



Mechanical and Industrial Engineering Curriculum

Majmaah University

College of Engineering

Website



Email



Phone



Mechanical Power

First Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
ARAB 101	Arabic Language Skills	2	(2,0,0)	-
MATH 105	Differential Calculus	3	(3,1,0)	-
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)	-
PHY 103	General Physics	4	(3,1,2)	-
		17		

Second Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
MATH 106	Integral Calculus	3	(3,1,0)	MATH 105
MATH 107	Algebra and Analytical Geometry	3	(3,1,0)	-
ME 111	Mechanical Measurements	2	(1,1,2)	GE 101
ME 121	Mechanical Engineering Drawing	3	(1,0,4)	GE 102
GE 108	Engineering Mechanics (Dynamics)	3	(3,1,0)	GE 103
GE 105	Engineering Chemistry	3	(3,1,0)	-
		17		

First Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 101	Introduction to Islamic Culture	2	(2,0,0)	-
MATH 204	Differential Equations	3	(3,1,0)	MATH 106 MATH 107
ME 212	Manufacturing Processes	3	(2,1,2)	GE 101
ME 251	Material Engineering	3	(2,1,2)	GE 103
ME 243	Machine Dynamics	3	(3,1,0)	GE 108
ME 231	Thermodynamics I	3	(3,1,0)	-
		17		

Second Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
EE 210	Electrical and Electronic Circuits	3	(3,1,0)	-
STAT 201	Statistics and Probability	3	(3,1,0)	-
ME 222	Machine Elements Design	3	(2,1,3)	ME 121 ME 232
ME 232	Mechanics of Materials	3	(3,1,0)	ME 251
ME 242	Mechanical Vibrations	3	(3,1,0)	ME 243
ME 252	Thermodynamics II	2	(2,1,0)	ME 231
		17		

First Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 102	Islam and Society Development	2	(2,0,0)	-
GE 306	Engineering Report Writing	2	(2,0,0)	STAT 201
ME 323	Mechanical Design	3	(2,1,3)	ME 222
ME 343	System Dynamics	2	(2,1,0)	ME 242
ME 353	Fluid Mechanics	4	(3,1,2)	ME 252
EE 398	Electrical Machines	2	(2,1,0)	EE 210
CEN 307	Computer Programming for Mechanical Engineering	3	(2,0,2)	-
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Second Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
ARAB 103	Arabic Editing	2	(2,0,0)	-
MATH 254	Numerical Methods	3	(3,1,0)	MATH 204
ME 344	Automatic Control	2	(2,1,0)	ME 343 ME 353
ME 354	Heat Transfer	3	(3,1,0)	ME 353
ME 355	Refrigeration & Air conditioning	3	(2,1,2)	Cor. ME 354
ME 356	Turbulent flow	3	(3,1,0)	ME 353
ME 357	Membrane Desalination Processes	2	(2,1,0)	Cor. ME 354
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ME 399	Practical Training	0
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First Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 103	Economic System in Islam	2	(2,0,0)	-
GE 407	Engineering Economy	2	(2,1,0)	-
ME 458	Turbo Machines	3	(3,1,0)	ME 356
ME 459	Internal Combustion Engines	3	(3,1,0)	ME 252
ME 46X	Elective (1)	3	(3,1,0)	XXX
ME 493	Mechanical Power Lab. (I)	1	(0,0,2)	ME 111
ME 498	Senior Design 1	2	(1,0,2)	-
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Second Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 104	Fundamentals of the Political System in Islam	2	(2,0,0)	-
GE 408	Project Management	2	(2,1,0)	GE 407
ME 460	Power Plants	3	(3,1,0)	ME 354
ME 46X	Elective (2)	3	(3,1,0)	XXX
ME 46X	Elective (3)	3	(3,1,0)	XXX
ME 494	Mechanical Power Lab. (2)	1	(0,0,2)	ME 493
ME 499	Senior Design 2	2	(1,0,2)	ME 498
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First Year

Second Year

Third Year

Fourth Year

Design and Production

First Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
ARAB 101	Arabic Language Skills	2	(2,0,0)	-
MATH 105	Differential Calculus	3	(3,1,0)	-
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)	-
PHY 103	General Physics	4	(3,1,2)	-
		17		

