SEM	Course Code	CourseName	Credits	Basket	Sem-total
1	MS5990	Introduction to Materials Science and Engineering	1	DC	13
	MS5991	Materials PG Lab (Processing + Structure + Compuational + Properties)	2	DC	
	LA5180	Communication skills	1	LA/CA	
	MSXXXX	Departmental Electives	9	DE	
2	MSXXXX	Departmental Electives	12	DE	13
	MS5016	Industrial Lectures	1	DC	
3	MS5015	Thesis stage - I	12		12
4	MS5015	Thesis stage - II	12		12
				Total	50

Departmental Electives (DE) for ODD semester			
SEM	Course Code	CourseName	Credits
1	MS5890	Functional Properties of Materials	2
	MS5830	Physical Metallurgy (Prereq: MS5990)	2
	MS5860	Intro to Computational Methods in Materials Science	2
	SD5010	Fundamnetal of Semiconductor Materials	3
	MS5980	Fundamentals of Scientific Computing	2
	MS5600	Role of microstructure in materials selection	3
	MS5753	Sustainable chemical metallurgy	2
	MS5970	Materials Thermodynamics and Kinetics	3
	MS5460	Metal Additive Manufacturing	3
	MS5920	Fundamentals of Electronic Packaging Materials	2
	MS5270	2D Materials: Synthesis, Characterization and Applications	3
	MS5840	Biomaterials	3
	MS5130	Powder Metallurgy Manufacturing	3
	MS5743	Kinetics of Metallurgical Processes	1
	MS5930	Imaging in Materials Science	2
	MS5510	Science and Technology of Light Metals and Alloys	2
	MS5390	Electrometallurgy	3
	SD5050	Electrochemical Processes in Semiconductors	3
	MS5760	Elements of metallurgy and manufacturing of superalloys an	2
	MS5450	High Entropy Materials	1
	MS5020	Electron Microscopy	3
	MS5620	Spintronic Materials and Devices	3

Departmental Electives (DE) for EVEN semester			
SEM	Course Code	CourseName	Credits
2	MS5973	Computational Thermodynamics and Kinetics (Prerequisite:	3
	MS5850	Phase Transformations	2
	MS5870	Mechanical behavior of Materials	3
	MS5023	Electronic structure and atomistic modeling	3
	MS5040	Thermomechanical processing of materials	3
	MS6021	Practical approach to TEM (prereq: MS5020)	3
	MS5080	Thin Film Technology	3
	SD5030	Semiconductor devices	3
	MS5730	Advanced X-ray Analysis of Materials and Devices	3
	MS5633	Carbon Capture Utilization and Storage	3
	MS5100	Composite Materials	3
	MS5690	Clean Steel Making: Theory, Practice & Modeling	3
	MS5530	Energy Materials and Devices	3
	MS5960	Diffraction and Spectroscopy	2
	MS5880	Creep, Fatigue and Fracture	3
	MS5520	Recycling and Sustainability of Green Energy Materials	2
	MS5380	Theory of Interdiffusion (Prereq: 5970)	2
	MS5033	Mesoscale microstructure modeling	3
	SD5021	Semiconductor Device Characterization lab (DC for SMD)	1
	MS5940	Materials Chemistry	2