

DEPARTMENT OF METALLURGICAL & MATERIAL ENGINEERING**CURRICULUM OF 2ND TO 4TH YEAR OF THE****UNDERGRADUATE ENGINEERING DEGREE PROGRAMME****SECOND YEAR FIRST SEMESTER**

Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
FET/ BS/B/Math/T/211	Mathematics-III	BS	B	2-1-0	3	100
Met/ BS/B/Chem/T/212	Chemistry - II	BS	B	3-0-0	3	100
Met/ ES/B/ME/T /213	Strength of Materials	ES	B	3-0-0	3	100
Met/ ES/B/ChE/T/214	Fluid Flow and Heat Transfer	ES	B	3-0-0	3	100
Met/ES/B/Geo-Met/TS/215	Geology and Minerals Beneficiation (Geology offered by Geological Sciences Dept.)	ES	B	4-0-0	4	50+50
Met/ES/B/Geo/ TS/215	Geology Laboratory	ES	B	0-0-3	1.5	100
Met/ES/B/TS/215	Minerals Beneficiation Laboratory	ES	B	0-0-3	1.5	100
Total					19	700

SECOND YEAR, SECOND SEMESTER

Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
Met/ES/B/ME/TS/221	Machine Design & Drawing	ES	B	3-0-0	3	100
Met/ES/B/TS/222	Testing, Inspection and Quality Control of Materials	ES	B	3-0-0	3	100
Met/ES/B/ChE/T/223	Fuel & Combustion	ES	B	3-0-0	3	100
Met/ES/B/T/224	Materials Science	ES	B	3-0-0	3	100
Met/ES/B/T/225	Thermodynamics of Materials	ES	B	3-1-0	4	100
Met/ES/B/ME/TS/221	Machine Design & Drawing	ES	B	0-0-3	1.5	100
Met/ES/B/TS/222	Mechanical Testing of Materials	ES	B	0-0-3	1.5	100
Met/ES/B/S/223	Basic Metallography Laboratory	ES	B	0-0-3	1.5	100
Total					20.5	800

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THIRD YEAR FIRST SEMESTER

Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
Met/ES/B/TS/311	Physical Metallurgy	ES	B	3-0-0	3	100
Met/ES/B/TS/312	Electro-Chemistry, Corrosion	ES	B	3-0-0	3	100
Met/ES/B/T/313	Plastic deformation of Metals	ES	B	3-0-0	3	100
Met/ES/B/T/314	Iron Making	ES	B	3-0-0	3	100
Met/ES/B/T/315	Chemical Kinetics and Mass Transfer	ES	B	3-1-0	4	100
	Open Elective	ES	B	3-0-0	3	100
Met/ES/B/T/311	Viva-Voce	ES	B	3-0-0	Non-credit	000
Met/ES/B/Met/TS/311	Physical Metallurgy Laboratory	ES	B	0-0-3	1.5	100
Met/ES/B/TS/312	Electrochemistry and Corrosion Laboratory	ES	B	0-0-3	1.5	100
Total					22	800

THIRD YEAR, SECOND SEMESTER

Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
Met/ES/B/TS/321	Foundry Metallurgy	ES	B	3-0-0	3	100
Met/ES/B/T/322	Solid state Phase Transformation Processes	ES	B	3-0-0	3	100
Met/ES/B/T/323	Steel Making	ES	B	3-0-0	3	100
Met/ES/B/T/324	Extraction of Non-ferrous Metals	ES	B	3-0-0	3	100
Met/ES/H/T/325	Surface Engineering & Coating Technology	ES	H	4-0-0	4	100
Met/ES/B/T322	Viva-Voce	ES	B	3-0-0	Non-credit	000
Met/ES/B/TS/321	Foundry Metallurgy	ES	B	0-0-3	1.5	100
Met/ES/B/S/322	Heat-treatment Practice & Microstructure Analysis	ES	B	0-0-3	1.5	100
Met/ES/B/S/323	Computer Application in Metallurgy	ES	B	0-0-3	1.5	100
Total					20.5	800

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FOURTH YEAR FIRST SEMESTER

Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
Met/ES/B/T/411	Alloy Steel Making	ES	B	3-0-0	3	100
Met/ES/B/T/412	Fabrication Processes	ES	B	3-0-0	3	100
Met/ES/B/T/413	Elective – I A. Heat-treatment Technology B. Production of Ferroalloys	ES	B	3-0-0	3	100
Met/ES/H/T/414	Materials Engineering	ES	H	4-0-0	4	100
Met/ES/H/T/415	Composite Materials	ES	H	4-0-0	4	100
Met/ES/B/T/413	Viva- Voce	ES	B	3-0-0	Non-credit	000
Met/ES/B/S/411	Materials Laboratory	ES	B	0-0-3	1.5	100
Met/ES/B/S/412	Seminar	ES	B	0-3-0	3	100
Met/ES/B/S/413	Project and Report	ES	B	0-2-4	4	100
Total					25.5	800

FOURTH YEAR, SECOND SEMESTER

Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
Met/ES/B/TS/421	X-ray Diffraction & Electron Microscopy	ES	B	3-0-0	3	100
Met/ES/B/TS/422	Joining of Metals	ES	B	3-0-0	3	100
Met/ES/B/T/423	Elective – II A. Light Metals and Alloys B. Nanostructured Materials	ES	B	3-0-0	3	100
Met/ES/B/T/424	Industrial Management and Engineering Economics	ES	B	4-0-0	4	100
Met/ES/H/T/425	Advanced Characterisation Techniques	ES	H	4-0-0	4	100
Met/ES/H/T/426	Creep & Fracture	ES	H	4-0-0	4	100
Met/ES/B/T/424	General Viva -Voce	ES	B		Non -Credit	000
Met/ES/B/TS/421	X-ray & Electron Microscopy Laboratory	ES	B	0-0-3	1.5	100
Met/ES/B/TS/422	Materials Processing Laboratory	ES	B	0-0-3	1.5	100
Met/ES/B/S/423	Extractive Metallurgy Laboratory	ES	B	0-0-3	1.5	100
Met/ES/B/S/424	Project and Report	ES	B	0-2-4	4	100
Total					29.5	1000