



College : **ENGINEERING**  
 Department : **MECHANICAL AND INDUSTRIAL ENGINEERING**  
 Cohorts : **2011**  
 Degree : **B. ENG**  
 Major : **INDUSTRIAL ENGINEERING**  
 Specialization :

<b><u>Summary of Credits:</u></b>	
<b>General Foundation Program</b>	
<b>University Requirements (UR)</b>	<b>6</b>
Arabic	3
Contemporary Omani Society	1
Oman & Islamic Civilization or Islamic Culture	2
<b>University Electives (UE)</b>	<b>6</b>
See List A	
<b>College Requirements (CR)</b>	<b>35</b>
See list B	
<b>College Electives (CE)</b>	<b>0</b>
See list C	
<b>Departmental Requirements (DR)</b>	<b>25</b>
See list D	
<b>Departmental Electives (DE)</b>	<b>0</b>
See list E	
<b>Major Requirements (AR)</b>	<b>55</b>
See list F	
<b>Major Electives (AE)</b>	<b>9</b>
See list G	
<b>Minor Requirements (IR)</b>	<b>0</b>
See list H	
<b>Minor Electives (IE)</b>	<b>0</b>
See list I	
<b>Specialization Requirements (SR)</b>	<b>0</b>
See list J	
<b>Specialization Electives (SE)</b>	<b>0</b>
See list K	
<b>TOTAL</b>	<b>136</b>

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: 2011 Cohort (Scheme I)**

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

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
<b>Semester 2 Spring</b>	ARAB1001	Arabic	3		UR
	HIST1010	Oman & Islamic Civilization <b>or</b>			
	ISLM1010	Islamic Culture	2		UR
	LANC2160	English for Engineering I	3		CR
	MATH2107	Calculus I	4		CR
	ENGR1501	Introduction to Engineering	1		CR
	ENGR1600	Workshop I	1		CR
<b>Total</b>		<b>14</b>			

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
<b>Semester 3 Fall</b>	SOCI3320	Contemporary Omani Society	1		UR
	LANC2161	English for Engineering II	3	LANC2160	CR
	MATH2108	Calculus II	3	MATH2107	CR
	PHYS2107	Physics for Engineering I	4	MATH2107	CR
	CHEM1071	General Chemistry for Engineers	3		CR
	<b>Total</b>		<b>14</b>		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
<b>Semester 4 Spring</b>	COMP2002	Introduction to Computer Programming for Engineers	3		CR
	MATH3171	Lin. Alg. & Mult. Calc. for Engineers	3	MATH2108, LANC2161	CR
	PHYS2108	Physics for Engineering II	4	PHYS2107	CR
	MEIE2181	Workshop II	1	ENGR1600	DR
		University Elective	2		UE
	MEIE2129	Basic Mechanics	3	PHYS2107	AR
<b>Total</b>		<b>16</b>			

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
<b>Semester 5 Fall</b>	MEIE3102	Solid Mechanics	3	MEIE2129	DR
	MEIE3105	Computer Graphics	3	ENGR1501	DR
	MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108*	DR
	MATH4174	Differential Equations for Engineers	3	MATH2108, LANC2161	CR
	MEIE3281	Probability & Statistics for Engineers	3	MATH2107	DR
<b>Total</b>		<b>15</b>			

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January	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
	ENGR3006	Industrial Training I	0	ENGR1600, MEIE3105	CR
	<b>Total</b>		<b>0</b>		

Semester 6 Spring	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
	MEIE3159	Thermofluids	3	PHYS2108, MATH4174	AR
	MEIE3161	Materials Science	3		DR
	MEIE3212	Methods Engineering & Work Measurement	3	MEIE3281 or PNGE4101 or CIVL4006	AR
	MEIE3270	Operations Research I	3	MATH3171, MEIE3281 or PNGE4101 or CIVL4006	AR
	MEIE3282	Design of Industrial Information Systems	3	COMP2002	AR
	<b>Total</b>		<b>15</b>		

