



BRAINWARE UNIVERSITY
SCHOOL OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING
Bachelor of Technology in Mechanical Engineering - 2024

Mandatory Induction Program (Duration: 3 weeks)

- Physical activity
- Creative Arts
- Universal Human Values
- Literary
- Proficiency Modules
- Lectures by Eminent People
- Visits to local Areas
- Familiarization to Department/Branch and Innovations

SEMESTER – I

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	BHS00001	English for Technical Communication	3	0	0	40	60	100	3	HSMC
2	BBS00013	Introduction to Mechanics	3	1	0	40	60	100	4	BSC
3	BBS00011	Engineering Mathematics -I	3	0	0	40	60	100	3	BSC
4	BES00003	Basic Mechanical Engineering	3	1	0	40	60	100	4	ESC
5	BES00006	Programming for Problem Solving	3	1	0	40	60	100	4	ESC
6	BBS09021	Introduction to Mechanics Lab	0	0	2	40	60	100	1	BSC
7	BES09012	Programming for Problem Solving Lab	0	0	2	40	60	100	1	ESC
8	BES09014	Engineering Graphics and Design Lab	0	0	3	40	60	100	1.5	ESC
9	BAU00004	Yoga and Sports	2	0	0	0	0	0	0	AUC
TOTAL			17	3	7	320	480	800	21.5	

SEMESTER – II

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	BHS07008	Effective Communication and Soft Skills	2	0	2	40	60	100	3	HSMC
2	BHS00004	Understanding Harmony and Ethical Human Conduct	2	0	0	40	60	100	2	HSMC
3	BBS00012	Engineering Mathematics -II	3	0	0	40	60	100	3	BSC
4	BBS00010	Engineering Chemistry	3	1	0	40	60	100	4	BSC
5	BES00002	Basic Electrical and Electronics Engineering	3	1	0	40	60	100	4	ESC
6	BBS09020	Engineering Chemistry Lab	0	0	2	40	60	100	1	BSC
7	BES09008	Basic Electrical and Electronics Engineering Lab	0	0	2	40	60	100	1	ESC
8	BES09015	Workshop and Manufacturing Practices	0	0	3	40	60	100	1.5	ESC
9	BAU00002	Environmental Sciences	2	0	0	0	0	0	0	AUC
TOTAL			15	2	9	320	480	800	19.5	



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SEMESTER – III

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	BBS00009	Electromagnetism	3	0	0	40	60	100	3	BSC
2	BBS00001	Advanced Engineering Mathematics	3	1	0	40	60	100	4	BSC
3	BES00005	Engineering Mechanics	3	0	0	40	60	100	3	ESC
4	BTM30101	Thermodynamics	3	0	0	40	60	100	3	PCC
5	BTM30102	Measurement and Metrology	3	0	0	40	60	100	3	PCC
6	BES09011	Engineering Mechanics Lab	0	0	2	40	60	100	1	ESC
7	BTM39103	Machine Drawing- I Lab	0	0	3	40	60	100	1.5	PCC
8	BBS09019	Electromagnetism Lab	0	0	2	40	60	100	1	BSC
9	BTM39104	Measurement and Metrology Lab	0	0	3	40	60	100	1.5	PCC
8	BAU00003	Essence of Indian Knowledge and Tradition	2	0	0	0	0	0	0	AUC
TOTAL			17	1	10	360	540	900	21	

SEMESTER – IV

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	BTM40105	Engineering Materials and Metallurgy	3	0	0	40	60	100	3	PCC
2	BTM40106	Strength of Materials	3	0	0	40	60	100	3	PCC
3	BTM40107	Manufacturing Processes	3	0	0	40	60	100	3	PCC
4	BTM40108	Heat Transfer and Thermal Mechanics	3	0	0	40	60	100	3	PCC
5	BTM40109	Manufacturing Automation	3	0	0	40	60	100	3	PCC
6	BTM49110	Engineering Materials and Metallurgy Lab	0	0	3	40	60	100	1.5	PCC
7	BTM49111	Strength of Materials Lab	0	0	3	40	60	100	1.5	PCC
8	BTM49112	Manufacturing Processes Lab	0	0	3	40	60	100	1.5	PCC
9	BTM49113	Thermal Engineering Lab	0	0	3	40	60	100	1.5	PCC
TOTAL			15	0	12	360	540	900	21	



