Scheme for III Semester B.E.(Mechanical Engineering

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical /Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	Type	Code			L	T	P					
1	BSC	MVJ20MME31	Transforms and Statistical Methods	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ20ME32	Mechanics of Materials	ME	3	2	0	3	50	50	100	4
3	PCC	MVJ20ME33	Thermodynamics	ME	2	2	0	3	50	50	100	3
4	PCC	MVJ20ME34	Materials Engineering	ME	3	0	0	3	50	50	100	3
5	PCC	MVJ20ME35	Manufacturing Process	ME	3	0	0	3	50	50	100	3
6	PCC	MVJ20ME36	Machine Drawing	ME	2	0	2	3	50	50	100	3
7	PCC	MVJ20MEL37	Mechanics and Materials Testing-Lab	ME	0	1	3	3	50	50	100	2
8	PCC	MVJ20MEL38	Foundry, Forging and welding-Lab	ME	0	1	3	3	50	50	100	2
9	HSMC	MVJ20KAN39	Kannada	Humanities	1*	0	0	3*	50*	50*	100	1
		MVJ20CPH39	CPH		1	0	0	3	50	50		
10	BSC	MVJ20MATDIP31*	Additional Mathematics-1	Mathematics	2*	1*	0	3	50	50	100	-
11	HSMC	MVJ20UHV310	Universal Human Values-I	Humanities	1	0	0	3	50	50	100	1
				Total	17	8	8	33	550	550	1100	25
Note: BSC: Basic Science, PCC: Professional Core Course , HSMC: Humanity and Social Science, MVJ20MATDIP31*- Mandatory non-credit course for Lateral Entry (Diploma) Students												

Scheme for IV Semester B.E.(Mechanical Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical /Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	Type	Code			L	T	P					
1	BSC	MVJ20MME41	Complex Variables and Numerical Methods	Mathematics	2	2	0	3	50	50	100	3
2	PCC	MVJ20ME42	Applied Thermodynamics	ME	3	2	0	3	50	50	100	4
3	PCC	MVJ20ME43	Manufacturing Technology	ME	3	0	0	3	50	50	100	3
4	PCC	MVJ20ME44	Kinematics of Machines	ME	2	2	0	3	50	50	100	3
5	PCC	MVJ20ME45	Fluid Mechanics	ME	2	2	0	3	50	50	100	3
6	PCC	MVJ20ME46	Instrumentation and metrology	ME	3	0	0	3	50	50	100	3
7	PCC	MVJ20MEL47	Machine shop-Lab	ME	0	1	3	3	50	50	100	2
8	PCC	MVJ20MEL48	Instrumentation and measurement-Lab	ME	0	1	3	3	50	50	100	2
9	HSMC	MVJ20KAN49	Kannada	Humanities	1*	0	0	3*	50*	50*	100	1
		MVJ20CPH49	CPH		1	0	0	3	50	50		
10	BSC	MVJ20MATDIP41*	Additional Mathematics-2	Mathematics	2*	1*	0	3	50	50	100	-
				Total	16	10	6	30	500	500	1000	24

Note: 1. BSC: Basic Science, PCC: Professional Core Course , HSMC: Humanity and Social Science, MVJ20MATDIP41*- Mandatory Non Credit Course for Lateral Entry (Diploma) Students.

2. Programming using C++ for 30 hours duration in 4th semester Vacation to be taught as Bridge Course for Audit Course on Application development using Python in V Semester and Machine Learning in VI Semester.

3.. Students can take up Certification Course of 60 (30+30) hours duration on CATIA for 2 credits in the IV Semester to be offered in association with the EDS Technologies.

Scheme for V Semester B.E.(Mechanical Engineering)													
S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination					Credits
					Theory Lecture	Tutorial	Practical/Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks		
	Type	Code			L	T	P						
1	HSMC	MVJ20TEM51	Technical Management & Entrepreneurship	Humanities	3	0	0	3	50	50	100		3
2	PCC	MVJ20ME52	Design of Machine Elements-I	ME	3	2	0	3	50	50	100		4
3	PCC	MVJ20ME53	Turbo Machinery	ME	3	2	0	3	50	50	100		4
4	PCC	MVJ20ME54	Dynamics of Machines	ME	2	2	0	3	50	50	100		3
5	PE	MVJ20ME55X	Professional Elective - 1	ME	3	0	0	3	50	50	100		3
6	PCC	MVJ20MEL56	Fluid Mechanics and Fluid Machinery-Lab	ME	0	1	3	3	50	50	100		2
7	PCC	MVJ20MEL57	Energy conversion-Lab	ME	0	1	3	3	50	50	100		2
8	PCC	MVJ20MEL58	Computational Techniques Lab	ME	0	1	3	3	50	50	100		2
9	HSMC	MVJ20ENV59	Environmental Studies	Humanities	1	0	0	3	50	50	100		1
10	HSMC	MVJ20UHV510	Universal Human Values – II	Humanities	2	0	0	3	50	50	100		2
				Total	17	9	9	30	500	500	1000		26

