



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(Deemed University)
(Declared Under Distinct Category by Ministry of Education, Government of India)
NAAC Accredited with A++ Grade
Department of Mechanical Engineering



Semester-Wise General Scheme Structure & Important Guidelines for Flexible Curriculum

(Batch admitted in Academic Session 2025-26 onwards)

Abbreviations Used

L	Lecture
T	Tutorial
P	Practical
HSMC	Humanities and Social Sciences including Management Courses
BSC	Basic Science Courses
ESC	Engineering Science Courses
DC	Departmental Core
DE	Departmental Elective
SPC	Specialization Courses
OC	Open Category
DLC	Departmental Laboratory Courses
MOOC	Massive Open Online Course
MWS	Mandatory Workshop
SP	Semester Proficiency
SIP	Skill Internship Program
SLP	Self-learning Presentation
PDC	Professional Development Component
PBL	Project Based Learning
PC	Professional Certification
MAC	Mandatory Audit Course
NEC	Novel Engaging Course



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(Deemed University)
(Declared Under Distinct Category by Ministry of Education, Government of India)



NAAC Accredited with A++ Grade
Department of Mechanical Engineering
Scheme of Evaluation

B. Tech. I Semester (Mechanical Engineering) (for batch admitted in academic session 2025-26)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation Lab Work & Sessional	Major Evaluation								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment											
1.	12251101	DC	Engineering Materials	25	25	20	30	-	-	100	3	-	-	3	Face to Face	MCQ	2 Hrs
2.	12251102	ESC	Computer Programming	25	25	20	30	-	-	100	2	-	-	2	Face to Face	MCQ	2 Hrs
3.	12251103	DC	Manufacturing Science	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	12251104	DC	Basic Mechanical Engineering	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	12251105	ESC	Basic Electrical & Electronics Engineering	25	25	20	30	-	-	100	2	-	-	2	Face to Face	MCQ	2 Hrs
6.	12251106	DLC	Computer Programming Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	12251107	DLC	Electrical & Electronics Engineering Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	12251108	SP	Semester Proficiency ^S	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	12251109	PBL	Micro Project-I [#]	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	12251110	ESC	Engineering Chemistry Lab ^{SS}	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	50	-	50	-	1	-	1	Interactive	SO	-
Total				125	125	100	150	380	120	1000	11	03	10	19	-	-	-
12.	12251111	MAC	Universal Human Values & Professional Ethics (UHVPE)	25	25	20	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	12251112	MWS	Mandatory Workshop on Report Writing at Department Level											GRADE	Interactive	MCQ	-
14.	12251113	MWS	Mandatory Workshop on Indian Constitution and Cultural Values at Department Level											GRADE	Interactive	MCQ	-
Induction programme of three weeks (MC): Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations.																	
Skill Internship Program (Soft Skill): Minimum 45 hours duration: To be credited in II Semester.																	

^SSemester Proficiency-- includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses.

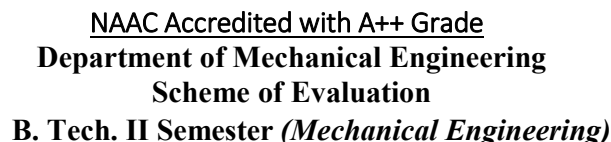
MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral OB: Open Book

^{SS} This course will be distributed in the I Year Group wise among the programmes where ever required.

[#] Micro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

ESC	DC	DLC	NEC	SP	PBL	MAC	MWS
3	3	2	1	1	1	1	2

Mode of Learning							Mode of Examination						Total Credits
Theory		Proficiency	NEC	Lab			Theory				Lab		
Face to Face	Online	Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	AO	
13	-	1	1	-	1	3	6	-	7	-	3	3	
68.42%	-	5.26%	5.26%	-	5.26%	15.79%	31.58%	-	21.05%	-	15.79%	15.79%	Credits %



