

Mechatronics Engineering Department under the Faculty of Engineering organized a National Workshop entitled of “**MATLAB, Programmable Logic Controller (PLC) & Solar Electric Vehicle**” on **28th & 29th of April 2019**. **Mr. Ganesh Babu Loganathan**, Head of Mechatronics Engineering, gave short-bio of **Prof. Dr. Ezideen hasso, Duhok Polytechnic University & Asst. Prof. Mr. N.S.Sivakumar (TIU)**. He presented their thoughts on the workshop theme. The workshop was having four sessions with **89 participants**. The participants consist of students and lecturers from different universities. Participants were served with a coffee break which created an atmosphere of social and professional interaction between participants and presenter between the sessions.

The workshop had an excellent insight for the participants on the current situation and what exactly is happening in the Mechatronics profession in local and international companies in the World. The workshop ended with the questions and answers from the participants from different directions such as the implementation of the MATLAB, PLC Software in entire country.

Mr. Ganesh Babu Loganathan, Head of Department presented certificate of appreciation to Prof. Dr. Ezideen hasso, & Asst. Prof N.S. Sivakumar for providing their valuable insights from her professional experience and the industry.

The areas of Engineering covered in the workshop were as the following:

1. Introduction to MATLAB

- Programming & Analysing MATLAB.
- Different windows of MATLAB
- SIMULINK
- Simscape in contrast to SIMULINK

2. Automation with Programmable Logic Controller (PLC)

- Introduction Automation, PLC and Ladder Programming
- Logic Gates, Switches and Sensors
- Siemens Soft Comfort Package
- Exercises: Basic Logic Gates Representation in Ladder Programming
- Motor Start/Stop with Seal-in Rung
- Timers in Ladder Programming

3. Solar Energy Workshop: Partial Shading of Photovoltaic (PV) Panels

- Introduction to Solar Energy, Solar Constant
- PV cell as a diode,
- Characteristic curve
- Equivalent circuit
- Building a panel
- Partial shading analysis
- Simscape simulation

4. Solar Vehicle Projects: Opportunities and Challenges

- Introduction to Solar Vehicle
- Solar electric vehicle projects

Faculty of Engineering appreciates Prof. Dr. Ezideen hasso, & Asst.Prof N.S.Sivakumar for gracing the event and expect continuous cooperation in future endeavors.

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