	English Language (2)	Required	ENGL 001	6 (5,5,10)	University
		MTH 102	Differential Calculus	Required	MTH 101	3 (2,0,2)	College
		CHM 103	Chemistry	Required	-----	3 (2,2,0)	College
		CIS 102	Problem Solving and Programming	Required	CIS 101	3 (2,2,0)	University
		Total Credit Hours					15 (11,9,12)
Second Year	Level 3	ARB 100	Arabic Language Skills	Required	-----	2 (2,0,0)	University
		ISL 103	Islamic Economic System	Required	-----	2 (2,0,0)	University
		PHS 101	General Physics (1)	Required	-----	4 (3,2,0)	College
		MEC 101	Engineering Drawing	Required	-----	2 (1,2,0)	College
		MEC 102	Engineering Design (1)	Required	-----	3 (2,2,0)	College
		MEC 103	Engineering Economy	Required	MTH 102	2 (2,0,0)	College
		MTH 203	Integral Calculus	Required	MTH 102	3 (2,0,2)	College
		Total Credit Hours					18 (14,6,2)
	Level 4	ISL 107	Professional Ethics	Required	-----	2 (2,0,0)	University
		MEC 104	Engineering Design (2)	Required	MEC 102	2 (1,2,0)	College
		MEC 105	Basics of Engineering Technology	Required	MEC 101	2 (1,2,0)	College
		PHS 202	General Physics (2)	Required	PHS 101	4 (3,2,0)	College
		MTH 204	Advanced Calculus	Required	MTH 203	3 (2,0,2)	College
		MTH 281	Statistics and Probabilities	Required	MTH 203	3 (2,0,2)	College
		CVE 101	Engineering Mechanics (Statics)	Required	MTH 203, PHS 101	2 (2,0,1)	Department
		Total Credit Hours					18 (13,6,5)
Third Year	Level 5	ARB 102	Writing Skills	Required	ARB 100	2 (2,0,0)	University
		ISL 10X	University Elective (1)	Elective	----	2 (2,0,0)	University
		MTH 305	Differential Equations	Required	MTH 204	3 (2,0,2)	College
		CVE 201	Computer Drawing	Required	MEC 101	3 (1,4,0)	Department
		CVE 211	Strength of Materials	Required	CVE 101	3 (2,2,0)	Department
		CVE 221	Geology for Civil Engineers	Required	PHS 101	2 (2,0,0)	Department
		CVE 251	Surveying	Required	MTH 204, MEC 101	3 (2,2,0)	Department
		Total Credit Hours					18 (13,8,2)
	Level 6	ISL 10X	University Elective (2)	Elective	----	2 (2,0,0)	University
		MTH 382	Numerical Methods	Required	MTH 305	3 (2,0,2)	College
		CVE 202	Integrated Course for Civil Engineers	Required	CVE 201, PHS 202	3 (2,2,0)	Department
		CVE 212	Structural Analysis (1)	Required	CVE 211	3 (3,0,0)	Department
		CVE 213	Materials of Construction	Required	CVE 211	3 (2,2,0)	Department
		CVE 241	Fluid Mechanics	Required	MTH 204, PHS 101	3 (3,0,0)	Department
		Total Credit Hours					17 (14,4,2)
Fourth Year	Level 7	CVE 311	Structural Analysis (2)	Required	CVE 212	3 (3,0,0)	Department
		CVE 312	Reinforced Concrete Design (1)	Required	CVE 212, CVE 213	3 (3,0,0)	Department
		CVE 321	Geotechnical Engineering (1)	Required	CVE 221	3 (2,2,0)	Department
		CVE 341	Hydraulics	Required	CVE 241	3 (2,2,0)	Department
		CVE 342	Hydrology and Water Resources Engineering	Required	CVE 241	3 (3,0,0)	Department
		Total Credit Hours					15 (13,4,0)