S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional									
1.	12251201	DC	Engineering Graphics	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	12251202	DC	Engineering Thermodynamics	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	12251203	DC	Engineering Mechanics	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	12251204	DC	Metal Cutting & Machine Tools	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	12251205	BSC	Matrix, Differential Equations and Vector Calculus	25	25	20	30	-	-	100	3	-	-	3	Face to Face	MCQ	2 Hrs
6.	12251206	DLC	Engineering Graphics Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	12251207	DLC	Problem Solving through Python Programming	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	12251208	SP	Semester Proficiency ^S	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	12251209	PBL	Micro Project-II [#]	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	12251210	ESC	Engineering Physics Lab ^{SS}	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
11.	12251211	HSMC	Language Lab	-	-	-	-	70	30	100	-	-	2	1	Blended	AO	-
12.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	50	-	50	-	1	-	1	Interactive	SO	-
13.	SIP1XXXX	SIP	Skill Internship Program (Soft Skill)	-	-	-	-	60	-	60	-	-	-	2**	Experiential	SO	-
Total				125	125	100	150	510	150	1160	11	05	12	24	-	-	-
14.	12251212	MAC	Sustainability & Environmental Science	25	25	20	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
15.	12251213	MWS	Mandatory Workshop on Indian Knowledge System at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

[#] Micro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

Mode of Learning							Mode of Examination						Total Credits
Theory		Proficiency	NEC	Lab			Theory				Lab		
Face to Face	Online	Face to Face	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	AO	
15	-	1	1	1	3	3	6	-	9	-	5	4	
62.5%	-	4.17%	4.17%	4.17%	12.5%	12.5%	50%	-	37.5%	-	20.83%	29.17%	Credits %



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NAAC Accredited with A++ Grade
Department of Mechanical Engineering
Scheme of Evaluation
B. Tech. III Semester (*Mechanical Engineering*)

(for batch admitted in academic session 2025-26)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional									
1.	12252101	BSC	Numerical Techniques	25	25	20	30	-	-	100	3	-	-	3	Face to Face	MCQ	2 Hrs
2.	12252102	DC	Data Structures	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	12252103	DC	Fluid Mechanics	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	12252104	DC	Mechanics of Materials	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	12252105	DC	Industrial Engineering	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
6.	12252106	DLC	Fluid Mechanics Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	12252107	DLC	Mechanics of Materials Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	12252108	SP	Semester Proficiency ^S	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
9.	12252109	PBL	Macro Project-I#	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
10.	12252110	SLP	Self-learning/Presentation ^{sss} (SWAYAM/NPTEL/MOOC)	-	-	-	-	40	-	40	-	-	2	1	Mentoring	SO	-
11.	NECXXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	50	-	50	-	1	-	1	Interactive	SO	-
Total				125	125	100	150	350	90	940	11	05	10	21	-	-	-
12.	12252111	MAC	Cyber Security	25	25	20	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
13.	12252112	MWS	Mandatory Workshop on Mastering Competitive Success at Department Level											GRADE	Interactive	MCQ	-
Skill Internship Program (Institute Level) (Qualifier): Minimum 30 hours duration: To be credited in IV Semester																	

Skill Internship Program (Institute Level) (Qualifier): Minimum 30 hours duration: To be credited in IV Semester

^SSemester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question **AO:** Assignment + Oral **PP:** Pen Paper **SO:** Submission + Oral **OB:** Open Book

[#] Macro Project-I will be presented and evaluated through an interdisciplinary project evaluation committee.

^{sss} Compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance and presentation.

