

REFLECTIVE ELECTRICAL ENGINEERING LEARNING (REEL2026)

Building Skills and Professionalism through
Industrial Training

SKILLS



REEL2026
Reflective
Electrical Engineering Learning

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BUILDING SKILLS AND PROFESSIONALISM THROUGH INDUSTRIAL TRAINING



REEL 2026

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*"Building Skills and Professionalism
through Industrial Training"*

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*Reflection transforms
experience into meaningful learning*

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Stepping Out My Comfort Zone

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I am currently undergoing my industrial training at P34Inari Technology, which is part of Inari Amertron Berhad, a company that deals with an electronic assembly process where components are assembled and tested before they are used in different types of electronic equipment. In this process, there are many machines used to improve the quality and reliability of the final product.

I was attached to the New Product Introduction Section in the planning department during my internship period. This was where I had the opportunity to learn about how production planning and coordination were carried out in relation to engineers, technicians, and operators in this field. Since I am an introverted person, it was quite challenging for me to adapt to a new environment in a working place. However, after observing and learning from experienced workers, I started to understand how things were carried out in real-life situations.



Figure 1: First Day of Internship at Inari

One of the most interesting experiences I had while undergoing my internship was observing the Surface Mount Technology (SMT) production line. In this process, the electronic components are assembled onto a Printed Circuit Board (PCB) using automated machines.

The PCB is the primary platform that connects the various electronic components and enables the circuit to function appropriately. In the SMT production line, the PCB travels through various stages while it moves along the conveyor belt. The machines have specific functions in the process, enabling the components to be appropriately assembled onto the PCB.



Figure 2: Production Line at Inari

Through this observation, I was able to learn about the Back Side Infrared Ray (BSIR) inspection machine. The BSIR machine is employed to inspect the PCB and identify the possible defect after some production processes. The inspection machine is employed to detect defects such as missing components or a faulty solder connection that may impact the functionality of the final product.



Figure 3: Handling of Defective Dies in the Production Line

Through this observation, I was able to understand the significance of inspection machines in ensuring the quality of products. Even the smallest defect on a PCB can lead to the malfunctioning of electronic devices. Hence, the BSIR inspection machine assists engineers in identifying defects and preventing defective products from progressing to the next production stage.

In addition, I also had the opportunity to witness how engineers and technicians respond to issues in the production process. When there is an issue in the process of production, discussions and meetings are held to determine the reason for the occurrence of the problem and how to solve it appropriately.

Based on the discussion above, I have learned that engineering involves a lot of problem-solving and teamwork. It is important for engineers to analyze the situation, identify the causes of the problems, and then come up with measures to solve the problems. This will ensure that the process of production continues smoothly and efficiently.

Safety practice is also an important aspect in the production environment. It is important for workers to follow the right procedures when operating the machines and handling the equipment. In my observation regarding the production environment, I have seen that

workers follow the right safety guidelines to ensure that there are no accidents in the workplace.



Figure 4: Introductory Meeting with the Industry Supervisor and Staff

Based on the above discussion, I have learned that engineering not only involves knowledge but also communication, teamwork, and safety practices.

In reflecting on my experience in this internship, I noticed that being an introvert does not hold me back from effective learning in the working environment. In fact, being an introvert allows me to learn many things about the working environment by simply observing and listening.

At first, I felt nervous about interacting with engineers and technicians. However, as time passed, I slowly became more comfortable and confident in asking questions or discussing certain matters, which helped me improve my communication skills.

Industrial training is not just about gaining knowledge in terms of technical skills; it is also about gaining certain skills such as working in teams, communication skills, and time management skills. These skills are important for future engineers who will soon find their way in real industrial environments.

In summary, the industrial training at Inari Technology provided a valuable and enriching learning experience. The training offered meaningful exposure to real industrial environments particularly through observations of SMT production processes. I gained knowledge into inspection systems including BSIR machine which enhanced my understanding of quality control in manufacturing. Opportunities to interact with engineers and technicians further contributed to my professional development by allowing me to learn from their practical knowledge and industry experience. Overall, this training significantly strengthened my understanding of industrial practices and the application of engineering concepts in a manufacturing setting.

As for my personal experience, this internship has also been a journey of stepping out of my comfort zone, especially since I am an introvert, and working in a new environment was not easy at first, yet it has been very helpful for my personal and professional growth.

I learned that observation, teamwork, and learning are essential for an engineer, and this internship has made me more ready for my future career as an electrical and electronic engineer.

Authors' Biography



Nur Musfirah binti Mohd Rozalee is a Diploma student in Electrical Engineering (Electronics) at Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang. She is currently undergoing industrial training in the electronics manufacturing industry, where she gains exposure to production planning, SMT processes, and inspection systems. Through this experience, she continues to develop her technical knowledge and practical skills in electrical and electronics engineering



Norsabrina binti Sihab has more than 20 years of teaching experience at Universiti Teknologi MARA (UiTM). She earned her Master of Engineering in Electrical – Electronics and Telecommunication from Universiti Teknologi Malaysia (UTM), Skudai, in 2006. Her research focuses on electrical engineering education, with particular emphasis on digital learning, teaching innovation, assessment and evaluation, and student learning outcomes. Her scholarly work in these areas has been published in several academic journals.

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