

I YEAR I SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2010001	Engineering Mathematics - I	BS	3	1	0	4	30	70	100
2	2010007	Engineering Physics	BS	3	1	0	4	30	70	100
3	2010501	Programming for Problem Solving	ES	3	1	0	4	30	70	100
4	2010072	Engineering Physics Lab	BS	0	0	3	1.5	30	70	100
5	2010571	Programming for Problem Solving Lab	ES	0	0	3	1.5	30	70	100
6	2010371	Engineering Drawing Practice	ES	1	0	4	3	30	70	100
TOTAL				10	3	10	18	180	420	600

I YEAR II SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2020002	Engineering Mathematics-II	BS	3	1	0	4	30	70	100
2	2020008	Engineering Chemistry	BS	3	1	0	4	30	70	100
3	2020009	Communicative English	HSMC	2	0	0	2	30	70	100
4	2020502	Data Structures	ES	3	0	0	3	30	70	100
5	2020073	Engineering Chemistry Lab	BS	0	0	3	1.5	30	70	100
6	2020074	Communicative English Lab	HSMC	0	0	2	1	30	70	100
7	2020372	Engineering Workshop	ES	1	0	3	2.5	30	70	100
8	2020572	Data Structures Lab	ES	0	0	2	1	30	70	100
9	2020021	Environmental Science	*MC	3	0	0	0	-	-	-
TOTAL				15	2	10	19	240	560	800

***MC- Satisfactory/Unsatisfactory**

II YEAR I SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2030005	Probability Distributions and Complex Variables	BS	3	1	0	4	30	70	100
2	2030202	Basic Electrical and Electronic Engineering	HSMC	3	0	0	3	30	70	100
3	2030301	Engineering Mechanics	ES	3	1	0	4	30	70	100
4	2030311	Thermodynamics	PC	3	1	0	4	30	70	100
5	2030505	Python Programming	ES	2	0	0	2	30	70	100
6	2030272	Basic Electrical and Electronic Engineering Lab	HSMC	0	0	2	1	30	70	100
7	2030373	Fuels and Lubricants Lab	PC	0	0	2	1	30	70	100
8	2030374	Machine Drawing Practice	PC	0	0	4	2	30	70	100
9	2030575	Python Programming Lab	ES	0	0	2	1	30	70	100
10	2030022	Gender Sensitization	*MC	2	0	0	0	-	-	-
TOTAL				16	3	10	22	270	630	900

II YEAR II SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2040312	Mechanics of Solids	PC	3	1	0	4	30	70	100
2	2040313	Metallurgy and Material Science	PC	3	0	0	3	30	70	100
3	2040314	Kinematics of Machinery	PC	3	1	0	4	30	70	100
4	2040315	Thermal Engineering-I	PC	3	0	0	3	30	70	100
5	2040316	Production Technology	PC	3	0	0	3	30	70	100
6	2040375	Production Technology Lab	PC	0	0	2	1	30	70	100
7	2040376	Material Science and Mechanics of Solids Lab	PC	0	0	2	1	30	70	100
8	2040377	Thermal Engineering Lab	PC	0	0	2	1	30	70	100
9	2040023	Constitution of India	*MC	3	0	0	0	-	-	-
10	2040026	OOPS through C++	*MC	0	2	0	0	-	-	-
TOTAL				18	4	6	20	240	560	800

*MC- Satisfactory/Unsatisfactory

III YEAR I SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2050317	Design of Machine Members -I	PC	3	0	0	3	30	70	100
2	2050318	Metrology and Machine Tools	PC	3	0	0	3	30	70	100
3	2050319	Dynamics of Machinery	PC	3	0	0	3	30	70	100
4	2050320	Thermal Engineering - II	PC	3	0	0	3	30	70	100
5	2050321	Fluid Mechanics and Hydraulics Machinery	PC	3	1	0	4	30	70	100
6		Professional Elective - I	PE	3	0	0	3	30	70	100
7	2050378	Kinematics and Dynamics of Machinery Lab	PC	0	0	2	1	30	70	100
8	2050379	Metrology and Machine Tools Lab	PC	0	0	2	1	30	70	100
9	2050380	Fluid Mechanics and Hydraulics Machinery Lab	PC	0	0	2	1	30	70	100
10	2050027	Data science	*MC	0	3	0	0	-	-	-
TOTAL				18	4	6	22	270	630	900

