Revised Curriculum for B.Sc. Engineering Honours Degree Programme
- Department of Mechanical Engineering -Intake 2015

Module Code	Module Name	Category	Lectures	Lab/ Assignments	Credits		Norm		Evaluation (%)	
			hrs/week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
Semester 1										
ME1032	Mechanics	C	2.0	3/4	2.0	-			20	80
CE1022	Fluid Mechanics	C	2.0	3/4	2.0	-			20	80
CS1032	Programming Fundamentals	C	2.0	3/1	3.0	-			60	40
EE1012	Electrical Engineering	C	2.0	3/4	2.0	-			20	80
EL1012	Language Skill Enhancement I	C	1.0	3/1	1.0	-			20	80
MA1013	Mathematics	C	3.0	1/1	3.0	-			20	80
MN1012	Engineering in Context	C	2.0	-	-	1.0			30	70
MT1022	Properties of Materials	C	2.0	3/4	2.0	-	15.0	1.0	20	80
					Total for Semester 1		15.0	1.0		

Module Code	Module Name	Category	Lectures	Lab/ Assignments	Credits		Norm		Evaluation (%)	
Semester 2										
ME1100	Mechanics of Materials I	C	1.5	3/2	2.0	-			30	70
ME1090	Engineering Drawing & Computer Aided Modelling	C	2.0	3/1	3.0	-			100	-
ME1052	Fundamentals of Engineering Thermodynamics	C	2.5	3/2	3.0	-			30	70
ME1070	Manufacturing Technology	C	1.0	3/1+3/2(A)	-	2.5			100	-
ME2040	Fundamentals of Mechatronics	C	1.0	3/1	2.0	-			40	60
ME1900	Industrial Visits and Guest Lectures I	C	1.0	3/1	-	1.0			100	-
EL1022	Language Skill Enhancement II	C	-	3/1	1.0	-			30	70
EN1802	Basic Electronics	C	2.0	3/4	2.0	-			40	60
MA1023	Methods of Mathematics	C	3.0	1/1	3.0	-			30	70
MT1812	Engineering Materials	C	1.5	3/2	2.0	-	18.0	3.5	30	70
ME1190	Introduction to Aircraft Engineering	O	1.5	3/2	2.0		0.0	0.0	30	70
MN1030	Entrepreneurship Skill Development	O	0.5	3/2	-	1.0			100	-
					Total for Semester 2		18.0	3.5		

Module Code	Module Name	Category	Lectures	Lab/ Assignments	Credits		Norm		Evaluation (%)	
			hrs/week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
Semester 3										
ME2010	Fluid Dynamics	C	2.5	3/2	3.0	-			30	70
ME2023	Manufacturing Engineering I	C	3.0	3/1	4.0	-			30	70
ME2092	Mechanics of Machines I	C	3.5	3/2	4.0	-			30	70
EE2803	Applied Electricity	C	1.5	3/2	2.0	-			30	70
EN2852	Applied Electronics	C	1.5	3/2	2.0	-			40	60
MA2013	Differential Equations	C	2.0	-	2.0	-			30	70
MA2023	Calculus	C	2.0	-	2.0	-	19.0	0.0	30	70
CS2882	Object Oriented Programming Using C++	O	2.0	3/1	3.0	-			30	70
MN1030	Entrepreneurship Skill Development	O	0.5	3/2	-	1.0	0.0	0.0	100	-
					Total for Semester 3		**19.0**	**0.0**		

Semester 4										
ME2032	Thermodynamics of Heat Engines & Work Transfer Devices	C	3.5	3/2	4.0	-			30	70
ME2050	Mechanics of Machines II	C	2.5	3/2	3.0	-			30	70
ME2060	Mechanics of Materials II	C	3.5	3/2	4.0	-			30	70
ME2170	Manufacturing Engineering II	C	3.5	3/2	4.0	-			40	60
ME2080	Design of Machine Elements	C	2.0	3/1	3.0	-			40	60
ME2160	Introduction to Automotive Engineering	C	1.5	3/2	2.0	-			30	70
MA2033	Linear Algebra	C	2.0	-	2.0	-			30	70
ME2180	Social/Community Project	C	-	3/1	-	1.0	22.0	1.0	100	-
CH2802	Process Engineering	O	1.5	3/2	2.0	-			30	70
MA2053	Graph Theory	O	2.0	-	2.0	-			30	70
MN2010	Entrepreneurial Leadership	O	1.5	3/2	2.0		0.0	0.0	50	50
					Total for Semester 4		**22.0**	**1.0**		