Semester 7 Fall	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
	MEIE4220	Design and Analysis of Experiments	3	MEIE3281 or PNGE4101 or CIVL4006	AR
	MEIE4222	Production Planning and Control	3	MEIE3270, MEIE3282	AR
	MEIE4262	Manufacturing Processes	3	MEIE3161, MEIE3102	DR
	MEIE4260	Industrial Automation and Control	3	MEIE3181, MEIE3159, MEIE3282	AR
	MEIE4271	Operations Research II	3	MEIE3270	AR
	MEIE4285	Engineering Economics	3	MATH2107	DR
<b>Total</b>		<b>18</b>			

Semester 8 Spring	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
	MEIE4211	Ergonomics and Safety Engineering	3	MEIE3212, MEIE4220	AR
	MEIE4224	Quality Engineering	3	MEIE4220	AR
	MEIE4261	Product Design and Manufacturing	3	MEIE4260, MEIE4285, MEIE4262*,	AR
	MEIE4272	Simulation Models	3	MEIE4222, MEIE4271	AR
	MEIE4283	Engineering Ethics	1		AR
		University Elective	2		UE
<b>Total</b>		<b>15</b>			

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

**Department of Mechanical & Industrial Engineering**  
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	<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Pre-requisite/Co-requisite*</b>	<b>Cat.</b>
<b>Semester 9 Fall</b>	MEIE4223	Facilities Planning	3	MEIE4211, MEIE4261	AR
	MEIE5291	Project I	2		AR
	MEIE5265	Computer Integrated Manufacturing	3	MEIE4261	AR
	MEIE5295	Seminar	1		AR
		Department Elective I	3		AE
		University Elective	2		UE
	<b>Total</b>			<b>14</b>	

	<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Pre-requisite/Co-requisite*</b>	<b>Cat.</b>
<b>Semester 10 Spring</b>	MEIE5261	Industrial Engineering Design	3	MEIE4223	AR
	MEIE 5288	Innovation, Entrepreneurship, and Management	3	MEIE4285	DR
	MEIE5292	Project II	3	MEIE5291	AR
		Department Elective II	3		AE
		Department Elective III	3		AE
	<b>Total</b>			<b>15</b>	

**Department of Mechanical & Industrial Engineering**  
**Industrial Engineering Study Plan: 2011 Cohort (Scheme II)**

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

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

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
<b>Semester 3 Fall</b>	ARAB1001	Arabic	3		UR
	LANC2160	English for Engineering I	3		CR
	CHEM1071	General Chemistry for Engineers	3		CR
	MATH2107	Calculus I	4		CR
	ENGR1501	Introduction to Engineering	1		CR
	ENGR1600	Workshop I	1		CR
	<b>Total</b>		<b>15</b>		

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
<b>Semester 4 Spring</b>	SOCI3320	Contemporary Omani Society	1		UR
	HIST1010	Oman & Islamic Civilization <b>or</b>			
	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	MATH2107	CR
		University Elective	2		UE
<b>Total</b>		<b>15</b>			

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
<b>Summer</b>	MATH3171	Lin. Alg. & Mult. Calc. for Engineers	3	MATH2108, LANC2161	CR
	COMP2002	Introduction to Computer Programming for Engineers	3		CR
	<b>Total</b>		<b>6</b>		

**Department of Mechanical & Industrial Engineering**  
**Industrial Engineering Study Plan: 2011 Cohort (Scheme II)**

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
<b>Semester 5 Fall</b>	MEIE3105	Computer Graphics	3		DR
	MATH4174	Differential Equations for Engineers	3	MATH2108, LANC2161	CR
	PHYS2108	Physics for Engineering II	4	PHYS2107	CR
	MEIE2181	Workshop II	1	ENGR1600	DR
	MEIE3281	Probability & Statistics for Engineers	3	MATH2107	DR
	MEIE2129	Basic Mechanics	3	PHYS2107	AR
	<b>Total</b>			<b>17</b>	

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
<b>January</b>	ENGR3006	Industrial Training I	0	ENGR1600, MEIE3105	CR
	<b>Total</b>			<b>0</b>	

