



MANUFACTURING PROCESS TECHNOLOGY I & II

PROF. SHANTANU BHATTACHARYA

Department of Mechanical Engineering
IIT Kanpur

TYPE OF COURSE : Rerun | Core | UG/PG

COURSE DURATION : 12 weeks (24 Jan' 22 - 15 Apr' 22)

EXAM DATE : 24 Apr 2022

INTENDED AUDIENCE : Students of BE/ME/MS/BSc/MSc stream

INDUSTRIES APPLICABLE TO : Small and medium scale production industries

COURSE OUTLINE :

This is an introductory level course in Manufacturing Systems Technology and management. For most enterprises, the long term goal is to stay in business, grow and make profits. This is particularly true for manufacturing enterprises, which must understand the dynamic changes that are taking place in business environment and are flexible enough to change at every level. This course is an introductory course for engineering professionals who would like to take up careers in manufacturing and also for professionals who are already in manufacturing careers and would like to see the technological changes that manufacturing paradigm has witnessed in the last 3 decades.

ABOUT INSTRUCTOR :

Prof. Shantanu Bhattacharya (PhD)
Associate Professor
Department of Mechanical Engineering
Indian Institute of Technology Kanpur

COURSE PLAN :

Week 1: Manufacturing properties of materials

Week 2: Casting processes

Week 3: Machining processes

Week 4: Machining processes

Week 5: Joining processes

Week 6: Non-traditional machining processes

Week 7: Non-traditional machining processes

Week 8: Introduction micromanufacturing

Week 9: Advanced machining processes (AJM, USM, ECM and EDM)

Week 10: Advanced machining processes (AJM, USM, ECM and EDM)

Week 11: Metal Forming Processes

Week 12: Micro-fabrication processes, Additive manufacturing.