

| MSME 2023 Batch | | | | | | |
|-----------------|---------------|---|---------|---------|--------------|------------|
| SEM | Course Code | CourseName | Segment | Credits | Basket | Sem-total |
| 1 | MSxxxx | Introduction of Materials Science and Engineering | | 2 | DC | 15 |
| | CY10010 | Environmental Chemistry | | 2 | BS | |
| | EP11010 | Modern Physics | | 2 | BS | |
| | EP11030 | Maths for Physics | | 2 | BS | |
| | ID10063 | Introduction to Programming | | 3 | BE | |
| | LA10760 | Communication Skills | | 2 | LA/CA | |
| | MA10010 | Calculus-I | | 1 | BS | |
| | MA10020 | Calculus-II | | 1 | BS | |
| 2 | MS10230 | Physics of Solids - I | | 3 | BE | 15 |
| | MS10220 | Structure of Materials | | 2 | DC | |
| | ID10054 | Digital Fabrication | | 2 | BE | |
| | CY10031 | Chemistry Laboratory | | 2 | BS | |
| | EP12011 | Physics Lab | | 2 | BS | |
| | ID10050 | Artificial Intelligence | | 1 | BE | |
| | MA10060 | Elementary Linear Algebra | | 1 | BS | |
| | MA10070 | Differential Equations | | 1 | BS | |
| | LAXxxx | Liberal Arts Elective | | 1 | LA/CA | |
| 3 | MS1980 | Fundamentals of Scientific Computing | 1-4 | 2 | BE | 18 |
| | MS2330 | Fundamentals of Extractive Metallurgy | 1-4 | 2 | DC | |
| | MS2120 | Ironmaking | 5-6 | 1 | DC | |
| | MS2110 | Semiconductor Materials | 3-6 | 2 | DC | |
| | MS2860 | Computational Methods in Materials Science | 3-6 | 2 | DC | |
| | MS2970 | Materials Thermodynamics and Kinetics | 1-6 | 3 | DC | |
| | MS2930 | Imaging in Materials Science | 1-4 | 2 | DC | |
| | MS2280 | Transport Phenomena in Materials Processing | 3-6 | 2 | BE | |
| | MS2031 | Microstructure and Properties Lab (physics of solids, semiconductor materials, metallography and imaging) | 1-6 | 2 | DC | |
| 4 | MS2850 | Phase Transformations | 3-6 | 2 | DC | 19 |
| | MS2870 | Mechanical Behaviour of Materials | 1-6 | 3 | DC | |
| | MS2130 | Steelmaking | 1-4 | 2 | DC | |
| | MS2140 | Thermomechanical Processing | 1-4 | 2 | DC | |
| | MS2960 | Diffraction and Spectroscopy | 1-4 | 2 | DC | |
| | MS1940 | Materials Chemistry | 1-4 | 2 | BS | |
| | MS2041 | Materials synthesis/extraction and characterization lab (1 Cr Ext. Met+Transport)+(1 Cr Diffraction+Spectroscopy+Mater. Synth.) | 1-6 | 2 | DC | |
| | BT1010 | Introduction to Life Sciences | | 1 | BS | |
| | FEXXXX | Free Elective | | 3 | FE | |
| 5 | MS3840 | Bio and Soft Materials | 1-6 | 3 | DC | 19 |
| | MS3890 | Properties of Materials | 3-6 | 2 | DC | |
| | MS3410 | Electrochemical Processing of Materials | 1-4 | 2 | DC | |
| | MS3150 | Corrosion | 5-6 | 1 | DC | |
| | MS3363 | Powder Metallurgy Processing | 1-2 | 1 | DC | |
| | MS3041 | Mechanical behavior, deformation processing and heat treatment lab (1 Cr TMP + HT) + 1 Cr Mech. Behav.) | 1-6 | 2 | DC | |
| | MSXXXX | Departmental Elective | 1-6 | 3 | DE | |
| | LAXxxx | Liberal Arts Elective | | 2 | LA/CA | |
| FExxxx | Free Elective | | 3 | FE | | |
| 6 | MS4023 | Electronic Structure and Atomistic Modeling | 1-6 | 3 | DC | 18 |
| | MS3950 | Device Fabrication and Processing | 1-6 | 3 | DC | |
| | MS3315/3305 | Internship or Project or Department Elective | 1-6 | 6 | DE | |
| | LAXxxx | Liberal Arts Elective | | 2 | LA/CA | |
| | FExxxx | Free Elective | | 4 | FE | |
| 7 | MS4021 | Functional device fabrication and electrochemical characterization lab (1 Cr Funct. Dev. Fab + 1 Cr ElectroChem/Corr.) | 1-6 | 2 | DC | 12 |
| | MS4410 | Casting and Welding | 1-6 | 3 | DC | |
| | CC1010 | Introduction to Climate Change | | 1 | BE | |
| | FEXXXX | Free Elective | 1-6 | 3 | FE | |
| | MSXXXX | Dept. Elective | | 2 | DE | |
| | LAXxxx | Liberal Arts Elective | | 1 | LA/CA | |
| 8 | MSxxxx | Departmental Elective | 1-6 | 9 | DE | 10 |
| | ID4000 | Ethics and Values | | 1 | LA/CA | |
| | | | | | Total | 126 |