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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by Andhra Pradesh Act No.30 of 2008)

Kukatpally, Hyderabad – 500 085, Andhra Pradesh (India)

B. TECH METALLURGY AND MATERIAL ENGINEERING

I YEAR

Code	Subject	L	T/P/D	Credits
	English	2	-	4
	Mathematics – I	3	1	6
	Engineering Mechanics	3	-	6
	Engineering Physics	3	-	6
	Engineering Chemistry	3	-	6
	Computer Programming	3	-	6
	Engineering Drawing	2	3	6
	Computer Programming Lab	-	3	4
	Engineering Physics & Engineering Chemistry Lab	-	3	4
	English Language Communication Skills Lab	-	3	4
	Engineering Workshop/IT Workshop	-	3	4
	Total	**19**	**16**	**56**

II YEAR I SEMESTER

Code	Subject	L	T/P/D	Credits
	Mathematics – II	4	-	4
	Electrical Engineering	4	-	4
	Mechanics of Solids	4	-	4
	Object Oriented Programming through JAVA	4	-	4
	Physical Metallurgy	4	-	4
	Thermodynamics and Kinetics	4	-	4
	Java Lab	-	3	2
	Physical Metallurgy Lab	-	3	2
	Total	**24**	**6**	**28**

II YEAR II SEMESTER

Code	Subject	L	T/P/D	Credits
	Mathematics – III	4	-	4
	Mechanics of Fluids	4	-	4
	Environmental Studies	4	-	4
	Fuels, Furnaces and Refractories	4	-	4
	Metallurgical Thermodynamics	4	-	4
	Mineral Processing	4	-	4
	Fuels, Furnaces and Refractories Lab	-	3	2
	Mineral Processing Lab	-	3	2
	Total	**24**	**6**	**28**

III YEAR I SEMESTER

Code	Subject	L	T/P/D	Credits
	Basic Electronics	4	-	4
	Non Ferrous Extractive Metallurgy	4	-	4
	Mechanical Metallurgy	4	-	4
	Heat Treatment Technology	4	-	4
	Iron Production	4	-	4
	Metal Joining Technology	4	-	4
	Mechanical Metallurgy Lab	-	3	2
	Heat Treatment Technology Lab	-	3	2
	Total	**24**	**6**	**28**

III YEAR II SEMESTER

Code	Subject	L	T/P/D	Credits
	Managerial Economics and Financial Analysis	4	-	4
	Mechanical Working of Metals	4	-	4
	Foundry Technology	4	-	4
	Powder Metallurgy	4	-	4
	Steelmaking	4	-	4
	Open Elective : Human Values and Professional Ethics Disaster Management Intellectual Property Rights	4	-	4
	Foundry Technology Lab	-	3	2
	Advanced Communication Skills Lab	-	3	2
	Total	**24**	**6**	**28**

IV YEAR I SEMESTER

Code	Subject	L	T/P/D	Credits
	Management Science	4	-	4
	Electro Metallurgy and Corrosion	4	-	4
	Material Characterization Techniques	4	-	4
	Non Destructive Testing	4	-	4
	Departmental Elective I Ceramic Science and Technology X- Ray Diffraction Light Metals and Alloys **Probability & Statistics**	4	-	4
	Departmental Elective II Semi Conductors and Magnetic Materials Metallurgical Problems Polymeric Materials	4	-	4
	Electro Metallurgy and Corrosion Lab	-	3	2
	Metallurgical Computations Lab	-	3	2
	Total	**24**	**6**	**28**

IV YEAR II SEMESTER

Code	Subject	L	P	Credits
	Departmental Elective III Advanced Materials Nano Materials Nuclear Metallurgy	4	-	4
	Departmental Elective IV Super Alloys Ferro Alloy Technology Selection of Materials for Engineering Applications	4	-	4
	Composite Materials	4	-	4
	Industry Oriented Mini Project	-	-	2
	Seminar	-	6	2
	Project Work	-	15	10
	Comprehensive viva	-	-	2
	Total	**12**	**21**	**28**

Note: All End Examinations (Theory and Practical) are of three hours duration.

T-Tutorial **L – Theory** **P – Practical/Drawing** **C – Credits**