

CHE353

INDUSTRIAL TRAINING REPORT

GLASFIL POLYMER SDN. BHD.

NAME:

MUHAMMAD ZAHIRUDDIN BIN SAPUAN

PROGRAMME:

DIPLOMA IN CHEMICAL ENGINEERING

ID:

2018245912

SUPERVISOR:

NURRUL ASYIKKEN

COMPANY ADDRESS:

19, JALAN TAMING P/1, OFF LEBUH TAMING, TAMAN TAMING JAYA,
43300 BALAKONG, SELANGOR

VISITING LECTURER:

MADAM INTAN SUHADA

1.0 INTRODUCTION

1.1 INTRODUCTION OF INDUSTRIAL TRAINING CHE 353

Industrial Training for Diploma in Chemical Engineering is too able the students to identify the types of work that chemical engineers do in real engineering world and appreciate the theoretical knowledge learn, students also can find this opportunity to perform the basic engineering practices, including technical writing report, communication with colleagues, handling project and generating proposal for making the industries better. And lastly to have higher level of integrity, ethical and accountability in practicing engineering. For the industrial training, Glasfil Polymer Sdn Bhd is where I went to undergo my internship, which in business of plastic manufacturing and other one stop business. The duration for industrial training is from 15 March until 16 July 2021. While in Glasfil Polymer Sdn. Bhd, the CEO of Glasfil Polymer is Samantha Chee which is the 2nd generation owner of Glasfil. Plastic injection moulding is the main technique used by Glasfil Polymer which the mould is from mould department. This internship benefits all parties. Through the industrial training programme, it gives the opportunity for the industry to identify and invite potential employees as well as enhancing company's reputation among graduates. The strength of industry-university partnership can be tightening through this programme. During internship programme, the students have to make sure that all tasks given must be completed and obey the company's rule in order to not sully university's name. Ultimately, this programme provides the most positive impact to students as they managed to experience a real-life working culture, demonstrate a constant building skill, and exposed to new knowledge with help of professionals in the industry.

1.2. JOB SCOPE OF INDUSTRIAL TRAINING

During this Internship Programme. I was assigned under marketing department in Glasfil Polymer Sdn Bhd. In Marketing department, I am responsible for various duties and work task which are video editing, creating posters, managing company social media, set up for video shooting and shoot photo of Glasfil. Aside from office task, I also responsible in assembling company's product as operator. For video editing, the video is meant for youtube and other social media such as facebook and linkedin, so I need to follow company's guide and rule in order to not violate copyright or offend other people. For the video content, I also responsible in making its script. After there is no raw video to edit, I need to come up with many scripts that related to Glasfil. Besides video editing, all facebook and Instagram post also handled by me.

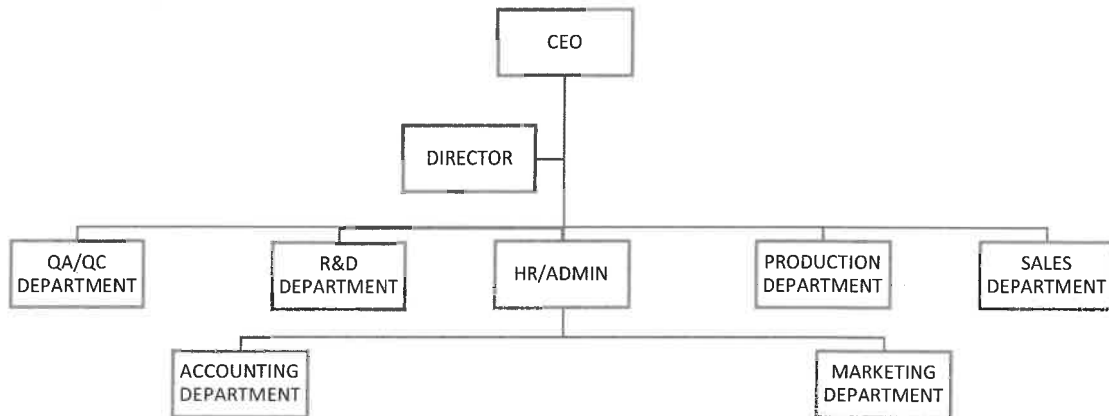
Every day, I need to create posters or shoot photos for the content. For my operator's task, the product that I need to assemble is George Kent water meter and Revo. George Kent involve trimming, greasing and assembling while Revo involve many specific assembling technique.



