B.E. in Mechanical Engineering

I Semester – Chemistry Cycle

Sl. No.	Course Code	Course Title	Teaching Department	Theory Lecture	Tutorial	Practical/ Drawing	Examination			Credits
				L	T	P	CIE Marks	SEE Marks	Final Marks	
1	22MATME101	Mathematics -I for Mechanical Engineering Stream	Maths	2	2	2	100	100	100	4
2	22CHEME102	Chemistry for Mechanical Engineering Stream	Chemistry	2	2	2	100	100	100	4
3	22CED101	Computer Aided Engineering Drawing	Mechanical	2	0	2	100	100	100	3
4	22ESC1XX	Engineering Science Course-I	Respective Engg.Dept	3	0	0	100	100	100	3
5	22PLC1XX	Programming Language Course	Any Dept.	2	0	2	100	100	100	3
6	22ENG102	Professional Writing Skills in English	Humanities	1	0	0	50	-	50	1
7	22ICO101	Indian Constitution	Humanities	1	0	0	50	-	50	1
8	22SFH101	Scientific Foundation for Health	Mechanical	1	0	0	50	-	50	1
						TOTAL				20

II Semester - Physics Cycle

Sl. No.	Course Code	Course Title	Teaching Department	Theory Lecture	Tutorial	Practical/ Drawing	Examination			Credits
				L	T	P	CIE Marks	SEE Marks	Final Marks	
1	22MATME201	Mathematics -II for Mechanical Engineering Stream	Maths	2	2	2	100	100	100	4
2	22PHYME202	Physics for Mechanical Engineering Stream	Physics	2	2	2	100	100	100	4
3	22ESCME201	Elements of Mechanical Engineering	Mechanical	2	2	0	100	100	100	3
4	22ESC2XX	Engineering Science Course-II	Respective Engg.Dept	3	0	0	100	100	100	3
5	22ETC2XX	Emerging Technology Course	Any Dept.	3	0	0	100	100	100	3
6	22ENG201	Communicative English	Humanities	1	0	0	50	-	50	1
7	22KSK201/ 22KBK202	Samskrutika Kannada/ Balake Kannada	Humanities	1	0	0	50	-	50	1
8	22IDTME201	Innovation and Design Thinking	Mechanical	1	0	0	50	-	50	1
						TOTAL				20

Engineering Science Courses (ESC)				
Code	Course Title	Teaching Hrs/Week		
		L	T	P
22ESC101/201	Introduction to Civil Engineering	3	0	0
22ESC102/202	Introduction to Electrical Engineering	3	0	0
22ESC103/203	Introduction to Electronics Engineering	3	0	0
22ESC105/205	Introduction to C Programming	2	0	2

Programming Language Courses (PLC)				
Code	Course Title	Teaching Hrs/Week		
		L	T	P
22PLC101/201	Introduction to Web Programming	2	0	2
22PLC102/202	Introduction to Python Programming	2	0	2
22PLC103/203	Introduction to JAVA programming	2	0	2
22PLC104/204	Introduction to C++ Programming	2	0	2

Emerging Technology Courses (ETC)				
Code	Course Title	Teaching Hrs/Week		
		L	T	P
22ETC101/201	Infrastructure for Smart Cities	3	0	0
22ETC102/202	Geographic Information Technologies	3	0	0
22ETC103/203	Introduction to Building Environment	3	0	0
22ETC104/204	Introduction to robotics, electric vehicle system and additive manufacturing	3	0	0
22ETC105/205	Renewable Energy Technology	3	0	0
22ETC106/206	Introduction to Smart City	3	0	0
22ETC107/207	Introduction to Embedded Systems	3	0	0
22ETC108/208	Introduction to Internet of Things	3	0	0
22ETC109/209	Introduction to Cyber Security	3	0	0
22ETC110/210	Introduction to Database Management Systems	3	0	0