BSC	DC	DLC	NEC	SP	SLP	PBL	MAC	MWS
1	4	2	1	1	1	1	1	1

Mode of Learning								Mode of Examination						Total Credits
Theory		Proficiency	NEC	Self-Learning	Lab			Theory				Lab		
Face to Face	Online	Face to Face	Interactive	Mentoring	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	AO	
15	-	1	1	1	-	1	2	6	-	9	-	4	2	
71.43%	-	4.76%	4.76%	4.76%	-	4.76%	9.52%	28.57%	-	42.85%	-	19.05%	9.52%	Credits %



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NAAC Accredited with A++ Grade
Department of Mechanical Engineering
Scheme of Evaluation
B. Tech. IV Semester (Mechanical Engineering)

(for batch admitted in academic session 2025-26)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted						Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional									
1.	12252201	DC	Design of Machine Elements	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	12252202	DC	Theory of Machines	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	12252203	DC	Metrology and Measurements	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	12252204	DC	Applied Thermodynamics	25	25	20	30	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	12252205	DC	Advanced Production Technology	25	25	20	30	-	-	100	3	-	-	3	Face to Face	MCQ	2 Hrs
6.	12252206	DLC	Design of Machine Elements Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
7.	12252207	DLC	Theory of Machines Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
8.	12252208	DLC	Metrology and Measurements Lab	-	-	-	-	70	30	100	-	-	2	1	Experimental	AO	-
9.	12252209	SP	Semester Proficiency ^S	-	-	-	-	50	-	50	-	-	2	1	Face to Face	SO	-
10.	12252210	PBL	Macro Project-II [#]	-	-	-	-	70	30	100	-	-	2	1	Experiential	SO	-
11.	12252211	PC	Professional Certification	-	-	-	-	50	-	50	-	-	2	1	Blended	SO	-
12.	NECXXXX	NEC	Novel Engaging Course (Activity Based Learning)	-	-	-	-	50	-	50	-	1	-	1	Interactive	SO	-
13.	SIP2XXXX	SIP	Skill Internship Program	-	-	-	-	60	-	60	-	-	-	2**	Experiential	SO	-
Total				125	125	100	150	490	120	1110	11	05	12	24	-	-	-
14.	12252212	MAC	Project Management, Economics & Financing	25	25	20	30	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
15.	12252213	MWS	Mandatory Workshop on Computer Vision at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-
16.	12252214	MWS	Mandatory Workshop on Life Skills at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-

Summer Semester of six-eight weeks duration will be conducted for makeup of previous semester examination.

Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

^SSemester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question **AO:** Assignment + Oral **PP:** Pen Paper **SO:** Submission + Oral **OB:** Open Book

[#] Macro Project-II will be presented and evaluated through an interdisciplinary project evaluation committee.

^{**} These credits will be transferred from Skill Internship Project.

PC	DC	DLC	NEC	SP	SIP	PBL	MAC	MWS
1	5	3	1	1	1	1	1	2

Mode of Learning								Mode of Examination						Total Credits
Theory		Proficiency	NEC	Certification	Lab			Theory			Lab			
Face to Face	Online	Face to Face	Interactive	Blended	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	AO	
15	-	1	1	1	-	3	3	6	-	9	-	6	3	
62.5%	-	4.17%	4.17%	4.17%	-	12.5%	12.5%	25%	-	37.5%	-	25%	12.5%	Credits %



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NAAC Accredited with A++ Grade
Department of Mechanical Engineering
Scheme of Evaluation
B. Tech. V Semester (*Mechanical Engineering*)

(for batch admitted in academic session 2025-26)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block		MOOCs			L	T	P				
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Assignment	Exam								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional											
1.	12253101	DC	Heat and Mass Transfer	25	25	20	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	12253102	DC	Machine Design	25	25	20	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	12253103	DC	Data Science	25	25	20	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
4.	122531XX	DE	Departmental Elective* (DE-1)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
5.	122531XX	SPC	Specialization Course (SPC-1)	25	25	20	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
6.	12253104	DLC	Heat and mass transfer Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	12253105	DLC	Data Science Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
8.	12253106	SP	Semester Proficiency ^S	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	12253107	PBL	Cornerstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
Total				100	100	80	120	260	90	25	75	850	11	04	10	20	-	-	-
10.	12253108	MAC	Supply Chain Management	25	25	20	30	-	-			100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	12253109	MWS	Mandatory Workshop on Block chain at Department Level (Duration: Two Days)													GRADE	Interactive	MCQ	-

Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

^SSemester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question **AO:** Assignment + Oral **PP:** Pen Paper **SO:** Submission + Oral **OB:** Open Book

* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

DC	DE	SPC	DLC	SP	PBL	MAC	MWS
3	1	1	2	1	1	1	1

Mode of Learning						Mode of Examination						Total Credits
Theory		Proficiency	Lab			Theory				Lab		
Face to Face	Online	Face to Face	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	AO	
12	3	1	-	2	2	6	-	9	-	3	2	
60%	15%	5%	-	10%	10%	30%	-	45%	-	15%	10%	Credits %



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NAAC Accredited with A++ Grade
Department of Mechanical Engineering
Scheme of Evaluation
B. Tech. VI Semester (Mechanical Engineering)

(for batch admitted in academic session 2025-26)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block		MOOCs			L	T	P				
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Assignment	Exam								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional											
1.	12253201	DC	Refrigeration and Air-Conditioning	25	25	20	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
2.	12253202	DC	Artificial Intelligence & Machine Learning	25	25	20	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
3.	122532XX	DE	Departmental Elective* (DE-2)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
4.	122532XX	OC	Open Category Course (OC-1)	25	25	20	30	-	-	-	-	100	2	1	-	3	Face to Face	MCQ	2 Hrs
5.	122532XX	SPC	Specialization Course (SPC-2)	25	25	20	30	-	-	-	-	100	3	-	-	3	Face to Face	mCQ	2 Hrs
6.	12253203	DLC	Refrigeration and Air-Conditioning Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	AO	-
7.	12253204	DLC	Artificial Intelligence & Machine Learning Lab	-	-	-	-	70	30	-	-	100	-	-	2	1	Experimental	SO	-
8.	12253205	SP	Semester Proficiency ^S	-	-	-	-	50	-	-	-	50	-	-	2	1	Face to Face	SO	-
9.	12253206	PBL	Capstone Project	-	-	-	-	70	30	-	-	100	-	-	4	2	Experiential	SO	-
Total				100	100	80	120	260	90	25	75	850	12	03	10	20	-	-	-
10.	12253207	MAC	Disaster Management	25	25	20	30	-	-	-	-	100	2	-	-	GRADE	Blended	MCQ	1.5 Hrs
11.	12253208	MWS	Mandatory Workshop on Intellectual Property Rights at Department Level (Duration: Two Days)											GRADE	Interactive	MCQ	-		

Skill Enhancement Program/Research Internship/On Job Training for Four weeks duration

Summer Semester of six-eight weeks duration will be conducted for makeup of previous semester examination.

Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree

^SSemester Proficiency– includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in the semester courses

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral OB: Open Book

* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform.

DC	DE	SPC	OC	DLC	SP	PBL	MAC	MWS
2	1	1	1	2	1	1	1	1

Mode of Learning						Mode of Examination						Total Credits
Theory		Proficiency	Lab			Theory				Lab		
Face to Face	Online	Face to Face	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	AO	
12	3	1	-	2	2	6	-	9	-	4	1	
60%	15%	5%	-	10%	10%	30%	-	45%	-	20%	5%	Credits %

Open Category Course (OC-1)		
S.No.	Subject Code	Subject Name
1		Smart Manufacturing
2		Statistical Quality control
3		Basic Mechanical Engineering



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NAAC Accredited with A++ Grade
Department of Mechanical Engineering
Scheme of Evaluation
B. Tech. VII Semester (Mechanical Engineering)

(for batch admitted in academic session 2025-26)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block		MOOCs									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Assignment	Exam								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment		Lab Work & Sessional											
1.	122541XX	DE	Departmental Elective [#] (DE-3)	25	25	20	30	-	-	-	-	100	2	1	-	3	Blended	MCQ	2 Hrs
2.	122541XX	DE	Departmental Elective* (DE-4)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
3.	122541XX	OC	Open Category Course * (OC-2)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
4.	122541XX	SPC	Specialization Course [#] (SPC-3)	25	25	20	30	-	-	-	-	100	2	1	-	3	Blended	MCQ	2 Hrs
5.	12254101	SEP	Skill Enhancement Program/Research Internship/ On Job Training	-	-	-	-	-	50	-	-	50	-	-	2	1**	Experiential	SO	-
6.	12254102	DLC	Creative Problem Solving	-	-	-	-	-	50	-	-	100	-	-	2	1	Experiential	SO	-
Total				50	50	40	60	-	100	50	150	500	10	02	04	14	-	-	-
Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree																			

