

# MID-semester syllabus for MEI102

## (2021-2022 Winter)

### Part I:

Introduction and general safety rules for workshop, Principle of metrology and introduction to commonly used mechanical devices: gauges/indicator and levels, CMM, surface roughness meter and other shop floor devices, Production drawings, design concepts, material selection

### Part II:

Fundamentals of casting process, steps involved, moulding sand and their properties, patterns and allowances, sand mould casting, expendable and nonexpendable casting processes, casting defects and remedies, special types of casting process, cast materials and defects.

**Part III:** Principle of metal forming, bulk deformation and sheet deformation processes, hot working and cold working processes. Tube manufacturing process. Sheet metal working: principle and applications.

**Part IV:** Classification of material removal processes, principle of metal cutting and related numerical problems, cutting tool materials and cutting tool geometry, Introduction to Lathe, its parts and their operating principle, different lathe operations.