

REFLECTIVE ELECTRICAL ENGINEERING LEARNING (REEL2026)

Building Skills and Professionalism through
Industrial Training

SKILLS



REEL2026
Reflective
Electrical Engineering Learning

REFLECTIVE ELECTRICAL ENGINEERING LEARNING

BUILDING SKILLS AND PROFESSIONALISM THROUGH INDUSTRIAL TRAINING



REEL 2026

REFLECTIVE ELECTRICAL ENGINEERING LEARNING

*"Building Skills and Professionalism
through Industrial Training"*

Copyright © July 2026

Electrical Engineering Studies
Universiti Teknologi MARA Pulau Pinang Branch
Permatang Pauh Campus

All rights reserved. No part of this e-magazine may be reused, republished, or reprinted in any form or by any electronic or mechanical means, including photocopying and recording, without prior written permission from the publisher.

eISSN

3093-7027

Published by

Diploma in Electrical Engineering
Electrical Engineering Studies
Universiti Teknologi MARA Pulau Pinang Branch
Permatang Pauh Campus
13500 Permatang Pauh
Pulau Pinang, Malaysia

This e-magazine is published annually

DISCLAIMER



*Reflection transforms
experience into meaningful learning*

The content displayed in this e-magazine is the intellectual property of the Electrical Engineering Studies, UiTM Pulau Pinang Branch (PKE UiTM CPP). Without written consent, no part of this publication may be reused, republished, or reprinted in any form or by any means.

All information published in REEL 2026 is intended solely for educational and informational purposes. The views and opinions expressed are those of the individual authors and do not necessarily reflect the official stance of PKE UiTM CPP or Universiti Teknologi MARA.

The editors and publisher are not responsible for any inaccuracies, omissions, or outcomes resulting from the use of the information provided.

Industrial Training Experience in Control Box Systems

Muhammad Faris bin Ahmad Puad, *Asmalia binti Zanal
Faculty of Electrical Engineering, Universiti Teknologi MARA Cawangan Pulau Pinang,
Permatang Pauh, Malaysia

*Corresponding author's email: asmalia978@uitm.edu.my

The first day of my industrial training at CHH Asia Holdings Sdn. Bhd. was a significant transition from learning in the classroom to real industrial engineering practice. I was no longer in a laboratory session that was guided and controlled. This is now a real working environment, where I am required to think independently and apply the knowledge gained from university. From the first day, I was exposed to real electrical systems, particularly control box operations in gondola systems. This opportunity was a major turning point. Never came into my mind that one day I would get involved in this system, but it developed my practical skills and my first experience in this engineering world. This is where I got my first experience of understanding how engineering concepts are applied in industry.

During my internship, one of the most impactful areas of learning was the opportunity to work with control box systems. From my diploma studies, I have been exposed to basic wiring, circuit design, and control components in laboratory sessions. But most of these were simplified and guided laboratories under the supervision of a lecturer and technician. This is my first time seeing a real industrial control box. I realized that real systems are much more complex, not only in terms of physical layout but also in functional integration. This first exposure challenged my confidence as I had little knowledge, but I know I need to push myself to learn more actively, because this is an opportunity that cannot be missed.

The control box system that I worked with was mainly used to operate gondola platforms at construction sites. These platforms are used to transport workers and equipment to higher areas, which means that the control system must be highly reliable and safe. Knowing the situation, I am now aware of the responsibility involved in handling the electrical equipment of the control box. It was no longer a question of completing the task, it was more about ensuring the safety of the system so it could operate correctly by following the rules.



Figure 1: First Day Internship at CHH Asia Holdings Sdn. Bhd.

In the early stage of my training, I was assigned to assist in wiring and assembling control boxes. I observed how different components, such as contactors, relays, circuit breakers, and

terminal blocks, were arranged in an organized manner. Unlike in the laboratory, the wiring inside the control box was dense and required careful attention to detail. I had to learn how to identify components quickly, understand their functions, and follow wiring paths accurately. This experience improved my ability to interpret circuit layouts beyond theoretical diagrams.

