



كلية الهندسة
College of Engineering



جامعة المجمعة
Majmaah University

Civil and Environmental Engineering

Curriculum



Structural Engineering

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURE	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		

First Year

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	(2,1,0)	
CE 102	Civil Engineering Drawing	3	(1,0,4)	GE 102
		17		

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURE	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		

Second Year

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

Code	Course	Credits	Contact hours	Prerequisite
MURE	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 363	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		

Third Year

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MURE	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
		17		

CE 399	Engineering Practice	0	90 Credit Hours must be completed
--------	----------------------	---	-----------------------------------

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURE	University Requirement	2	(2,0,0)	
GE 407	Engineering Economy	2	(2,1,0)	
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		

Fourth Year

Spring Semester

Code	Course	Credits	Contact hours	Prerequisite
MURE	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
MURE	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	(2,1,0)	
CE 102	Civil Engineering Drawing	3	(1,0,4)	GE 102
		17		

Fall Semester

Second Year

Code	Course	Credits	Contact hours	Prerequisite
MURE	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
MURE	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 363	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
MURE	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
		17		

CE 399	Engineering Practice	0	90 Credit Hours must be completed	
--------	----------------------	---	-----------------------------------	--

Fall Semester

Fourth Year

Code	Course	Credits	Contact hours	Prerequisite
MURE	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
MURE	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
MURE	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	(2,1,0)	
CE 102	Civil Engineering Drawing	3	(1,0,4)	GE 102
		17		

First Year

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURE	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		

Second Year

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURE	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 363	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
MURE	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		

Third Year

CE 399	Engineering Practice	0	90 Credit Hours must be completed	
--------	----------------------	---	-----------------------------------	--

Fall Semester

Code	Course	Credits	Contact hours	Prerequisite
MURE	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
MURE	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 363
CE 46x	Elective Course (4)	3	(3,1,0)	
CE 499	Senior Design (2)	2	(1,0,2)	CE 498
		16		

Fourth Year