

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.

Finding My Voice and Engineering Integrity as an Intern

Puteri Nur Arissa binti Shahafizan, *Ida Rahayu binti Mohamed Noordin
Faculty of Electrical Engineering, Universiti Teknologi MARA Cawangan Pulau Pinang,
Permatang Pauh, Malaysia

*Corresponding author's email: idarahayu660@uitm.edu.my

When I first walked into SMT Technologies, I had to confess that I was speechless. As an Electrical Engineering student, I always go to the university lab which is a quiet environment where you have all the time in the world to figure out what is going on with the circuit that isn't working right. Well, as I quickly discovered, when it comes to a high-speed production environment, everything is different. Very soon I realized that Quality Assurance (QA) is not only a department but a philosophy. It means nothing more than ensuring small things to avoid failure in the final result.

My biggest problem was not about dealing with machines, but the fact that I was the only one intern there. At first, there was no one approaching me when I needed help since the staff are experienced and have a lot of work to do on time. As it turns out, communication wasn't my strength. Being quiet by nature, when I figured that all these people were extremely busy, it made me realize that I couldn't really approach them. However, I knew that if I wait while doing nothing and hoping that someone would take notice of me and teach me something, I will stay where I'm and learn nothing. That's when I began politely asking the technicians and engineers for some tasks or asking such simple questions as, "Why did you adjust that?" I initially felt intimidated by the technical gap, but asking those questions proved to be a turning point. It taught me that effective communication and gathering requirements are just as essential to the project's success as the actual engineering work.



Figure 1: Observe SMT Process

Since I was the only intern, most of my time would go into key in in the production data for all these models. To tell the truth, at first, I had mixed feelings. There was a time when I asking myself "What is this? Why are they keep asking me to do this?" At first glance, I felt like I was far from what I had learned in classes. I realized that what I was doing would have a great effect on the floor. If I input any wrong data, the whole report became invalid. This

intern taught me that Data Integrity is the backbone of engineering. Without proper data, you can't fix anything.

Working in QA department, my seat placement is in a front-row to the entire SMT process from the solder paste printing, the pick-and-place machines to the reflow oven. From there, I learned that in the real-world situations are different, that small things do matter. For example, in university phase, we don't really think about static. But in production area, Electrostatic Discharge (ESD) is a huge deal. Passing my ESD test and wearing smock everyday made me realize that being an engineer is about respecting the invisible rules. Following the Standard Operating Procedures is not just about following rules, it is about protecting the product.

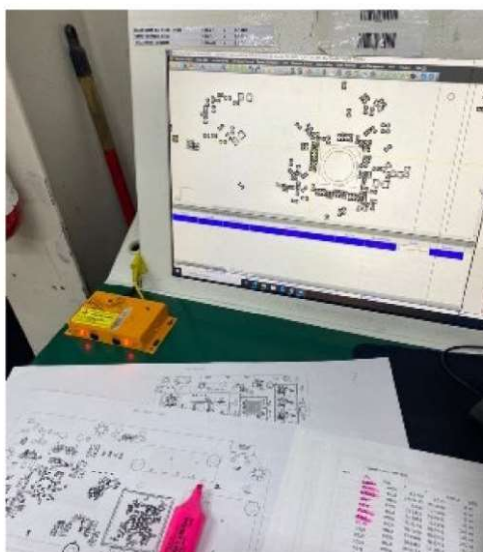


Figure 2: Marking unmounted components on PCBA according to the Work Instruction

This internship phase has been a bit of a rollercoaster to me. At first, it was lonely when I was the only intern and it was hard to find my voice in such a busy environment. But now, I have learned to be brave and come out of it with a lot more than technical skills. I've learned that engineering is more about integrity in the data process and how I can carry it yourself. When I need to review a QA report or ask senior engineer for help on something, I understand that integrity and courage go hand in hand to make a good engineer.

Authors' Biography



Puteri Nur Arissa binti Shahafizan is a student pursuing a Diploma in Electrical Engineering (Electronics) at Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang. As part of her academic journey, she is currently undergoing an internship at SMT Technologies from 2nd March to 21st June 2026. This hands-on experience allows her 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, she aims to contribute meaningfully to the industry and to become a skilled professional in electrical and electronics engineering.



Ida Rahayu binti Mohamed Noordin has accumulated 18 years of experience in the field of Electrical Engineering since joining Universiti Teknologi MARA Cawangan Pulau Pinang in 2007. She holds a Bachelor of Engineering (Hons.) in Electrical from Universiti Teknologi MARA Shah Alam, awarded in 2006, and a Master of Science in Electronic System Design Engineering from Universiti Sains Malaysia, completed in 2010.

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