

B.TECH.-COURSESTRUCTURE-R23
(Applicable from the academic year2023-24 onwards)

INDUCTIONPROGRAMME

S.No.	Course Name	Category	L-T-P-C
1	Physical Activities--Sports, Yoga and Meditation, Plantation	MC	0-0-6-0
2	Career Counseling	MC	2-0-2-0
3	Orientation to all branches - career options, tools, etc.	MC	3-0-0-0
4	Orientation on admitted Branch--corresponding labs, tools and platforms	EC	2-0-3-0
5	Proficiency Modules & Productivity Tools	ES	2-1-2-0
6	Assessment on basic aptitude and mathematical skills	MC	2-0-3-0
7	Remedial Training in Foundation Courses	MC	2-1-2-0
8	Human Values & Professional Ethics	MC	3-0-0-0
9	Communication Skills—focus on Listening, Speaking, Reading, Writing skills	BS	2-1-2-0
10	Concepts of Programming	ES	2-0-2-0



B. TECH- Automobile Engineering

I Year I Semester						
S.No	Category	Course Name	L	T	P	Credits
1.	BS	Linear Algebra & Calculus	3	0	0	3
2.	BS	Engineering Chemistry	3	0	0	3
3.	ES	Introduction to Programming	3	0	0	3
4.	ES	Engineering Graphics	1	0	4	3
5.	ES	Basic Electrical & Electronics Engineering	3	0	0	3
6.	BS	Engineering Chemistry Lab	0	0	2	1
7.	ES	Computer Programming Lab	0	0	3	1.5
8.	ES	Electrical & Electronics Engineering Workshop	0	0	3	1.5
9.	MC	NSS/NCC/Scouts & Guides/ Community Service	0	0	1	0.5
Total Credits						19.5

I Year II Semester						
S.No	Category	Course Name	L	T	P	Credits
1.	BS	Differential Equations and Vector Calculus	3	0	0	3
2.	BS	Engineering Physics	3	0	0	3
3.	HS	Communicative English	2	0	0	2
4.	ES	Basic Civil & Mechanical Engineering	3	0	0	3
5.	PC	Engineering Mechanics	3	0	0	3
6.	HS	Communicative English Lab	0	0	2	1
7.	BS	Engineering Physics Lab	0	0	2	1
8.	ES	IT workshop	0	0	2	1
9.	ES	Engineering Workshop	0	0	3	1.5
10.	PC	Engineering Mechanics Lab	0	0	3	1.5
11.	MC	Health and Wellness, Yoga and Sports	0	0	1	0.5
Total Credits						20.5

B. Tech – II Year I Semester						
S. No	Category	Title	L	T	P	Credits
1	BS	Numerical Techniques and Statistical Methods	3	0	0	3
2	HS	Universal human values– Understanding harmony and Ethical human conduct	2	1	0	3
3	ES	Thermodynamics & Thermal Engineering	3	0	0	3
4	PC	Fluid Mechanics & Hydraulic Machines	3	0	0	3
5	PC	Components of Automotive Chassis	3	0	0	3
6	PC	Fluid Mechanics & Hydraulic Machines Lab	0	0	3	1.5
7	PC	Automotive Chassis Lab	0	0	3	1.5
8	SEC	Computer Aided drafting and Automobile Assembly Drawing	0	1	2	2
9	Audit Course	Environmental Science	2	0	0	-
Total Credits						20

B. Tech – II Year II Semester						
S. No.	Category	Title	L	T	P	Credits
1	Management course	Product Life Cycle Management	2	0	0	3
2	ES/ BS	Mechanics of Solids	3	0	0	3
3	PC	Automobile Engines	3	0	0	3
4	PC	Automobile Electrical and Electronics	3	0	0	3
5	PC	Metallurgy and Material Science	3	0	0	3
6	PC	Automobile Engines & Fuels Lab	0	0	3	1.5
7	PC	Automobile Electrical and Electronics Lab	0	0	3	1.5
8	SEC	Machine Tools and Metrology Lab	0	1	2	2
9	ES	Design Thinking & Innovation	1	0	2	2
Total Credits						21
Mandatory Community Service Project Internship of 08 weeks duration during Summer Vacation						

B. TECH- III YEAR – I SEMESTER						
S. No.	Category	Course Title	L	T	P	Credits
1	PC	Theory of Machines	3	0	0	3
2	PC	Production Technology	3	0	0	3
3	PC	Vehicle Dynamics	3	0	0	3
4	OE-1	OPEN ELECTIVE	3	0	0	3
5	PE	1.Alternative Fuels for engines 2.Two and Three Wheelers 3.Microprocessor and Micro Controllers 4.Heat Transfer 5.Industrial Hydraulics and Pneumatics 6.MOOC's/NPTEL	3	0	0	3
6	PC	Production Technology Lab	0	0	3	1.5
7	PC	Theory of Machines Lab	0	0	3	1.5
8	SEC	Vehicle Design & Analysis Lab	0	0	4	2
9	MC	Indian Traditional Knowledge	2	0	0	0
10	Evaluation of Community service project	Community service Internship				2
Total Credits						22
Honors/Minor courses			4	0	0	4

B. TECH - III YEAR II SEMESTER						
S. No	Course Code	Course Title	L	T	P	Credits
1	PC	Automobile Components and Chassis Design	3	0	0	3
2	PC	Automobile Transmission systems	3	0	0	3
3	PC	Vehicle Body Engineering	3	0	0	3
4	OE-2	OPEN ELECTIVE	3	0	0	3
5	PE -2	1.CFD for Automobile Applications 2.Condition Monitoring 3.Noise Vibrations and Harshness 4.Mechatronics 5.Measurements and Control systems 6.MOOC's/NPTEL	3	0	0	3
6	PC	Auto Scanning & Vehicle Testing Lab	0	0	3	1.5
7	PC	Vehicle Maintenance Lab	0	0	3	1.5
8	PC	Vehicle Evaluation Lab	0	0	4	2
9	SEC	Soft Skills	0	0	4	2
10	MC	Technical Paper Writing & IPR	2	0	0	0
Total Credits						22
Mandatory industry Internship of 08 weeks duration during summer vacation						
Honors/Minor courses			4	0	0	4

B. TECH - IV YEAR I SEMESTER						
S. No	Code	Course Title	L	T	P	Credits
1	PE-3	1.Automobile Safety 2.Automobile HVAC 3.Special Purpose Vehicles 4.Engine Management Systems 5.Vehicle Infotronics 6.MOOC's/NPTEL	3	0	0	3
2	PE-4	1.Automobile Certification and Homologation 2.Total Quality Management 3.Electric Vehicles and Hybrid Technology 4.Facilities Planning and Material Handling 5.Rapid Prototyping 6.MOOC's/NPTEL	3	0	0	3
3	PE-5	1.Automobile Comfort Systems and Ergonomics 2.Lean Manufacturing 3.Vehicle Design Data Characteristics 4.Reliability Engineering 4.Smart, Autonomous and Connected Vehicles 5.MOOC's/NPTEL	3	0	0	3
4	OE-3	OPEN ELECTIVE	3	0	0	3
5	OE-4	OPEN ELECTIVE	3	0	0	3
6	HS	Professional Ethics	3	0	0	3
7	SOC	Artificial Intelligence and Machine Learning Lab	1	0	2	2
Evaluation of Summer Internship completed after III B. Tech II Semester						3
Total credits						23
Honors/ Minor courses			4	0	0	4

B. TECH - IV YEAR II SEMESTER						
S.No.	Category	Course Title	L	T	P	Credits
1	Internship & Project work	Full semester Internship & Project work	0	0	24	12
Total credits						12