



Civil and Environmental Engineering

Curriculum



جامعة المجمعة
Majmaah University



كلية الهندسة
College of Engineering



مركز الجودة
Quality Center

Structural Engineering

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 105	Differential Calculus	3	(3,1,0)	
PHY 103	General Physics	4	(3,1,2)	
GE 101	Fundamentals of Engineering Technology	2	(1,0,2)	
GE 102	Fundamentals of Engineering Drawing	3	(1,0,4)	
GE 103	Engineering Mechanics (Statics)	3	(3,1,0)	
		17		

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 204	Differential Equations	3	(3,1,0)	MATH 106 MATH 107
CE 210	Soil Mechanics and Foundation Engineering 1	3	(2,1,2)	CE 101
CE 214	Structural Analysis 1	3	(3,1,0)	GE 103
CE 240	Hydraulics 1	3	(2,1,2)	GE 108
CE 370	Surveying 1	3	(2,1,2)	MATH 107
		17		

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 306	Engineering Report Writing	2	(2,0,0)	STAT 201
CE 311	Soil Mechanics and Foundation Engineering 2	3	(2,1,2)	CE 210
CE 360	Environmental Engineering 1	2	(2,0,0)	GE 105
CE 362	Water Supply and Sewage Engineering	2	(2,1,0)	CE 241
CE 371	Surveying 2	3	(2,1,2)	CE 370
CE 380	Highway and Traffic Engineering	3	(3,1,0)	CE 370
		17		

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 407	Engineering Economy	2	(0 ·1 ·2)	
CE 425	Computer Applications in Structural Engineering	2	(1,0,2)	CEN 209
CE 419	Reinforced Concrete Design 3	3	(3,2,0)	CE 318
CE 421	Steel Structures Design 2	3	(3,2,0)	CE 320
CE 42x	Elective Course (1)	3	(3,2,0)	
CE 498	Senior Design (1)	2	(1,0,2)	
		17		

Second Semester

Code	Course	Credits	Contact hours	Prerequisite
MATH 106	Integral Calculus	3	(3,1,0)	MATH 105
MATH 107	Algebra and Analytical Geometry	3	(3,1,0)	
GE 108	Engineering Mechanics (Dynamics)	3	(3,1,0)	GE 103
GE 105	Engineering Chemistry	3	(3,1,0)	
CE 101	Engineering Geology	2	(1,0,2)	
CE 102	Civil Engineering Drawing	3	(1,0,4)	GE 102
		17		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
STAT 201	Statistics and Probability	3	(3,1,0)	
CEN 209	Computer Programming for Civil Engineering	3	(2,0,2)	
CE 217	Reinforced Concrete Design 1	3	(3,2,0)	CE 214
CE 212	Properties and Strength of Materials 1	3	(2,1,2)	
CE 215	Structural Analysis 2	3	(3,1,0)	GE 214
CE 241	Hydraulics 2	3	(2,1,2)	GE 240
		18		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 254	Numerical Methods	3	(3,1,0)	MATH 204
CE 313	Properties and Strength of Materials 2	3	(2,1,2)	CE 212
CE 316	Structural Analysis 3	3	(3,1,0)	CE 215
CE 318	Reinforced Concrete Design 2	3	(3,2,0)	CE 217
CE 320	Steel Structures Design 1	3	(3,2,0)	CE 214
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CE 399	Engineering Practice	0	90 Credit Hours must be completed
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Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 408	Engineering Project Management	2	(2,1,0)	GE 407
CE 422	Methods and Equipment of Construction	2	(2,1,0)	
CE 423	Contracts and Specifications	2	(2,1,0)	
CE 424	Building Construction	3	(3,1,0)	CE 419
CE 43x	Elective Course (2)	3	(3,1,0)	
CE 499	Senior Design (2)	2	(1,0,2)	CE 498
		16		

Surveying Engineering

Fall Semester

First Year

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 105	Differential Calculus	3	(3,1,0)	
PHY 103	General Physics	4	(3,1,2)	
GE 101	Fundamentals of Engineering Technology	2	(1,0,2)	
GE 102	Fundamentals of Engineering Drawing	3	(1,0,4)	
GE 103	Engineering Mechanics (Statics)	3	(3,1,0)	
		17		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MATH 106	Integral Calculus	3	(3,1,0)	MATH 105
MATH 107	Algebra and Analytical Geometry	3	(3,1,0)	
GE 108	Engineering Mechanics (Dynamics)	3	(3,1,0)	GE 103
GE 105	Engineering Chemistry	3	(3,1,0)	
CE 101	Engineering Geology	2	(1,0,2)	
CE 102	Civil Engineering Drawing	3	(1,0,4)	GE 102
		17		

Fall Semester

Second Year

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 204	Differential Equations	3	(3,1,0)	MATH 106 MATH 107
CE 210	Soil Mechanics and Foundation Engineering 1	3	(2,1,2)	CE 101
CE 214	Structural Analysis 1	3	(3,1,0)	GE 103
CE 240	Hydraulics 1	3	(2,1,2)	GE 108
CE 370	Surveying 1	3	(2,1,2)	MATH 107
		17		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
STAT 201	Statistics and Probability	3	(3,1,0)	
CEN 209	Computer Programming for Civil Engineering	3	(2,0,2)	
CE 217	Reinforced Concrete Design 1	3	(3,2,0)	CE 214
CE 212	Properties and Strength of Materials 1	3	(2,1,2)	
CE 215	Structural Analysis 2	3	(3,1,0)	GE 214
CE 241	Hydraulics 2	3	(2,1,2)	GE 240
		18		