2.0 CONTENT

2.1 ORGANIZATIONAL CHART AND HISTORY OF THE COMPANY

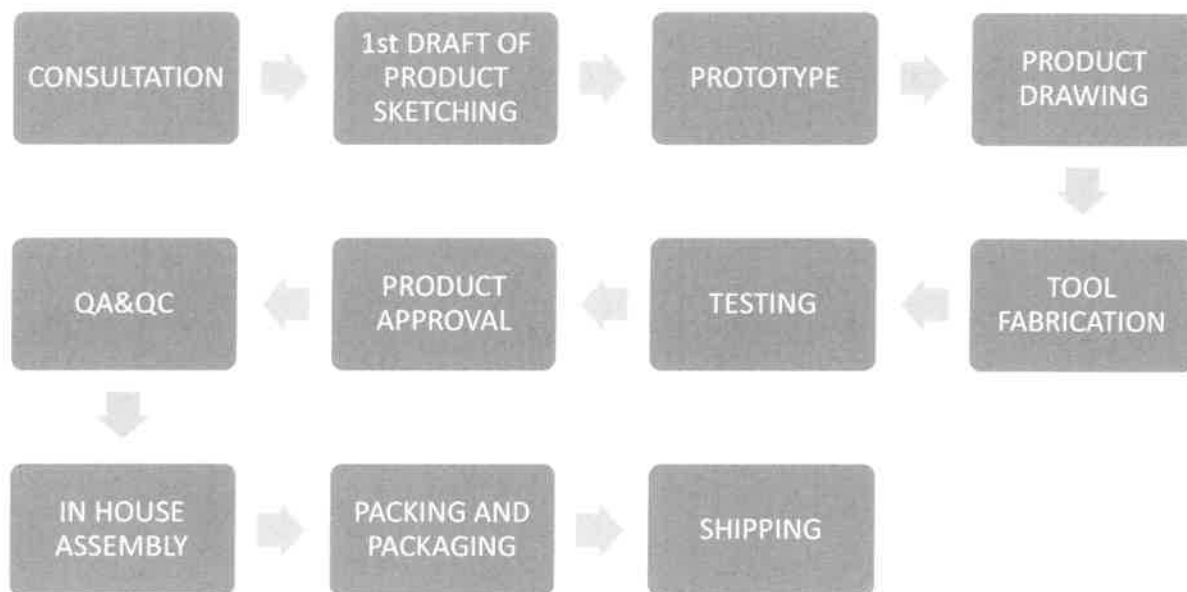
2.1.1 ORGANIZATIONAL CHART



2.1.2 HISTORY OF THE GLASFIL POLYMER SDN BHD

Mr. Chee, the founder and the first-generation owner of Glasfil Polymer. In the first 25 years Glasfil Polymer only owned 13 machines in the old factory and 30 employees. In 2017 Glasfil Polymer moved to a bigger factory that is located in Balakong, Selangor. In the same year Ms. Samantha had taken over Glasfil Polymer who is the daughter of Mr. Chee as the second-generation owner of Glasfil Polymer. Currently, Glasfil Polymer has over 50 and more employees, 19 machines, 2 factories and 1 warehouse.

