



A Report of One Day Hands on Workshop On "MATLAB Application to Electrical Engineering"

The Department of Electrical Engineering organized a one-day Hands on workshop on " **MATLAB Application to Electrical Engineering** " on 17th February 2023. More than 35 students from Electrical Engineering Department, Valia Polytechnic College, Ankleshwar, have participated. There were three sessions conducted: In the first session, **Dr. Ravish H. Hirpara** elaborated on how Electrical engineering differs from other branches of science and engineering & basic concepts of Power electronics. Electrical engineering is an engineering discipline concerned with the study, design, and application of equipment, devices, and systems which use electricity, electronics, and electromagnetism. Engineering science is different from natural science as it studies human artifacts rather than nature. Power electronics is the application of electronics to the control and conversion of electric power. Power electronics is the application of electronics to the control and conversion of electric power.





In the second session, **Tejas G. Mistry, Assistant Professor** explained the Basics of MATLAB, Power electronics converter-Inverter and Waijung. MATLAB is a programming platform designed specifically for engineers and scientists to analyse and design systems and products that transform our world. The heart of MATLAB is the MATLAB language, a matrix-based language allowing the most natural expression of computational mathematics. Millions of engineers and scientists worldwide use MATLAB for a range of applications, in industry and academia, including deep learning and machine learning, signal processing and communications, image and video processing, control systems, test and measurement, computational finance, and computational biology. An inverter (or power inverter) is a power electronics device which used to convert DC voltage into AC voltage. "WAIJUNG" is a Simulink Block-set can be used to easily and automatically generate C code from MATLAB/Simulink simulation models for many kinds of microcontrollers (Targets). WAIJUNG is designed specifically to support STM32F4 family of microcontrollers (STM32F4 Target) which is a Hi-Performance & DSP MCU from STMicroelectronics.



After theory session completed students were go to hardware demonstration, where they show how to run induction motor using MATLAB coding.



SITARAMBHAI NARANJI PATEL

INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE, UMRAKH

A Vidyabharti Trust Institution
Vidyabharti Campus, At. Ta. Bardoli, Dist. Surat-394345
Ph.02622-224581, 220581 Fax : 02622-227481,225458
Email : admin@snpitrc.ac.in,vbtdegree_umrakh@yahoo.co.in
Visit us on : www.snpitrc.ac.in

Electrical engineering Department, S N Patel Institute of Technology & Research Centre, Umrakh



In the last session, students visited departmental laboratories like the Power Electronics lab, Microprocessor and Micro controller lab, Machine lab, High Voltage engineering lab, Measurement lab, Control system lab, etc. During the departmental visit, **Tejas G. Mistry Assistant Professor** conveys the details of department placements, internships, Industrial visits, Faculties achievements, Institute, department GTU results data, scholarships, etc., to the students.

