

**MTech – Mechanical (CADME)**

**Scheme of Examination for MTech - Mechanical Engineering**

**Branch- COMPUTER AIDED DESIGN, MANUFACTURE AND ENGINEERING**

**Semester- I**

Subject code	Subject Name	Teaching scheme (Weekly Load in hrs.)				Credits	Evaluation Scheme					ESE Duration (Hrs.)
		Lecture	Tutorial	Practical	Total		Theory			Practical	Total	
							TAE 20%	CAE 20%	ESE 60%	Cont. Ass.		
MCDL501	Advanced Mathematics	3	1	--	4	4	20	20	60	--	100	3
MCDL502	Advanced Machine Design	3	1	--	4	4	20	20	60	--	100	3
MCDL503	Computer Aided Design	3	1	--	4	4	20	20	60	--	100	3
MCDL504	Research Methodology	3	1	--	4	4	20	20	60	--	100	3
MCDL505	Elective I	2	--	--	2	2	20	20	60	--	100	3
MCDP506	Modelling and Analysis Lab-I	--	--	4	4	2	--	--	--	100	100	--
MSDP501	Advance Skill Development	--	--	2	2	AU	--	--	--	--	--	--
<b>Total</b>		14	4	6	24	<b>20</b>	100	100	300	100	<b>600</b>	--

**MHPL505: Elective-I**

**Modules of 2 Credits (Select any One)**

Code No.	Title	Code No.	Title
MCDL505A	Energy Audit and Management	MCDL505G	Operation Management
MCDL505B	Financial Management	MCDL505H	Engineering Economics
MCDL505C	Financial Costing	MCDL505I	Technology Forecasting
MCDL505D	Project Management	MCDL505J	Technology Transfer
MCDL505E	Energy Efficient Technologies in Electrical Systems	MCDL505K	Human Rights
MCDL505F	Environmental Pollution and Control	MCDL504L	Intellectual property Rights

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Semester- II													
Subject code	Subject Name	Teaching scheme (Weekly Load in hrs)				Credits	Evaluation Scheme						ESE Duration (Hrs)
		Lecture	Tutorial	Practical	Total		Theory			Practical		Total	
							TAE 20%	CAE 20%	ISE 60%	Cont. Ass.	Ext. Ass.		
MCDL507	Computer Integrated Manufacturing	3	1	-	4	4	20	20	60	--	--	100	3
MCDL508	Finite Element Analysis	3	1	-	4	4	20	20	60	--	--	100	3
MCDL509	Automated Manufacturing System Modelling	3	1	-	4	4	20	20	60	--	--	100	3
MCDL510	Elective II	3	-	-	3	3	20	20	60	--	--	100	3
MCDL511	Elective III	3	-	-	3	3	20	20	60	--	--	100	3
MCDP512	Simulation Lab-II	-	-	4	4	2	--	--	--	50	50	100	-
	<b>Total</b>	15	3	4	22	<b>20</b>	100	100	300	50	50	<b>600</b>	-

MCDL510: Elective-II			
Modules of 2 Credits (Select any One)			
Code No.	Title	Code No.	Title
MCDL510A	Iso-parametric Elements And Formulation of Plane Elasticity Problems	MCDL510I	Nonlinear Problems – Geometric, Material And Contact Problems
MCDL5104B	Dynamic Problems – Eigen Value and Time Dependent Problems	MCDL510J	Finite Difference Solutions
MCDL510C	Finite Volume Methods	MCDL510K	Advanced Materials
MCDL510D	Engineering Alloys	MCDL510L	Ceramics
MCDL510E	Composite Materials	MCDL510M	Data Models
MCDL510F	Distributed Database	MCDL510N	Web Languages
MCDL510G	J2EE Technologies:	MCDL510O	Solid - Based Rapid Prototyping Systems
MCDL510H	Tools For Customization	MCDL510P	Automated Solid Modeling Using Customization
Modules of 1 Credits (Select any One)			
MCDL510a	Plate Bending Problems – Plate And Shell Elements	MCDL510d	Turbulence Modeling
MCDL510b	Relational Database Design	MCDL510e	File & System Structure
MCDL510c	Computer-Based System Engineering	MCDL510f	Rapid Development / Solid Modelling Algorithms
MCDL510g	Robotics and its application		

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<b>MCDL51: Elective-III</b>			
<b>Modules of 3 Credits (Select any One)</b>			
<b>Code No.</b>	<b>Title</b>	<b>Code No.</b>	<b>Title</b>
MCDL511A	Open Elective	MCDL511D	Computational Fluid Dynamics
MCDL511B	Simulation Modelling	MCDL511E	Intelligent Manufacturing Systems
MCDL511C	Optimization Techniques	MCDL511F	Computer Aided Process Planning
MCDL511G	Industrial Product Design & Product Life Cycle Management		

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<b>Semester- III</b>													
<b>Subject code</b>	<b>Subject Name</b>	<b>Teaching scheme (Weekly Load in hrs)</b>				<b>Credits</b>	<b>Evaluation Scheme</b>						<b>ESE Duration (Hrs)</b>
		<b>Lecture</b>	<b>Tutorial</b>	<b>Practical</b>	<b>Total</b>		<b>Theory</b>			<b>Practical</b>		<b>Total</b>	
							<b>TAE 20%</b>	<b>CAE 20%</b>	<b>ISE 60%</b>	<b>Cont. Ass.</b>	<b>Ext. Ass.</b>		
MCDP601	Technical Writing	--	--	3	3	3	--	--	--	50	50	100	--
MCDP602	Seminar I	--	--	4	4	4	--	--	--	50	50	100	--
MCDP603	Dissertation Phase-I	--	--	8	8	8	--	--	--	100	100	200	--
	<b>Total</b>	--	--	15	15	<b>15</b>	--	--	--	200	200	<b>400</b>	--

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**Semester- IV**

Subject code	Subject Name	Teaching scheme (Weekly Load in hrs.)				Credits	Evaluation Scheme						ESE Duration (Hrs.)
		Lecture	Tutorial	Practical	Total		Theory			Practical		Total	
							TAE 20%	CAE 20%	ISE 60%	Cont. Ass.	Ext. Ass.		
MCDP604	Seminar II	--	--	4	4	4	--	--	--	50	50	100	--
MCDP605	Dissertation Phase-II	--	--	16	16	16	--	--	--	200	100	300	--
	<b>Total</b>	--	--	20	20	<b>20</b>	--	--	--	250	150	<b>400</b>	--