2.2 PROCESS FLOW



2.3 MINI PROJECT

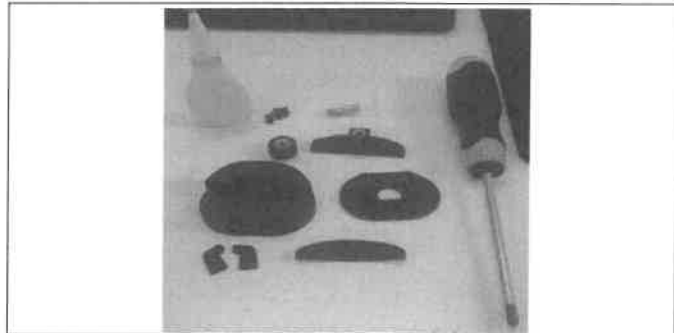
2.3.1 REVO

Glasfil Polymer is also one stop center which take request from customers. Revo is one of the products that Glasfil Polymer customer asked for our service for the product assembly. Revo also is one of the most difficult tasks in Glasfil since the assembly process need to be done carefully. Precision, diligent, and patience is crucial in order to assemble this product. This is because the market price for Revo is RM 500, so any defect or even tiniest flaw cannot be tolerated. I took part in Revo assembly on 18 May 2021 and the project was halted on 3 June due to PKP which I need to work from home and continue on 25 Jun 2021 until 2 July 2021 where the project was halted once again due to one of the operators was confirmed positive COVID19. Below is the Standard Operation Procedure (SOP) for Revo that consist of mounting assembly and Pod Assembly.

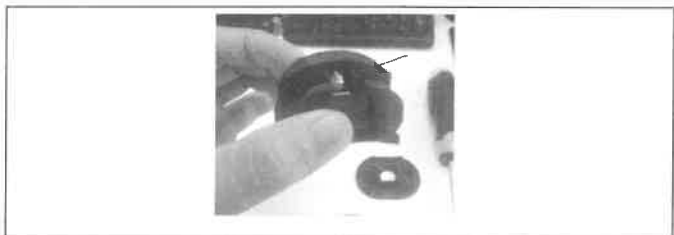
REVO Mounting Assembly

1. Before starting, make sure item is well prepared

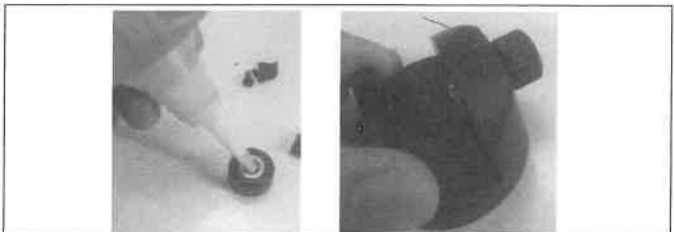
- REV004 parts
- Head screw insert
- Super glue
- Phillips screw driver
- Flat head screw driver
- Rubber pad
- Flat head screw



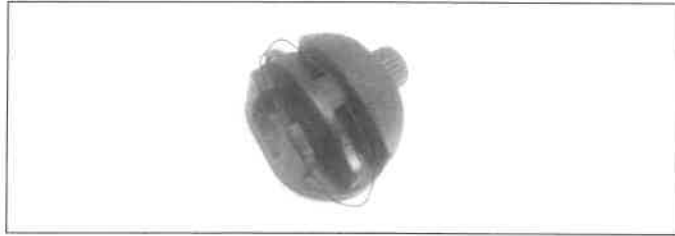
2. Insert the Head screw insert through the mounting body



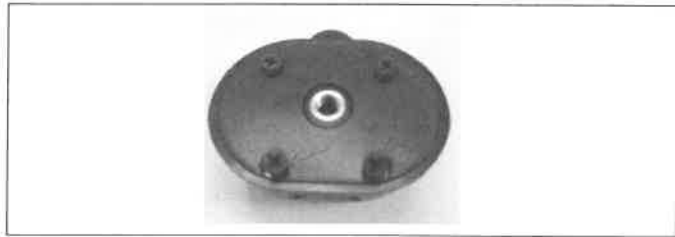
3. Put a drop of super glue into the Head screw, and lock the Head screw insert into the Head screw using flat head screwdriver and wait for it to dry



4. Insert the clamper, turn the head screw to lock the clamper.




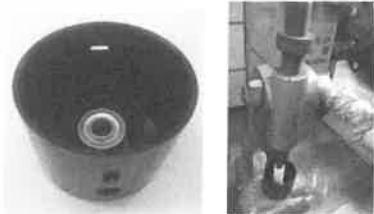

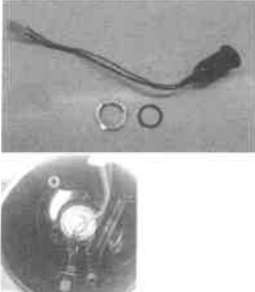



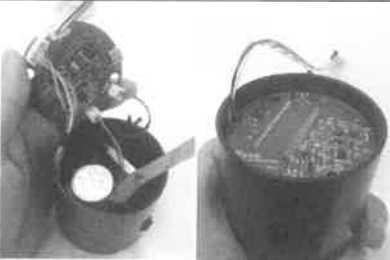
5. Attach the base. Insert 4 flat head screw, and tighten using phillips screw driver