III Semester										
Sl. No	Course Code	Course Title	Category	Teaching Department	Teaching Hrs/Week			Examination		Credits
					Theory Lecture	Tutorial	Practical/ Drawing	CIE marks	SEE marks	
					L	T	P			
1	21MA3C01	Complex analysis, Transforms and Partial Differential Equations	BSC	Maths	3	0	0	50	100	3
2	21ME3C01	Mechanics of Materials	PC	ME	3	0	0	50	100	3
3	21ME3C02	Manufacturing Technology-I	PC	ME	3	0	0	50	100	3
4	21ME3C03	Thermodynamics	PC	ME	3	0	2	50	100	4
5	21ME3C04	Material Science and Engineering	PC	ME	3	0	0	50	100	3
6	21ME3C05	Computer Aided Machine Drawing	PC	ME	1	0	4	50	100	3
7	21BG3C04	Biology for Engineers	BSC	Che	2	0	0	50	50	2
8	21CI3H01	CIPE	HSC	Hum.	1	0	0	50	0	0
9	21ME3A01	Engineering Skills Lab	AEC 3	ME	0	0	2	50	0	1
10	21ME3U01	Social Connect & Responsibility	UHV	ME	1	0	0	50	0	0
TOTAL										22
Lateral Entry Students										
11	21MA3N01	Additional Maths 1	BSC	Maths	2	2	0	50	-	0

IV Semester										
Sl. No	Course Code	Course Title	Category	Teaching Department	Teaching Hrs/Week			Examination		Credits
					Theory Lecture	Tutorial	Practical/ Drawing	CIE marks	SEE marks	
					L	T	P			
1	21MA4C01	Statistics and Probability	BSC	Maths	3	0	0	50	100	3
2	21ME4C01	Theory of Machines-I	PC	ME	2	2	0	50	100	3
3	21ME4C02	Design of machine Elements-I	PC	ME	1	2	0	50	50	2
4	21ME4C03	Manufacturing Technology-II	PC	ME	3	0	2	50	100	4
5	21ME4C04	Fluid Mechanics	PC	ME	3	0	0	50	100	3
6	21ME4C05	Applied Thermal Engineering	PC	ME	2	0	0	50	50	2
7	21ME4L01	Metallography and Material Testing Lab	PC	ME	0	0	2	25	25	1
8	21KA4H01/ 21KA4H02	Samskrutika Kannada /Balake Kannada	HSC	Hum.	1	0	0	50	0	0
9	21ME4A01	Numerical Simulation using MATLAB	AEC 4	ME	0	0	2	50	0	1
10	21ME4U01	Universal Human Values & Prof. Ethics	UHV	ME	1	0	0	50	0	1
11	21ME4I01	Summer Internship 1	PI	Completed during II Sem vacation				50	0	2
TOTAL										22
Lateral Entry Students										
12	21MA4N01	Additional Maths 2	BSC	Maths	2	2	0	50	-	0

V SEMESTER

Sl. No.	Course Code	Course	Hrs/Week			Credits
			L	T	P	
1	ME5C01	Design of Machine Elements-I	3	2	0	4
2	ME5C02	Dynamics of Machinery	3	0	0	3
3	ME5C03	Mechatronics	3	2	0	4
4	ME5C04	Turbo Machines	3	2	0	4
5	ME5C05	Engineering Management and Entrepreneurship	3	0	0	3
6	ME5MXX	MOOC Elective	3	0	0	3
7	ME5L01	CAD/CAM Laboratory	0	0	3	1.5
8	ME5L02	Fluid Mechanics and Fluid Machines Laboratory	0	0	3	1.5
Total			**30**			**24**
Lateral Entry Students:						
9	MA5CL1	Applied Mathematics-II*	3	0	0	3

VI SEMESTER

Sl. No.	Course Code	Course	Hrs/Week			Credits
			L	T	P	
1	ME6C01	Design of Machine Elements-II	3	2	0	4
2	ME6C02	Mechanical Vibrations	3	0	0	3
3	ME6C03	Finite Element Method	3	0	0	3
4	ME6C04	Heat Transfer	3	0	0	3
5	ME6C05	Engineering Economics	3	0	0	3
6	ME6C06	Minor Project Work	0	0	4	2
7	ME6E1XX	Elective-I	3	0	0	3
8	ME6L01	Computer Aided Analysis Laboratory	0	0	3	1.5
9	ME6L02	Dynamics Laboratory	0	0	3	1.5
Total			**30**			**24**

Elective I- 3 Credits

Sl. No.	Course code	Course
1	ME6E101	Theory of Elasticity
2	ME6E102	Composite Materials
3	ME6E103	Power Plant Engineering
4	ME6E104	Computer Integrated Manufacturing
5	ME6E105	Computational Fluid Dynamics
6	ME6E106	Tool Design
7	ME6E107	Introduction to Nano-Sciences & Technology
8	ME6E108	Basic Course on Entrepreneurship
9	ME6E109	Microgrids with RE Integration
10	ME6E110	Coordinate Metrology
11	ME6E111	Maintenance Engineering
12	ME6E112	Organizational Behavior
13	ME6E113	German Language Skills
14	ME6E114	Project Management
15	ME6E115	Financial Management
16	ME6E116	Marketing Management
17	ME6E117	Automobile Body Design
18	ME6E118	Non Traditional Machining

