SIMULATION OF BUSINESS SYSTEMS: AN APPLIED APPROACH

PROF. DEEPU PHILIP
Department of Industrial & Management Engg
IIT Kanpur

TYPE OF COURSE : Rerun | Elective | UG/PG
COURSE DURATION : 8 weeks (24 Jan' 22 - 18 Mar' 22)
EXAM DATE : 27 Mar 2022

PRE-REQUISITES : The student should have completed six semesters of UG Engineering or Science program.

INTENDED AUDIENCE : Students of all Engineering and Science disciplines.

INDUSTRIES APPLICABLE TO : Manufacturing companies: HAL, NAL, SAIL, ISRO, BHEL, L&T, BEL, BDL, TATA, DRDO, Automotive manufacturers, DELL, HP, Pharmaceuticals, Johnson & Johnson, Abbott, UPL, etc. Service Industries: Banks (SBI, UBI, HDFC, ICICI, Canara Bank, PNB, etc.), Hotels (Taj, Oberoi, Accor group (IBIS, NOVOTEL, PULLMAN), Holiday Inn, Leela Kempinski, etc., Shopping Malls, Airports (GMR, GVR, etc.), and so on.

COURSE OUTLINE :
The application of computer simulation to industrial settings is taught. The course will introduce the basic concepts of computation through modeling and simulation that are increasingly being used by architects, planners, and engineers to shorten design cycles, innovate new products, conduct process improvements, optimize system performance, and so on. Areas covered include system structure, system analysis, model construction, data collection, and computer simulation languages.

ABOUT INSTRUCTOR :
Prof. Deepu Philip is a faculty of Industrial & Management Engg. Department and Design Programme of IIT Kanpur. He works in the area of Production and Operations, Systems Simulation, Product Life Cycle Management, Unmanned Aerial Systems, and Systems Engineering. He holds bachelor degree in Industrial Engineering with his doctorate in Industrial & Management Engineering from MSU Bozeman. He has both academic and industrial experience with leading organizations of the world.

COURSE PLAN :
Week 1: Introduction to Simulation
Week 2: Complex systems
Week 3: Single server simulations
Week 4: Validation and verification of simulation models
Week 5: Simulation of production shop systems
Week 6: Alternative analysis
Week 7: Call center simulation
Week 8: Optimization of system using simulation