

MANUFACTURING- CNC LAB

Description

The Computer Numerical Control (CNC) Laboratory consists of LMW VJ 55 Vertical Machining Centre (VMC), SMARTURN and Siemens Simulation controllers for programming. The CNC laboratory aims to enhance the student's knowledge in development of practical knowledge on CNC machines and the lab caters the skills necessary for the development of a mechanical engineer pursuing further studies and a career in manufacturing area.





SMARTURN CNC LATHE



Siemens simulation controllers

Objectives

The main objective of Manufacturing CNC lab is to teach students to understand the basic concepts of computer numerical control (CNC) machine tool, machining methods and CNC programming. The Lab has Production model Smart turn CNC lathe and JV55 vertical machining center CNC milling machines with CAM simulation software's like, SINUTRAIN with Siemens controllers (828D, 802D) for programming simulation, Unigraphics NX10 (CAM). After completing this course, a student will be able to:

- Present an overview of CNC and describe its applications in different fields
- Outline the basic principles associated with CNC and demonstrate common Machining techniques.
- Introduce the advanced capabilities of CNC to increase productivity.
- Use effectively CAD/CAM systems in order to produce the final NC code for the manufacturing of various mechanical parts and carry out exchange of data between CAD and CAM systems.

Key areas covered

1. Computer-aided manufacturing (CAM) (Manufacturing)
2. POD software for online demonstration of CNC lab through tutorials

Software is used

SINU TRAIN for Sinumeric operate, NX CAM, POD Software, SINUMERIC 8400SL, SINUMERIC 828D/828D Basic training simulation modules.

List of Machinery Available

1. Model Smart turn CNC lathe
2. JV55 vertical machining center
3. Siemens simulation controllers



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