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
<b>Semester 6 Spring</b>	MEIE3159	Thermofluids	3	PHYS2108, MATH4174	AR
	MEIE3102	Solid Mechanics	3	MEIE2129	DR
	MEIE3161	Materials Science	3		DR
	MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108*	DR
	MEIE3270	Operations Research I	3	MATH3171, MEIE3281	AR
	MEIE3282	Design of Industrial Information Systems	3	COMP2002	AR
	<b>Total</b>			<b>18</b>	

	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
<b>Summer</b>	MEIE4285	Engineering Economics	3	MATH2107	DR
		University Elective	2		UE
	<b>Total</b>			<b>5</b>	

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	Course Code	Course Title	Credit Hours	Pre-requisite /Co-requisite*	Cat.
	MEIE3212	Methods Engineering & Work Measurement	3	MEIE3281or PNGE4101 or CIVL4006	AR
Semester 7 Fall	MEIE4220	Design and Analysis of Experiments	3	MEIE3281or PNGE4101 or CIVL4006	AR
	MEIE4222	Production Planning and Control	3	MEIE3270, MEIE3282	AR
	MEIE4260	Industrial Automation and Control	3	MEIE3181, MEIE3159, MEIE3282	AR
	MEIE4271	Operations Research II	3	MEIE3270	AR
	<b>Total</b>			<b>15</b>	

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
Semester 8 Spring	MEIE4211	Ergonomics and Safety Engineering	3	MEIE3212, MEIE4220	AR
	MEIE4224	Quality Engineering	3	MEIE4220	AR
	MEIE4261	Product Design and Manufacturing	3	MEIE4260, MEIE4285, MEIE4262*	AR
	MEIE4272	Simulation Models	3	MEIE4222, MEIE4271	AR
	MEIE4283	Engineering Ethics	1		AR
	MEIE4262	Manufacturing Processes	3	MEIE3161, MEIE3102	DR
<b>Total</b>			<b>16</b>		

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

**Department of Mechanical & Industrial Engineering**  
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	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
<b>Semester 9 Fall</b>	MEIE4223	Facilities Planning	3	MEIE4211, MEIE4261	AR
	MEIE5265	Computer Integrated Manufacturing	3	MEIE4261	AR
	MEIE5291	Project I	2		AR
	MEIE5295	Seminar	1		AR
		Department Elective I	3		AE
		University Elective	2		UE
	<b>Total</b>			<b>14</b>	

	Course Code	Course Title	Credit Hours	Pre-requisite/Co-requisite*	Cat.
<b>Semester 10 Spring</b>	MEIE5261	Industrial Engineering Design	3	MEIE4223	AR
	MEIE 5288	Innovation, Entrepreneurship, and Management	3	MEIE4285	DR
	MEIE5292	Project II	3	MEIE5291	AR
		Department Elective II	3		AE
		Department Elective III	3		AE
	<b>Total</b>			<b>15</b>	