Fall Semester

Third Year

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 306	Engineering Report Writing	2	(2,0,0)	STAT 201
CE 311	Soil Mechanics and Foundation Engineering 2	3	(2,1,2)	CE 210
CE 360	Environmental Engineering 1	2	(2,0,0)	GE 105
CE 362	Water Supply and Sewage Engineering	2	(2,1,0)	CE 241
CE 371	Surveying 2	3	(2,1,2)	CE 370
CE 380	Highway and Traffic Engineering	3	(3,1,0)	CE 370
		17		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 254	Numerical Methods	3	(3,1,0)	MATH 204
CE 372	Geodetic Surveying	3	(2,1,2)	CE 371
CE 381	Highway Materials and Construction	3	(2,1,2)	CE 380
CE 318	Reinforced Concrete Design 2	3	(3,2,0)	CE 217
CE 320	Steel Structures Design 1	3	(3,2,0)	CE 214
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CE 399	Engineering Practice	0	90 Credit Hours must be completed	
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Fall Semester

Fourth Year

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 407	Engineering Economy	2	(2,1,0)	
CE 473	Computer Applications in Surveying Engineering	2	(1,0,2)	CEN 209
CE 474	Photogrammetric	3	(3,1,0)	CE 372
CE 482	Railway Engineering	3	(3,1,0)	CE 371
CE 47x	Elective Course (5)	3	(3,1,0)	
CE 498	Senior Design (1)	2	(1,0,2)	
		17		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 408	Engineering Project Management	2	(2,1,0)	GE 407
CE 422	Methods and Equipment of Construction	2	(2,1,0)	
CE 423	Contracts and Specifications	2	(2,1,0)	
CE 475	Remote Sensing	3	(3,1,0)	CE 474
CE 48x	Elective Course (6)	3	(3,1,0)	
CE 499	Senior Design (2)	2	(1,0,2)	CE 498
		16		

Water and Environmental Engineering

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 105	Differential Calculus	3	(3,1,0)	
PHY 103	General Physics	4	(3,1,2)	
GE 101	Fundamentals of Engineering Technology	2	(1,0,2)	
GE 102	Fundamentals of Engineering Drawing	3	(1,0,4)	
GE 103	Engineering Mechanics (Statics)	3	(3,1,0)	
		17		

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 204	Differential Equations	3	(3,1,0)	MATH 106 MATH 107
CE 210	Soil Mechanics and Foundation Engineering 1	3	(2,1,2)	CE 101
CE 214	Structural Analysis 1	3	(3,1,0)	GE 103
CE 240	Hydraulics 1	3	(2,1,2)	GE 108
CE 370	Surveying 1	3	(2,1,2)	MATH 107
		17		

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 306	Engineering Report Writing	2	(2,0,0)	STAT 201
CE 311	Soil Mechanics and Foundation Engineering 2	3	(2,1,2)	CE 210
CE 360	Environmental Engineering 1	2	(2,0,0)	GE 105
CE 362	Water Supply and Sewage Engineering	2	(2,1,0)	CE 241
CE 371	Surveying 2	3	(2,1,2)	CE 370
CE 380	Highway and Traffic Engineering	3	(3,1,0)	CE 370
		17		

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 407	Engineering Economy	2	(2,1,0)	
CE 444	Computer Applications in Water Engineering	2	(1,0,2)	CEN 209
CE 445	Hydrology	3	(3,1,0)	CE 241
CE 461	Environmental Engineering 2	3	(2,0,2)	CE 360
CE 4xx	Elective Course (3)	3	(3,1,0)	
CE 498	Senior Design (1)	2	(1,0,2)	
		17		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MATH 106	Integral Calculus	3	(3,1,0)	MATH 105
MATH 107	Algebra and Analytical Geometry	3	(3,1,0)	
GE 108	Engineering Mechanics (Dynamics)	3	(3,1,0)	GE 103
GE 105	Engineering Chemistry	3	(3,1,0)	
CE 101	Engineering Geology	2	(1,0,2)	
CE 102	Civil Engineering Drawing	3	(1,0,4)	GE 102
		17		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
STAT 201	Statistics and Probability	3	(3,1,0)	
CEN 209	Computer Programming for Civil Engineering	3	(2,0,2)	
CE 217	Reinforced Concrete Design 1	3	(3,2,0)	CE 214
CE 212	Properties and Strength of Materials 1	3	(2,1,2)	
CE 215	Structural Analysis 2	3	(3,1,0)	GE 214
CE 241	Hydraulics 2	3	(2,1,2)	GE 240
		18		

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
MATH 254	Numerical Methods	3	(3,1,0)	MATH 204
CE 342	Hydraulic structures (1)	3	(3,1,0)	CE 241
CE 343	Irrigation and Drainage Engineering	3	(3,1,0)	CE 241
CE 318	Reinforced Concrete Design 2	3	(3,2,0)	CE 217
CE 320	Steel Structures Design 1	3	(3,2,0)	CE 214
		17		

CE 399	Engineering Practice	0	90 Credit Hours must be completed	
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Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MURQ	University Requirement	2	(2,0,0)	
GE 408	Engineering Project Management	2	(2,1,0)	GE 407
CE 422	Methods and Equipment of Construction	2	(2,1,0)	
CE 423	Contracts and Specifications	2	(2,1,0)	
CE 463	Water and Wastewater Treatment	3	(3,1,0)	CE 362
CE 46x	Elective Course (4)	3	(3,1,0)	
CE 499	Senior Design (2)	2	(1,0,2)	CE 498
		16		

First Year

Second Year

Third Year

Fourth Year