



**UMT310 Jan. 2:1**

## **Introduction to Materials Manufacturing**

### **Instructor**

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### **Teaching Assistant**

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### **Department: UG-Materials**

Course Time: MW9-10;M2-5(Lab)

Lecture venue: UG Building(Old Physics Dept.) IISc, Bangalore-12.

Detailed Course Page: Contact UG Office

## **Announcements**

### **Brief description of the course**

This course is meant for UG-6th Semester students of Materials Major for the Degree of B.Sc.(Research) 4 year course of IISc. It covers major manufacturing process and also has a lab component which gives the students(about 15-20) a feel for these processes and also have hands on experience.

### **Prerequisites**

none

### **Syllabus**

Processing of Metallic Materials; Different Metal Forming Processes like rolling, forging ,extrusion; Metal Casting, Powder Metallurgy; Polymer Processing;Classification, Additive manufacturing,Plastic moldings.

### **Course outcomes**

They will learn different types of manufacturing processes for metals and polymers, including practical experience of lab scale manufacturing of different materials.

### **Grading policy**

Theory papers as well as practicals viva examination including lab. report.

(Mid Term: 30%, Final : 40% and Lab.:30%)

## **Assignments**

Depends on individual instructors.

## **Resources**

1. Grover M P: Introduction to Manufacturing Processes
2. Dieter G E : Mechanical Metallurgy
3. Billimeyer F W: Textbook of Polymer Science
4. Gowarikar V R etal: Polymer Science