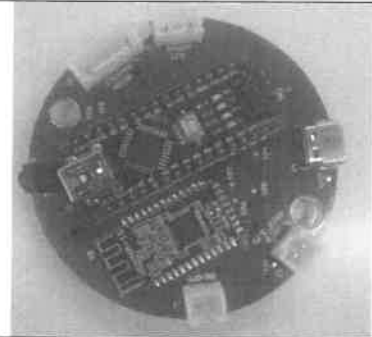


6. Install the rubber pad onto the horns and the clamper.

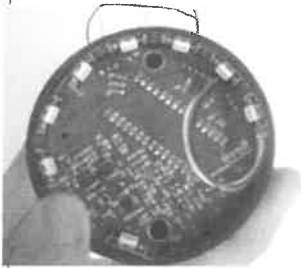


REVO POD Assembly

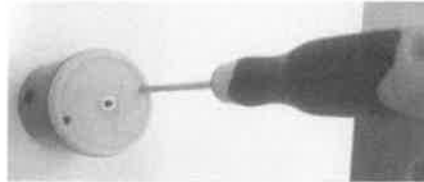
<p>1. Before starting, make sure item is well prepared</p> <ul style="list-style-type: none"> -REV001 Top -REV002 Body -REV003A & B Bottom & IR Cap -M2 Screw (round head) -Phillips Screw Driver -Pressing Jig -White Tape 	<p>2. Insert the bearing into REVO body, and use pressing jig to press fit the bearing. Make sure bearing goes all the way inside the parts.</p> 	<p>3. Wrap the pole of the REVO Top using white tape (7 roll). Prepare the REVO Top onto the jig, install the parts on REVO Body using pressing jig.</p> 
<p>4. Install the switch into REVO Body. Make sure the O-Ring is placed on the outer side of the switch to prevent water leakage. Make sure to tightened the nut.</p> 	<p>5. Install REVO IR Cap into the slot and pressed it firmly until it seated nicely into the oval slot.</p> 	<p>6. Align the stepper motor head with the REVO Top, and secured it in place using M2 screw. Make sure the screw is tightened nicely.</p> 
<p>7. Insert the batteri into the battery seating area.</p> 	<p>8. Connect the connector onto the PCB. Make sure the alignment for USB port is correct. LED cable should be inserted at the PCB Slot. Connect the connector according to the label on the PCB.</p> <p>On Off= Switch Stepper Motor=Motor Strip LED=LED Pack 3.7v = Battery</p>	



9. Peel off the double sided tape on the LED strip and stick the LED on the internal wall of REVO Body. Make sure no LED light bulb obstructing the screw hole.



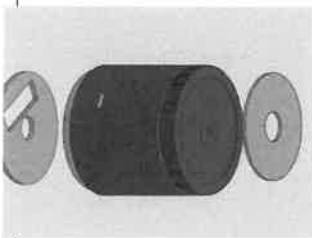
10. Install the REVO Bottom into REVO Body. Make sure the alignment is correct and secure using M2 Screw.



11. Stick the QR Code sticker on the bottom square of the REVO Bottom.



12. Apply the rubber pad onto the REVO Bottom and REVO Top.



13. Turn on and test with remote to make sure product function properly






2.3.2 SITE PLANNER

My task as a site planner was given on 22 June 2021. This task are consist of 3 parts, purchase request, project management and site runner. Firstly, for purchase request, I made a research on what item is suitable for the project and submit the purchase request to our purchaser. Next, the most important part is project management, where I need to come up with the layout of the potential site and the assembly line for the REVO assembly and INTRIX assembly. And lastly, as site runner, I was required to delivered documents to certain people, mostly our staff.

Purchase Request

I searched the required item for the assembly project on Shopee, Alibaba and Lazada. However, I only chose the product from Shopee since it much cheaper and met the expectation of what I want to purchase. For now, 4 products are confirmed which are fan, desk, rack and LED lamp.

