



Semester - 1

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
						T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203104102	Elements of Civil Engineering	4	3	2	0	20	20	20	60	30	40	25	150
203105101	Fundamentals of Programming	4	2	4	0	20	20	20	60	30	40	25	150
203109101	Engineering Graphics	4	2	4	0	20	20	20	60	30	40	25	150
203191101	Mathematics – I	5	3	0	2	20	-	20	60	-	40	-	100
203192101	Engineering Physics	4	3	2	0	20	20	20	60	30	40	25	150
203193101	Communication Skills - 1	2	0	0	2	-	-	100	0	-	40	-	100
	Total	23	13	12	4								800

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 2

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
						T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203100101	Workshop	2	0	4	0	-	40	-	-	60	-	50	100
203104103	Environmental Science	2	2	0	0	20	-	20	60	-	40	-	100
203104151	Mechanics of Solids	4	3	2	0	20	20	20	60	30	40	25	150
203106101	Basic Electrical Engineering	5	4	2	0	20	20	20	60	30	40	25	150
203109102	Elements of Mechanical Engineering	4	3	2	0	20	20	20	60	30	40	25	150
203191151	Mathematics-II	5	3	0	2	20	-	20	60	-	40	-	100
203193151	Communication Skills - 2	2	0	0	2	-	-	100	0	-	40	-	100
	Total	24	15	10	4								850

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
 Theory Passing % : 40 Practical Passing % : 50



Semester - 3

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
						T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109201	Thermodynamics	4	3	0	1	20	50	20	60	-	40	25	150
203109203	Materials Engineering	3	3	0	0	20	-	20	60	-	40	-	100
203109204	Materials Engineering Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109205	Manufacturing Processes	3	3	0	0	20	-	20	60	-	40	-	100
203109206	Manufacturing Processes Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109207	Kinematics and Theory of Machines	3	3	0	0	20	-	20	60	-	40	-	100
203109208	Kinematics and Theory of Machines Lab	1	0	2	0	-	20	-	-	30	-	25	50
203192201	Optics and Waves	4	3	0	1	20	50	20	60	-	40	25	150
203193201	Professional Communication Skills-1	2	1	0	1	-	-	100	0	-	40	-	100
Total		22	16	6	3								850

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
 Theory Passing % : 40 Practical Passing % : 50



Semester - 4

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
						T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109251	Mechanical Measurement and Metrology	3	3	0	0	20	-	20	60	-	40	-	100
203109252	Mechanical Measurement and Metrology Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109253	Fluid Mechanics and Fluid Machines	3	3	0	0	20	-	20	60	-	40	-	100
203109254	Fluid Mechanics and Fluid Machines Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109255	Manufacturing Technology	3	3	0	0	20	-	20	60	-	40	-	100
203109256	Manufacturing Technology Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109257	Strength of Materials	3	2	0	1	20	50	20	60	-	40	25	150
203191252	PDE, Probability and Statistics	5	3	0	2	20	-	20	60	-	40	-	100
203193251	Professional Communication Skills-2	2	1	0	1	-	-	100	0	-	40	-	100
	Total	22	15	6	4								800

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
 Theory Passing % : 40 Practical Passing % : 50



Semester - 5 Open Elective

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203101346	Basic Aircraft Science	2	2	0	0	20	-	20	60	-	40	-	100
203104346	Disaster Preparedness and Planning	2	2	0	0	20	-	20	60	-	40	-	100
203105346	Cyber Security	2	2	0	0	20	-	20	60	-	40	-	100
203106346	Energy Science and Engineering	2	2	0	0	20	-	20	60	-	40	-	100
203108346	Internet of Things	2	2	0	0	20	-	20	60	-	40	-	100
203109346	Renewable Energy Sources	2	2	0	0	20	-	20	60	-	40	-	100

Semester - 5

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109301	Heat Transfer	3	3	0	0	20	-	20	60	-	40	-	100
203109302	Heat Transfer Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109303	Instrumentation and Control	3	3	0	0	20	-	20	60	-	40	-	100
203109304	Instrumentation and Control Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109305	Applied Thermodynamics	3	3	0	0	20	-	20	60	-	40	-	100
203109306	Applied Thermodynamics Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109307	Industrial Engineering and Project Management	4	3	0	1	20	50	20	60	-	40	25	150
203109308	Project - 1	1	0	2	0	-	50	-	-	50	-	50	100



Semester - 5

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
						T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109309	Design of Machine Elements	4	3	0	1	20	50	20	60	-	40	25	150
203193301	Programming Skills and Placement Essentials (All Branches Except CSE/IT/ICT)	2	1	0	1	-	-	100	0	-	40	-	100
	Open Elective (Compulsory Subjects :1) -	2	2	0	0	-	-	-	-	-	-	-	100
	Total	25	18	8	3								1050

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 6 Open Elective 02

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203100351	Life Science	2	2	0	0	60	-	40	0	0	40	0	100
203100352	Biology for Engineers	2	2	0	0	60	-	40	0	0	40	0	100
203100353	Engineering Geology	2	2	0	0	60	-	40	0	0	40	0	100
203100355	Fundamentals of Management	2	2	0	0	60	-	40	0	0	40	0	100
203100356	Corporate Social Responsibility	2	2	0	0	60	-	40	0	0	40	0	100
203100357	Innovation and Entrepreneurship	2	2	0	0	60	-	40	0	0	40	0	100
203100358	Constitution of India	2	2	0	0	60	-	40	0	0	40	0	100
203100359	Cyber Law & Ethics	2	2	0	0	60	-	40	0	0	40	0	100