Module Code	Module Name	Category	Lectures	Lab/ Assignments	Credits		Norm		Evaluation (%)	
			hrs/week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
Semester 5										
ME3012	Control Systems & Instrumentation	C	3.5	3/2	4.0	-			30	70
ME3022	Fluid Power Systems & Machinery	C	3.5	3/2	4.0	-			30	70
ME3042	Production & Operations Management	C	2.5	2/2	3.0	-			40	60
ME3200	Machine Design Project	C	3.0	3/1	4.0	-			100	-
MA3013	Applied Statistics	C	2.0	-	2.0	-			30	70
MA3023	Numerical Methods	C	2.0	-	2.0	-			30	70
MN3042	Business Economics and Financial Accounting	C	2.5	3/2	3.0	-	22.0	0.0		
MN3010	Multidisciplinary Design Innovation and Venture Creation	O	1.5	3/2	2.0	-			50	50
MN3052	Industrial Management and Marketing	O	2.5	3/2	3.0	-	0.0	0.0	30	70
					Total for Semester 5		22.0	0.0		
ME3992	**Industrial Training**	**C**	**-**	**-**	**-**	**6.0**	**0.0**	**6.0**		
Semester 6										
ME3901	Project Methodology and Communication	C	1.5	3/2	-	2.0			100	-
ME4202	Design/Research Project**	C	-	-	2.0	-	2.0	2.0	100	-
DE2xxx	Humanities Elective I*	E			2.0	-				
DE2xxx	Humanities Elective II*	E			2.0	-	4.0	0.0		-
					Total for Semester 6		6.0	2.0		

*   *Compulsory elective modules selected from a basket*

**   *Module continued in three semesters:6, 7 and 8 and the results are counted at the end of Semester 08 only*

Module Code	Module Name	Category	Lectures	Lab/ Assignments	Credits		Norm		Evaluation (%)	
			hrs/week	hrs/weeks	GPA	NGPA	GPA	NGPA	CA	WE
Semester 7										
ME4202	Design/Research Project**	C	-	-	4.0	-			100	-
MN4900	Professional Ethics	C	1.0	-	-	1.0				
ME4903	Industrial Visits and Guest Lectures II	C	-	3/2	-	0.5			100	-
							4.0	1.5		
ME4210	Acoustics and Visual Comfort	E	2.5	3/2	3.0	-			30	70
ME4242	Energy Technology & Environment	E	2.5	3/2	3.0	-			30	70
ME4332	Computer Aided Design & Manufacture	E	3.0	3/1	4.0	-			30	70
ME4382	Refrigeration & Air Conditioning	E	3.5	3/2	4.0	-			40	60
ME4452	Industrial Project Management	E	3.5	3/2	4.0	-			40	60
ME4090	Industrial Automation	E	2.0	3/1	3.0	-			60	40
ME4512	Industrial Products, Machinery & Equipment Design	E	2.0	3/1	3.0	-			40	60
MA4023	Operational Research	E	3.0	-	3.0	-	7.0	0.0	30	70
ME4310	Micro/Nano Electro Mechanical Systems and Nanotechnology	E	2.0	3/1	3.0	-			40	60
ME4372	Aerodynamics	E	3.5	3/2	4.0	-			30	70
ME 4710	Aircraft Technology	E	2.5	3/2	3.0	-			30	70
ME4620	Biomedical Engineering Applications	E	2.5	3/2	3.0	-			30	70
ME4642	Advanced Dynamics & Vibrations	E	2.5	3/2	3.0	-			30	70
MA4013	Linear Models & Multivariate Statistics	E	3.0	-	3.0	-			30	70
MA4033	Time Series & Stochastic Process	E	3.0	-	3.0	-			30	70
MN4062	Organization Behaviour & Management	E	1.5	3/2	3.0	-			30	70
MN4122	Human Resource Management and Industrial Relations	E	2.0	-	2.0	-	5.0	0.0	30	70
MN3020	Entrepreneurship Business Basics	O	2.0	3/1	3.0	-			50	50
MN4030	Strategic Enterprise Management	O	1.5	3/2	2.0	-			40	60
MN4042	Technology Management	O	1.5	3/2	2.0	-	0.0	0.0	30	70
					Total for Semester 7		**16.0**	**1.5**		

