FUNDAMENTALS OF MANUFACTURING PROCESSES

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IIT Roorkee

TYPE OF COURSE : Rerun | Core | UG/PG
COURSE DURATION : 12 weeks (20 Jul’20 - 09 Oct’20)
EXAM DATE : 18 Oct 2020

INTENDED AUDIENCE : B.E/B.Tech,M.E/M.Tech,M.S,PhD

COURSE OUTLINE :

ABOUT INSTRUCTOR :
Prof. D.K. Dwivedi obtained BE (mechanical engineering), in 1993 from GEC Rewa, ME (welding engineering) from Univ. of Roorkee in 1997 and PhD in Met. Engineering from MNIT, Jaipur in 2003. He has about 9 years teaching experience at NIT Hamirpur and 12 years at IIT Roorkee of subjects related with manufacturing at UG level and welding engineering related subjects at PG level.

COURSE PLAN :
Week 01 : Understanding Manufacturing
Week 02 : Selection of manufacturing processes
Week 03 : Metal Casting: Steps of casting processes
Week 04 : Metal Casting: Sand Moulding II
Week 05 : Metal Casting: Cleaning of casting
Week 06 : Metal working processes: Rolling
Week 07 : Metal working processing: Sheet metal operations (Shearing)
Week 08 : Material removal processes: Mechanism of the metal cutting
Week 09 : Material removal processes: Tool materials
Week 10 : Material removal processes: Grinding operations
Week 11 : Joining of metals: Weldability and welding defects
Week 12 : Heat treatment: Tempering