As I learned more about the system, I was given opportunities to participate in testing and troubleshooting. It was one of the hardest parts, but also one of the most rewarding. There were cases where the control box did not function as intended after installation. I was encouraged to think about the problem and suggest possible causes. This chance made me independent and think analytically, but of course, with the supervision of my colleagues. I learned how to work through faults using a structured troubleshooting process. First, I began by checking the power source to ensure that the system received the correct amount of voltage. After that, I examined the wiring connections to confirm that all terminals were tight and properly connected. Finally, I tested each individual component to ensure that none of them were malfunctioning. I could find faults more effectively by breaking the system into smaller sections. This method helped me improve my technical skills and also taught me the importance of logical thinking in solving engineering problems.

Another important lesson I learned was that safety is very important when working with electricity. Working with control boxes, in a construction environment, or in general, requires strict adherence to safety standards. I learned to always turn off the power supply before any maintenance work and to wear the proper protective equipment when working on site. These practices are important for accident prevention and a safe working environment. This experience has taught me that safety is a professional responsibility, not just a rule to follow.

In addition to technical exposure, I was also given the opportunity to visit construction sites and observe the operation of gondola systems in real conditions. In some situations, I assisted in checking system performance and identifying issues directly at the site. This required me to communicate with workers and supervisors, sometimes explaining technical problems in a simple and clear manner. Through this experience, my communication skills have improved, and I learned how to interact effectively in a professional setting.

Over time, I noticed a significant improvement in my confidence and capability. Tasks that initially seemed difficult became more manageable as I gained experience. I became more comfortable handling tools, interpreting wiring systems, and contributing to troubleshooting processes. This gradual progress showed me that practical skills are developed through continuous practice and exposure, not just through theoretical study.

This industrial training experience also changed my perspective on learning. I realized that engineering education does not end in the classroom. Instead, it is a continuous process that requires curiosity, initiative, and willingness to adapt. Every task, whether simple or complex, provided an opportunity to learn something new. This mindset is important for lifelong learning, especially in a field where technology and industry practices are constantly evolving.

In conclusion, my internship at CHH Asia Holdings Sdn. Bhd. has played a significant role in developing my practical and industry-relevant technical skills. Through hands-on

experience with control box systems, I was able to strengthen my understanding of electrical concepts while improving my troubleshooting, safety awareness, and communication abilities. More importantly, this experience has prepared me to become a more independent and adaptable learner. The lessons I gained during this training will continue to guide me in my future career and support my growth as an engineer committed to lifelong learning.



Figure 2: Installation Control Box

Authors' Biography



Muhammad Faris bin Ahmad Puad is a dedicated student pursuing a Diploma in Electrical Engineering (Electronics) at Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang. As part of his academic journey, Faris is currently undergoing an internship at CHH Asia Holdings Sdn Bhd from 2nd March to 21st June 2026. This hands-on experience allows him to apply theoretical knowledge in a real-world setting, further developing his expertise in electrical and electronics engineering. With a keen interest in technological advancements, Faris aims to contribute meaningfully to the industry and to become a skilled professional in electrical and electronics engineering.



Asmalia binti Zanal is a Senior Lecturer at Faculty of Electrical Engineering, Universiti Teknologi MARA Cawangan Pulau Pinang. With over 19 years of academic experience, she has demonstrated a sustained commitment in teaching and research. She obtained her B.Eng. Hons. In Electrical and Electronics Engineering from Universiti Teknologi Malaysia (UTM) in 2004 and subsequently earned her MSc. In Electronic System Design Engineering from Universiti Sains Malaysia (USM) in 2008.

eISSN 3093-7027



PUBLISHED BY:
DIPLOMA IN ELECTRICAL ENGINEERING
ELECTRICAL ENGINEERING STUDIES
UNIVERSITI TEKNOLOGI MARA (UiTM)
PULAU PINANG BRANCH
PERMATANG PAUH CAMPUS
13500 PERMATANG PAUH
PULAU PINANG