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits GPA	Credits NGPA	Norm GPA	Norm NGPA	Evaluation (%) CA	Evaluation (%) WE
Semester 8										
ME4072	Industrial Engineering	C	3.5	3/2	4.0	-			30	70
ME4202	Design/Research Project**	C	-	-	4.0	-	8.0	0.0	100	-
ME4392	Advanced Aspects of Manufacturing	E	3.0	-	3.0	-			30	70
ME4422	Energy Conservation	E	2.5	3/2	3.0	-			40	60
ME4442	Heat and Mass Transfer	E	2.5	3/2	3.0	-			30	70
ME4472	Computer Aided Engineering	E	2.5	3/2	3.0	-			30	70
ME4483	Logistics and Supply Chain Systems	E	2.5	3/2	3.0	-			30	70
ME4502	Robotics Technology	E	2.5	3/2	3.0	-			40	60
ME4532	Industrial Ergonomics	E	2.5	3/2	3.0	-	6.0	0.0	40	60
ME4432	Computational Fluid Dynamics	E	2.5	3/2	3.0	-			50	50
ME4632	Automotive Engineering	E	3.5	3/2	4.0	-			30	70
ME4652	Marine Engineering & Naval Architecture	E	3.5	3/2	4.0	-			30	70
ME4662	Die and Mould Design	E	2.5	3/2	3.0	-			30	70
ME4672	Control Systems Design	E	2.5	3/2	3.0	-			30	70
MA4043	Neural Network and Fuzzy Logic	E	3.0	-	3.0	-			30	70
MN4022	Engineering Economics	E	1.5	3/2	2.0	-	3.0	0.0	30	70
MN4072	Small Business Management Entrepreneurship	O	1.5	3/2	2.0	-			30	70
MN4010	Business Plan Development	O	1.5	3/2	2.0	-			70	30
MN4170	Global Entrepreneurship	O	1.5	3/2	2.0	-	0.0	0.0	40	60
					Total for Semester 8		17.0	0.0		
					Total for the programme		135.0	15.0		
							150.0			

There are four focus areas introduced from 15 batch onwards and the following elective modules becomes compulsory for each focus area as mentioned in the table below.

Focus area	Compulsory Modules for focus areas to be selected from Elective Modules	
	Semester 07	Semester 08
Energy Engineering	ME4242 and ME4382	ME4422 and ME4442
Building Services Engineering	ME4210 and ME4382	ME4422 and ME4442
Industrial Engineering	ME4452 and MA4022	ME4483 and ME4532
Product Design and Manufacturing Engineering	ME4512 and ME4332	ME4392 and ME4472

Compulsory Modules for Focus Area

In Semester 07, there is a set of 8 elective modules from which the students have to take 7 credits. Those modules are as follows. Minimum 5 credits have to be obtained from other set of electives.

Semester 07	
Module code	**Module name**
ME4512	Industrial Products, Machinery & Equipment Design
ME4332	Computer Aided Design & Manufacture
ME4242	Energy Technology & Environment
ME4382	Refrigeration & Air Conditioning
ME4210	Acoustics and visual comfort
ME4452	Industrial Project Management
MA4022	Operational Research
ME4090	Industrial Automation

In Semester 08, there is a set of 7 elective modules from which the students have to take 6 credits. Those modules are as follows.
Minimum 3 credits have to be obtained from other set of electives.

Semester 08	
Module code	**Module name**
ME4392	Advanced Aspects of Manufacturing
ME4472	Computer Aided Engineering
ME4483	Logistics and Supply Chain Systems
ME4532	Industrial Ergonomics
ME4422	Energy Conservation
ME4442	Heat and Mass Transfer
ME4502	Robotics Technology

Modules offered for other fields of specialisation

Semester 02	
ME1812	Basic Thermal Sciences (CE: 140)

ME1802	Introduction to Manufacturing Engineering (EE:110, TT:75)
ME1090	Engineering Drawing and Computer Aided Modeling (MT:56, ER:59, CH:90)
Semester 03	
ME1822	Basic Engineering Thermodynamics (ICE:25,CSE:100,MT: 50, TT:75)
ME1100	Mechanics of Materials I (EE:110, MT:56)
Semester 04	
ME1802	Introduction to Manufacturing Engineering (CSE:100,ICE:25)
ME2842	Basic Thermal Science and Applications (EE:110)
ME2850	Fundamentals of Machine Element Design (MT: 56, TT: 75)
ME2832	Mechanics of Machines (MT: 56)
Semester 05	
ME3810	Machine Design (MT: 56)
ME3012	Control Systems and Instrumentation (MT: Elective)