



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(Autonomous Institute under VTU)

Scheme of Teaching and Examination: Effective from AY 2021 - 22

Choice Based Credit System (CBCS)

PG PROGRAM: MACHINE DESIGN (MMD)								Semester: I				
Sl. No	Course Category	Course Code	Course Title	Teaching Dept.	Teaching Hours /Week			Credits	Examination			
					L	T	P		Duration	CIE Marks	SEE Marks	Total Marks
1	BS	21MMD11	Advanced Engineering Mathematics	Maths	4	0	0	4	3	50	50	100
2	HS	21MMD12	Research Methodology and IPR	HS	2	0	0	2	3	50	50	100
3	PC	21MMD13	Fracture Mechanics	ME	3	0	0	3	2	50	50	100
4	PC	21MMD14	Advanced Solid Mechanics	ME	4	0	0	4	3	50	50	100
5	PC	21MMD15	Composite Materials Technology	ME	4	0	0	4	3	50	50	100
6	PC	21MMD16	Advanced Finite Element Methods	ME	4	0	0	4	3	50	50	100
7	PC	21MMDL17	Modelling and Static Analysis lab	ME	0	0	3	1.5	3	50	50	100
8	PC	21MMDL18	Composite Materials Lab	ME	0	0	3	1.5	3	50	50	100
TOTAL					21	0	6	24		400	400	800



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Sl. No	Course Category	Course Code	Course Title	Teaching Dept.	Teaching Hours /Week			Credits	Examination			
					L	T	P		Duration	CIE Marks	SEE Marks	Total Marks
1	PC	21MMD21	Advanced Theory of Vibration	ME	4	0	0	4	3	50	50	100
2	PC	21MMD22	Dynamics and Design of Mechanisms	ME	4	0	0	4	3	50	50	100
3	PC	21MMD23	Advanced Machine Design	ME	4	0	0	4	3	50	50	100
4	PC	21MMD24AX	Professional Elective-A	ME	4	0	0	4	3	50	50	100
5	PC	21MMD25BX	Professional Elective-B	ME	4	0	0	4	3	50	50	100
6	PC	21MMDL26	Dynamics and Thermal Analysis lab	ME	0	0	3	1.5	3	50	50	100
7	PC	21MMDL27	Simulation and Failure AnalysisLab	ME	0	0	3	1.5	3	50	50	100
8	PC	21MMD28	Technical Seminar	ME	0	2	0	1	3	50	-	50
TOTAL					20	2	6	24		400	350	750

Professional Elective - Group A	
Course Code	Course Title
21MMD24A1	Advanced Materials and Characterization
21MMD24A2	Design Optimization
21MMD24A3	Design of Robotic System
21MMD24A4	Mechatronics System Design

Professional Elective - Group B	
Course Code	Course Title
21MMD25B1	Experimental Mechanics
21MMD25B2	Automobile System Design
21MMD25B3	Theory of Plates and Shells
21MMD25B4	Computer Applications in Design



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Sl. No	Course Category	Course Code	Course Title	Teaching Dept.	Teaching Hours /Week				Credits	Examination			
					L	T	P	PW		Duration	CIE Marks	SEE Marks	Total Marks
1	PC	21MMD31	Tribology and Bearing Design	ME	4	0	0	0	4	3	50	50	100
2	PC	21MMD32CX	Professional Elective-C	ME	4	0	0	0	4	3	50	50	100
3	PC	21MMD33DX	Professional Elective-D	ME	4	0	0	0	4	2	50	50	100
4	PC	21MMD34	Mini Project	ME	0	0	0	4	2	3	50	50	100
5	PC	21MMD35	Project Phase - 1	ME	0	0	0	4	4	3	50	50	100
6	IN	21MMDI36	Internship	ME	0	0	0	4	2	Mandatory submission of certificate and Report			
TOTAL					12	0	0	12	20		250	250	500

Professional Elective - Group C	
Course Code	Course Title
21MMD32C1	Smart materials and Structures
21MMD32C2	Material Handling Equipment Design
21MMD32C3	Computational Fluid Dynamics
21MMD32C4	Creative Engineering

Professional Elective - Group D	
Course Code	Course Title
21MMD33D1	Design for manufacture and assembly
21MMD33D2	Statistical Modelling and Experimental Design
21MMD33D3	Robust Design
21MMD33D4	Design of Hydraulic and Pneumatic Systems



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Sl. No	Course Category	Course Code	Course Title	Teaching Dept.	Teaching Hours /Week				Self-Study	Credits	Examination			
					L	T	P	PW			Duration	CIE Marks	SEE Marks	Total Marks
1	PC	21MCS41	MOOC on Project Work	ME	0	0	0	0	4	4	-	-	-	-
2	PC	21MCS42	Project Phase - 2	ME	0	0	0	16	0	16	3	50	50	100
TOTAL					0	0	0	16	4	20		50	50	100