Second Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
MATH 106	Integral Calculus	3	(3,1,0)	MATH 105
MATH 107	Algebra and Analytical Geometry	3	(3,1,0)	-
ME 111	Mechanical Measurements	2	(1,1,2)	GE 101
ME 121	Mechanical Engineering Drawing	3	(1,0,4)	GE 102
GE 108	Engineering Mechanics (Dynamics)	3	(3,1,0)	GE 103
GE 105	Engineering Chemistry	3	(3,1,0)	-
		17		

First Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 101	Introduction to Islamic Culture	2	(2,0,0)	-
MATH 204	Differential Equations	3	(3,1,0)	MATH 106 MATH 107
ME 212	Manufacturing Processes	3	(2,1,2)	GE 101
ME 251	Material Engineering	3	(2,1,2)	GE 103
ME 243	Machine Dynamics	3	(3,1,0)	GE 108
ME 231	Thermodynamics I	3	(3,1,0)	-
		17		

Second Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
EE 210	Electrical and Electronic Circuits	3	(3,1,0)	-
STAT 201	Statistics and Probability	3	(3,1,0)	-
ME 222	Machine Elements Design	3	(2,1,3)	ME 121 ME 232
ME 232	Mechanics of Materials	3	(3,1,0)	ME 251
ME 242	Mechanical Vibrations	3	(3,1,0)	ME 243
ME 252	Thermodynamics II	2	(2,1,0)	ME 231
		17		

First Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 102	Islam and Society Development	2	(2,0,0)	-
GE 306	Engineering Report Writing	2	(2,0,0)	STAT 201
ME 353	Fluid Mechanics	4	(3,1,2)	ME 252
ME 343	System Dynamics	2	(2,1,0)	ME 242
ME 323	Mechanical Design	3	(2,1,3)	ME 222
EE 398	Electrical Machines	2	(2,1,0)	EE 210
CEN 307	Computer Programming for Mechanical Engineering	3	(2,0,2)	-
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Second Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
ARAB 103	Arabic Editing	2	(2,0,0)	-
MATH 254	Numerical Methods	3	(3,1,0)	MATH 204
ME 354	Heat Transfer	3	(3,1,0)	ME 353
ME 344	Automatic Control	2	(2,1,0)	ME 343 ME353
ME 313	Material Removal Processes	3	(2,1,2)	ME 212 ME232
ME 333	Materials Selection in Design and Manufacturing	3	(2,1,2)	ME 212 ME232
ME 345	Fault Diagnosis of Mechanical Systems	2	(1,1,2)	ME 232 ME343
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ME 399

Practical Training

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First Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 103	Economic System in Islam	2	(2,0,0)	-
GE 407	Engineering Economy	2	(2,1,0)	-
ME 424	Computer Aided Design	3	(2,0,3)	ME 323
ME 414	Metal Forming Processes	3	(2,1,2)	ME 212 ME 232
ME 43X	Elective (1)	3	(2,1,2)	ME 232
ME 491	Design and Production Lab (1)	1	(0,0,2)	ME 111
ME 498	Senior Design 1	2	(1,0,2)	-
		16		

Second Semester

Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 104	Fundamentals of the Political System in Islam	2	(2,0,0)	-
GE 408	Project Management	2	(2,1,0)	GE 407
ME 415	Computer Aided Manufacturing	3	(2,1,2)	ME 212 ME 424
ME 42X	Elective (2)	3	(2,1,2)	ME 212 ME 323
ME 41X	Elective (3)	3	(2,1,2)	XXX
ME 492	Design and Production Lab (2)	1	(0,0,2)	ME 491
ME 499	Senior Design 2	2	(1,0,2)	ME 498
		16		

Industrial Engineering

First Year	First Semester				
	Code	Course Title	Credit Hours	Contact Hours	Prerequisite
	ARAB 101	Arabic Language Skills	2	(2,0,0)	-
	MATH 105	Differential Calculus	3	(3,1,0)	-
	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)	-
	PHY 103	General Physics	4	(3,1,2)	-
			17		

