



University of Engineering & Management, Jaipur
Syllabus to be implemented from the Academic Year 2014-15
Mechanical Engineering
First Year First Semester

A. THEORY							
Sl. No.	Course Code	Theory	Contact Hours/Week				Credit Points
			L	T	P	Total	
1	HU101	English Language & Technical Communication-I	2	0	0	2	2
2	PH101	Physics-I	3	1	0	4	3
3	M101	Mathematics-I	3	1	0	4	3
4	ES101	Basic Electrical & Electronic Engineering-I	3	0	0	3	4
5	ME101	Engineering Mechanics	3	0	0	3	3
6	CS101	Basic Computation & Principles of Computer Programming-I	3	0	0	3	3
Total of Theory						19	18
B. PRACTICAL							
7	PH191	Physics-I Lab	0	0	3	3	2
8	ES191	Basic Electrical & Electronic Engineering-I Lab	0	0	3	3	2
9	ME191	Engineering Drawing & Computer Graphics Lab	1	0	3	4	3
10	CS191	Basic Computation & Principles of Computer Programming-I Lab	0	0	3	3	2
Total of Practical						13	9
C. SESSIONAL							
11	HU181	Language Laboratory-I	0	0	2	2	2
12	XC181	Extra Curricular Activities(NSS/NCC/NSO etc)	0	0	2	2	1
Total of Sessional						4	3
Total of Semester						36	30



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Mechanical Engineering
First Year Second Semester

A. THEORY							
Sl. No.	Course Code	Theory	Contact Hours/Week				Credit Points
			L	T	P	Total	
1	CS201	Principles of Computer Programming-(C++)	3	1	0	4	4
2	PH201	Physics-II	3	1	0	4	3
3	M201	Mathematics-II	3	1	0	4	3
4	ES201	Basic Electrical & Electronic Engineering-II	3	1	0	4	4
5	ME201	Engineering Thermodynamics & Fluid Mechanics	3	1	0	4	3
6	HU201	English Language & Technical Communication-II	2	0	0	2	2
Total of Theory						22	19
B. PRACTICAL							
7	CS291	Principles of Computer Programming-II Lab	0	0	3	3	2
8	PH291	Physics-II Lab	0	0	3	3	2
9	ES291	Basic Electrical & Electronic Engineering-II	0	0	3	3	2
10	ME291	Workshop Practice Lab	1	0	3	4	3
Total of Practical						13	9
C. SESSIONAL							
11	HU281	Language Laboratory-II	0	0	2	2	2
Total of Sessional						2	2
Total of Semester						37	30



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**Mechanical Engineering
Second Year Third Semester**

A. THEORY							
Sl.No.	Paper Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
1.	M301	Mathematics-III	3	1	0	4	4
2.	CS(ME)301	Data Structure & Algorithm	3	1	0	4	3
3.	CH301	Basic Environmental Engineering	2	1	0	3	3
4.	ME301	Applied Thermodynamics	4	0	0	4	4
5.	ME302	Strength of Materials	3	1	0	4	4
6.	ME303	Engineering Materials	3	0	0	3	3
Total Theory						22	22
B. PRACTICAL							
Sl. No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
7.	HU381	Technical Report Writing & Language Lab	0	0	3	3	2
8.	CS(ME)391	Data Structure & Algorithm Lab	0	0	3	3	2
9.	ME392	Workshop Practice-II Lab	0	0	3	3	3
10.	ME393	Applied Mechanics Lab	0	0	3	3	2
Total Practical						12	8
Total Semester						33	30

Second Year Fourth Semester

A. THEORY							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
1.	M(CS)401	Numerical Methods	2	1	0	3	2
2.	HU401	Values & Ethics in Profession	3	1	0	4	3
3.	ME401	Fluid Mechanics & Hydraulic Machines	4	0	0	4	4
4.	ME402	Primary Manufacturing Processes	3	0	0	3	3
5.	ME403	Mechanisms	4	0	0	4	4
Total Theory						18	16
B. PRACTICAL							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
6.	M(CS)491	Numerical Methods Lab	0	0	3	3	2
7.	ME491	Fluid Mechanics & Hydraulics Lab	0	0	3	3	2
8.	ME492	Manufacturing Technology Lab	0	0	3	3	2
9.	ME493	Material Testing Lab	0	0	3	3	2
10.	ME494	Machine Drawing Lab	0	0	3	3	2
Total Practical						15	10
Total Semester						33	26



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**Mechanical Engineering
Third Year Fifth Semester**

