



College: **ENGINEERING**
 Department: **MECHANICAL AND INDUSTRIAL ENGINEERING**
 Cohorts: **2015**
 Degree: **B. ENG**
 Major: **INDUSTRIAL ENGINEERING**
 Specialization:

<u>Summary of Credits:</u>		
General Foundation Program		
University Requirements (UR)		6
Arabic	3	
Omani Society	1	
Oman & Islamic Civilization or Islamic Culture	2	
University Electives (UE)		6
See List A		
College Requirements (CR)		35
See list B		
College Electives (CE)		0
See list C		
Departmental Requirements (DR)		24
See list D		
Departmental Electives (DE)		0
See list E		
Major Requirements (AR)		53
See list F		
Major Electives (AE)		12
See list G		
Minor Requirements (IR)		0
See list H		
Minor Electives (IE)		0
See list I		
Specialization Requirements (SR)		0
See list J		
Specialization Electives (SE)		0
See list K		
TOTAL		136

For reference contact: (HoD)

Ext. 1352

HoD

Date

Dean's Office

Date

Admission and Registration

Date

Department of Mechanical and Industrial Engineering
Industrial Engineering Study Plan: 2015 Cohort (Scheme I)

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 1 Fall 15		General Foundation Program	0		UR
	Total		0		

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
Semester 2 Spring 16	ARAB1001	Arabic	3		UR
	HIST1010 ISLM1010	Oman & Islamic Civilization or Islamic Culture	2		UR
	LANC2160	English for Engineering I	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	MATH2107	Calculus I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT(0105 or 0109)	CR
	ENGR1501	Introduction to Engineering	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	ENGR1600	Workshop I	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	Total		14		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 3 Fall 16	SOCY1001	Omani Society	1		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2108	Calculus II	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) MATH2107*	CR
	CHEM1071	General Chemistry for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT(0105 or 0109)	CR
		University Elective	2		UE
	Total		16		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 4 Spring 17	COMP2002	Introduction to Computer Programming for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS(0101 or 0102)	CR
	MATH3171	Lin. Alg. & Mult. Calc. for Engineers	3	MATH2108, LANC2161	CR
	PHYS2108	Physics for Engineering II	4	PHYS2107	CR
	MEIE3281	Probability & Statistics for Engineers	3	MATH2107	DR
	MEIE2129	Basic Mechanics	3	PHYS2107	AR
	Total		16		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 5 Fall 17	MEIE3102	Solid Mechanics	3	MEIE2129 or MEIE2102	DR
	MEIE3107	Engineering Drawings and Graphics	3	ENGR1501	DR
	MEIE3262	Materials Science and Engineering	3	CHEM1071	DR
	MATH4174	Differential Equations for Engineers	3	MATH2108, LANC2161	CR
	MEIE3269	Mathematics of Linear Programming	3	MATH3171*	AR
		University Elective	2		UE
Total			17		

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
January 18	ENGR3006	Industrial Training I	0	ENGR1600, MEIE3107	CR
	Total		0		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 6 Spring 18	MEIE3159	Thermofluids	3	PHYS2108, MATH4174	AR
	MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108*	DR
	MEIE3271	Methods of Operations Research	3	MEIE3269	AR
	MEIE4262	Manufacturing Processes	3	MEIE3262, MEIE3102	DR
	MEIE4218	Advanced probability and statistics	3	MEIE3281 or PNGE4101 or CIVL4006	AR
	Total		15		

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
Semester 7 Fall 18	MEIE4224	Quality Engineering and Six Sigma	3	MEIE3281 or PNGE4101 or CIVL4006	AR
	MEIE4222	Production Planning and Control	3	MEIE3281, (MEIE3271 or MEIE3290 or MEIE3270)	AR
	MEIE3292	Work System Analysis and Design	3	MEIE3281 or CIVL4006 or PNGE4101	AR
	MEIE4265	Stochastic Optimization	3	MEIE3269, MEIE3281	AR
	MEIE3284	Industrial Information System	3	COMP2002	AR
	Total		15		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 8 Spring 19	MEIE4275	Facilities Design and logistics	3	MEIE4222	AR
	MEIE4272	Simulation Models	3	MEIE4222, (MEIE4265or MEIE4250 or MEIE4271)	AR
	MEIE4201	Ergonomics and Safety	3	MEIE3292 or MEIE3212	AR
	MEIE5273	Product Design and Manufacturing	3	MEIE3262, MEIE4262*	AR
		University Elective	2		UE
	Total		14		

