

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



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*"Building Skills and Professionalism
through Industrial Training"*

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*Reflection transforms
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Development of Practical and Industry-Relevant Technical Skill Industrial Training in Electrical Engineering

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Industrial training is playing an important component in engineering education because it can allow students to gain new practical experience at the company that the students do their industrial training. Through industrial training, students are applied to gain theoretical knowledge that they learn at university and develop all the technical skills that are required in the engineering field. This article will discuss my experience during industrial training at Sea Asia Pacific Sdn. Bhd located in Penang Science Park, Penang. Through the internship period, I was introduced to work in quality inspection processes and real workplace responsibilities. Through this experience, I was able to learn how quality department is applied in an industrial environment. Moreover, I was able to learn the practical and industry technical skills that are important for my future career. The training also makes me attentive to workplace safety, and professional conduct. During this training, I learned about the industrial standards, specifications, and requirements for the products manufactured by the company. The industrial training also prepared me to face real-world engineering challenges and enhanced my understanding of professional practices in the industry.

Moreover, I was introduced to the workflow and responsibilities with the Quality Department. My daily tasks at this department are checking APCVD products, make inspections for incoming accessories and air curtains. The tools that I used to measure all products such as digital calipers and measuring tape to verify product dimensions and ensure all requirements follow with specifications. The challenge that I need to face is when to interpret some technical drawings either from engineering team or supplier. These tasks need careful attention to make sure all the products I check met with the engineering drawing also the tolerance dimension is not too high from requirement. However, with guidance from my supervisors and quality team, I slowly can improve my skills and confidence. I also learned how to measure the dimension properly during the inspection and report any defects found on the engineering side. This experience helped me develop strong technical and communication skills.

One of technical tasks that I was exposed was assisting to performing APCVD 3-step that received from welding department. The inspection process needs to verify the welding condition before proceeding to next stage production. During the process, I inspected the appearance of the welding quality, checked physical condition of the parts and ensured the dimension met the required quality standards. By assisting this work, I was able to understand how defect plays as main quality in engineering field. This experience gives me valuable practical knowledge about quality inspection.



Figure 1: Distribution Meter Board Installation

Apart from that, there is another important task that I need to look at is recording inspection results in the company's internal Excel system. After completing the inspection for APCD material, I need to make sure the result of the inspection is entered into the company's in-house data file. This data recording process is important because it allows the company to monitor product quality performance and for quality department benefit if have any issue and trace that not currently come from QC Department. During this activity, I learned that accuracy and consistency are very important when recording quality data. Any mistake in the data entry process may affect the reliability of quality reports and influence decision-making in production management. Through this task, I gained practical experience in industrial documentation and learned how digital data systems support quality control processes in manufacturing environments.



IN COMING COMMON ACCESSORIES FOR APCVD												
NO	PART NUMBER	MATERIAL	RECEIVE	INSPECT	PASS	REJECT	REASON REJECT	RECAP		REWORK		REMARK
			QUANTITY (PCS)	QUANTITY (PCS)	QUANTITY (PCS)			QUANTITY (PCS)	REWORK	REWORK		
								SCRAPING	REWORKING	REWORK	REWORK	
54	P00034790	SAUS004	3	3	3							
55	P0019690	SAUS004	5	5	5							
56	P00184413	SAUS004	10	5	10							
57	P00057664	SAUS005	3	3	3							
58	P00159155	SAUS004	20	5	20							
59	P00184245	SAUS005	10	5	10							
60	P00103061	SAUS004	5	5	5							
61	P00113130	SAUS005	5	5	5							
62	P00118004	SAUS005	5	5	5							

Figure 2: Incoming House Data File

Another important technical skill that I developed during my industrial training was checking incoming house components supplied by external vendors. These components were purchased by the company and needed to be inspected before being accepted. into the production process. My task involved verifying that all items met the required engineering specifications and quality standards. I referred to technical drawings and documentation provided by the engineering department to ensure accuracy. This process required careful measurement, visual inspection, and comparison with approved design requirements. I also learned how to identify defects such as incorrect dimensions, surface damage, or incomplete parts. This task helped me understand the importance of supplier quality control in maintaining overall product reliability. It also showed how engineering standards are applied in real industrial situations. Through this activity, I improved my ability with engineering requirements and apply during inspection. Overall, this experience strength my technical knowledge and enhanced my awareness of quality.



Figure 3: Incoming House

During the early stages of my industrial training, the experience that I got was adapting to the working environment also the staff permanent works life. As a student, I was more familiar with learning theoretical concepts in the classroom, while for industrial environment it includes practical understanding and the ability to follow procedures on the job. However, it took me some time to understand the inspection workflow and read the drawing. Moreover, during high school, I studied Technical Communication Graphics which allow me to apply the basic knowledge I gained when reading the drawing.

Through this industrial training experience, I gained valuable insights into developing practical and technical skills in quality control field. By observing the real inspection activities, it helped me understand how theoretical knowledge learned in class can be applied in real industrial environments. I also realized that quality inspection work requires careful observation, in ensuring that products meet the required standards. As a Quality Department, following the proper inspection procedures is important to avoid any prevent defects that can have effect at the end of the final inspection.

In addition, this training experience helped me to gain better communication skills and teamwork when interacting with technicians and supervisors. Working in an engineering environment gives me inspiration by looking at how they solve any issue without creating new problems or issues with different team members to ensure that tasks are completed efficiently. Overall, the industrial training experience played an important role in improving my practical knowledge, technical awareness, and professional attitude as a future electrical engineer.

In conclusion, industrial training provides many opportunities for engineering students to develop practical and technical skills in real working environments. Through the experience that I gained during the training period, I was able to observe several electrical engineering activities and gain exposure to all electrical components that are real industrial use that I currently do not use in my practical studies. The experience helped me understand the importance of technical competence, safety awareness and teamwork in electrical engineering work. The knowledge and skills gained from this industrial training will serve as an important foundation for my future career in the engineering field.

Authors' Biography



Nur Syafiqah binti Elias is currently pursuing a Diploma in Electrical Engineering at Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang. As part the academic programmed, she is undergoing industrial training in the Quality Department. Through this training experience, she gained experience in quality inspection, basic E-plan Electric P8 design, measurement techniques, and industrial workflows. She developed strong practical and technical skills through hands-on. Her interest in engineering studies includes quality engineering industrial applications and developing strong practical and technical skills in future.



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