Semester - 6

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109351	Computer Aided Design	3	3	0	0	20	-	20	60	-	40	-	100
203109352	Computer Aided Design Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109353	Dynamics of Machines	3	3	0	0	20	-	20	60	-	40	-	100
203109354	Dynamics of Machines Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109356	Project - II	1	0	2	0	-	50	-	-	50	-	50	100
	Open Elective 02 (Compulsory Subjects :1) -	2	2	0	0	-	-	-	-	-	-	-	100



Semester - 6

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
	Open Elective 03 (Compulsory Subjects :1) -	2	1	0	1	-	-	-	-	-	-	-	100
	PEC 01-LAB (Compulsory Subjects :1) -	1	0	2	0	-	-	-	-	-	-	-	50
	PEC 01 (Compulsory Subjects :1) -	3	3	0	0	-	-	-	-	-	-	-	100
	PEC 02 (Compulsory Subjects :1) -	3	2	0	1	-	-	-	-	-	-	-	150
	Total	20	14	8	2								900

Semester - 6 PEC 01

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109381	Internal Combustion Engine	3	3	0	0	20	-	20	60	-	40	-	100
203109383	Tool Design	3	3	0	0	20	-	20	60	-	40	-	100
203109385	Oil Hydraulics and Pneumatic	3	3	0	0	20	-	20	60	-	40	-	100

Semester - 6 PEC 01-LAB

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109382	Internal Combustion Engine Lab	1	0	2	0	-	20	-	-	30	-	25	50



Semester - 6 PEC 01-LAB

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109384	Tool Design lab	1	0	2	0	-	20	-	-	30	-	25	50
203109386	Oil Hydraulics and Pneumatic Lab	1	0	2	0	-	20	-	-	30	-	25	50

Semester - 6 PEC 02

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109387	Quality Management Techniques	3	2	0	1	20	50	20	60	-	40	25	150
203109388	Power Plant Engineering	3	2	0	1	20	50	20	60	-	40	25	150

Semester - 6 Open Elective 03

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203193351	Advanced Programming and Placement Essentials	2	1	0	1	-	-	100	0	-	40	-	100

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50



Semester - 7

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109401	Machine Design	4	3	0	1	20	50	20	60	-	40	25	150
203109403	Automation in Manufacturing	3	3	0	0	20	-	20	60	-	40	-	100
203109404	Automation in Manufacturing Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109406	Summer Internship	1	0	0	0	-	20	-	-	30	-	25	50
203109408	Project - III	7	0	14	0	-	100	-	-	100	-	100	200
	Open Elective 04 (Compulsory Subjects :1) -	3	2	0	1	-	-	-	-	-	-	-	150
	PEC 03 (Compulsory Subjects :1) -	3	3	0	0	-	-	-	-	-	-	-	100
	PEC 03-LAB (Compulsory Subjects :1) -	1	0	2	0	-	-	-	-	-	-	-	50
	Total	23	11	18	2								850

Semester - 7 PEC 03

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109431	Refrigeration and Air Conditioning	3	3	0	0	20	-	20	60	-	40	-	100
203109433	Advanced Heat Transfer	3	3	0	0	20	-	20	60	-	40	-	100
203109435	Tribology	3	3	0	0	20	-	20	60	-	40	-	100



Semester - 7 PEC 03-LAB

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109432	Refrigeration and Air Conditioning Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109434	Advanced Heat Transfer Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109436	Tribology Lab	1	0	2	0	-	20	-	-	30	-	25	50

Semester - 7 Open Elective 04

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109437	Nanomaterials and Surface Engineering	3	2	0	1	20	50	20	60	-	40	25	150
203109438	Industrial Safety and Maintenance Engineering	3	2	0	1	20	50	20	60	-	40	25	150
203109439	Waste to Energy Conversion	3	2	0	1	20	50	20	60	-	40	25	150

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
 Theory Passing % : 40 Practical Passing % : 50



Semester - 8

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109451	Renewable Energy Engineering	4	3	0	1	20	50	20	60	-	40	25	150
203109453	Operation Research and Optimization Techniques	4	3	0	1	20	50	20	60	-	40	25	150
203109456	Project - IV	7	0	14	0	-	100	-	-	100	-	100	200
	PEC 04 (Compulsory Subjects :1) -	4	3	0	1	-	-	-	-	-	-	-	150
	PEC 05 (Compulsory Subjects :1) -	3	3	0	0	-	-	-	-	-	-	-	100
	PEC 05-LAB (Compulsory Subjects :1) -	1	0	2	0	-	-	-	-	-	-	-	50
	Total	23	12	16	3								800

Semester - 8 PEC 04

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109481	Energy Conservation and Management	4	3	0	1	20	50	20	60	-	40	25	150
203109482	Product Design and Value Engineering	4	3	0	1	20	50	20	60	-	40	25	150



Semester - 8 PEC 05

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109483	Finite Element Methods	3	3	0	0	20	-	20	60	-	40	-	100
203109485	Industrial Robotics	3	3	0	0	20	-	20	60	-	40	-	100
203109487	Automobile Engineering	3	3	0	0	20	-	20	60	-	40	-	100

Semester - 8 PEC 05-LAB

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203109484	Finite Element Methods Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109486	Industrial Robotics Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109488	Automobile Engineering Lab	1	0	2	0	-	20	-	-	30	-	25	50

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
 Theory Passing % : 40 Practical Passing % : 50