## Department of Mechanical and Industrial Engineering

Industrial Engineering Degree Plan: 2011 Cohort

### LIST A<sup>T</sup> – UNIVERSITY ELECTIVES

#	Code	Title	Credits	College/Dept
1	ARAB1040	Literature and Sociology	2	Arts
2	ARAB1050	Language and Sociology	2	Arts
3	ARCH1170	Development Civilization in Oman	2	Arts
4	ARCH1180	Archhaeology and Environment in Oman	2	Arts
5	ARCH1520	Arch in Ancient Oman	2	Arts
6	ARCH1525	Arch Style Arab Gulf	2	Arts
7	ARCH1526	Islamic Arch	2	Arts
8	ARCH1530	Oman Arch Through Ages	2	Arts
9	ARCH1531	Hist Animals in Oman	2	Arts
10	ARCH1535	Oman Town Culture Rem	2	Arts
11	ARCH1536	Arch. Know Arab Peninsulum	2	Arts
12	ARCH1537	Cult. Development Arab Gulf	2	Arts
13	ARCH1538	Oral History Cult. Heritage	2	Arts
14	ARCH1539	Hist. Ethn Jewwl. Oman	2	Arts
15	ARCH1540	Natural Culture Heritage Oman	2	Arts
16	ARCH1541	Cult. Scent and Arom. Oman	2	Arts
17	ARCH1550	Devl. Art Arch. Oman	2	Arts
18	ARCH1551	Admin. Arch. Heritage	2	Arts
19	ARCH5500	Sea Port and Mart. Arch	2	Arts
20	ARED1001	Contemporary Visual Arts	2	Education
21	ARED1002	Appreciation of Islamic Arts and Arabic	2	Education
22	BCOM1950	Varieties of Public and Professional Communication	3	Commerce
23	BCOM1960	Cross-Cultural Communication	2	Commerce
24	BIOL1003	Genetics in our Life	2	Science
25	BIOL1004	Environment Issues	2	Science
26	CUTM1002	Environmental Education	2	Education
27	CUTM1003	Principles of Teaching	2	Education
28	GEOG2021	Man and Natur. Env. In Oman	2	Arts
29	GEOG2031	Urbanization in the Arabian Gulf	2	Arts
30	GEOG2122	Man and Enviroment	2	Arts
31	GEOG2341	Dev. Countries	2	Arts
32	HIST1030	History of the GCCountries	2	Arts
33	HIST1040	Some Aspects of the History of Oman	2	Arts
34	INFO4100	Children's Lierature	2	Arts
35	ISLM1020	Human Right in Islam	2	Education
36	ISLM2010	Prophet Biog.	2	Education

37	ISLM2030	The Miracle of the Holy Quran	2	Education
38	ISLM2040	Islamic Economy	2	Education
39	ISLM2060	Family Systems in Islam	2	Education
40	ISLM2070	Quranic Stories	2	Education
41	ISLM2080	General Aims	2	Education
42	ISLM2090	Islamic Ethics	2	Education
43	ISLM2150	Islamn and the Modern World	2	Education
44	MASS1020	Arts of Media Edit	2	Arts
45	MASS1030	Public Opinion (UE)	2	Arts
46	MASS1060	Mass Media and Society	2	Arts
47	MASS1070	International Comm	2	Arts
48	MASS1080	Principles of Public Relations (UE)	2	Arts
49	NURS1004	First Aid	2	Nursing
50	NURS1005	Physical & Psychological Child Health	2	Nursing
51	PHED1000	Physical Fitness	2	Education
52	PHIL2050	International Meth	2	Arts
53	PHIL2060	Ethics	2	Arts
54	PHIL2070	Tren. Cont. Phi. Though	2	Arts
55	PHIL2213	Science in Arab Through	2	Arts
56	PSYC1001	Human Behavior	2	Education
57	PSYC1002	Psych/Human Problems	2	Education
58	SOCI2151	Medical Sociology	2	Arts
59	SOCI2361	Introduction to Social Work	2	Arts
60	THAR1001	Theater Appreciation	2	Arts
61	THAR1003	Music Appreciation	2	Arts
62	THAR1012	Play Writing	2	Arts
63	THAR1013	Oratory/Presentation	2	Arts
64	THAR1014	Scholastic Theater	2	Arts
65	THAR1016	Child's Theater	2	Arts
66	THAR1017	Theater Scenography	2	Arts
67	TOUR1050	Tourism in Oman	2	Arts

**T:** Engineering students must select a humanity or social course (non-scientific & non-linguistic course) from any college as a University Elective.

**Department of Mechanical and Industrial Engineering**

**Industrial Engineering Degree Plan: 2011 Cohort**

**LIST B: COLLEGE REQUIREMENTS (CR)**

<b>Code</b>	<b>Title</b>	<b>Credits</b>	<b>Pre-Requisite / Co-req. *</b>
ENGR1501	Introduction to Engineering	<b>1</b>	
ENGR1600	Workshop I	<b>1</b>	
LANC2160	English for Engineering I	<b>3</b>	
LANC2161	English for Engineering II	<b>3</b>	LANC2160 or equivalent
MATH2107	Calculus I	<b>4</b>	
MATH2108	Calculus II	<b>3</b>	MATH 2107
MATH3171	Linear Algebra & Multivariate Calculus	<b>3</b>	MATH2108, LANC2161
MATH4174	Differential Equations for Engineers	<b>3</b>	MATH2108, LANC2161
COMP2002	Introduction to Computer Programming.	<b>3</b>	
PHYS2107	General Physics I	<b>4</b>	MATH2107*
PHYS2108	General Physics II	<b>4</b>	PHYS 2107
CHEM1071	General Chemistry for Engineers	<b>3</b>	
ENGR3006	Industrial Training I	<b>0</b>	ENGR1600, MEIE3105
ENGR4006	Industrial Training II	<b>0</b>	ENGR3006
<b>Total</b>		<b>35</b>	

