

B. Tech. Mechanical Engineering - I Semester (with minor Automobile and Industrial Engineering)						
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type	
Theory Courses					UGC	AICTE
1	CY 101/ PH 102	Engineering Chemistry/ Engineering Physics	3-1-0	4	FC-C1	BSC
2	MA 101	Engineering Mathematics –I	3-1-0	4	FC-C2	BSC
3	EC 101/ EE 102	Basic Electronics Engineering/ Basic Electrical Engineering	3-1-0	4	FC-C3	ESC
4	CS 101/ ME101	Fundamentals of Computer Programming/ Engineering Mechanics	3-1-0	4	SEC 1	ESC
5	BS 101	Human Values & Buddhist Ethics	2-0-0	2	AECC 1	HSMC
6	EN 101	English Proficiency	2-0-0	2	AECC 2	HSMC
Practical Courses						
7	CE103/ ME102	Engineering Graphics/ Workshop Practice	1-0-2	2	SEC2	ESC
8	CY 103/ PH 104	Engineering Chemistry/ Engineering Physics	0-0-2	1	FC-C4	BSC
9	CS 181/ EN 151/	Computer Programming Lab/ Language Lab	0-0-2	1	SEC 3	ESC
10	EC 181/ EE 103	Basic Electronics Engg. Lab/ Basic Electrical Engg. Lab	0-0-2	1	FC-C5	ESC
11	GP	General Proficiency		NC		
Total Credits				25		
Total Contact Hours			17-4-08			

B. Tech. Mechanical Engineering -II Semester (with minor Automobile and Industrial Engineering)						
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type	
Theory Courses					UGC	AICTE
1	PH 102/ CY 101	Engineering Physics/ Engineering Chemistry	3-1-0	4	FC-C6	BSC
2	MA 102	Engineering Mathematics –II	3-1-0	4	FC-C7	BSC
3	ME101/ CS 101	Engineering Mechanics/ Fundamentals of Computer Programming	3-1-0	4	FC-C8	ESC
4	EE 102/ EC 101	Basic Electrical Engineering/ Basic Electronics Engineering	3-1-0	4	FC-C9	ESC
5	ES 101	Environmental Studies	4-0-0	4	AECC 3	BSC
Practical Courses						
6	ME102/ CE103	Workshop Practice/ Engineering Graphics	1-0-2	2	CC-C 1	ESC
7	PH 104/ CY 103	Engineering Physics/ Engineering Chemistry	0-0-2	1	FC-C10	BSC
8	CS 181/ EN 151/	Computer Programming Lab/ Language Lab	0-0-2	1	AECC 4	BSC
9	EE 103 / EC 181	Basic Electrical Engg. Lab/ Basic Electronics Engg. Lab	0-0-2	1	FC-C11	ESC

10	GP	General Proficiency		NC		
		Total credits		25		
		Total Contact Hours	17-4-08			
B. Tech. Mechanical Engineering - III Semester (with minor Automobile and Industrial Engineering)						
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type	
	Theory Courses				UGC	AICTE
1	MA 201	Engineering Mathematics- III	3-1-0	4	FC-C12	BSC
2	ME 201	Theory of Production Processes –I	4-0-0	4	CC-C2	PCC
3	ME 203	Strength of Materials- I	3-1-0	4	CC-C4	PCC
4	ME 205	Engineering Thermodynamics	3-1-0	4	CC-C3	PCC
5	ME 207	Materials Engineering	4-0-0	4	CC-C5	PCC
	Practical Courses					
6	ME 209	Production Processes Lab –I	0-0-3	2	CC-C7	PCC
7	ME 211	Strength of Materials Lab	0-0-2	1	CC-C8	PCC
8	ME 213	Machine Drawing	1-0-2	2	CC-C6	PCC
9	GP	General Proficiency		NC		
		Total Credits		25		
		Total Contact Hours	18-3-8			

