



KEMENTERIAN PENDIDIKAN TINGGI



SULTAN ABDUL HALIM MU'ADZAM SHAH

# PROGRAMME HANDBOOK

## DIPLOMA

### MECHANICAL ENGINEERING (PLASTIC)



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## 1.0 INTRODUCTION

Politeknik Sultan Abdul Halim Mu'adzam Shah (POLIMAS) is a comprehensive, learner-centered higher education institution that serves its local and regional learners and their communities through high-quality and flexible education and training. It is aimed to develop students' employability skills to meet the needs of a more dynamic economy, which values innovation and productivity. Programs include a global perspective that will enable graduates to make a valuable contribution to the wider society as it changes in response to regional and international competition and demand.

POLIMAS programmes include a variety of Outcome-Based Education teaching approaches, adding value to POLIMAS teaching and learning which cater to students seeking a quality polytechnic education and training.

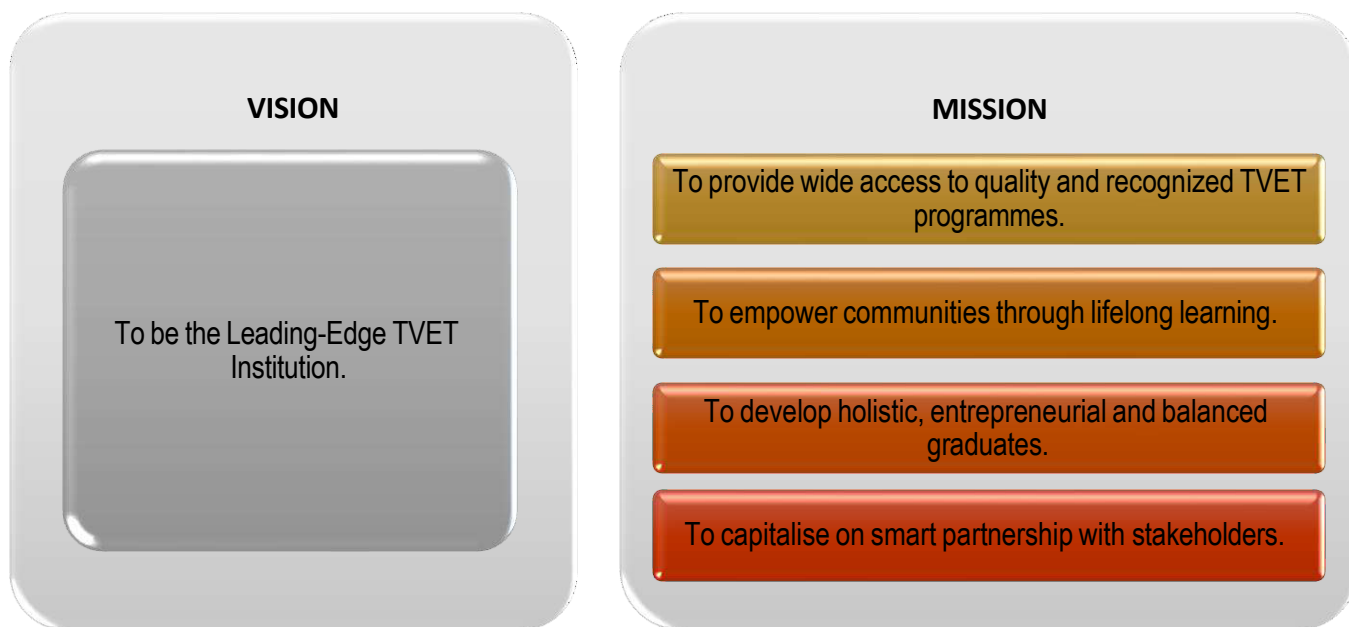
The POLIMAS Programme Handbook provides students with information on many facets of college life such as policies, procedures, and services. It is written for every student enrolled in one or more courses at POLIMAS.

This Handbook is aimed to guide students through the various procedural steps that lead to a Diploma study. It also provides graduate program descriptions, the requirements needed to obtain a graduate Diploma, and a clear outline of the procedural steps that students need to follow. Students are also provided with information on matters related to general administration such as student services and facilities, campus disciplinary measures, student organizations and other relevant matters.

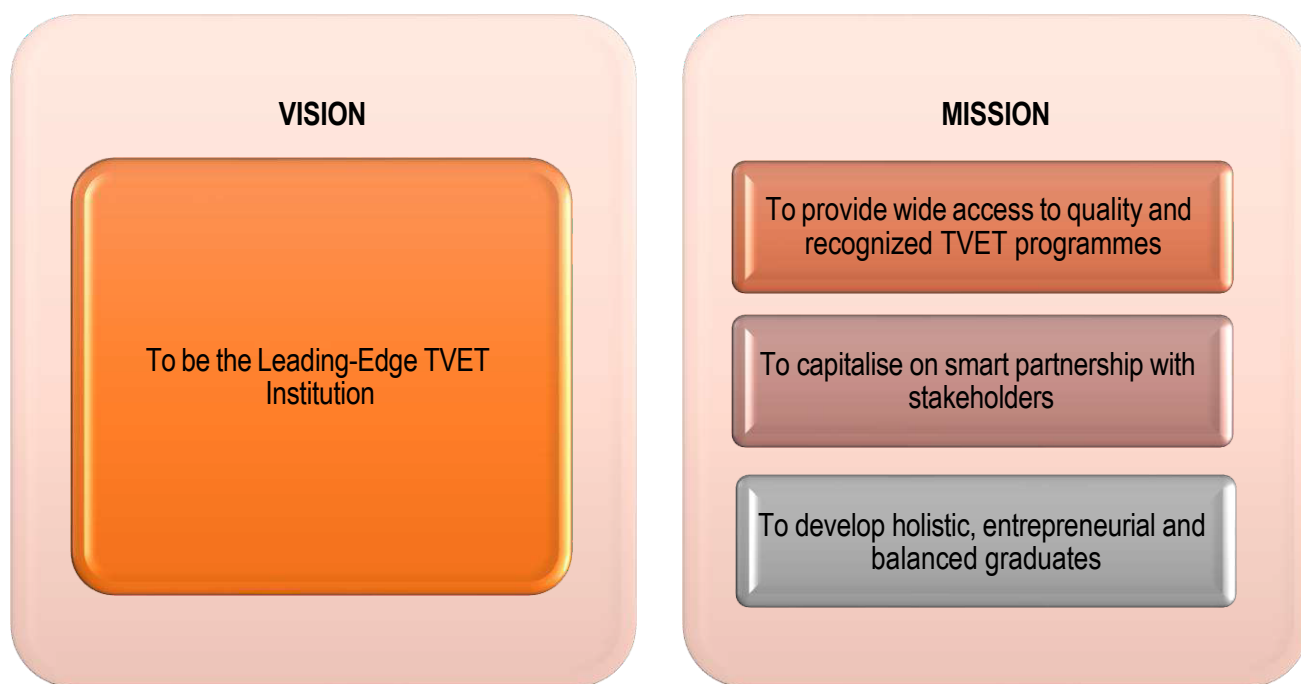
This book serves as a preliminary guide and does not purport to completely address every policy, procedure and regulation. In addition, no claim is made that this document covers all the rules and regulations in effect now at POLIMAS. Students must refer to their event POLIMAS Department programmes and services publications and other Departments and Units Policies for further information.

