



BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institution Affiliated to VTU, Belagavi)

B. E. in Mechanical Engineering

Scheme of Teaching and Examinations – 2022 Scheme

Outcome-Based Education (OBE) and Choice Based Credit System (CBCS)

(Effective from the academic year 2022-23 onwards)

VIII Semester

Sl. No.	Course Category	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Credits Distribution				Examination				Contact Hours/week
					L	T	P	Total	CIE Marks	SEE Marks	Total Marks	SEE Duration (H)	
1	PEC	22ME81X	Professional Elective Course IV (Online courses)	TD: ME PSB: ME	3	0	0	3	30	70	100	3	-
2	OEC	22ME82X	Open Elective Course III (Online courses)		3	0	0	3	30	70	100	3	-
3	INT	22ME83	Industry Internship / Research Internship	-	0	0	10	10	100	100	200	3	20
TOTAL					0	0	10	16	200	200	400	-	20

Professional Elective / Open Elective Online Courses: These are ONLINE courses suggested by the respective Board of Studies. Details of these courses shall be made available for students during the V semester only. Students are required to choose only the courses which are suggested by the respective BoS. Duration of the online course should be of a minimum of 12 weeks. Students can able to complete the specified online courses with a qualifying certificate issued by the competent authority. The online courses can be registered and completed from the vacation of V semester onwards and the credits will be considered during the VIII semester only. The courses are to be chosen from the SWAYAM – NPTEL platform only. The credits earned for these courses will not be considered for claiming the credits under the Honors Degree programme.

Industry Internship / Research Internship: The mandatory Industry / Research internship is for 14 to 20 weeks. The internship shall be considered as a head of passing and shall be considered for the award of a degree. Those who do not take up/complete the internship shall be declared to fail and shall have to complete it during the subsequent examination after satisfying the internship requirements.

Research internship: A research internship is intended to offer the flavour of current research going on in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

Industry internship: Is an extended period of work experience undertaken by students to supplement their degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, and adapt to organizational realities by tempering their knowledge with practical constraints.

List of Professional Elective Courses offered (NPTEL)

Sl. No.	NPTEL Course Code	Name of the NPTEL Course (As professional elective)	Course link
01	noc26-me04	Advanced Measurement Techniques in Fluid Mechanics and Heat Transfer	https://onlinecourses.nptel.ac.in/noc26_me04/preview
02	noc26-me101	Autotronics	https://onlinecourses.nptel.ac.in/noc26_me101/preview
03	noc26-me12	Data-Enabled Tribological Engineering: From Experiments to Predictive Models	https://onlinecourses.nptel.ac.in/noc26_me12/preview
04	noc26-me23	IC Engines and Gas Turbines	https://onlinecourses.nptel.ac.in/noc26_me23/preview
05	noc26-me25	Mechanics of Fiber Reinforced Polymer Composite Structures	https://onlinecourses.nptel.ac.in/noc26_me25/preview
06	noc26-me29	Power Plant System Engineering	https://onlinecourses.nptel.ac.in/noc26_me29/preview
07	noc26-me34	Advanced Robotics	https://onlinecourses.nptel.ac.in/noc26_me34/preview
08	noc26-me44	Phase Transformation in Materials	https://onlinecourses.nptel.ac.in/noc26_me44/preview
09	noc26-me45	Advanced Machining Processes	https://onlinecourses.nptel.ac.in/noc26_me45/preview
10	noc26-me51	Industrial Hydraulics and Automation	https://onlinecourses.nptel.ac.in/noc26_me51/preview
11	noc26-me59	Introduction to Mechanical Micro Machining	https://onlinecourses.nptel.ac.in/noc26_me59/preview
12	noc26-me76	Failure Analysis and Prevention	https://onlinecourses.nptel.ac.in/noc26_me76/preview
13	noc26-me77	Fundamentals of Surface Engineering: Mechanisms, Processes and Characterizations	https://onlinecourses.nptel.ac.in/noc26_me77/preview
14	noc26-me78	Principles of Industrial Engineering	https://onlinecourses.nptel.ac.in/noc26_me78/preview
15	noc26-me89	Noise Control in Mechanical Systems	https://onlinecourses.nptel.ac.in/noc26_me89/preview
16	noc26-ae03	Aeromechanics of Unmanned Aerial Vehicles / Drones	https://onlinecourses.nptel.ac.in/noc26_ae03/preview

Name of the Department: Mechanical Engineering

List of Open Elective Courses offered (NPTEL)