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
Summer 19	ENGR4006	Industrial Training II	0	ENGR3006	CR
	Total		0		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 9 Fall 19	MEIE4285	Engineering Economics	3	MATH2107	DR
	MEIE5291	Project I	2	(MEIE4275 or MEIE4272)+ MEIE4285	AR
	MEIE5275	Automated Industrial Systems	3	MEIE4262, MEIE3181, MATH4174	AR
	MEIE5295	Seminar	0		AR
		Major Elective I	3		AE
		Major Elective II	3		AE
	Total		14		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 10 Spring 20	MEIE5262	Industrial Systems Design	3	MEIE4275 or MEIE4223	AR
	MEIE5288	Innovation and Entrepreneurship	3	MEIE4285	DR
	MEIE5292	Project II	3	MEIE5291	AR
		Major Elective III	3		AE
		Major Elective IV	3		AE
	Total		15		

Department of Mechanical & Industrial Engineering
Industrial Engineering Study Plan: 2015 Cohort (Scheme II)

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 1 Fall 15		General Foundation Program	0		UR
	Total		0		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 2 Spring 16		General Foundation Program	0		UR
	Total		0		

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
Semester 3 Fall 16	ARAB1001	Arabic	3		UR
	LANC2160	English for Engineering I	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	CHEM1071	General Chemistry for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT(0105 or 0109)	CR
	MATH2107	Calculus I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPMT(0105 or 0109)	CR
	ENGR1501	Introduction to Engineering	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	ENGR1600	Workshop I	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)	CR
	Total		15		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 4 Spring 17	SOCY1001	Omani Society	1		UR
	HIST1010	Oman & Islamic Civilization or			
	ISLM1010	Islamic Culture	2		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2108	Calculus II	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) MATH2107*	CR
		University Elective	2		UE
	Total		15		

Summer 17	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
	MEIE3107	Engineering Drawings and Graphics	3	ENGR1501	DR
	COMP2002	Introduction to Computer Programming for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS(0101 or 0102)	CR
	Total		6		

Semester 5 Fall 17	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
	MATH3171	Lin. Alg. & Mult. Calc. for Engineers	3	MATH2108, LANC2161	CR
	MATH4174	Differential Equations for Engineers	3	MATH2108, LANC2161	CR
	PHYS2108	Physics for Engineering II	4	PHYS2107	CR
	MEIE3269	Mathematics of Linear Programming	3	MATH3171*	AR
	MEIE2129	Basic Mechanics	3	PHYS2107	AR
	Total		16		

January 18	Course Code	Course Title	Credit Hours	Pre-requisite /Co-	Cat.
	ENGR3006	Industrial Training I	0	ENGR1600, MEIE3107	CR
	Total		0		

Semester 6 Spring 18	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
	MEIE3159	Thermofluids	3	PHYS2108, MATH4174	AR
	MEIE3102	Solid Mechanics	3	MEIE2129 or MEIE2102	DR
	MEIE3262	Materials Science and Engineering	3	CHEM1071	DR
	MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108*	DR
	MEIE3271	Methods of Operations Research	3	MEIE3269	AR
	MEIE3281	Probability & Statistics For Engineers	3	MATH2107	DR
	Total		18		

Summer 18	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
	Total				

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
	MEIE3284	Industrial Information System	3	COMP2002	AR
	MEIE3292	Work System Analysis & Design	3	MEIE3281or PNGE4101 or CIVL4006	AR
Semester 7 Fall 18	MEIE4218	Advanced Probability and Statistics	3	MEIE3281or PNGE4101 or CIVL4006	AR
	MEIE4222	Production Planning and Control	3	MEIE3281, (MEIE3271 or MEIE3290 or MEIE3270)	AR
	MEIE4224	Quality Engineering and Six Sigma	3	MEIE3281or PNGE4101 or CIVL4006	AR
	MEIE4265	Stochastic Optimization	3	MEIE3269, MEIE3281	AR
	Total		18		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 8 Spring 19	MEIE4275	Facilities Design and logistics	3	MEIE4222,	AR
	MEIE4201	Ergonomics and Safety	3	MEIE3292 or MEIE3212	AR
	MEIE5273	Product Design and Manufacturing	3	MEIE3262, MEIE4262*	AR
	MEIE4272	Simulation Models	3	MEIE4222, (MEIE4265or MEIE4250 or MEIE4271)	AR
	MEIE4262	Manufacturing Processes	3	MEIE3262, MEIE3102	DR
	Total		15		

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
Summer 19	ENGR4006	Industrial Training II	0	ENGR3006	CR
	Total		0		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 9 Fall 19	MEIE4285	Engineering Economics	3	MATH2107	DR
	MEIE5275	Automated Industrial Systems	3	MEIE4262, MEIE3181, MATH4174	AR
	MEIE5291	Project I	2	(MEIE4275 or MEIE4272)+ MEIE4285	AR
	MEIE5295	Seminar	0		AR
		University Elective	2		UE
		Major Elective I	3		AE
		Major Elective II	3		AE
	Total		16		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 10 Spring 20	MEIE5262	Industrial Systems Design	3	MEIE4275 or MEIE4223	AR
	MEIE5288	Innovation and Entrepreneurship	3	MEIE4285	DR
	MEIE5292	Project II	3	MEIE5291	AR
		Major Elective III	3		AE
		Major Elective IV	3		AE
		University Elective	2		UE
	Total		17		