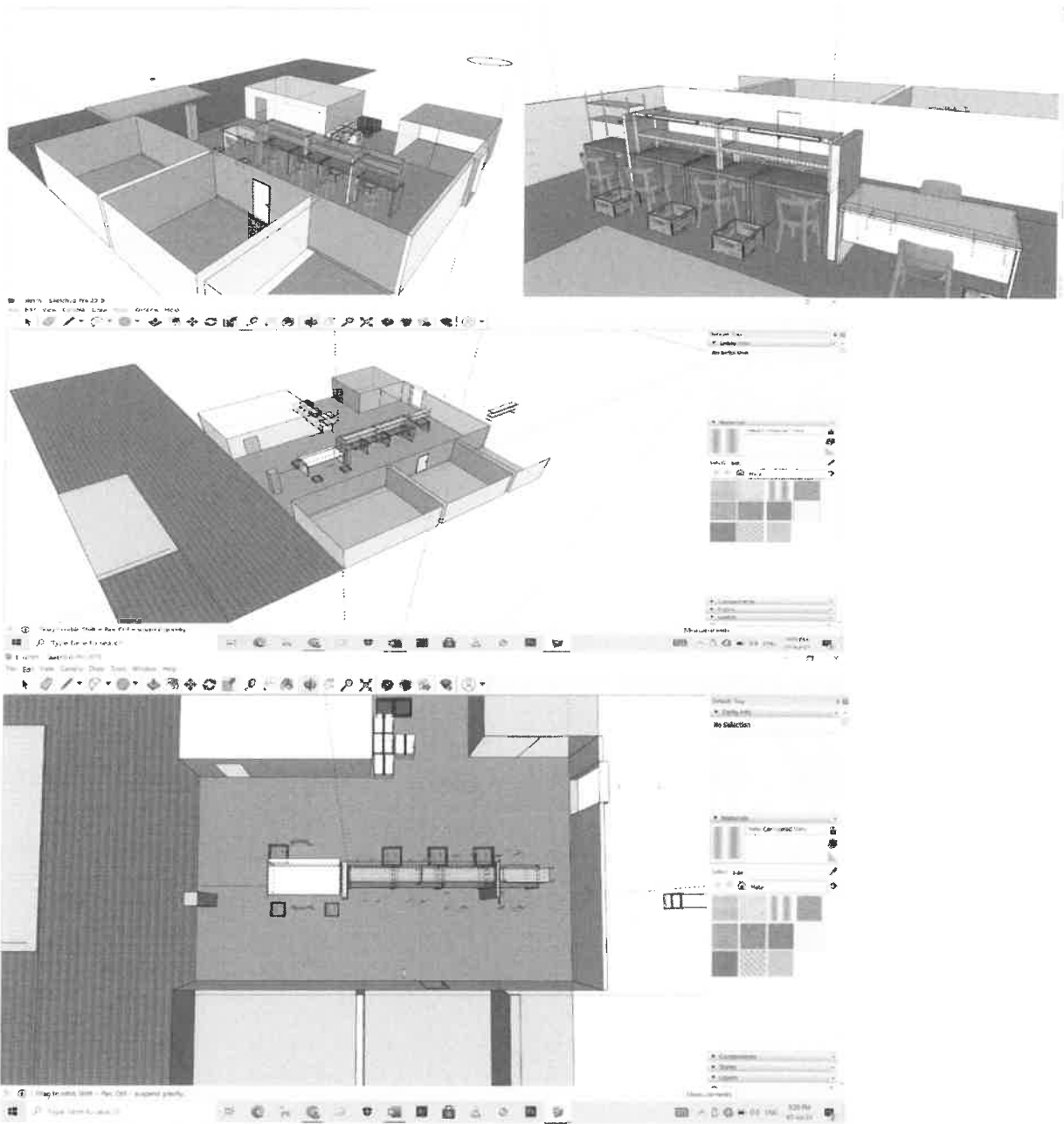
Fan		x4	340
-----	---	----	-----

Desk		X4	376
Rack		x3	597
Lamp	RM 10 / each	X8	80







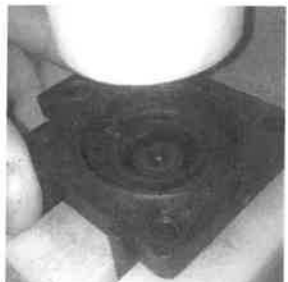




Total = 340+ 376 + 597 + 80

= RM1393

Layout

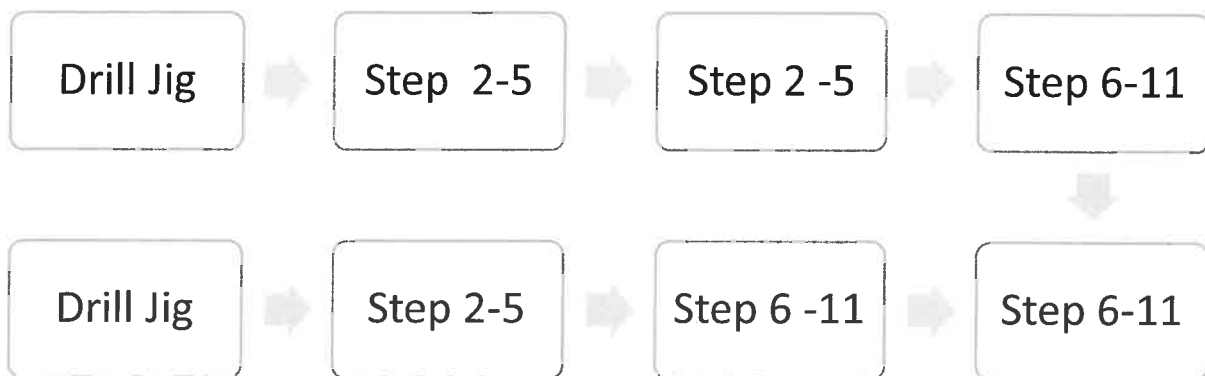


INTRIX Standard Operating Procedure (SOP)

<p>1. Put DPS Cover Dynamic inside the jig and punch a hole accordingly.</p> 	<p>2. Put DPS Cover Dynamic inside the jig.</p> 	<p>3. Put DPS Retainer Dynamic to the pin</p> 	<p>4. Put Oring 2.9 X 1.78 to the pin.</p> 
<p>5. Press the jig.</p> 	<p>6. Put the DPS Piston Dynamic into the jig.</p> 	<p>7. Put the DPS Cover Dynamic on top of the DPS Actuator Dynamic inside the jig.</p> 	<p>8. Apply grease on specified area of the Pin Dynamic.</p> 
<p>9. Put the Pin 3 x 20 Dynamic inside the DPS Cover Dynamic.</p> 	<p>10. Put the Spring inside the DPS Cover Dynamic.</p> 	<p>11. Press the jig.</p> 	

Assembly Line

The assembly line is decided based on the Standard Operating Procedure (SOP). With my experience being an operator and assemble water meter George Kent, I can imagine and come up with the most efficient assembly line that I could think of. The arrangement oof diagram below is based on the actual desk arrangement from the layout.



The assembly line flow is from left to right. Starting from row one, I conclude that the drill part must have at least 2 people to do it in order to keep the assembly process moving. This is because from my experience, if step 1 progress is moderate, then everything would be delayed resulting to not meeting the target for the day. Next, for the remaining row which got 6 more desks, I split the tasks evenly. For the first 3, their task it to assemble the product from step 2 to step 5. Next for the remaining 3, they were given step 6 to 11. Although the number of steps given seems unfair, it is actually reasonable. Since some step is just another follow up from previous step.

3.0 CONCLUSION

During this 17 weeks of student industrial Training, the student managed gain fresh information and valuable experience. The students had the opportunity to complete her internship training at Glasfil Polymer Sdn. Bhd. The student managed to gain a wide range of knowledge such The effective way to market the company through social media as well as multimedia and injection molding knowledge. The student also gained knowledge on safety precautions and hazards which are very important in order to avoid any injury during the process of injection molding. The opportunity to undergo the life as employee is very valuable to student as they need to use this experience later. This is because work culture cannot be studied theoretically. This internship program has helped the students to grasp the ethics, work culture, adapting to new environments while contributing to self confidence, improving and strengthen their skills while discipline them. In conclusion, while the company reap many benefits from student as their extra manpower, the student also gain many benefits from them too which helps them in future.