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral OB: Open Book

*Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

** These credits will be transferred from Skill Enhancement Program/Research Internship/On Job Training

Course run through MITS-DU MOOCs

DE	SPC	OC	DLC	SP	MWS
2	1	1	1	1	1

Mode of Learning						Mode of Examination					Total Credits
Theory		Proficiency		Lab		Theory				Lab	
Face to Face	Online	Face to Face	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
9	3	1	-	1	-	6	-	6	-	2	14
64.29%	21.43%	5%	-	7.14%	-	42.86%	-	42.86%	-	14.29%	Credits %

S.No.	DE-3 (Code)	DE-3 Subject Name	DE-4 (Code)*	DE-4 Subject Name*	OC-2 (Code)	OC-2 Subject Name
1		Turbo Machinery				Solar Energy
2		Dynamics of Machines				Process Planning and Cost Estimation
3		Operations Research				Hybrid Vehicles
		Machinery Fault Diagnosis				



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(Deemed University)
(Declared Under Distinct Category by Ministry of Education, Government of India)



NAAC Accredited with A++ Grade
Department of Mechanical Engineering
Scheme of Evaluation
B. Tech. VIII Semester (*Mechanical Engineering*)

(for batch admitted in academic session 2025-26)

S. No.	Course Code	Category Code	Course Name	Maximum Marks Allotted								Total Marks	Contact Hours per week			Total Credits	Mode of Learning	Mode of Major Evaluation	Duration of Major Evaluation
				Theory Block				Practical Block		MOOCs									
				Continuous Evaluation			Major Evaluation	Continuous Evaluation	Major Evaluation	Assignment	Exam								
				Minor Evaluation I	Minor Evaluation II	Quiz/ Assignment													
1.	122542XX	DE	Departmental Elective* (DE-5)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
2.	122542XX	OC	Open Category Course* (OC-3)	-	-	-	-	-	-	25	75	100	3	-	-	3	Online	MCQ	3 Hrs
3.	12254201	PBL	Industry Internship/ Research Internship/ Innovation & Start-up	-	-	-	-	280	120	-	-	400	-	-	20	10	Experiential	SO	-
4.	12254202	PDC	Professional Development ^{##}	-	-	-	-	-	50	-	-	50	-	-	4	2	Interactive	SO	-
Total				-	-	-	-	280	170	50	150	650	06	-	24	18	-	-	-
Summer Semester of six-eight weeks duration will be conducted to complete any backlog courses.																			
Additional Course for Honours or Minor Degree: Permitted to opt for maximum two additional courses for the award of Honours or Minor Degree																			

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral OB: Open Book

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^{##} Evaluation will be based on participation/laurels brought by the students to the institution in national/state level technical and other events during the complete tenure of the UG programme (participation in professional chapter activities, club activities, cultural events, sports, personality development activities, collaborative events, MOOCs, technical events, institute/department committees, etc.)

DE	OC	PDC	PBL
1	1	1	1

Mode of Learning						Mode of Examination					Total Credits
Theory		Professional Development	Lab			Theory				Lab	
Face to Face	Online	Interactive	Blended	Experiential	Experimental	PP	AO	MCQ	OB	SO	
-	6	2	-	10	-	-	-	6	-	12	
-	33.33%	11.11%	-	55.56%	-	-	-	33.33%	-	66.67%	Credits %

S.No.	DE-5 (Code) *	DE-5 Subject Name *	OC-3 (Code) *	OC-3 Subject Name *
1				
2				
3				