THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Fundamentals of Solid State Processing

ISE 5501

Credit Hours:
3.00 - 3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate

Course Components:
Lecture

Course Description:
Application of basic principles of heat transfer, tribology, and elastic/plastic deformation for metallic solids to manufacturing processes.

Prerequisites and Co-requisites:
Prereq: MechEng 2010, 2020, and 2040, or equiv, and Sr or Grad standing in Engineering.

Course Goals / Objectives:
- Provides students with an understanding of the basic forming processes for metals in the solid state: forging, rolling, extruding, and sheet forming processes

Course Topics:
- Introduction to the solid state deformation of metals
- Heat flow and tribology in metal forming operations
- Common metal forming processes
- Application of modelling of heat flow and deformation to metal forming processes.

Designation:
Elective