## 2.0 VISION & MISSION

### DEPARTMENT OF POLYTECHNIC EDUCATION AND COMMUNITY COLLEGE EDUCATION

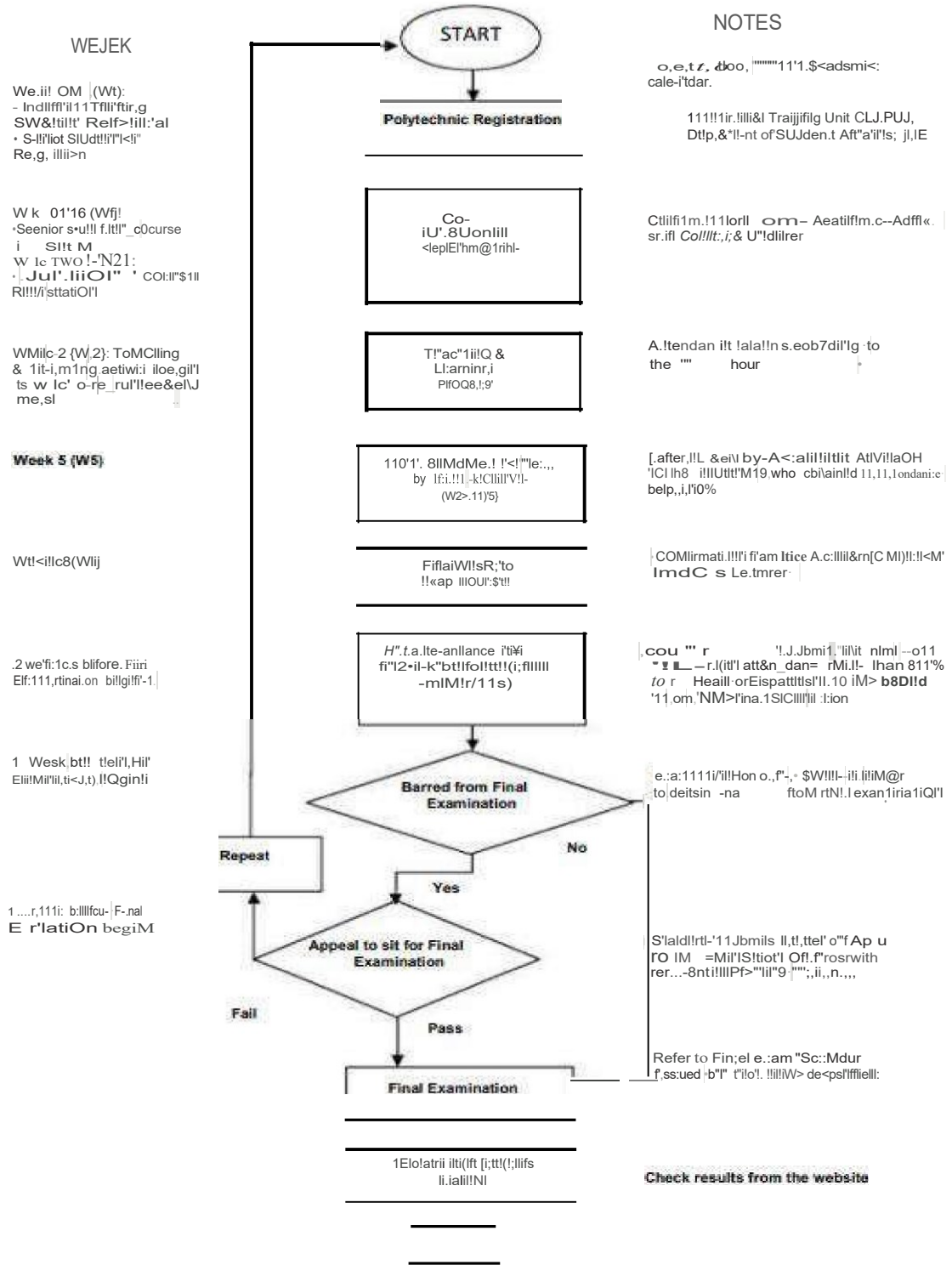


### POLITEKNIK SULTAN ABDUL HALIM MU'ADZAM SHAH

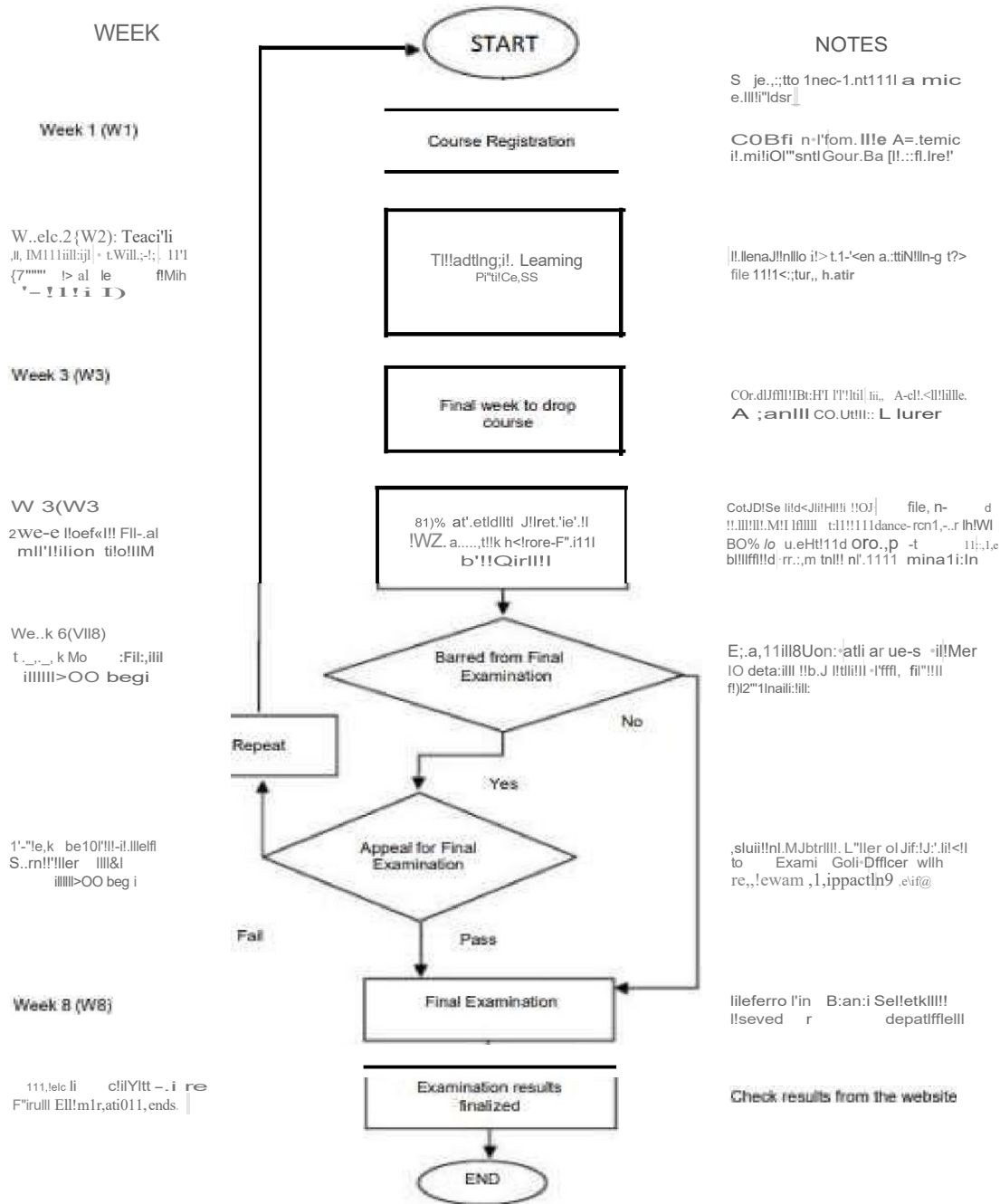


### 3.0 ACADEMIC FLOW CHART

#### ACADEMIC: FLOW CHART FOR SEMESTER



# ACADEMIC WORK CHART FOR STUDENT

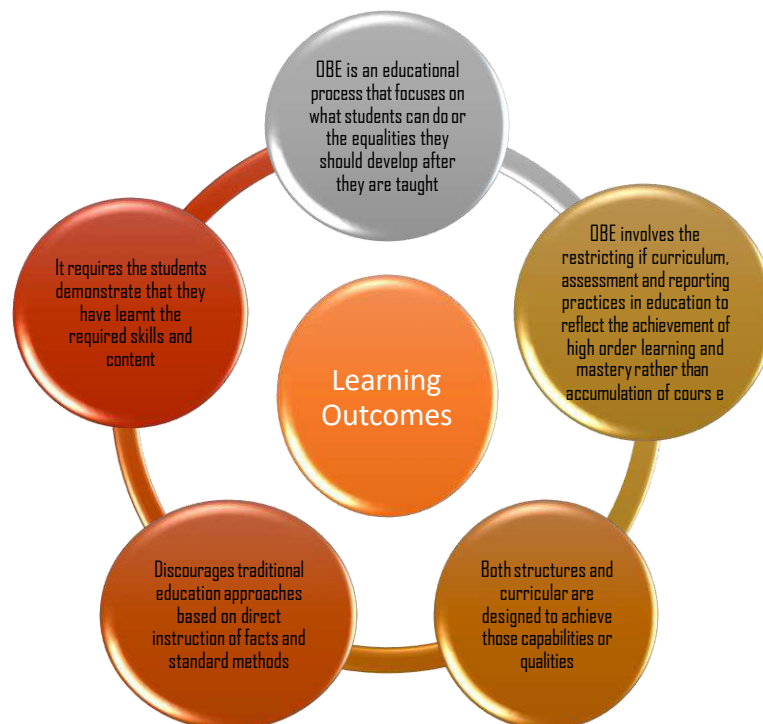


## 4.0 OUTCOME-BASED EDUCATION [OBE]

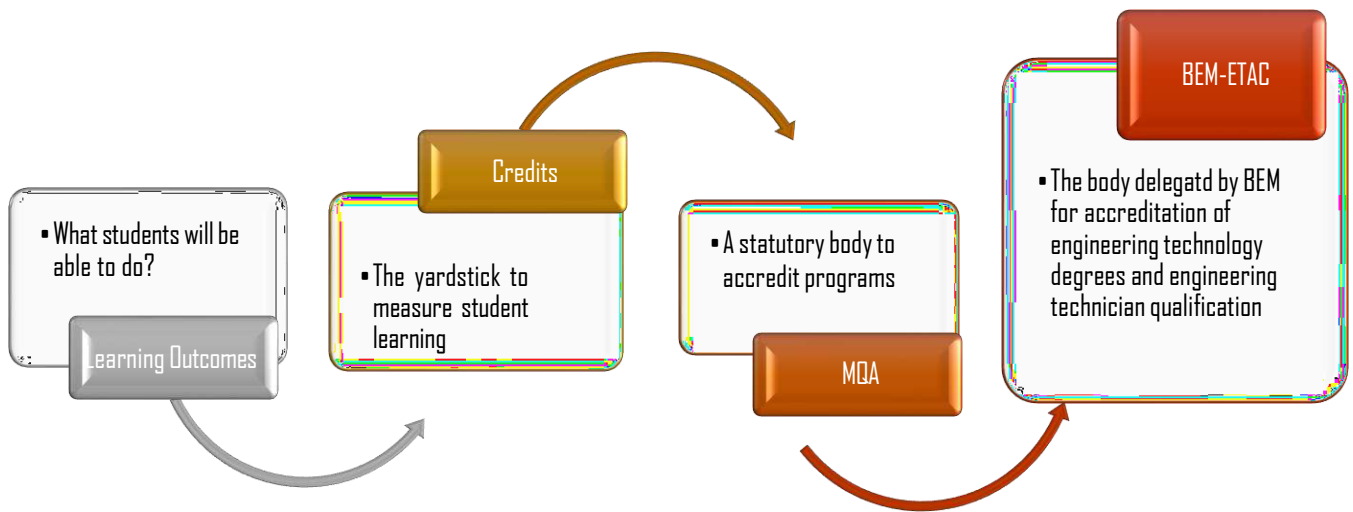
Outcome-based education (OBE) is an educational model for students to demonstrate their knowledge and able to perform according to the required outcomes. It is a student-centered approach that focuses on students' learning. It starts with a clear picture of what students should know, what they should be able to do, and what desirable attitudes and values needed to organize the curriculum, instruction, and assessment to ensure an ultimate learning (Spady, 1994:1). Thus, OBE involves the restructuring of curriculum and assessment that reflects achievement of high learning order and mastery learning.

OBE helps students to be aware of what they should learn, aware of what they are learning, and the control over their learning. It leads to successful student learning and encourages lecturers to be well prepared. It also provides students with appropriate, purposeful learning experiences and opportunities for students to develop originality, self-motivation and independence while acquiring useful knowledge and skills.