**LIST D: DEPARTMENT REQUIREMENTS (DR)**

<b>Code</b>	<b>Title</b>	<b>Credits</b>	<b>Pre-Requisite / Co-req. *</b>
MEIE2181	Workshop II	1	ENGR1600
MEIE3105	Computer Graphics	3	ENGR1501
MEIE3161	Material Science	3	
MEIE3102	Solid Mechanics	3	MEIE 2102 or MEIE 2129
MEIE4262	Manufacturing Processes	3	MEIE 3161, MEIE3102
MEIE3281	Probability & Statistics for Engineers	3	MATH 2107
MEIE4285	Engineering Economics	3	MATH 2107
MEIE5288	Innovation, Entrepreneurship, and Management	3	MEIE 4285
MEIE3181	Electromechanical Systems	3	MATH2107, PHYS2108*
<b>Total</b>		<b>25</b>	

**Department of Mechanical and Industrial Engineering**

**Industrial Engineering Degree Plan: 2011 Cohort**

**LIST F: MAJOR REQUIREMENTS (AR)**

Code	Title	Credits	Pre-Requisite / Co-req. *
MEIE 2129	Basic Mechanics	3	PHYS2107
MEIE 3159	Thermofluids	3	PHYS 2108, MATH4174
MEIE 3212	Methods Engineering & Work Measurement	3	MEIE3281 or PNGE4101 or CIVL4006
MEIE3282	Design of Industrial Information Systems	3	COMP2002
MEIE 3270	Operations Research I	3	MATH3171, MEIE3281 or PNGE4101 or CIVL4006
MEIE4220	Design and Analysis of Experiments	3	MEIE3281 or PNGE4101 or CIVL4006
MEIE4224	Quality Engineering	3	MEIE4220
MEIE 4222	Production Planning and Control	3	MEIE3270, MEIE3282
MEIE 4271	Operations Research II	3	MEIE 3270
MEIE4260	Industrial Automation and Control	3	MEIE3181, MEIE3159, MEIE3282
MEIE4261	Product Design and Manufacturing	3	MEIE4260, MEIE4285, MEIE4262*,
MEIE 4272	Simulation Models	3	MEIE 4222, MEIE 4271
MEIE4283	Engineering Ethics	1	
MEIE 4211	Ergonomics and Safety Engineering	3	MEIE3212, MEIE4220
MEIE 5261	Industrial Engineering Design	3	MEIE 4223
MEIE 4223	Facilities Planning	3	MEIE4211, MEIE4261
MEIE 5295	Seminar	1	
MEIE 5265	Computer Integrated Manufacturing	3	MEIE 4261
MEIE 5291	Project I	2	
MEIE 5292	Project II	3	MEIE 5291
<b>Total</b>		<b>55</b>	

**LIST G: MAJOR ELECTIVES (AE)**

**Two Courses- 9 credit hours**

The elective courses will be offered from the following, subject to availability.

	Code	Title	Pre-Requisite / Co-req. *
1	MEIE5202	Occupational Safety engineering	MEIE4211
2	MEIE5224	Six Sigma Methodology	MEIE4224
3	MEIE5232	Reliability and Maintenance Engineering	MEIE3281 or PNGE4101 or CIVL4006
4	MEIE5263	Design for Manufacturing	MEIE3105, MEIE4262
5	MEIE5268	Industrial Robots	MEIE2129, MEIE3181
6	MEIE5147	Energy conservation and Management	MEIE3141 or MEIE3159
7	MEIE5271	Decision Analysis Models and Applications	MEIE4271
8	MEIE5286	Supply Chain Management	MEIE4222
9	MEIE5287	Project Management	MEIE3270
10	MEIE5297	Special Topics	