

WORKSHOPS AND SEMINARs 2021-22

Embedded C programming and simulation of AVR Microcontrollers using Proteus

To bridge this gap and to introduce the students to the power and flexibilities of Embedded C programming, a workshop was conducted on 27.5.2022. The target microcontrollers were chosen from the AVR ATmega series microcontroller family. This workshop was also designed to expose students to the industry standard Proteus VSM software tool.



DOBOT Magician Robotic Arm- A Customized Workshop

DOBOT Magician is a multifunctional small-sized desktop robotic arm for practical training education, deploying multiple functions, such as pick and place operations, sorting, 3D printing, laser engraving etc. This robotic arm supports secondary development in 13 interfaces and 20 programming languages.

Mr. Senthil and Mr. Siddharth Vijay resource persons from Autobots Inc led the session for Department of Electronics (ECE and RA) faculty on 2nd June 2022 and 9th June 2022. This custom workshop covered topics such as the DOBOT Magician's input and output ports, sensors, conveyor belts, sliding

rails, vision cameras, joint space and Cartesian space trajectory planning for a pick and place task, object tracking, and visual servoing.



ARDUINO MICROCONTROLLER BOARD AND APPLICATIONS

SPAN conducted workshops on 26/11/2021 to familiarize students with the Arduino Microcontroller board and its applications. Students learnt to build circuits that use the analog and digital I/Os of the Arduino board. Serial communication to monitor and control applications, interfacing of sensors and actuators and decision-making structures were utilized in various applications. Speed and direction control of motors using various techniques were carried out.

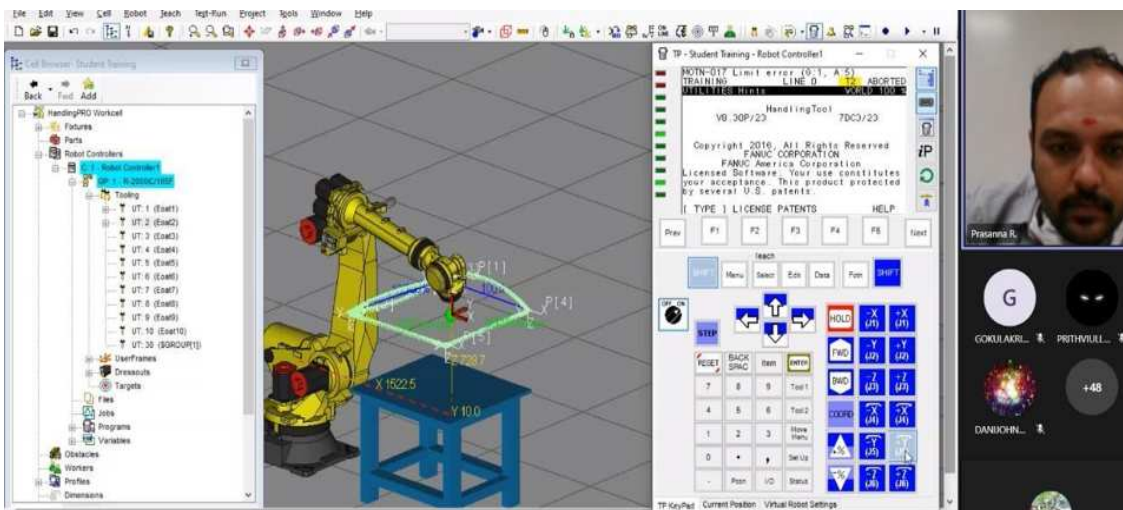
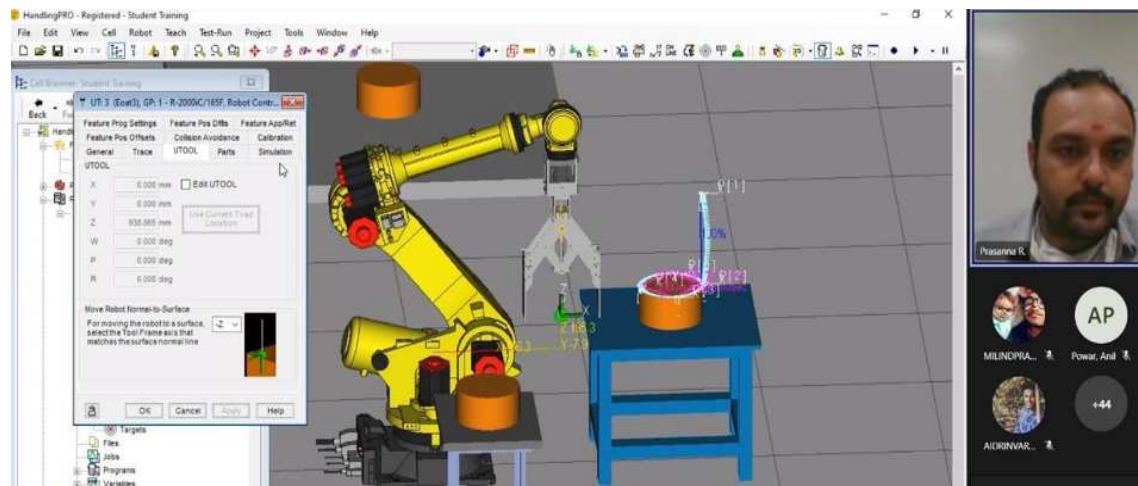


Workshop on Robot Operations and Programming – Fanuc India Pvt. Ltd.

This program was conducted in association with FANUC India Pvt. Ltd. Students of BTech Robotics and Automation participated in the program to develop their skills in robot programming and to develop real industrial robotics application using FANUC's development tool 'ROBOGUIDE'

The topics covered were:

- Robot selection and application
- Robot controllers and mechanical parts
- Safety standards on robots
- Different operating modes, Coordinate systems, jogging of robot
- Creation, selection of program, motion instructions, control instructions
- Loading and unloading application for a machine tool
- Application development and simulation using rob guide software



Workshop on 8051/Arduino Microcontroller Programming

A workshop was conducted by SPAN on 12th November 2021 for the faculty of Electrical and Electronics Engineering department, TIST. The session gave the participants an opportunity to familiarize and practice programming of 8051 and Arduino microcontrollers.