III YEAR II SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2060010	Business Economics and Financial Analysis	PC	3	1	0	4	30	70	100
2	2060322	Heat Transfer	PC	3	1	0	4	30	70	100
3	2060323	Design of Machine Members -II	OE	3	0	0	3	30	70	100
4		Open Elective – I	PE	3	0	0	3	30	70	100
5		Professional Elective - II	PC	3	0	0	3	30	70	100
6	2060075	Advanced English Communication Skills Lab	PC	0	0	2	1	30	70	100
7	2060381	Heat Transfer Lab	PC	0	0	3	1.5	30	70	100
8	2060382	CADD and MAT Lab	PC	0	0	2	1	30	70	100
9	2060028	Machine Learning	*MC	2	0	0	0	-	-	-
10	2060025	Professional Ethics	*MC	2	0	0	0	-	-	-
TOTAL				17	4	8	20	240	560	800

*MC- Satisfactory/Unsatisfactory

IV YEAR I SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2070324	CAD/ CAM	PC	3	0	0	3	30	70	100
2	2070325	Instrumentation and Control Systems	PC	3	0	0	3	30	70	100
3		Open Elective - II	OE	3	0	0	3	30	70	100
4		Professional Elective - III	PE	3	0	0	3	30	70	100
5		Professional Elective - IV	PE	3	0	0	3	30	70	100
6	2070383	CAD/CAM Lab	PC	0	0	2	1	30	70	100
7	2070384	Instrumentation and Control Systems Lab	PC	0	0	2	1	30	70	100
8	2070385	Industry Oriented Mini Project / Summer Internship**	PS	0	0	4	2	30	70	100
9	2070386	Project Stage – I	PS	0	0	6	3	30	70	100
TOTAL				15	0	14	22	270	630	900

IV YEAR II SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1		Open Elective - III	PE	3	0	0	3	30	70	100
2		Professional Elective - V	PE	3	0	0	3	30	70	100
3		Professional Elective - VI	OE	3	0	0	3	30	70	100
4	2080387	Technical seminar	PS	0	0	2	1	100	-	100
5	2080388	Project Stage - II	PS	0	0	14	7	30	70	100
TOTAL				9	0	16	17	220	280	500

****Students have to complete Industry Oriented Mini Project / Summer Internship in III Year- II Semester Summer break, Evaluation is carried in IV-I semester.**

Professional Elective (PE) Courses**PE I - Professional Elective I**

S. No.	Course Code	Course Title
1	2050341	Unconventional Machining Process
2	2050342	Total Quality Management
3	2050343	Operational Research
4	2050344	Non Destructive Testing

PE II - Professional Elective II

S. No.	Course Code	Course Title
1	2060345	Machine Tool Design
2	2060346	Finite Element Methods
3	2060347	Mechatronics
4	2060348	Mechanical Vibrations

PE III - Professional Elective III

S. No.	Course Code	Course Title
1	2070349	Renewable Energy Sources
2	2070350	Robotics
3	2070351	Computational Fluid Dynamics
4	2070352	Turbo Machinery

PE IV - Professional Elective IV

S. No.	Course Code	Course Title
1	2070353	Refrigeration and Air Conditioner
2	2070354	Automobile Engineering
3	2070355	I.C.Engines and Gas Turbines
4	2070356	Jet Propulsion & Rocket Engineering

PE V - Professional Elective V

S. No.	Course Code	Course Title
1	2080357	Additive Manufacturing Technology
2	2080358	Flexible Manufacturing System
3	2080359	Automation In Manufacturing
4	2080360	Plant Layout And Material Handling

PE VI - Professional Elective VI

S. No.	Course Code	Course Title
1	2080361	Powder Metallurgy
2	2080362	Composite Materials
3	2080363	Surface Engineering
4	2080364	Nano Materials

Open Elective (OE) Courses

S. No	Open Elective	Course Code	Course Title
1	Open Elective - I	2060302	Elements Of Mechanical Engineering
2	Open Elective – II	2070303	Fabrication Process
3	Open Elective - III	2080304	Alternate Energy Sources

Note: *Open Elective subject's syllabus is provided in a separate document. Student should take open electives from the list of offered by other departments/branches only.*