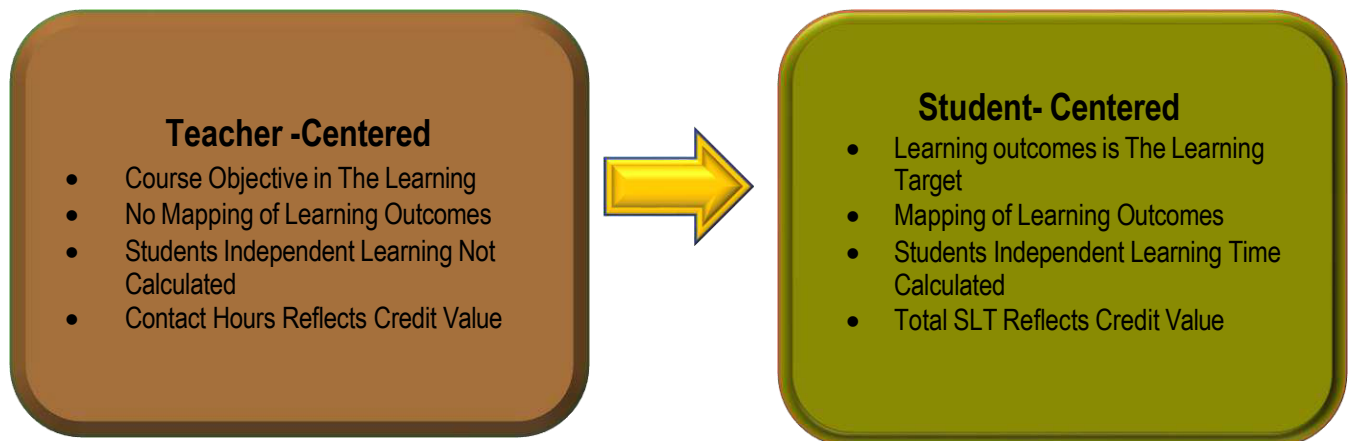
## 4.1 WHAT IS OUTCOME-BASED EDUCATION [OBE]



## 4.2 ACREDITATION PROCESS

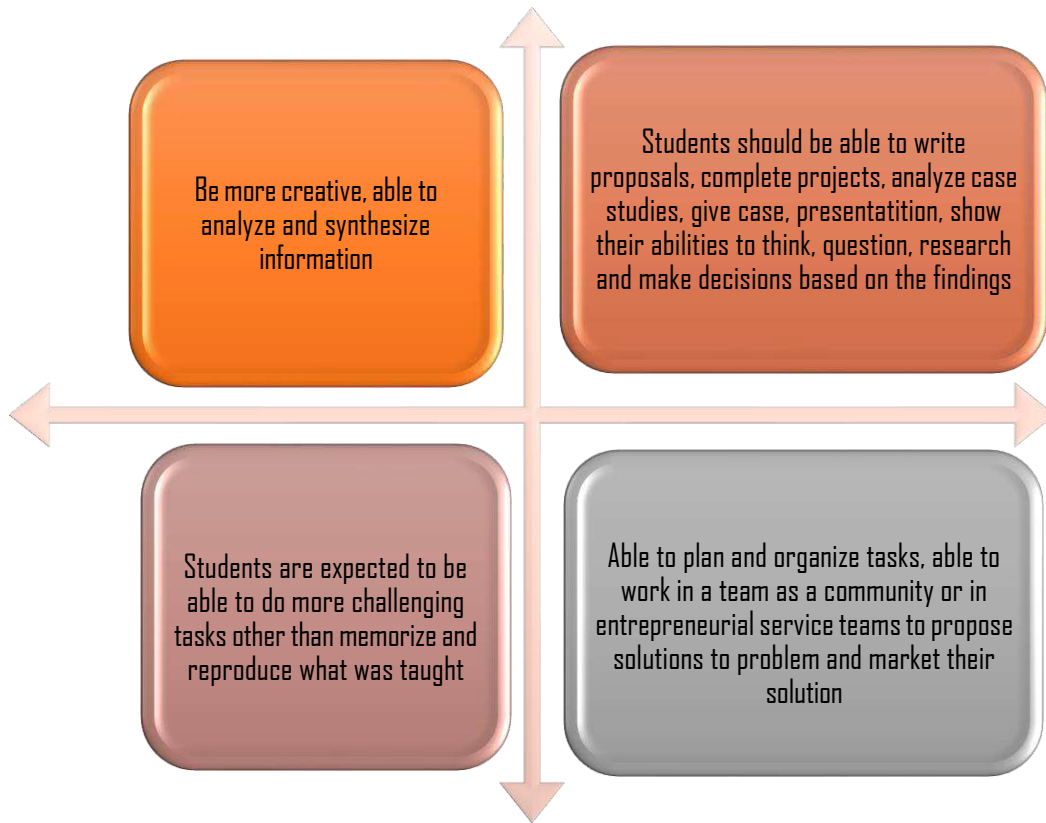


## 4.3 HOW DOES OBE AFFECT TEACHING-LEARNING?



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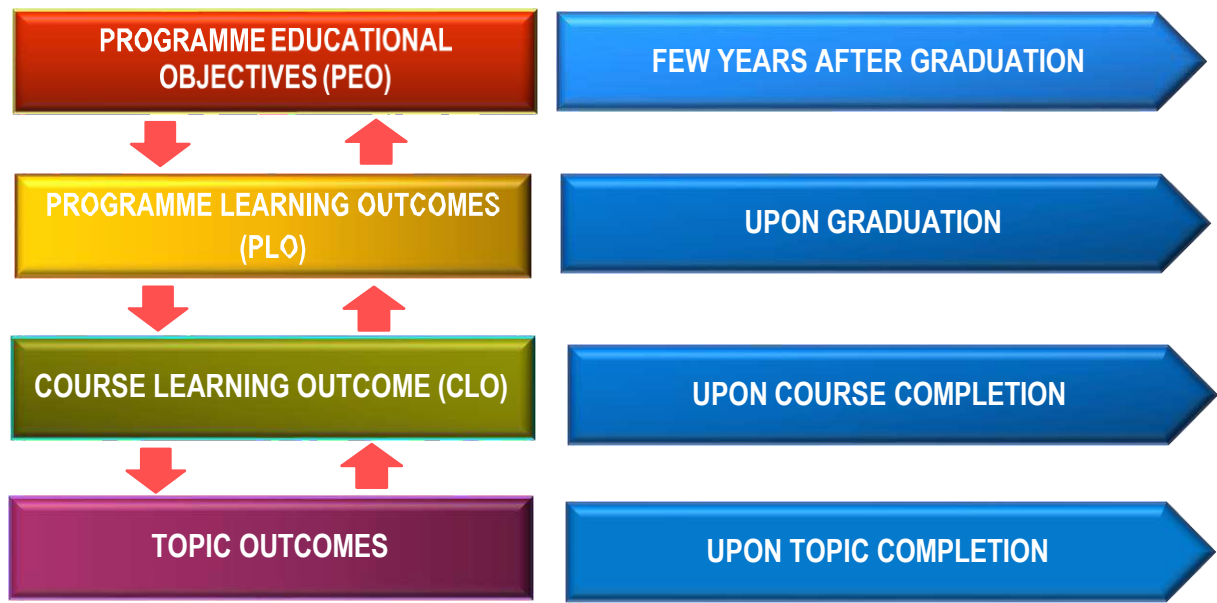
## 4.4 EXPECTATIONS ON STUDENTS