Sl. No.	NPTEL Course Code	Name of the NPTEL Course (As Open elective)	Course link
01	noc26-me74	Operations Management	https://onlinecourses.nptel.ac.in/noc26_me74/preview
02	noc26-ae06	Lighter than Air Systems	https://onlinecourses.nptel.ac.in/noc26_ae06/preview
03	noc26-ae08	Introduction to Aircraft Control System	https://onlinecourses.nptel.ac.in/noc26_ae08/preview
04	noc26-ae09	Advanced Aircraft Control Systems with MATLAB/SIMULINK	https://onlinecourses.nptel.ac.in/noc26_ae09/preview
05	noc26-ae16	Fundamentals of Supersonic and Hypersonic Flow	https://onlinecourses.nptel.ac.in/noc26_ae16/preview
06	noc26-bt05	Polymeric Biomaterials: Structure, Properties, Function and Performance	https://onlinecourses.nptel.ac.in/noc26_bt05/preview
07	noc26-ce11	Smart Cities	https://onlinecourses.nptel.ac.in/noc26_ce11/preview
08	noc26-ce41	Advanced Foundation Engineering	https://onlinecourses.nptel.ac.in/noc26_ce41/preview
09	noc26-ce44	Sustainable Engineering Concepts and Life Cycle Analysis	https://onlinecourses.nptel.ac.in/noc26_ce44/preview

10	noc26-ch19	Biomass Conversion and Biorefinery	https://onlinecourses.nptel.ac.in/noc26_ch19/preview
11	noc26-ch23	Membrane Technology	https://onlinecourses.nptel.ac.in/noc26_ch23/preview
12	noc26-ch29	Characterization of Polymers, Elastomers and Composites	https://onlinecourses.nptel.ac.in/noc26_ch29/preview
13	noc26-ch42	Matlab Programming for Numerical Computation	https://onlinecourses.nptel.ac.in/noc26_ch42/preview
14	noc26-cs01	Foundations of Deep Learning: Concepts and Applications	https://onlinecourses.nptel.ac.in/noc26_cs01/preview
15	noc26-cs20	Time Series Modelling and Forecasting with Applications in R	https://onlinecourses.nptel.ac.in/noc26_cs20/preview
16	noc26-cs22	Introduction to Embedded System Design	https://onlinecourses.nptel.ac.in/noc26_cs22/preview
17	noc26-cs38	Introduction to Industry 4.0 and Industrial Internet of Things	https://onlinecourses.nptel.ac.in/noc26_cs38/preview
18	noc26-cs45	Natural Language Processing	https://onlinecourses.nptel.ac.in/noc26_cs45/preview
19	noc26-cs54	Embedded Systems Design	https://onlinecourses.nptel.ac.in/noc26_cs54/preview
20	noc26-cs55	Cloud Computing	https://onlinecourses.nptel.ac.in/noc26_cs55/preview
21	noc26-cs70	Human Computer Interaction (In English)	https://onlinecourses.nptel.ac.in/noc26_cs70/preview
22	noc26-cs72	Introduction to Database Systems	https://onlinecourses.nptel.ac.in/noc26_cs72/preview
23	noc26-cs74	Introduction to Machine Learning	https://onlinecourses.nptel.ac.in/noc26_cs74/preview
24	noc26-cs76	Machine Learning for Engineering and Science Applications	https://onlinecourses.nptel.ac.in/noc26_cs76/preview
25	noc26-cs87	Fundamentals of Object Oriented Programming	https://onlinecourses.nptel.ac.in/noc26_cs87/preview
26	noc26-cs88	Introduction to Large Language Models (LLMs)	https://onlinecourses.nptel.ac.in/noc26_cs88/preview
27	noc26-de06	Understanding Incubation and Entrepreneurship	https://onlinecourses.nptel.ac.in/noc26_de06/preview
28	noc26-mg05	International Human Resource Management	https://onlinecourses.nptel.ac.in/noc26_mg05/preview
29	noc26-mg19	AI in Human Resource Management	https://onlinecourses.nptel.ac.in/noc26_mg19/preview
30	noc26-mg20	Organizational Behaviour: Individual Dynamics in Organization	https://onlinecourses.nptel.ac.in/noc26_mg20/preview
31	noc26-mg29	Business Ethics	https://onlinecourses.nptel.ac.in/noc26_mg29/preview
32	noc26-mg41	E-Business	https://onlinecourses.nptel.ac.in/noc26_mg41/preview
33	noc26-mg45	Management of Inventory Systems	https://onlinecourses.nptel.ac.in/noc26_mg45/preview
34	noc26-mg47	Quality Design and Control	https://onlinecourses.nptel.ac.in/noc26_mg47/preview
35	noc26-mg66	Production and Operation Management	https://onlinecourses.nptel.ac.in/noc26_mg66/preview
36	noc26-mg71	Integrated Marketing Communication	https://onlinecourses.nptel.ac.in/noc26_mg71/preview
37	noc26-mg72	Principles of Management	https://onlinecourses.nptel.ac.in/noc26_mg72/preview
38	noc26-mg76	Innovation in Marketing and Marketing of Innovation	https://onlinecourses.nptel.ac.in/noc26_mg76/preview
39	noc26-mm14	Advances in Additive Manufacturing of Materials: Current status and Emerging Opportunities	https://onlinecourses.nptel.ac.in/noc26_mm14/preview
40	noc26-hs78	German - I	https://onlinecourses.nptel.ac.in/noc26_hs78/preview


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