B. Tech. Mechanical Engineering - IV Semester (with minor Automobile and Industrial Engineering)						
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type	
	Theory Courses				UGC	AICTE
1	ME 202	Theory of Production Processes –II	4-0-0	4	CC-C12	PCC
2	ME 204	Strength of Materials- II	3-1-0	4	CC-C9	PCC
3	ME 206	Fluid Mechanics	3-1-0	4	CC-C11	PCC
4	ME 208	Kinematics of Machines	3-1-0	4	CC-C10	PCC
5	ME 210	Engineering Measurements & Metrology	3-0-0	3	CC-C13	PCC
6	ME 212	Automobile Engineering	3-0-0	3	CC-C14	PCC
	Practical Labs					
7	ME 214	Production Processes Lab –II	0-0-3	2	CC-C15	PCC
8	ME 216	Fluid Mechanics Lab	0-0-3	2	CC-C16	PCC
9	ME 218	Engineering Measurements & Metrology Lab	0-0-2	1	CC-C17	PCC
10	ME 220	Automobile Engineering Lab	0-0-2	1	CC-C18	PCC
11	GP	General Proficiency		NC		
		Total Credits		28		
		Total Contact Hours	19-3-10			

B. Tech.Mechanical Engineering - V Semester (with minor Automobile and Industrial Engineering)						
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type	
Theory Courses					UGC	AICTE
1.	*ME 319	Numerical Methods in Engineering	2-1-0	3	CC-C23	PCC
2.	*ME 321	Automotive Dynamics and Noise	3-1-0	4	CC-C19	PCC
3.	*ME 323	Industrial Engineering and Management	3-0-0	3	CC-C24	PCC
4.	ME 301	Design of Machine Elements –I	2-0-2	4	CC-C20	PCC
5.	ME 303	Applied Thermodynamics	3-1-0	4	CC-C21	PCC
6.	ME 305	Fluid Machines	2-1-0	3	CC-C22	PCC
Practical Labs						
7.	ME 313	Fluid Machines Lab	0-0-3	2	CC-C26	PCC
8.	*ME 325	Automotive Dynamics and Noise Lab	0-0-3	2	CC-C25	PCC
9.	*ME 327	Numerical Methods in Engineering Lab	0-0-2	1	CC-C27	PCC
10.	GP	General Proficiency		NC		
Total Credits				26		
Total Contact Hours			15-4-10			

B. Tech.Mechanical Engineering - VI Semester (with minor Automobile and Industrial Engineering)						
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type	
Theory Courses					UGC	AICTE
1	*ME 322	Vehicle Performance and Testing	3-0-0	3	CC-C32	PCC
2	*ME 326	Automotive Power and Transmission Systems	3-1-0	4	CC-C30	PCC
3	*ME 328	Automotive Electrical and Electronics Systems	2-1-0	3	CC-C31	PCC
4	*ME 330	Lean Enterprises and New Manufacturing Technologies	2-1-0	3		
5	ME 302	Design of Machine Elements –II (Same as B. Tech Mechanical)	2-0-2	4	CC-C28	PCC
6	ME 306	Refrigeration and Air Conditioning (Same as B. Tech Mechanical)	3-1-0	4	CC-C29	PCC
Practical Courses						
7	*ME 332	Vehicle Performance and Testing Lab	0-0-3	2	CC-C33	PCC
8	ME 316	Refrigeration and Air Conditioning Lab (Same as B. Tech Mechanical)	0-0-2	1	CC-C35	PCC
9	*ME 334	Automotive Power and Transmission Systems Lab	0-0-3	2	CC-C34	PCC
10		Industrial Training - <u>(Min. 6 Weeks)</u> - Evaluation will be done in VII Semester				
11	GP	General Proficiency		NC		
Total Credits				26		
Total Contact Hours			15-4-10			