Year	Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours (LT, LB, TU)	Type of requirements (Institution, College or Department)
	Level 8	CVE 313	Design of Steel Structures	Required	CVE 311	3 (3,0,0)	Department
		CVE 314	Reinforced Concrete Design (2)	Required	CVE 312	3 (3,0,0)	Department
		CVE 322	Geotechnical Engineering (2)	Required	CVE 321	2 (1,2,1)	Department
		CVE 331	Construction Management	Required	CVE 312	3 (3,0,0)	Department
		CVE 361	Transportation and Traffic Engineering	Required	CVE 251	3 (3,0,0)	Department
		CVE 371	Sanitary Engineering	Required	CVE 341	3 (3,0,0)	Department
	Total Credit Hours					17 (16,2,1)	
	Fifth Year	Level 9	CVE 491	Senior Project	Required	Pass 110 Credits	4 (2,4,0)
CVE 494			Cooperative Training**	Required	Pass 110 Credits	8	Department
Total Credit Hours					12		
Level 10		EDU 102 BUS 101	University Elective (3)	Elective	----	2 (2,0,0)	University
		CVE 421	Foundation Engineering	Required	CVE 322	3 (3,0,0)	Department
		CVE 431	Construction Engineering and Sustainability	Required	CVE 312	2 (2,0,0)	Department
		CVE 441	Design of Hydraulic Structures	Required	CVE 341	3 (3,0,0)	Department
		CVE 461	Highway Engineering	Required	CVE 361	3 (2,2,0)	
		CVE 4XX	Department Elective (1)	Elective	Department approval	3	Department
	CVE 492	Special Topics in Civil Engineering	Required	Department approval	2 (2,0,0)	Department	
Total Credit Hours					18		

List of Elective Courses:

Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
CVE 411	Advanced Structural Analysis	Elective	CVE 311	3 (3,0,0)	Department
CVE 412	Structural Analysis Using Finite Elements	Elective	CVE 311	3 (3,0,0)	Department
CVE 413	Advanced Reinforced Concrete Design	Elective	CVE 314	3 (3,0,0)	Department
CVE 414	Wind and Earthquake Resistance Design	Elective	CVE 314	3 (3,0,0)	Department
CVE 415	Advanced Steel Design	Elective	CVE 313	3 (3,0,0)	Department
CVE 416	Advanced Materials of Construction	Elective	CVE 213	3 (2,2,0)	Department
CVE 422	Applications in Foundation Engineering	Elective	CVE 421	3 (3,0,0)	Department
CVE 423	Soil Improvement	Elective	CVE 322	3 (3,0,0)	Department
CVE 424	Excavation Support and Tunneling Methods	Elective	CVE 322	3 (3,0,0)	Department
CVE 432	Construction Estimating and Scheduling	Elective	CVE 331	3 (3,0,0)	Department
CVE 433	Sustainability Energy and Materials Use	Elective	CVE 331	3 (3,0,0)	Department
CVE 442	Irrigation and Drainage Systems	Elective	CVE 341	3 (3,0,0)	Department
CVE 443	Harbor and Coastal Engineering	Elective	CVE 341	3 (3,0,0)	Department
CVE 444	Dams Engineering	Elective	CVE 341	3 (3,0,0)	Department
CVE 451	Remote Sensing	Elective	CVE 251	3 (2,2,0)	Department
CVE 452	Geographic Information Systems	Elective	CVE 251	3 (2,2,0)	Department
CVE 453	Photogrammetry	Elective	CVE 251	3 (2,2,0)	Department
CVE 462	Advanced Traffic Engineering	Elective	CVE 361	3 (3,0,0)	Department
CVE 463	Airports Planning and Design	Elective	CVE 361	3 (3,0,0)	Department
CVE 471	Environmental Engineering	Elective	CVE 371	3 (3,0,0)	Department
CVE 472	Solid Waste Treatment	Elective	CVE 371	3 (3,0,0)	Department
CVE 495	Computer Applications in Civil Engineering	Elective	CVE 311, CVE 312	3 (1,4,0)	Department

Total Credit Hours 162