

Department of Mechanical Engineering

Consolidated Proposal for UG Curriculum

Based on the discussions held in a series of many DFB meetings, following is the proposal for the two UG programs offered by the department.

1) Name of the Programs

4 year B.Tech program in Mechanical engineering (ME1)

4 year B.Tech program in Production and Industrial engineering (ME2)

2) Program structure

a) For ME1 Program:

	L	T	P	TOTAL
Departmental Core	43	4.5	32	64
Programme-linked	9	2	2	12
BS/EAS/HU				55
Departmental Elective				12
Open category				10
Grand Total				153

B) For ME2 Program:

	L	T	P	TOTAL
Departmental Core	49	2	31	66
Programme-linked	9	2	2	12
BS/EAS/HU				55
Departmental Elective				12
Open category				10
Grand Total				155

3) Department core subjects

a) For ME1 Program:

S. No.	Course Name	L	T	P	Credits
	Departmental Core				
1	Manufacturing Processes I (DC)	3	0	0	3
2	Manufacturing Processes II (DC)	3	0	0	3
3	Manufacturing Lab I (DC)	0	0	2	1
4	Manufacturing Lab II (DC)	0	0	2	1
5	Manufacturing System Design (DC)	3	0	0	3
6	Introduction to Operations Research (DC)	3	0	0	3
7	Engineering Thermodynamics (DC)	3	1	0	4
8	Introduction to Fluid Mech (DC)	3	1	0	4
9	Energy systems and Technologies (DC)	3	0.5	1	4
10	Heat and Mass Transfer (DC)	3	1	0	4
11	Mechanical Engg Drawing (DC)	2	0	3	3.5
12	Solid Mech (DC)	3	1	0	4
13	Kinematics & Dynamics of Machines (DC)	3	0	2	4
14	Design of Machines (DC)	3	0	2	4
15	Control theory and applications (DC)	3	0	2	4
16	ME LAB 1 (DC)	0	0	3	1.5
17	ME LAB II (DC)	0	0	4	2
18	CAM & Automation (DC)	2	0	2	3
19	CAD & Finite Element Analysis (DC)	3	0	2	4
20	BTP I (DC)	0	0	8	4
	DC total	43	4.5	32	64

b) For ME2 Program:

S. No.	Course name	L	T	P	credits
	Departmental Core				
1	Near Net Shape Manufacturing	3	0	0	3
2	Welding and Allied Processes	3	0	0	3
3	Metal Forming and Press Tools	3	0	0	3
4	Material Removal Processes	3	0	0	3
5	Production Engineering Lab 1(DC)	0	0	2	1
6	Production Engineering Lab 2 (DC)	0	0	2	1
7	Micro and Nano Manufacturing (DC)	3	0	0	3
8	Manufacturing System Design (DC)	3	0	0	3

9	Introduction to Operations Research (DC)	3	0	0	3
10	Thermal Science for mfg. (DC)	3	1	0	4
11	Metrology and Quality Assurance	3	0	1	3.5
12	Stochastic Modelling and Simulation(DC)	3	0	0	3
13	Mechanical Engg Drawing (DC)	2	0	3	3.5
14	Kinematics & Dynamics of Machines (DC)	3	0	2	4
15	Design of Machines (DC)	3	0	2	4
16	Control theory and applications (DC)	3	0	2	4
17	Industrial Engineering LAB 1 (DC)	0	0	2	1
18	Industrial Engineering Lab 2 (DC)	0	0	2	1
19	CAM & Automation (DC)	2	0	2	3
20	CAD & Finite Element Analysis (DC)	3	0	2	4
21	Solid Mech (DC)	3	1	0	4
22	BTP I (DC)	0	0	8	4
	DC total	49	2	31	66

3) Program Linked courses for ME1 and ME2 Programs

Introduction to Statistics (MAL 215): 4 Credits (3-1-0)

Introduction to Material science and engineering (AML 120): 4 Credits (3-0-2)

Numerical methods and computation (MAL 230): 4 Credits (3-1-0)

Total credits: 12

4) Semester schedule

Students of ME1 and ME2 do 34 credits of the Institute core courses in the first two semesters. The schedule of courses for the next six semesters is given below.

