

INDUSTRIAL ENGINEERING LABORATORY

Description of the Laboratory:

Industrial engineering is concerned with the design, improvement and installation of integrated system of men, materials and equipment. It draws upon specialized knowledge and skills in the mathematical and physical sciences together with the principles and methods of engineering analysis and design to specify, predict and evaluate the results to be obtained from such systems. Industrial engineering is vital in finding the answers to many crucial problems in manufacturing, distribution of goods and services, health care, utilities, transportation, entertainment, and the environment. Industrial engineers design and change the things to improve quality, safety and productivity. Industrial engineering lab provides a platform to design and conduct the exercises on Process Chart, Method study and Work Measurement for effective utilization of manpower resources. Also, the lab provides necessary tools and equipment for quality control charts and acceptance sampling. In addition, students understand the significance and importance of inventory fluctuations or inefficient asset allocation as a result of demand changes as one moves up the supply chain through a simulated experiment of bull whip effect. Students can gain knowledge on applications of principles of motion economy through experiential learning.

List of Experiments:

- Preparation of Process Charts for Method Study
- String diagram
- Work Measurement - Time study by Stop watch
- Bolt & Nut assembly, Productivity enhancement experiment
- Hand-tool dexterity test –Fatigue Measurement
- Minnesota dexterity test
- Pyramid Puzzle Burmese test
- O'Connor Finger Dexterity Test
- Purdue Peg Board test
- Simple Assembly Process experiment
- Segregation/Sorting test using different size bolts, washers (rubber & metal), nuts, screws with one hand and with both hands.
- Jebson Taylor Hand function test
- Study of Control charts for variables
- Quality Control of Attributes - Sampling experiments
- Bull-whip effect /Beer Game

Photographs of the Lab/Equipment:

