

Courses in Undergraduate Programme

(Materials Science and Engineering)

Rajshahi University of Engineering & Technology

4th Year Even Semester

SL. No.	Course No.	Course Title	Conduct Hours/ Week	Credits
Theory Courses				
1.	IPE 4259	Production Planning and Control	3.00	3.00
2.	MSE 4231	Metallic Alloys and Materials Selection	3.00	3.00
3.	MSE 4233	Industrial Metal Working Processes	3.00	3.00
4.	MSE 4243	Advanced Materials	3.00	3.00
5.	MSE 4241	Optional-II (a) Transport Phenomena in Metal Processing (b) Biomaterials Engineering (c) Quality Control and Materials Handling	3.00	3.00
Sessional Courses				
6.	MSE 4232	Failure of Materials and Artefact Study	3.00	1.50
7.	MSE 4234	Industrial Metal Working Processes Sessional	1.50	0.75
8.	MSE 4200	Project and Thesis-II	6.00	3.00
9.	MSE 4210	Seminar	1.50	0.75
Total			27.00	21.00

4th Year Odd Semester

SL. No.	Course No.	Course Title	Conduct Hours/ Week	Credits
Theory Courses				
1.	IPE 4159	Industrial Management	3.00	3.00
2.	MSE 4131	Physical Metallurgy and Heat Treatment	3.00	3.00
3.	MSE 4111	Physical Properties of Materials	3.00	3.00
4.	MSE 4101	Materials Characterization	3.00	3.00
5.	MSE 4141	Optional-I (a) Advanced Glass Engineering (b) Materials for Energy Generation, Conversion and Storage (c) Industrial Pollution and Control	3.00	3.00
Sessional Courses				
6.	MSE 4102	Materials Characterization Sessional	3.00	1.50
7.	MSE 4132	Physical Metallurgy and Heat Treatment Sessional	3.00	1.50
8.	MSE 4100	Project and Thesis-I	3.00	1.50
Total			24.00	19.50

3rd Year Even Semester

SL. No.	Course No.	Course Title	Contact Hours/ Week	Credits
Theory Courses				
1.	MSE 3213	Corrosion and Degradation of Materials	3.00	3.00
2.	MSE 3231	Foundry Engineering	3.00	3.00
3.	MSE 3235	Metal Joining and Removing Technology	3.00	3.00
4.	MSE 3241	Polymer Science and Engineering	3.00	3.00
5.	MSE 3243	Ceramics for Advanced Application	3.00	3.00
Sessional Courses				
6.	MSE 3232	Foundry Engineering Sessional	3.00	1.50
7.	MSE 3236	Metal Joining and Removing Technology Sessional	3.00	1.50
8.	MSE 3242	Polymers Sessional	1.50	0.75
9.	MSE 3210	Case Study in Material Science and Engineering	1.50	0.75
10.	MSE 3200	Industrial training	4 weeks	1.00
Total			24.00	20.50

3rd Year Odd Semester

SL. No.	Course No.	Course Title	Contact Hours/ Week	Credits
Theory Courses				
1.	GCE 3159	Glass and Ceramics Engineering	3.00	3.00
2.	MSE 3131	Surface Engineering of Materials	3.00	3.00
3.	MSE 3133	Refractories and Furnaces	3.00	3.00
4.	MSE 3135	Iron and Steel Making	3.00	3.00
5.	MSE 3141	Metal Extraction and Refining	3.00	3.00
Sessional Courses				
6.	GCE 3160	Glass and Ceramics Engineering Sessional	3.00	1.50
7.	MSE 3132	Surface Engineering of Materials Sessional	1.50	0.75
8.	MSE 3134	Refractories and Furnaces Sessional	3.00	1.50
9.	MSE 3142	Metal Extraction and Refining Sessional	3.00	1.50
Total			25.50	20.25

2nd Year Even Semester

SL. No.	Course No.	Course Title	Contact Hours/ Week	Credits
Theory Courses				
1.	Hum 2231	Industrial Law and Accounting	3.00	3.00
2.	MSE 2211	Crystal Defect, Deformation and Fracture	3.00	3.00
3.	MSE 2221	Strength of Materials	3.00	3.00
4.	ME 2259	Heat and Mass Transfer	3.00	3.00
5.	EEE 2291	Electrical Machines and Electronics	3.00	3.00
Sessional courses				
6.	MSE 2220	Materials & Metallurgical Analysis	3.00	1.50
7.	MSE 2212	Crystal Defect, Deformation and Fracture Sessional	3.00	1.50
8.	MSE 2222	Application to Computers in Strength of Materials	1.50	0.75
9.	EEE 2292	Electrical Machines and Electronics Sessional	1.50	0.75
Total			24.00	19.50

2nd Year Odd Semester

SL. No.	Course No.	Course Title	Contact Hours/ Week	Credits
Theory Courses				
1.	Math 2131	Statistics, Numerical and Power Series	3.00	3.00
2.	MSE 2101	Crystallography and Structure of Materials	3.00	3.00
3.	MSE 2103	Phase Transformation of Materials	3.00	3.00
4.	ME 2159	Basic Mechanical Engineering	3.00	3.00
5.	ME 2169	Fluid Mechanics and Machinery	3.00	3.00
Sessional Courses				
6.	MSE 2102	Crystallography and Structure of Materials Sessional	3.00	1.50
7.	MSE 2104	Metallography Sessional	3.00	1.50
8.	ME 2160	Basic Mechanical Engineering Sessional	1.50	0.75
9.	ME 2170	Fluid Mechanics and Machinery	1.50	0.75
Total			24.00	19.50

1st year Even Semester

SL. No.	Course No.	Course Title	Contact Hours/ Week	Credits
Theory Courses				
1.	Chem 1225	Chemistry	3.00	3.00
2.	Math 1225	Vector Analysis and Matrices	3.00	3.00
3.	Hum 1225	Communication English	3.00	3.00
4.	CSE 1275	Programming language and data structure	3.00	3.00
5.	ME 1253	Engineering Mechanics	3.00	3.00
Sessional Courses				
6.	Chem 1226	Chemistry Sessional	1.50	0.75
7.	CSE 1276	Programming Language and Data Structure Sessional	1.50	0.75
8.	Hum 1226	Communication English Sessional	1.50	0.75
9.	ME 1254	Engineering Mechanics Sessional	3.00	1.50

Courses of the 1st Year B.Sc. Engineering

1st year Odd Semester

SL. No.	Course No.	Course Title	Contact hours/ Week	Credits
Theory Courses				
1.	Phy 1125	Physics	3.00	3.00
2.	Math 1125	Calculus and Differential Equation	3.00	3.00
3.	Hum 1125	Industrial Economics	3.00	3.00
4.	EEE 1175	Electrical Circuits	3.00	3.00
5.	MSE 1101	Introduction to Material Science & Engineering	3.00	3.00
Sessional Courses				
6.	Phy 1126	Physics Sessional	1.50	0.75
7.	EEE 1176	Electrical Circuits Sessional	3.00	1.50
8.	ME 1100	Engineering Drawing-I	3.00	1.50
9.	MSE 1102	Introduction to Material Science & Engineering	1.50	0.75
Total			24.00	19.50