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SEMESTER – V

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	BHS00006	Operations Research	3	0	0	40	60	100	3	HSMC
2	BTM50114	Fluid Mechanics and Machinery	3	0	0	40	60	100	3	PCC
3	BTM50115	Principle of Machine Tools	3	0	0	40	60	100	3	PCC
4	BTM50116	Kinematics of Machines	3	0	0	40	60	100	3	PCC
5	BTM50117	Mechatronics and IoT	3	0	0	40	60	100	3	PCC
6	BTM59118	Machine Drawing- II Lab	0	0	3	40	60	100	1.5	PCC
7	BTM59119	Fluid Mechanics and Machinery Lab	0	0	3	40	60	100	1.5	PCC
8	BTM59120	Software Tools for Mechanical Engineering	0	0	3	40	60	100	1.5	PCC
9	BTM59121	Mechatronics and IoT Lab	0	0	2	40	60	100	1	PCC
TOTAL			15	0	11	360	540	900	20.5	

SEMESTER – VI

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	BHS00007	Project Management and Entrepreneurship	3	0	0	40	60	100	3	HSMC
2	BTM60122	Design of Machine Elements	3	0	0	40	60	100	3	PCC
3	BTM60123	Computer Aided Design and Analysis	3	0	0	40	60	100	3	PCC
4	BTM60124	Advanced Manufacturing Technology	3	0	0	40	60	100	3	PCC
5	BTM60125	Dynamics and Control of Mechanical Systems	3	0	0	40	60	100	3	PCC
6	BTM60201	A. Turbo Machinery B. Finite Element Method C. Power Plant Engineering	3	0	0	40	60	100	3	PEC
7	BTM60301	A. Industrial Engineering B. Total Quality Management C. Non-conventional Energy Sources D. Design Optimization Techniques E. MOOCs	3	0	0	40	60	100	3	OEC
8	BTM69126	Advanced Manufacturing Technology Lab	0	0	3	40	60	100	1.5	PCC
TOTAL			21	0	3	320	480	800	22.5	



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SEMESTER – VII

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	BTM70127	Automobile Engineering	3	0	0	40	60	100	3	PCC
2	BTM70128	Refrigeration and Air Conditioning	3	0	0	40	60	100	3	PCC
3	BTM70202	A. Vehicle Dynamics B. Design for Manufacturing and Assembly C. Machine Tool Design	3	0	0	40	60	100	3	PEC
4	BTM70203	A. Computer Integrated Manufacturing B. Jigs and Fixtures C. Mechanical Vibration	3	0	0	40	60	100	3	PEC
5	BTM70302	A. Entrepreneurship Development B. Water Resource Engineering C. Industrial IoT with Applications D. Introduction to Artificial Intelligence E. MOOCs	3	0	0	40	60	100	3	OEC
6	BTM70303	A. Energy Conservation and Management B. Automation and Control C. Additive Manufacturing D. Computational Fluid Dynamics E. MOOCs	3	0	0	40	60	100	3	OEC
7	BTM79129	Refrigeration and Air Conditioning Lab	0	0	3	40	60	100	1.5	PCC
8	BTM79130	Manufacturing Engineering Lab II	0	0	3	40	60	100	1.5	PCC
9	BTM78101	Minor Project/Internship	0	0	0	40/0	60/100	100	3	PROJ
TOTAL			18	0	6	360/320	540/580	900	24	

SEMESTER – VIII

Sl. No.	Course Code	Course Name	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIA	TEE			
1	BTM88102	Major Project/ Internship	0	0	0	40	60	100	12	PROJ
2	BTM88103	Grand Viva Voce	0	0	0	0	100	100	4	PROJ
TOTAL			0	0	0	40	160	200	16	