B. Tech. Mechanical Engineering - VII Semester (with minor Automobile and Industrial Engineering)						
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type	
Theory Courses					UGC	AICTE
1	OE1	Open Elective 1	3-0-0	3	OE 1	OEC
2	DSE 1	Departmental Elective 1	3-0-0	3	DSE 1	PEC
3	DSE 2	Departmental Elective 2	3-0-0	3	DSE 2	PEC
4	DSE 3	Departmental Elective 3	3-0-0	3	DSE 3	PEC
5	--	HSMC Course I	3-0-0	3	AECC 5	HSMC
Practical/Seminar/Project/Ind. Training Courses						
6	ME 401	Project I	0-0-8	4	E-DP 1	PCC
7	ME 403	Seminar	0-0-4	2	SEC 4	PCC
8	ME 405	Industrial Training (Min. 4-6 Weeks) – Evaluation		5	E-DP 2	PCC
9	GP	General Proficiency		NC		
Total Credits				26		
Total Contact Hours			15-1-12			
B. Tech. Mechanical Engineering - VIII Semester (with minor Automobile and Industrial Engineering)						
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type	
Theory Courses					UGC	AICTE
1	OE2	Open Elective 2	3-0-0	3	OE 2	OEC
2	DSE 4	Departmental Elective 4	3-0-0	3	DSE 4	PEC
3	DSE 5	Departmental Elective 5	3-0-0	3	DSE 5	PEC
		HSMC Courses II	3-0-0	3	AECC 6	HSMC
Practical/Seminar/Project Courses						
4	ME 402	Project II	0-0-16	08	E-DP 3	PCC
	GP	General Proficiency		NC		
Total Credits						
Total Contact Hours			12-0-16	20		

B. Tech. Mechanical Engineering (with minor Automobile and Industrial Engineering)

List of Departmental Elective 1				
S. No.	Course Code	Name of Course	L-T-P	Credits
1	*ME 427	Hydraulics and Pneumatics	3-0-0	3
2	*ME 441	Automotive Pollution and Control	3-0-0	3
3	*ME 443	Facilities and Process Planning	3-0-0	3

List of Departmental Elective 2				
S. No.	Course Code	Name of Course	L-T-P	Credits
1	*ME 445	Supply Chain Management	3-0-0	3
2	*ME 447	Thermodynamics of Automotive Engines and Heat Transfer	3-0-0	3
3	ME 413	Maintenance Engineering (Same as B. Tech Mechanical)	3-0-0	3

List of Departmental Elective 3				
S. No.	Course Code	Name of Course	L-T-P	Credits
1	*ME 449	Lean Start-up Management	3-0-0	3
2	*ME 451	Vehicle Body Engineering	3-0-0	3
3	*ME 453	Industrial Economics	3-0-0	3

List of HSMC Course I				
S. No.	Course Code	Name of Course	L-T-P	Credits
1	ME 425	Basics of Operations Research(Same as B. Tech Mechanical)	3-0-0	3
2	MB 457	Organizational Behaviour (Same as B. Tech Mechanical)	3-0-0	3
3	MB 451	Financial Accounting and Analysis(Same as B. Tech Mechanical)	3-0-0	3
4	EN 531	Language Culture and Society(Same as B. Tech Mechanical)	3-0-0	3
		Any MOOC (NPTEL) Course	3-0-0	3

List of Departmental Elective 4				
S. No.	Course Code	Name of Course	L-T-P	Credits
1	*ME 422	Quality Control and Reliability Engineering	3-0-0	3
2	ME 404	Industrial Automation and Robotics (Same as B. Tech Mechanical)	3-0-0	3
3	ME 406	Engineering Optimization (Same as B. Tech Mechanical)	3-0-0	3

B. Tech. Mechanical Engineering (with minor Automobile and Industrial Engineering)

List of Departmental Elective 5				
S. No.	Course Code	Name of Course	L-T-P	Credits
1	*ME 424	Design of Automotive Components	3-0-0	3
2	*ME 426	Agile Manufacturing	3-0-0	3
3	ME 410	Financial Management (Same as B. Tech Mechanical)	3-0-0	3

List of HSMC Course II				
S. No.	Course Code	Name of Course	L-T-P	Credits
1	*ME 428	Resource Management	3-0-0	3
2	MB 513/ ME 418	Entrepreneurship Development (Same as B. Tech Mechanical)	3-0-0	3
3	EN 522	Advance Course in Communication (Same as B. Tech Mechanical)	3-0-0	3
		Any MOOC (NPTEL) Course	3-0-0	3

