

**School of Engineering
Department of Mechanical Engineering
B. Tech in Mechanical Engineering**

GALGOTIAS UNIVERSITY

Program Structure: B. Tech Mechanical Engineering

Semester-1								
Sl. No.	Course Code	Subject Name	Course Type	L	T	P		C
1	G2UA120B	Basic Electrical and Electronics Engineering	B	3	0	1		4
2	L1UB120T	YOGA	T	2	0	0		0
3	G3UB101B	Engineering design and prototyping	B	3	0	1		4
4	C1UC122B	Engineering Mathematics-I	B	3	0	1		4
5	E2UC102C	Programming for problem solving	C	2	0	2		4
6	C1UB129T	Chemical and biological materials	T	3	0	0		3
				16	0	5		19
Semester-2								
Sl. No.	Course Code	Subject Name	Course Type	L	T	P	S	C
1	C1UD124B	Semiconductor and Optoelectronics devices	B	3	0	1		4
2	G3UB201T	Engineering Mechanics	T	3	1	0		4
3	O1UA104B	Communication skill for engineers	B	2	0	1		3
4	C1UB120T	Environment Impact analysis	T	0	0	0		0
5	C1UC222B	Engineering Mathematics II	B	3	0	1		4
6	E2UC201C	OOPS	C	3	0	2		5
7	G3UB201B	Engineering workshop	C	1	0	2	1	3
				15	1	7	1	23

Semester 3								
Sl. No.	Course Code	Course Title	Course Type	L	T	P		C
1	G3UB301T	Applied Engineering Mechanics	T	2	1	0		3
2	G3UB302T	Engineering Thermodynamics	T	2	1	0		3
3	G3UB303B	Manufacturing Processes I	B	3	0	2		4
4	G3UB304B	Material Science	B	2	0	2		3
5	C1UC321T	Functions of complex variables and Transforms	T	3	0	0		3
6	GIUA306B	Design thinking-I	T	1	0	1		0
7	K1UC320B	Communication competency and aptitude building-1	B	1	0	1		2
8	G3UB305B	Machine Drawing with Solid Works	C	2	0	2	1	4
		Total		16	2	8	1	22

Semester 4								
Sl. No.	Course Code	Course Title	Course Type	L	T	P		C
1	G3UB401B	Mechanics of Material	B	2	1	2		4
2	G3UB402C	Fluid Mechanics	B	2	1	2		5
3	G3UB403B	Manufacturing Processes II and Metrology	B	3	0	2		4
4	G2UA403T	Sensors and transducers (Minor-1)	T	3	0	0		3
5	O1UA421B	Communication competency and Aptitude Building 2	T	1	0	1		2
6	G3UB404B	Applied Thermodynamics	T	3	0	1		4
7	C1UC424B	Numerical methods	T	2	0	1		3
8	G3UA601B	Design Thinking-II	B	1	0	1		0
		Total		16	2	7		25

Semester 5								
Sl. No.	Course Code	Course Title	Course Type	L	T	P		C
1	G3UB501T	Kinematics of Machines	T	2	1	0		3
2	G3UB502C	Machine Design	C	3	0	2	1	5

3	G3UB503T	Automobile Engineering (minor-2)	T	2	0	0		2
4	G3UB504B	Heat and Mass Transfer	I	2	1	2		4
5	GIUA306B	Design thinking-I	T	1	0	1		0
6	G3UB506T	CAM, and Automation	T	2	0	0		2
7	G3UB507T	Augmented Reality /Virtual Reality (minor-3)	T	3	0	0		3
8	K1UC523B	Communication Competency and Aptitude Building -III	I	1	0	2		2
Total				16	2	7		21
Semester 6								
Sl. No.	Course Code	Course Title	Course Type	L	T	P		C
1	G3UB601B	Refrigeration and Air Conditioning	T	2	1	2		4
2	G3UB602B	Dynamics of Machines	B	2	1	2		4
3	G3UB604C	FEM (minor-4)	C	2	1	2	1	5
4	G3UB603B	Robotics and Automation (minor-5)	B	3	0	1		4
5	G3UB606T	Design of Transmission systems	T	3	0	0		3
6	G3UB605T	Automatic Control Systems	T	3	0	0		3
7	G3UA601B	Design Thinking-II	B	1	0	1		0
8	O1UA602B	Soft Skill - 6 (Campus to Corporate)	B	1	0	2		2
Total				17	3	10		25
Semester 7								
Sl. No.	Course Code	Course Title	Course Type	L	T	P		C
1	G3UB702T	Computer Integrated Manufacturing	T	3	0	0		3
2	G3UB703T	Mechanical Vibrations	T	3	0	0		3
3	G3UB704T	Total Quality Management	T	3	0	0		3

4	G3UB707T	Flexible Manufacturing Systems	T	3	0	0		3
9	G1UA705R	Summer Internship		0	0	0		2
10	G3UC704R	Capstone Project- Phase I/Industrial Internship Domain 5		-	-	-		3
Total				12	0	0		17
Semester 8								
Sl. No.	Course Code	Course Title	Course Type	L	T	P		C
1	G3UB801R	Capstone Project- Phase II		-	-	-		9
Total								9
Total Program Credit						163		

Elective Course Baskets

Minor Elective Courses - Stream wise								
Sl No	Course Code	Energy Engineering		L	T	P		C
1		Energy conservation and Management		3	0	0		3
2		Renewable energy systems		3	0	0		3
3		Energy Engineering Fundamental		3	0	0		3
4		Solar Energy Systems		3	0	0		3
5		Waste management and energy generation technologies		3	0	0		3
6		Solar architecture and energy-efficient building		3	0	0		3
7		Energy Resources, Economics & Environment		3	0	0		3
8		Energy Storage and Technology		3	0	0		3

9		Cryogenics		3	0	0		3
10		Fuel Technology		3	0	0		3
Sl No		Smart Manufacturing & 3D Machining		L	T	P		C
1		Introduction to product design & digital drawing		3	0	2		4
2		Fracture Mechanics		3	0	2		4
3		Advanced Welding Technology		3	0	2		4
4		Solid modelling & additive manufacturing		3	0	2		4
5		Sensors and Controls		3	0	2		4
6		CNC machines tool		3	0	2		4
7		Entrepreneurship and Management Functions		3	0	0		3
8		Mechanical Metallurgy		3	0	2		4
9		Optimization Techniques and Applications		3	1	0		4
10		Plastic Technology		3	0	0		3
Sl No		Mechatronics		L	T	P		C
1		Sensors and Actuators		3	0	0		3
2		Automatic Control Systems		3	0	0		3
3		Design of Mechatronics System		3	0	0		3
4		Modelling and Simulation of Mechatronics System		3	0	0		3
5		Computer Integrated Manufacturing		3	0	0		3
6		Robotics: Analysis and Systems		3	0	0		3
7		Drives and Control system for Automation		3	0	0		3
8		Process Control & Automation		3	0	0		3

9		Flexible Manufacturing Systems		3	0	0		3
10		Design of Mechanisms and Manipulators		3	0	0		3