A. THEORY							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
1.	ME501	Metrology & Measurement	3	1	0	3	4
2.	ME502	Heat Transfer	4	0	0	4	4
3.	ME503	Design of Machine Elements	4	0	0	4	4
4.	ME504	Dynamics of Machines	3	0	0	3	3
5.	ME505	Industrial Management	3	0	0	3	3
6.	ME506	Professional Elective-I	3	0	0	3	3
Total Theory						20	21
B. PRACTICAL							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
7.	ME592	Applied Thermodynamics & Heat Transfer Lab	0	0	3	3	2
8.	ME593	Design Practice-I	0	0	3	3	2
9.	ME591	Metrology & Measurement Lab	0	0	2	2	2
10.	ME596	Professional Elective Lab-I	0	0	3	3	2
Total Practical						11	8
Total Semester						31	29

* List of Professional Elective 1:

1. ME506A-Electrical Machines

2. ME506B-Applied Fluid Mechanics



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**Mechanical Engineering
Third Year Sixth Semester**

A. THEORY							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
1.	ME601	IC Engines & Gas Turbines	3	0	0	3	3
2.	ME602	Machining Principles & Machine Tools	3	0	0	3	3
3.	ME603	Machine Design-II	3	0	0	3	3
4.	ME604	Production & Operations Management	3	0	0	3	3
5.	ME605	@ Professional Elective-II	3	0	0	3	3
6.	ME606	@@ Professional Elective-III	2	0	0	2	2
Total Theory						17	17
B. PRACTICAL							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
7.	ME691	IC Engine Lab	0	0	3	3	2
8.	ME692	Machining & Machine Tools Lab	0	0	3	3	2
9.	ME693	Design Practice-II Lab	0	0	3	3	2
10.	ME694	Dynamics of Machines Lab	0	0	3	3	2
11.	ME695	Professional Elective-II Lab	0	0	3	3	2
Total Practical						15	10
Total Semester						32	27

@ List of Prof. Elective-II:

1. ME605A: Air Conditioning & Refrigeration
2. ME605B: Mechatronics
3. ME605C: Fluid Power Control

@ @List of Prof. Elective-III:

1. ME606A- Materials Handling
2. ME606B- Finite Element Method
3. ME606C- Turbo Machinery

Note: Vocational Training to be conducted after sixth semester and to be evaluated in seventh semester



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**Mechanical Engineering
Fourth Year Seventh Semester**

A. THEORY							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
1.	ME701	Advanced Manufacturing Technology	3	1	0	4	3
2.	ME702	Power Plant Engineering	4	0	0	4	4
3.	ME703	^Professional Elective-IV	3	0	0	3	3
4.	ME704	^^Professional Elective-V	3	0	0	3	3
5.	ME705	^^^Free Elective-I	3	0	0	3	3
Total Theory						17	16
B. PRACTICAL / SESSIONAL							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
6.	ME791	Advanced Manufacturing Technology Lab	0	0	3	3	2
7.	ME792	Group Discussion	0	0	3	3	2
8.	ME781	Seminar on Industrial Training	4 wks during 6 th -7 th During Semester Break				2
9.	ME782	Project Part-I			6	6	4
Total Practical						12	10
Total Semester						29	26

^List of Prof. Elective-IV

ME703A: Maintenance Engineering

ME703B: Renewable Energy Systems

ME703C: Tribology

^^List of Prof. Elective-V:

ME704A: Quantity Production Method

ME704B: Advanced Welding Technology

ME704C: Computational Methods in Engineering

^^^ List of Free Elective-I:

ME705A: Software Engineering

ME705B: Industrial Instrumentation

ME705C: Operations Research



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**Mechanical Engineering
Fourth Year Eighth Semester**

A. THEORY							
Sl.No.	Course Code	Subjects	Contact Hours / Week				Credit Points
			L	T	P	Total	
1.	HU802	Economics for Engineers	3	0	0	3	3
2.	ME801	*Professional Elective-VI	3	0	0	3	3
3.	ME802	@Free Elective-II	3	0	0	3	3
Total Theory						9	9
B. PRACTICAL / SESSIONAL							
Sl. No.	Course Code	Subjects	Contact Hours / Week				Credit
			L	T	P	Total	
4.	ME891	Design of Mechanical System Lab	0	0	3	3	2
5.	ME881	Grand Viva	0	0	0	0	4
6.	ME882	Project Part-II			12	12	6
Total Practical						15	12
Total Semester						24	21

*List of Prof. Elective-VI:

ME801A: CAD/CAM

ME801B: Industrial Robotics

ME801C: Energy Conservation & Management

ME801D: Quality & Reliability Engineering

@List of Free Elective-II:

ME802A: Safety & Occupational Health

ME802B: Automation & Control

ME802C: Water Resource Engineering

ME802D: Automobile Engineering