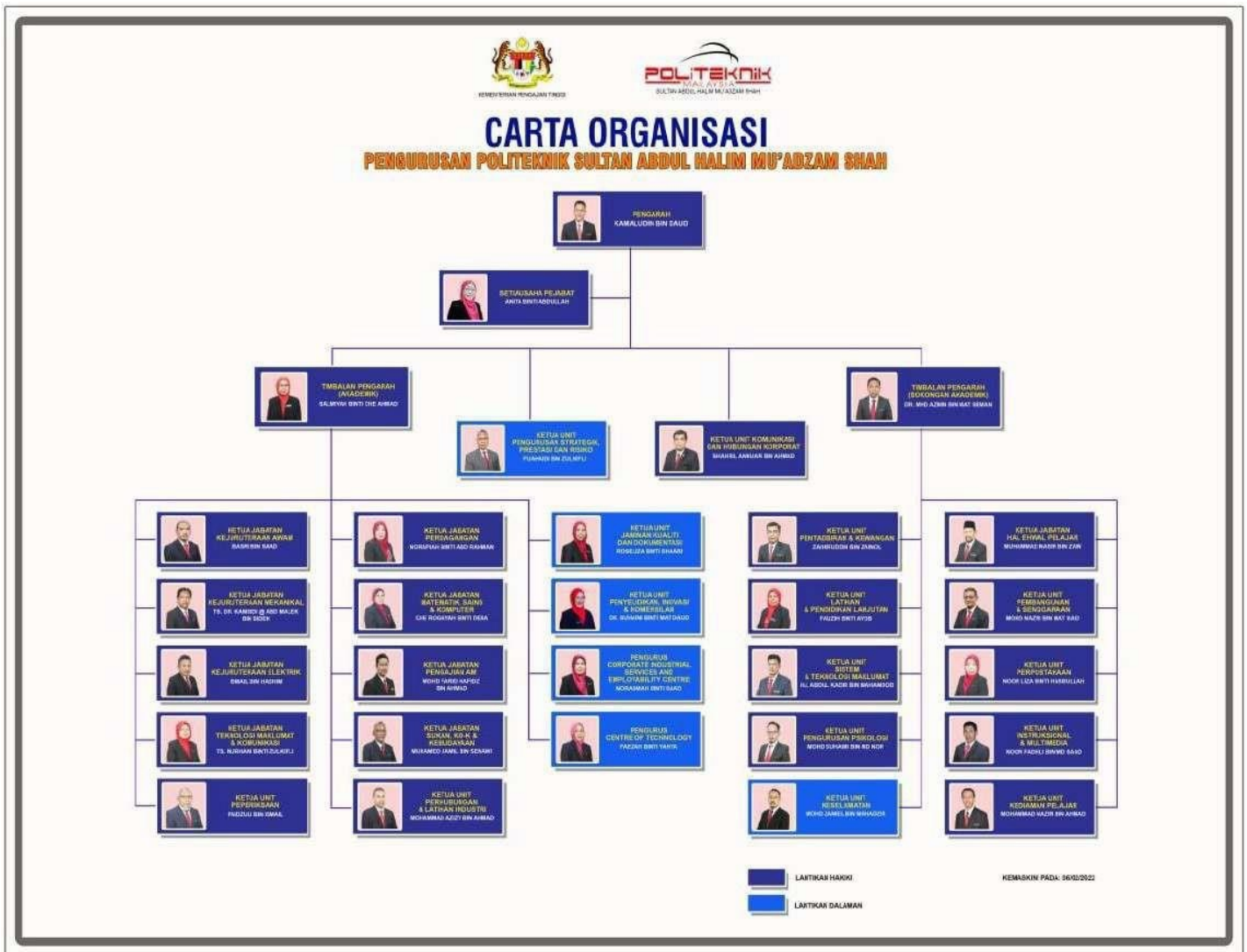


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4.5 DIFFERENT LEVELS OF OBE



# 5.0 MANAGEMENT ORGANISATION CHART



## 6.0 MECHANICAL ENGINEERING DEPARTMENT

### 6.1 MECHANICAL ENGINEERING DEPARTMENT ORGANISATION CHART

KETUA JABATAN: WAN AB AZIZ BIN WAN KADIR
PEN. KETUA JAB: IR DR NIK AHMAD FARIS BIN NIK ABDULLAH

PROGRAM KEJ. MEKANIKAL PEMBUATAN (DTP)		
1	Syed Mohd. Fady bin Syed Hassan (KP)	DH44
2	Dr Syaiful Nizam bin Ab. Rahim	DH52
3	Ts Kamarulna Fuzi bin Mad Kasim	DH48
4	Neza Nurulhuda binti Nekmat	DH48
5	Azijan bin Murad	DH48
6	Khairul Adly bin Abd Wahib	DH44
7	Mohd Izham bin A. Rahim	DH44
8	Mohamad Nazri bin Abd Halim	DH44
9	Mohd Helmi bin Abd Halim	DH44
10	Nur Faridah Hanim binti Mohd. Mokht	DH44
11	Zainol bin Hashim	DH44
12	Nor Ruzanna binti Abd Rahman	DH41
13	Zairini binti Mohammad	DH41
14	Mohd Shakir bin Mohammad Isa	DH42
15	Abdul Rahman bin Mohd Khaidzir	DH40

PROGRAM KEJ. MEKANIKAL LOJI (DJL)		
1	Ku Nasharudin bin Ku Ismail (KP)	DH44
2	Ts Mohamad Pauzi bin Mat Din	DH48
3	Muhammad Adli bin Haron	DH48
4	Siti Salwa binti Samsuri	DH48
5	Airul Aznie bin Mohd Sahari	DH44
6	Azunaidi bin Abdul Aziz	DH44
7	Mohd Fadzli bin Othman	DH44
8	Norhasimah binti Habibi	DH44
9	Rokayah binti A. Rashid	DH44
10	Mohd Nizam bin Osman	DH42
11	Mohd Rafidi bin A. Aziz	DH41
12	Rohaizan bin Radzi	DH41
13	Siti Rohanah binti Murad	DH41
14	Mohd Radzi bin Mohd Rajab	DH34

STAF SOKONGAN		
PEMBANTU MAKMAL		
1	Ishak bin Man	C17
2	Norizan binti Md Isa	C17
3	Norazaimi binti Ramli	C17
PENOLONG JURUTERA		
1	Mohamad Taufik bin A.Rahman	JA29
PEMBANTU OPERASI		
1	Mohd Padzri bin Bakar	N11