Department of Mechanical and Industrial Engineering

Industrial Engineering Degree Plan: 2015 Cohort

LIST B: COLLEGE REQUIREMENTS (CR)

Code	Title	Credits	Pre-Requisite / Co-req. *
LANC2160	English for Engineering I	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
LANC2161	English for Engineering II	3	LANC2160
ENGR1501	Introduction to Engineering	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
ENGR1600	Workshop I	1	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
MATH2107	Calculus I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
MATH2108	Calculus II	3	MATH 2107
MATH3171	Linear Algebra & Multivariate Calculus	3	MATH2108, LANC2161
MATH4174	Differential Equations for Engineers	3	MATH2108, LANC2161
ENGR2216 Or COMP2002	Programming in Fortran or Introduction to Comp. Program.	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604) and FPCS(0101 or 0102)
PHYS2107	Physics for Engineering I	4	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
PHYS2108	Physics of Engineering II	4	PHYS 2107
CHEM1071	General Chemistry for Engineers	3	FPEL (0560 or 0600 or 0601 or 0602 or 0603 or 0604)
ENGR3006	Industrial Training I	0	ENGR1600, MEIE3107
ENGR4006	Industrial Training II	0	ENGR3006
Total		35	

LIST D: DEPARTMENT REQUIREMENTS (DR)

Code	Title	Credits	Pre-Requisite / Co-req. *
MEIE3107	Engineering Drawing and Graphics	3	ENGR1501
MEIE3262	Material Science and Engineering	3	CHEM1071
MEIE3102	Solid Mechanics	3	MEIE2102 or MEIE 2129
MEIE4262	Manufacturing Processes	3	MEIE3262, MEIE3102
MEIE3281	Probability & Statistics for Engineers	3	MATH2107
MEIE4285	Engineering Economics	3	MATH2107
MEIE5288	Innovation and Entrepreneurship	3	MEIE4285
MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108*
Total		24	

Department of Mechanical and Industrial Engineering
Industrial Engineering Degree Plan: 2015 Cohort

LIST F: MAJOR REQUIREMENTS (AR)

Code	Title	Credits	Pre-Requisite / Co-req. *
MEIE2129	Basic Mechanics	3	PHYS2107
MEIE3159	Thermofluids	3	PHYS 2108, MATH4174
MEIE3284	Industrial Information Systems	3	COMP2002
MEIE3292	Work System Analysis and Design	3	MEIE3281 or PNGE4101 or CIVL4006
MEIE3269	Mathematics of Linear Programming	3	MATH3171*
MEIE3271	Methods of Operations Research	3	MEIE3269
MEIE4265	Stochastic Optimization	3	MEIE3269, MEIE3281
MEIE4201	Ergonomics and Safety	3	MEIE3212 or MEIE3292
MEIE4218	Advanced Probability and Statistics	3	MEIE3281 or PNGE4101 or CIVL4006
MEIE4222	Production Planning and Control	3	MEIE3281, (MEIE3271 or MEIE3290, or MEIE3270)
MEIE4275	Facilities Design and Logistics	3	MEIE4222,
MEIE4224	Quality Engineering and Six Sigma	3	MEIE3281 or PNGE4101 or CIVL4006
MEIE4272	Simulation Models	3	MEIE 4222, (MEIE4265 or MEIE 4250 or MEIE4271)
MEIE5262	Industrial Systems Design	3	MEIE 4275 or MEIE4223
MEIE5275	Automated Industrial Systems	3	MEIE4262, MEIE3181
MEIE5273	Product Design and Manufacturing	3	MEIE3262, MEIE4262*
MEIE 5291	Project I	2	MEIE4285*
MEIE 5292	Project II	3	MEIE 5291
MEIE5295	Seminar	0	
Total		53	

LIST G: MAJOR ELECTIVES (AE)

Four Courses- 12 credit hours

The elective courses will be offered from the following and additional courses might be added subject to availability.

	Code	Program Electives Title	Pre-Requisite / Co-req. *
1	MEIE5201	Occupational Safety engineering	MEIE4201
2	MEIE5224	Six Sigma Methodology	MEIE4224 or MEIE4221
3	MEIE5263	Design for Manufacturing	MEIE3107, MEIE4262
4	MEIE5287	Project Management	MEIE3270 or MEIE3290 or MEIE3271
5	MEIE5271	Decision Analysis Models and Applications	MEIE4271, MEIE4285
6	MEIE5286	Supply Chain Management	MEIE4222
7	MEIE5285	Technology Transfer	
8	MEIE5290	Data Mining	
9	MEIE4125	Instrumentation & Measurement	MEIE3181
10	MEIE4286	Management for Engineers	
11	MEIE5233	Maintenance and Reliability Engineering	MEIE4224
12	MEIE5265	Computer Integrated Manufacturing	MEIE4262

** Student is allowed to take one 4000 or 5000 level course from any other engineering programs.