

HKE Society's PDA College of Engineering, Gulbarga Karnataka

M.Tech. Materials Science and Technology

Scheme of Teaching and Examination for M.Tech. Degree (Materials Science and Technology):2020-2021

First Sem. : M Tech. Materials Science and Technology

Code No.	Course	Hours/Week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CIE	SEE	Total
19MST11	Concepts in Materials Science	4	--	--	4	50	50	100
19MST12	Powders Processing Techniques	4	--	--	4	50	50	100
19MST13	Advances in Cement Materials	4	--	--	4	50	50	100
19MST14X	Elective – I	4	--	--	4	50	50	100
19MST15X	Elective – II	4	--	--	4	50	50	100
19MST16X	Elective – III	4	--	--	4	50	50	100
PRACTICAL								
19MSTL17	Materials Processing Lab.	--	--	4	2	50	50	100
					26	350	350	700

Electives					
19MST14X	Elective-I	19MST15X	Elective-II	19MST16X	Elective-III
19MST141	Physical Metallurgy	19MST151	Phase Transformations in Solids	19MST161	Ceramic Technology
19MST142	Project Management	19MST152	Non-Destructive Testing	19MST162	Materials and Environment
19MST143	Process Operations and Calculations	19MST153	Thermodynamics in Materials Science	19MST163	Polymer Technology

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Code No.	Course	Hours/Week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CIE	SEE	Total
19MST21	Characterization of Materials	4	--	--	4	50	50	100
19MST22	Mechanical Behavior of Materials	4	--	--	4	50	50	100
19MST23	Research Methodology	4	--	--	4	50	50	100
19MST24X	Elective – IV	4	--	--	4	50	50	100
19MST25X	Elective – V	4	--	--	4	50	50	100
19MST26X	Elective-VI	4	--	--	4	50	50	100
PRACTICAL								
19MSTL27	Materials Testing Lab.	--	--	4	2	50	50	100
					26	350	350	700

Electives					
19MST24X	Elective-IV	19MST25X	Elective-V	19MST26X	Elective-VI
19MST241	Engineering Composites	19MST251	Electrical and Magnetic Materials	19MST261	Biomaterials
19MST242	Colloids and Interfacial Engineering	19MST252	Production and Operation Management	19MST262	High Temperature Materials
19MST243	Non-Traditional Machining	19MST253	Smart Materials	19MST263	Sustainable solid electrolytes

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Third Sem.: M.Tech. Materials Science and Technology

Code No.	Course	Hours/Week				Maximum Marks			
		Lecture	Tutorial	Practical	Credits	CIE	SEE	Total	
19MST31	Industrial Internship	6 Weeks Duration				05	50	50	100
19MST32	Project Phase-I	--	--	16	08	50	50	100	
19MST33	Seminar	--	--	2	01	100	--	100	
		--	--	--	14	200	100	300	

Fourth Sem.: M.Tech. Materials Science and Technology

Code No.	Course	Hours/Week				Maximum Marks			
		Lecture	Tutorial	Practical	Credits	CIE	SEE	Total	
19MST41	Project Phase-II (Final)	--	--	40	20	100	200	300	
19MST42	Online Certificate Course*	8 weeks course				02	--	--	--
					22				

*Online Certificate Courses may be completed from AICTE/NPTEL MOOCs programs during any of the semesters of M.Tech. program. The certificate to be submitted at the SEE of 4th Semester of M.Tech program.