PROGRAM KEJ. MEKATRONIK (DEM)		
1	Syukrul Hassani bin Jamaludin (KP)	DH44
2	Che Mohd Azmi bin Che Ibrahim	DH48
3	Ts Mohd Yahya bin Saad	DH48
4	Mohd Zaniel bin Mahadzir	DH48
5	Muffili bin Mahadi	DH48
6	Norfidah binti Abdul Hamid	DH48
7	Shaiful Zamri bin Abdul Sattar	DH48
8	Wan Nor Harman bin Wan Yahaya	DH48
9	Azahar bin Mohd Noor	DH44
10	Lizawati binti Jaafar	DH44
11	Mohd Nazri bin Saad	DH44
12	Salmi binti Abdullah	DH44
13	Shariman bin Johari	DH44
14	Abdul Latif bin Abd Razak	DH41
15	Mohd Zulkiflee Faizal bin Saleh	DH41
16	Siti Arfah binti Hashim	DH41
17	Sofian bin Yusoff	DH41

PROGRAM KEJ. MEKANIKAL PLASTIK(DMK)		
1	Mohd Hairol Mizzam Bin Haris (KP)	DH44
2	Ir Dr Nik Ahmad Faris bin Nik Abdu	DH52
3	Ts Azimah binti Ismail	DH52
4	Riduwan bin Zakaria	DH48
5	Suzana binti Shafie	DH48
6	Ahmad Fahmi bin Fadzil	DH44
7	Mahdir bin Abdullah	DH44
8	Azora binti Jaafar	DH41
9	Jefri bin Hanafiah	DH41
10	Mohd Alfathi bin Md Udin	DH41
11	Zulkifli bin Hamzah	DH41
12	Muhammad Izzudin bin Mohd Yusof	DH34
13	Mohd Nubli bin Ahmat	DH34

## 6.2 PROGRAMME MECHANICAL ENGINEERING (PLASTIC) LECTURERS

No.	Name	Designation	Contact No.	E-mail
1.	MOHD HAIROL MIZZAM BIN HARIS	Head of Programme	04-9146100 ext. 6293	<a href="mailto:mizzam@polimas.edu.my">mizzam@polimas.edu.my</a>
2.	Ir DR NIK AHMAD FARIS BIN NIK ABDULLAH	Senior Lecturer	04-9146100 ext. 6293	<a href="mailto:nikfaris@polimas.edu.my">nikfaris@polimas.edu.my</a>
3.	Ts AZIMAH BINTI ISMAIL	Senior Lecturer	04-9146100 ext. 6293	<a href="mailto:azimah@polimas.edu.my">azimah@polimas.edu.my</a>
4.	RIDUWAN BIN ZAKARIA	Senior Lecturer	04-9146100 ext. 6293	<a href="mailto:riduwan@polimas.edu.my">riduwan@polimas.edu.my</a>
5.	SUZANA BINTI SHAFEI	Senior Lecturer	04-9146100 ext. 6293	<a href="mailto:suzana.s@polimas.edu.my">suzana.s@polimas.edu.my</a>
6.	AHMAD FAHMI BIN FADZIL	Lecturer	04-9146100 ext. 6293	<a href="mailto:fahmi@polimas.edu.my">fahmi@polimas.edu.my</a>
7.	MAHDIR BIN ABDULLAH	Lecturer	04-9146100 ext. 6293	<a href="mailto:mahdir@polimas.edu.my">mahdir@polimas.edu.my</a>
8.	AZORA BINTI JAAFAR	Lecturer	04-9146100 ext. 6293	<a href="mailto:azora@polimas.edu.my">azora@polimas.edu.my</a>
9.	JEFRI BIN HANAFIAH	Lecturer	04-9146100 ext. 6293	<a href="mailto:jefri@polimas.edu.my">jefri@polimas.edu.my</a>
10.	MOHD ALFATHI BIN MD UDIN	Lecturer	04-9146100 ext. 6293	<a href="mailto:alfathi@polimas.edu.my">alfathi@polimas.edu.my</a>
11.	ZULKIFLI BIN HAMZAH	Lecturer	04-9146100 ext. 6293	<a href="mailto:zulhamzah@polimas.edu.my">zulhamzah@polimas.edu.my</a>
12.	MUHAMMAD IZZUDIN BIN MOHD YUSOF	Lecturer	04-9146100 ext. 6293	<a href="mailto:izzudin@polimas.edu.my">izzudin@polimas.edu.my</a>
13.	MOHD NUBLI BIN AHMAT	Lecturer	04-9146100 ext. 6293	<a href="mailto:nubliahmat@polimas.edu.my">nubliahmat@polimas.edu.my</a>

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## **6.3 PROGRAMME DIPLOMA IN MECHANICAL ENGINEERING (PLASTIC)**

### **6.3.1 PROGRAMME OVERVIEW**

#### **SYNOPSIS**

The Diploma in Mechanical Engineering (Plastic) programme is designed to produce holistic graduates that have knowledge and competent skills in the field of mechanical engineering to fulfil the demand of workers in engineering sector. The programme structure focusses on the area of Solid Mechanics, Statics & Dynamics, Thermodynamics & Heat Transfer, Fluid Mechanics, Materials, Mechanical Design, Electrical, Manufacturing, Instrumentation & Control and Mechanical Maintenance.

### **6.3.2 JOB PROSPECT**

**JOB PROSPECT** This programme provides the knowledge and skills in Manufacturing field that can be applied to a broad range of careers in Mechanical Engineering. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market as:

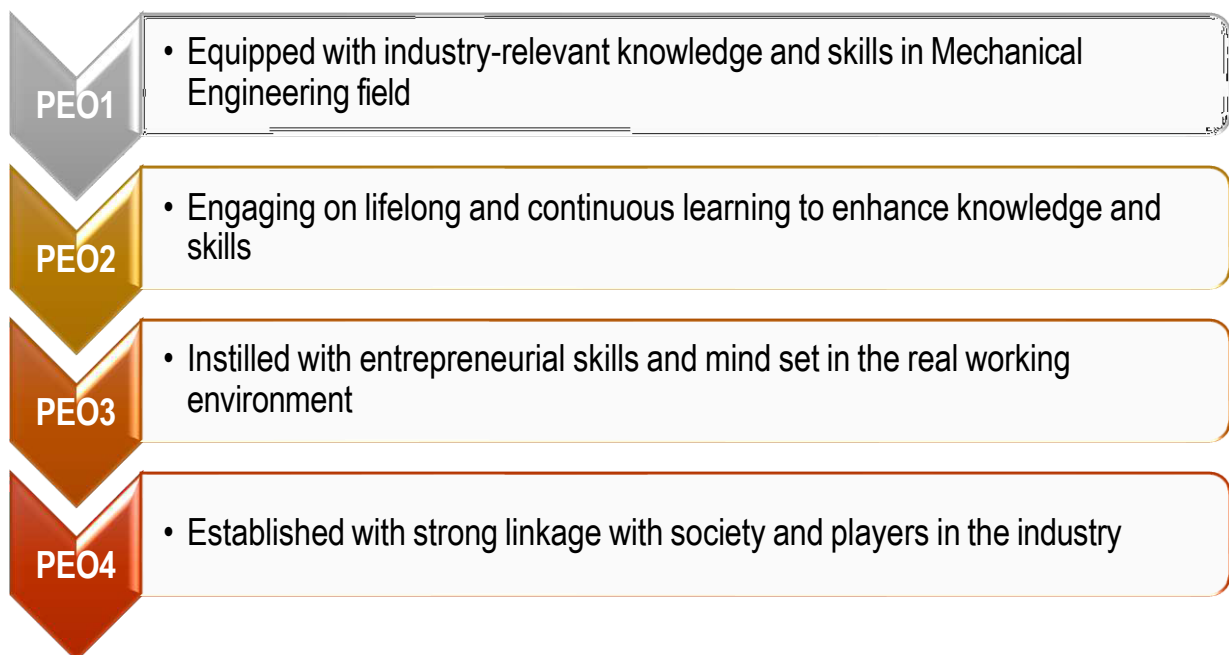
- a. Assistant Engineer
- b. Assistant R&D Executive
- c. Assistant Tooling Engineer
- d. Quality Assurance Executive
- e. Production Executive
- f. Mold maker
- g. Supervisor
- h. Technical Specialist
- i. Technician
- j. Technical Assistant

