

**Ph.D. (METALLURGICAL AND MATERIALS ENGINEERING)**

<b>Cat.</b>	<b>Course Number</b>	<b>Course Title</b>	<b>L-T-P</b>	<b>Credits</b>	<b>Cat.</b>	<b>Course Number</b>	<b>Course Title</b>	<b>L-T-P</b>	<b>Credits</b>
<b>I Semester</b>					<b>II Semester</b>				
E		<i>Elective 1*</i>	3-0-0	3	E		<i>Elective 6*</i>	3-0-0	3
E		<i>Elective 2</i>	3-0-0	3	E		<i>Elective 7</i>	3-0-0	3
E		<i>Elective 3</i>	3-0-0	3	E		<i>Elective 8</i>	3-0-0	3
E		<i>Elective 4</i>	3-0-0	3	E		<i>Elective 9</i>	3-0-0	3
E		<i>Elective 5</i>	3-0-0	3	E		<i>Elective 10</i>	3-0-0	3
						MT811	<i>Seminar</i>	0-2-0	2
				<i>Total</i>					<i>Total</i>
<b>III Semester</b>					<b>IV Semester</b>				
TH	MT799	Ph.D. Thesis			TH	MT799	Ph.D. Thesis		
				<i>Total</i>					<i>Total</i>
<b>V Semester</b>					<b>VI Semester</b>				
TH	MT799	Ph.D. Thesis			TH	MT799	Ph.D. Thesis		
				<i>Total</i>					<i>Total</i>
<b>VII Semester</b>					<b>VIII Semester</b>				
TH	MT799	Ph.D. Thesis			TH	MT799	Ph.D. Thesis		
				<i>Total</i>					<i>Total</i>

**\* Electives 1 and 6 to be taken from M.Tech. elective courses only. No 5XX courses can be taken.**

**ELECTIVES**

<b>Course Number</b>	<b>Course Title</b>	<b>L-T-P</b>	<b>Credits</b>	<b>Course Number</b>	<b>Course Title</b>	<b>L-T-P</b>	<b>Credits</b>
MT711	<i>Interfacial Phenomena</i>	3-0-0	3	MT658	<i>Electronic, Optical and Magnetic Properties of Materials</i>	3-0-0	3
MT656	<i>Fatigue and Fracture</i>	3-0-0	3				
MT712	<i>Quantitative Metallography</i>	3-0-0	3	MT659	<i>Thin Film Technology</i>	3-0-0	3
MT713	<i>Particulate Matter Technology</i>	3-0-0	3	MT714	<i>Theory and Design of Alloys</i>	3-0-0	3
MT657	<i>Transport Phenomena</i>	3-0-0	3	MT660	<i>Diffusion in Solids</i>	3-0-0	3

**DISTRIBUTION OF CREDITS (Ph.D.)**

<b>S. No.</b>	<b>Category</b>	<b>Category Title</b>	<b>Students with</b>	<b>Total Courses</b>	<b>Total Credits</b>
1.	E	<i>ELECTIVES</i>	M. Tech., M.E., M.Sc. Degree in MT	4	12
			M. Tech., M.E., M.Sc. Degree in other Engineering disciplines	4	12
			M. Sc. Degree in Science disciplines	10	30
			Bachelor Degree	10	30
2.	H	<i>THESIS</i>	-	-	-