VII SEMESTER

DEPARTMENT OF MECHANICAL ENGINEERING SCHEME OF TEACHING AND EXAMINATION VII SEMESTER B.E (AUTONOMOUS SCHEME)						
Sl.No.	**Course Code**	**Course**	**L**	**T**	**P**	**Credits**
1	ME7C01	Control Engineering and Electrical Drives	3	2	0	4
2	ME7C02	Technology in Hybrid and Fuel Cell Vehicles	3	2	0	4
3	ME7E2XX	Elective II	3	0	0	3
4	ME7E3XX	Elective III	3	0	0	3
5	ME7IXX	Industry Driven Elective	2	0	0	2
6	ME7OXX	Open Elective	2	0	0	2
7	ME7L01	Heat Transfer Laboratory	0	0	2	1
8	ME7L02	IC Engines and Fuels Laboratory	0	0	2	1
9	ME7C03	Seminar / Paper presentation	0	0	2	1
10	ME7C04	Project Phase I	0	0	2	1
11	ME7C05	Competency training	-	-	-	0
		Total	**28**			22

Elective II– 3 Credits		
Sl.No.	**Subject Code**	**Subject**
1	ME7E201	Aeronautical Engineering
2	ME7E202	IC Engines
3	ME7E203	Industrial Design and Ergonomics
4	ME7E204	Operations Management
5	ME7E205	Fluid Power Systems
6	ME7E206	Mobile Equipment Hydraulics

Elective III– 3 Credits		
Sl.No.	**Subject Code**	**Subject**
1	ME7E302	Design for Additive Manufacturing
2	ME7E303	Product Design and Development
3	ME7E304	Advanced Course in Entrepreneurship
4	ME7E305	Renewable Energy Technologies
5	ME7E306	PLC Applications in Fluid Power Systems
6	ME7E307	Environmental Friendly and Sustainable Technologies Systems

Industry driven Elective – 2 Credits		
Sl.No.	**Subject Code**	**Subject**
1	ME7I03	Applied Research in Product Development and Manufacturing
2	ME7I04	Meshing and Simulation

Open Elective – 2 Credits		
Sl.No.	**Subject Code**	**Subject**
1	ME7O01	Advanced NanoTechnology
2	ME7O02	Project Management
3	ME7O03	Entrepreneurship
4	ME7O04	Research Methodology
5	ME7O05	Marketing Management
6	ME7O06	Microgrid Systems
7	ME7O07	Financial Management
8	ME7O08	Organizational Behavior
9	ME7O09	Industrial Internet of Things

VIII SEMESTER

DEPARTMENT OF MECHANICAL ENGINEERING SCHEME OF TEACHING AND EXAMINATION VIII SEMESTER B.E (AUTONOMOUS SCHEME)						
Sl.No.	**Course Code**	**Course**	**L**	**T**	**P**	**Credits**
1	ME8E4XX	Elective – IV	3	0	0	3
2	ME8E5XX	Elective-V	3	0	0	3
3	ME8E6XX	Elective-VI	3	0	0	3
4	ME8C01	Internship	-	-	-	3
5	ME8C02	Project Work	0	0	8	4
		Total	**17**			16

Elective IV– 3 Credits		
Sl.No.	**Course Code**	**Course**
1	ME8E401	Tribology & Bearing Design
2	ME8E402	Robotics and Numerical Control
3	ME8E403	Aerodynamics
4	ME8E406	Rotor Dynamics

Elective V– 3 Credits		
Sl.No.	**Subject Code**	**Subject**
1	ME8E501	Automotive Engineering
2	ME8E502	Quality Management
3	ME8E503	Introduction to Aircraft Design
4	ME8E504	Digital Manufacturing

Elective VI– 3 Credits		
Sl.No.	**Subject Code**	**Subject**
1	ME8E601	Biomass Energy Technology
2	ME8E602	Quality by Design
3	ME8E603	Statistical Quality Control
4	ME8E604	Advanced Operations Management & Analytics