Note: 1. PCC: Professional Core Course , PE: Professional Elective, HSMC: Humanity and Social Science
2. Audit Course of Application development using Python to be taught in V Semester.
3. Students can take up Certification Course of 45 (30+15) hours duration on HVAC for 2 credits in the V Semester to be offered in association with the Alpine Coach Tree - HVAC Training Institute.
Professional Elective - 1:
1. MVJ20ME551: Industrial Internet of Things
2. MVJ20ME552: Advanced Manufacturing Technology,
3. MVJ20ME553: Composite Materials,
4. MVJ20ME554: Total Quality Management

Scheme for VI Semester B.E.(Mechanical Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	Type	Code			L	T	P					
1	PCC	MVJ20ME61	Heat and Mass Transfer	ME	3	2	0	3	50	50	100	4
2	PCC	MVJ20ME62	Design of Machine Elements-II	ME	3	2	0	3	50	50	100	4
3	PE	MVJ20ME63X	Professional Elective -2	ME	3	0	0	3	50	50	100	3
4	PE	MVJ20ME64X	Professional Elective -3	ME	3	0	0	3	50	50	100	3
5	OE	MVJ20ME65X	Open Elective – 1	ME	3	0	0	3	50	50	100	3
6	PCC	MVJ20MEL66	CAMA-Lab	ME	0	1	3	3	50	50	100	2
7	PCC	MVJ20MEL67	Heat Transfer Lab	ME	0	1	3	3	50	50	100	2
8	Proj	MVJ20MEP68	Mini-Project	ME				3	50	50	100	2
				Total	15	6	6	24	400	400	800	23

Note: PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work

Professional Elective -2:
1. MVJ20ME631: Refrigeration and Air-Conditioning,
2. MVJ20ME632: Plastic Processing,
3. MVJ20ME633: Smart Materials and Structures,
4. MVJ20ME634: Finite Element Method

Professional Elective -3:
1. MVJ20ME641:Design of Experiments
2. MVJ20ME642: Computer Integrated Manufacturing,
3. MVJ20ME643: Material Characterisation Techniques,
4. MVJ20ME644: Theory of Elasticity

Open Elective – 1:
1. MVJ20ME651: Automotive Electronics
2. MVJ20ME652: Operation Management
3. MVJ20ME653: Engineering Economics

Note: 1. Audit Course of Machine Learning to be taught in VI Semester.

Scheme for VII Semester B.E.(Mechanical Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	Type	Code			L	T	P					
1	PCC	MVJ20ME71	Mechanical Vibrations	ME	3	2	0	3	50	50	100	4
2	PCC	MVJ20ME72	Operation Research	ME	3	2	0	3	50	50	100	4
3	PE	MVJ20ME73X	Professional Elective -4	ME	3	0	0	3	50	50	100	3
4	PE	MVJ20ME74X	Professional Elective -5	ME	3	0	0	3	50	50	100	3
5	OE	MVJ20ME75X	Open Elective – 2	ME	3	0	0	3	50	50	100	3
6	PCC	MVJ20MEL76	Design -Lab	ME	0	1	3	3	50	50	100	2
7	PCC	MVJ20MEL77	CIM-Lab	ME	0	1	3	3	50	50	100	2
8	Proj	MVJ20MEP78	Project Phase-1	ME				-	50	-	50	2
				Total	15	6	6	21	400	350	750	23

Note: 1. PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work
2. Students can take up Certification Course of 40 (30+10) hours duration on Big Data Analytics for 2 credits in the VII Semester to be offered in association with the Console Lancer LLP

Professional Elective -4:
1. MVJ20ME731: Renewable Energy Sources
2. MVJ20ME732: CAD/CAM,
3. MVJ20ME733: Computational Mechanics,
4. MVJ20ME734: Theory of Plasticity

Professional Elective -5:
1. MVJ20ME741: Solar Energy
2. MVJ20ME742: Lean Manufacturing,
3. MVJ20ME743: Control Engineering,
4. MVJ20ME744: Tribology

Open Elective – 2:
1. MVJ20ME751: Energy Engineering,
2. MVJ20ME752: Smart Materials and Mems,
3. MVJ20ME753: Operation Research

Scheme for VIII Semester B.E. (Mechanical Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
					Theory Lecture	Tutorial	Practical/Drawing	Duration in Hours	CIE Marks	SEE Marks	Total marks	
	Type	Code			L	T	P					
1.	Proj	MVJ20MEP81	Project Phase-2	ME				3	50	50	100	8
2.	Int	MVJ20MEI82	Internship	ME				3	50	50	100	3
3.	Sem	MVJ20MES83	Seminar	ME				3	50	50	100	1
4.	CRT	MVJ20MEC84	Certification	Industry/Institute								2
				Total	-	-	-	9	150	150	300	14

Note: 1. PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work, Int.: Internship, Sem : Seminar, CRT: Certification Course (Can be carried out during the program period but same will reflect in the final semester grade card).
2. The certification course of a minimum duration of 30 hours completed by the students will be considered for 2 credits, and reflected in VIII semester.