Second Semester				
Code	Course Title	Credit Hours	Contact Hours	Prerequisite
MATH 106	Integral Calculus	3	(3,1,0)	MATH 105
MATH 107	Algebra and Analytical Geometry	3	(3,1,0)	-
ME 111	Mechanical Measurements	2	(1,1,2)	GE 101
ME 121	Mechanical Engineering Drawing	3	(1,0,4)	GE 102
GE 108	Engineering Mechanics (Dynamics)	3	(3,1,0)	GE 103
GE 105	Engineering Chemistry	3	(3,1,0)	-
		17		

Second Year	First Semester				
	Code	Course Title	Credit Hours	Contact Hours	Prerequisite
	IC 101	Introduction to Islamic Culture	2	(2,0,0)	-
	MATH 204	Differential Equations	3	(3,1,0)	MATH 106 MATH 107
	ME 212	Manufacturing Processes	3	(2,1,2)	GE 101
	ME 251	Material Engineering	3	(2,1,2)	GE 103
	ME 243	Machine Dynamics	3	(3,1,0)	GE 108
	ME 231	Thermodynamics I	3	(3,1,0)	-
			17		

Second Semester				
Code	Course Title	Credit Hours	Contact Hours	Prerequisite
EE 210	Electrical and Electronic Circuits	3	(3,1,0)	-
STAT 201	Statistics and Probability	3	(3,1,0)	-
ME 222	Machine Elements Design	3	(2,1,3)	ME 121 ME 232
ME 232	Mechanics of Materials	3	(3,1,0)	ME 251
ME 242	Mechanical Vibrations	3	(3,1,0)	ME 243
ME 252	Thermodynamics II	2	(2,1,0)	ME 231
		17		

Third Year	First Semester				
	Code	Course Title	Credit Hours	Contact Hours	Prerequisite
	IC 102	Islam and Society Development	2	(2,0,0)	-
	GE 306	Engineering Report Writing	2	(2,0,0)	STAT 201
	ME 353	Fluid Mechanics	4	(3,1,2)	ME 252
	ME 343	System Dynamics	2	(2,1,0)	ME 242
	ME 323	Mechanical Design	3	(2,1,3)	ME 222
	EE 398	Electrical Machines	2	(2,1,0)	EE 210
	CEN 307	Computer Programming for Mechanical Engineering	3	(2,0,2)	-
			18		

Second Semester				
Code	Course Title	Credit Hours	Contact Hours	Prerequisite
ARAB 103	Arabic Editing	2	(2,0,0)	-
MATH 254	Numerical Methods	3	(3,1,0)	MATH 204
ME 354	Heat Transfer	3	(3,1,0)	ME 353
ME 344	Automatic Control	2	(2,1,0)	ME 343 ME 353
ME 371	Industrial Operations Research I	3	(3,1,0)	MATH 107
ME 372	Quality Management	3	(3,1,0)	STAT 201
ME 373	Reliability & Maintenance Engineering	2	(2,1,0)	STAT 201
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ME 399	Practical Training	0
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Fourth Year	First Semester				
	Code	Course Title	Credit Hours	Contact Hours	Prerequisite
	IC 103	Economic System in Islam	2	(2,0,0)	-
	GE 407	Engineering Economy	2	(2,1,0)	-
	ME 474	Industrial Operations Research II	3	(3,1,0)	ME 371
	ME 475	Computer Aided Design & Manufacturing	3	(2,1,2)	ME 212 ME 323
	ME XXX	Elective (1)	3	(3,1,0)	XXX
	ME 495	Work Study Lab	1	(0,0,2)	ME 111
	ME 498	Senior Design 1	2	(1,0,2)	-
			16		

Second Semester				
Code	Course Title	Credit Hours	Contact Hours	Prerequisite
IC 104	Fundamentals of the Political System in Islam	2	(2,0,0)	-
GE 408	Engineering Project Management	2	(2,1,0)	GE 407
ME 476	Industrial Operations Management	3	(3,1,0)	MATH 107
ME XXX	Elective (2)	3	(3,1,0)	XXX
ME XXX	Elective (3)	3	(3,1,0)	XXX
ME 496	Human Factors Engineering Lab	1	(0,0,2)	ME 495
ME 499	Senior Design 2	2	(1,0,2)	ME 498
		16		