B. Tech. Mechanical Engineering (with minor Automobile and Industrial Engineering)

List of Open Elective 1				
S. No.	Course Code	Name of Course	L-T-P	Credits
Generic Elective from other Department approved by Mech. Department Sample Courses are given below-				
1	CS208	Artificial Intelligence (Syllabus same as 4 th Sem B. Tech in Computer Science & Engineering)	3-0-0	3
2	AI207	Database Management Systems	3-0-0	3
3	ES 417	Disaster Management	3-0-0	3

List of Open Elective 2				
S. No.	Course Code	Name of Course	L-T-P	Credits
Generic Elective from other Department approved by Mech. Department Sample Courses are given below-				
1	AI 202	Machine Learning	3-0-0	3
2	ES 507	Waste Management	3-0-0	3
3	MA 030	Finite Element Method for Partial Differential Equations	3-0-0	3

Semester	Credits
I	25
II	25
III	25
IV	28
V	26
VI	26
VII	26
VIII	20
Total Credits - 201	

- Total Credit from Semester I to VIII of B. Tech. (Mech. Engg. /with minor Automobile and Industrial Engineering) : 201
- There is no change in the syllabus of the subjects which are common in B. Tech. Mechanical and B. Tech. Mechanical with minor Automobile and Industrial Engineering.
- * Courses added for B. Tech. Mechanical with minor Automobile and Industrial Engineering.

Details of Faculty members for Mechanical Engineering Programmes:

S.no.	Name and Designation of Faculty	Major Thrust areas of Research	E-mail
01.	Dr. Dharamvir Mangal Assistant Professor	Supply Chain, Inventory Management, Manufacturing (Casting, Welding), Composites	dharamvir@gbu.ac.in
02.	Dr. Satpal Sharma Assistant Professor	Thermal Sprayed Coatings, Welding, Tribological Properties, Welding and Casting	satpal@gbu.ac.in
03.	Dr. H C Thakur Assistant Professor	Computational Fluid Dynamics, Heat Transfer Enhancement, Mesh-free Methods, Solar Energy	harish@gbu.ac.in
04.	Dr Manish Dev (Assistant Professor on Contract for Fixed Duration)	Ergonomics, Occupational Health and Safety	manishdev.ocfd@gbu.ac.in
05.	Dr Parvesh Ali (Assistant Professor on Contract for Fixed Duration)	Manufacturing Processes (Advance Machining, Composites)	parvesh.ocfd@gbu.ac.in
06.	Dr Vikas Srivastava (Assistant Professor on Contract for Fixed Duration)	Composites, Corrosion, Mechanical and Materials Characterizations	vikassri.ocfd.gbu.ac.in
07.	Dr Nand Kumar (Assistant Professor on Contract for Fixed Duration)	Plasma Processing, Tribological Properties Evaluation	nandkr.7400@gmail.com
08.	Dr Sultan Singh (Assistant Professor on Contract for Fixed Duration)	Mechanical Vibrations and Control, Metamaterials in Vibration Mitigation, Energy Harvesting	sultan.ocfd@gbu.ac.in
09.	Dr Suraj Kumar Singh (Assistant Professor on Contract for Fixed Duration)	Composites and Design Engineering	surajk.ocfd@gbu.ac.in

For open Elective subjects:

1. Dr Arun Solanki

(Assistant Professor, Department of Computer Engg., School of ICT)

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2. Dr M. A. Ansari

(Assistant Professor, Electrical Engg. Dept., School of Engineering)

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3. Dr Amit Ujlayan

(Assistant Prof, Dept. of Mathematics, School of VS&AS)

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4. Dr Shobha Ram

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Overall coordinator

(B. Tech. Mechanical Engineering with minor Automobile and Industrial Engineering)

Dr Dharamvir Mangal

(Assistant Professor in Mechanical Engineering Department)

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