

SCHOOL OF ENGINEERING AND SCIENCES

M.Tech in MMT

2023-25 Batch

<u>Semester Wise Course Credit Distribution Under Various Categories</u>

Category	S1	S2	S 3	S4	Total	%age
Value Added Courses (UG Common) (VAC)	02	-	-	-	02	2.5%
Skill Enhancement Courses (SEC)	2	2	-	-	04	5%
Multidisciplinary / Interdisciplinary / Foundation Core (FIC)	3	3	-	-	06	7.5%
Major Core (CC) + Specialization (SE) + Core Elective (CE)	16	20	-	-	36	45%
Research / Design / Industrial Practice / Project (RDIP)	-	-	17	15	32	40%
Grand Total			17	15	80	100%

VAC- Community Engagement & Social Responsibility

SEC-Problem Solving or Entrepreneurial mindset or Design Thinking

FIC- Mathematics or AIML or Project Management

M.Tech in MMT

		Semester-1				
Category	Sub- Category	Course Title	L	T/D	P/Pr	Credits
VAC	University AEC	Community Engagement & Social Responsibility		-	1	01*
VAC	University AEC	Research Seminar	-	ı	1	01*
SEC1	SEC	Design Thinking	1	-	1	02
CC	CORE	Industrial Surface Engineering	3	0	1	4
CC	CORE	Sustainable Manufacturing	3	0	1	4
CC	CORE	Materials for Manufacturing	3	0	1	4
CC	CORE	Production and operation management		0	0	3
Multidisciplinary	School (Engg./Sc.)	Advanced Numerical Techniques	2	1	1	4
Semester Total						21
		Semester-2				
Category	Sub- Category	Course Title	L	T/D	P/Pr	Credits
VAC	University AEC	Community Engagement & Social Responsibility		-	1	1
VAC	University AEC	Research Seminar		-	1	1
SEC2	SEC	Entrepreneurial mindset	1	-	1	2
СЕ	Core Elective	Industry - Core Elective	3	0	1	4
CE	Core Elective	Industry - Core Elective	3	0	1	4
CC	Core	Advanced Materials Processing Technologies	3	0	1	4
CC	Core	Additive Manufacturing	3	0	1	4
CC	Core	Material Characterization Processes		0	1	4
Multidisciplinary	University (PSB)	Project Management	-	2	1	3
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Semester-3						
Category	Sub- Category	Course Title	L	T/D	P/Pr	Credit
RDIP	Research / Design / Industrial Practice / Project	Thesis (Project)	-	-	14	14
RDIP	Research / Design / Industrial Practice / Project	Industrial Practice/Internship			3	3
Semester Total				17		
Semester-4						
Category	Sub- Category	Course Title	L	T/D	P/Pr	Credi
RDIP	Internship / Research / Thesis	Thesis	-	-	15	15
Semester Total				15		

List of Core Electives

1	Analysis	of machining	g processes
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- 2 Lean manufacturing
- 3 Reliability engineering
- 4 Tool design
- 5 Digital Manufacturing
- 6 Advanced Metal Forming
- 7 Lasers in Manufacturing
- 8 Precision and Micro Manufacturing
- 9 Quality engineering
- 10 Finite element methods for Manufacturing
- 11 Inspection and Testing in Manufacturing
- 12 Flexible Manufacturing System
- 13 Product Design and Manufacturing
- 14 Biomaterials Processing and Applications
- 15 Powder Materials and Processing
- 16 Design and Analysis of Experiments
- 17 Robotics and AI/ML for Manufacturing
- 18 Manufacturing Automation and Industry 4.0