APPLIED ERGONOMICS

PROF. SHANTANU BHATTACHARYA
Department of Mechanical Engineering
IIT Kanpur

PROF. ANKUR GUPTA
Department of Mechanical Engineering
IIT Jodhpur

TYPE OF COURSE : Rerun | Elective | UG
COURSE DURATION : 12 weeks (24 Jan' 22 - 15 Apr' 22)
EXAM DATE : 23 Apr 2022

INTENDED AUDIENCE : Students of B.Tech/M.Tech/MS/BSc/MSc stream

INDUSTRIES APPLICABLE TO : Industries related to Work Study and Management

PRE REQUISITES : Nil

COURSE OUTLINE :
"Ergonomics" is an applied scientific discipline that is concerned with how humans interact with the system/equipment/surrounding while performing tasks and other activities. Syllabus includes Introduction, Physical, Cognitive, Occupational and biomechanics aspect. The course syllabus is designed so as to cover work physiology, Engineering aspect of product, improvement in the cognitive capabilities and other relevant topics. Students will be able to correlate the understanding of this subject with their day to day activities and will be aware of concepts related to increase in the human and system efficiency.

ABOUT INSTRUCTOR :
Prof. Shantanu Bhattacharya is currently a Professor at the Department of Mechanical Engineering at the Indian Institute of Technology Kanpur. Prior to joining IIT Kanpur he was associated with Suzuki Motors in the senior management level and has over 6 years of experience in various production capacities and positions.

Prof. Ankur Gupta is currently working as an Assistant Professor in the Department of Mechanical Engineering at Indian Institute of Technology, Jodhpur. He did his PhD from IIT Kanpur and served IIT Bhubaneswar as a faculty before joining, IIT Jodhpur.

COURSE PLAN :

Week 1**:** Introduction and Overview of Ergonomics

Week 2**:** Human centred design

Week 3**:** Anthropometry

Week 4**:** Physical Ergonomics-I

Week 5**:** Physical Ergonomics-II

Week 6**:** Tools and techniques for Ergonomics

Week 7**:** Cognitive Ergonomics-I

Week 8**:** Cognitive Ergonomics-II

Week 9**:** Cognitive Ergonomics-III

Week 10**:** Physical Environment and its importance

Week 11**:** Biomechanics

Week 12**:** Occupational Ergonomics and use of Ergonomics