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### 6.3.3 PROGRAMME AIMS

The programme believes that every individual has potential and the programme aims to develop adaptable and responsible Senior Assistant Mechanical Engineers to support government's aspiration to increase workforce in engineering related field.

### 6.3.4 PROGRAMME EDUCATIONAL OBJECTIVES (PEO)



### 6.3.5 PROGRAMME LEARNING OUTCOMES(PLO)

Upon completion of the programme, the graduates should be able to:

<b>PLO1</b>	<ul style="list-style-type: none"><li>• Apply knowledge of applied mathematics, applied science, engineering fundamentals and an engineering specialization as specified in DK1 to DK4 respectively for practical procedures and practices</li></ul>
<b>PLO2</b>	<ul style="list-style-type: none"><li>• Identify and analyze well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (DK1 to DK4)</li></ul>
<b>PLO3</b>	<ul style="list-style-type: none"><li>• Design solutions for well-defined technical problems and assist with the design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations (DK5)</li></ul>
<b>PLO4</b>	<ul style="list-style-type: none"><li>• Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements</li></ul>
<b>PLO5</b>	<ul style="list-style-type: none"><li>• Apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems, with an awareness of the limitations (DK6)</li></ul>
<b>PLO6</b>	<ul style="list-style-type: none"><li>• Demonstrate knowledge of the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to engineering technician practice and solutions to well- defined engineering problems (DK7)</li></ul>
<b>PLO7</b>	<ul style="list-style-type: none"><li>• Understand and evaluate the sustainability and impact of engineering technician work in the solution of well-defined engineering problems in societal and environmental contexts (DK7)</li></ul>
<b>PLO8</b>	<ul style="list-style-type: none"><li>• Understand and commit to professional ethics and responsibilities and norms of technician practice</li></ul>
<b>PLO9</b>	<ul style="list-style-type: none"><li>• Function effectively as an individual, and as a member in diverse technical teams PLO10: communicate effectively on well-defined engineering activities with the engineering community and with society at large, by being able to comprehend the work of others, document their own work, and give and receive clear instructions</li></ul>
<b>PLO11</b>	<ul style="list-style-type: none"><li>• Demonstrate knowledge and understanding of engineering management principles and apply these to one's own work, as a member or leader in a technical team and to manage projects in multidisciplinary environments</li></ul>
<b>PLO12</b>	<ul style="list-style-type: none"><li>• Recognize the need for, and have the ability to engage in independent updating in the context of specialized technical knowledge</li></ul>

## 6.3.6 PROGRAMME STRUCTURE FOR DIPLOMA IN MECHANICAL ENGINEERING (PLASTIC)

### PROGRAMME STRUCTURE

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PROGRAMME LEARNING OUTCOME (PLO)												PREREQUISITE / CO-REQUISITE
			L	P	T	O		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO 10	PLO 11	PLO 12	
								Knowledge	Problem Analysis	Design/Development of Solution	Investigation	Modern Tool Usage	The Engineer and Society	Environment and Sustainability	Ethic	Individual and Teamwork	Communication	Project Management and Finance	Life Long Learning	
CLS1	CLS2	CLS2	CLS2	CLS3a /3c	CLS3 b	CLS5	CLS5	CLS3 d	CLS3 b	CLS4	CLS4									
<b>SEMESTER 1</b>																				
Compulsory	DUE10012	Communicative English 1	1	0	2	0	2										√		√	
	MPU24XX1	Sukan	0	2	0	0	1										√		√	
	MPU24XX1	Unit Beruniform 1																		
Common Core	DUW10022	Occupational, Safety and Health for Engineering	2	0	0	0	2	√						√			√			
	DBS10012	Engineering Science	2	1	0	0	2	√			√									
	DBM10013	Engineering Mathematics 1	2	0	2	0	3	√			√						√			
Discipline Core	DJJ10013	Engineering Drawing	1	3	0	0	3	√			√			√						
	DJJ10022	Mechanical Workshop Practice 1	0	4	0	0	2				√	√								
	DJJ10033	Workshop Technology	3	0	0	0	3	√						√					√	
<b>TOTAL</b>			<b>25</b>				<b>18</b>													
<b>SEMESTER 2</b>																				
Compulsory	MPU23052	Sains, Teknologi dan Kejuruteraan Islam*	1	0	2	0	2							√					√	
	MPU23042	Nilai Masyarakat Malaysia**																		
	MPU24XX1	Kelab/Persatuan	0	2	0	0	1										√		√	
	MPU24XX1	Unit Beruniform 2																		
Common Core	DBM20023	Engineering Mathematics 2	2	0	2	0	3	√			√						√		DBM10013	
Discipline Core	DJJ20053	Electrical Technology	2	2	0	0	3	√			√									
	DJJ20063	Thermodynamics	2	2	0	0	3	√			√									
Specialization	DJC20012	Plastic Technology	2	0	0	0	2	√	√								√			
	DJC20022	Machining Workshop Practice	0	4	0	0	2				√						√			
<b>TOTAL</b>			<b>23</b>				<b>16</b>													
<b>SEMESTER 3</b>																				
Compulsory	DUE30022	Communicative English 2	1	0	2	0	2										√		√	DUE10012
Common Core	DBM30033	Engineering Mathematics 3	2	0	2	0	3	√			√						√		DBM20023	
Discipline Core	DJJ30093	Engineering Mechanics	2	2	0	0	3	√	√		√									
	DJJ20073	Fluid Mechanics	2	2	0	0	3	√			√									
	DJJ30113	Material Science	2	2	0	0	3	√			√						√			
	DJJ30122	Computer Aided Design	1	2	0	0	2	√			√						√		DJJ10013	
Specialization	DJC30032	Composites Plastic	2	0	0	0	2	√			√						√			
<b>TOTAL</b>			<b>24</b>				<b>18</b>													



CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PROGRAMME LEARNING OUTCOME (PLO)												PREREQUISITE / CO-REQUISITE
			L	P	T	O		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO 10	PLO 11	PLO 12	
								Knowledge	Problem Analysis	Design/Development of Solution	Investigation	Modern Tool Usage	The Engineer and Society	Environment and Sustainability	Ethic	Individual and Teamwork	Communication	Project Management and Finance	Life Long Learning	
CL S1	CL S2	CL S2	CL S2	CL S3a /3c	CL S3 b	CL S5	CL S5	CL S3 d	CL S3 b	CL S4	CL S4									
<b>SEMESTER 4</b>																				
Common core	DJJ40132	Engineering and Society	2	0	0	0	2							√	√	√				
Discipline Core	DJJ40153	Pneumatic & Hydraulics	2	2	0	0	3	√		√		√								
	DJJ30103	Strength of Materials	2	2	0	0	3	√	√			√								
	DJJ40182	Project 1	2	0	0	0	2		√				√					√		
Specialization	DJC40042	Plastic Production Process	2	0	0	0	2	√			√					√				
	DJC40052	Plastic Workshop Practice	0	4	0	0	2	√			√				√					
	DJC40062	Product Design & CAE Modeling	0	4	0	0	2			√		√						√		
Elective		Elective***																		
<b>TOTAL</b>			<b>22</b>				<b>16</b>													
<b>SEMESTER 5</b>																				
Compulsory	MPU21012	Pengajian Malaysia	1	0	2	0	2							√					√	
	DUE50032	Communicative English 3	1	0	2	0	2									√		√	DUE30012	
	MPU22012	Entrepreneurship (U2)	1	0	2	0	2									√	√			
Discipline Core	DJJ50193	Project 2	0	4	0	0	3			√	√					√	√		DJJ40182	
Specialization	DJC50073	Plastic Testing	1	3	0	0	3	√			√				√					
	DJC50083	Mould Design	1	3	0	0	3	√		√								√		
Elective		Elective***																		
<b>TOTAL</b>			<b>21</b>				<b>15</b>													
<b>SEMESTER 6</b>																				
Industrial Training	DUT600610	Engineering Industrial Training	0	0	0	0	10					√	√		√	√	√		√	
<b>TOTAL</b>			<b>0</b>				<b>10</b>													
<b>TOTAL CREDIT VALUES</b>							<b>95</b>													
<b>ELECTIVES COURSES</b>																				
1	DJJ42022	Industrial Management	2	0	0	0	2													
2	DJJ42032	Instrumentation and Control	2	0	0	0	2													
3	DJJ52012	Engineering Plant Technology	2	0	0	0	2		√					√		√				
4	DJJ52042	Railway 1 - Rolling Stock	2	0	0	0	2													
5	DJJ52052	Railway 2 - Railway Track System	2	0	0	0	2													
6	DJM20032	C Programming	1	2	0	0	2	√		√					√					
7	DJM40082	Programmable Logic Control	1	2	0	0	2	√			√				√					
8	DJM40092	Control System	1	2	0	0	2	√			√				√					
9	DJF51082	Quality Control	2	0	0	0	2	√	√						√					
<b>FREE ELECTIVES</b>																				
1	DUD10012	Design Thinking	1	0	0	1	2		√								√			

## 6.3.7 SYNOPSIS AND COURSE LEARNING OUTCOMES (CLO)

SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
1	DBM10013 ENGINEERING MATHEMATICS 1	<p>ENGINEERING MATHEMATICS 1 exposes students to the basic algebra including resolve partial fractions. This course also covers the concept of trigonometry and the method to solve trigonometry problems by using basic identities, compound angle and double angle formulae. Students will be introduced to the theory of complex number and concept of vector and scalar. Students will explore advanced matrices involving 3x3 matrix.</p> <p>Credit(S): 3 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Use mathematical statement to describe relationship between various physical phenomena. (C3, CLS1)</li> <li>2. Show mathematical solutions using the appropriate techniques in mathematics. (C3, CLS3c)</li> <li>3. Use mathematical expression in describing real engineering problems precisely, concisely and logically. (A3, CLS3b)</li> </ol>
1	DBS10012 ENGINEERING SCIENCE COURSE	<p>ENGINEERING SCIENCE introduces the physical concepts required in engineering disciplines. Students will learn the knowledge of fundamental physics in order to identify and solve engineering physics problems. Students will be able to perform experiments and activities to mastery physics concepts.</p> <p>Credit(S): 2 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Use basic physics concept to solve engineering physics problems (C3, CLS1)</li> <li>2. Apply knowledge of fundamental physics in activities to mastery physics concept (C3, CLS 1)</li> <li>3. Perform appropriate activities related to physics concept (P3, CLS 3a)</li> </ol>
1	DJJ10013 ENGINEERING DRAWING	<p>ENGINEERING DRAWING provides the students with the fundamentals of technical drawings and the application Computer Aided Design (CAD) software. For technical drawing, it emphasizes on the practical knowledge of drawing instruments and drawing techniques while for the CAD student will learn to navigate and use the software to create 2D drawing design in engineering. Students shall be able to demonstrate competency in using some standard available features of technical drawing and CAD application to create and manipulate objects or elements in engineering drawing.</p> <p>Credit(S): 3 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Apply the fundamentals of technical drawing and features of CAD software in producing engineering drawing. (C3, P1)</li> <li>2. Construct the technical drawing and 2D CAD drawing according to the engineering drawing standards. (P3, PLO5)</li> <li>3. Propose a project report with following engineering norms and practices in engineering drawing. (A3, PLO8)</li> </ol>

SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
1	DJJ10022 MECHANICAL WORKSHOP PRACTICE 1	MECHANICAL WORKSHOP PRACTICE 1 exposes the students to welding, machining and fitting which involve the use of arc and gas welding machine, lathe machine, drilling machine, grinding, hand tools, marking out tools, measuring and testing tools. Students are also taught to emphasize on safety procedures and cleanliness in the workshop.  Credit(S): 3 Pre-Requisite(S): None	<ol style="list-style-type: none"> <li>1. Apply the knowledge of basic mechanical components and equipment, hand tools and measuring equipment in workshop technology (C3, PLO1)</li> <li>2. Apply standard practice in operating mechanical tools and component (C3, PLO8)</li> <li>3. Demonstrate continuous learning and information management skills to complete assigned task (A3, PLO12)</li> </ol>
1	DJJ10033 WORKSHOP TECHNOLOGY	WORKSHOP TECHNOLOGY provides exposure and knowledge in using hand tools, machine operation such as drilling, lathe, milling and computer numerical control. It also covers on gear measurement and inspection welding process in oxy acetylene, Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW) and Gas Metal Arc Welding (GMAW).  Credit(S): 3 Pre-Requisite(S): None	<ol style="list-style-type: none"> <li>1. Apply the knowledge of basic mechanical components and equipment, hand tools and measuring equipment in workshop technology (C3, PLO1)</li> <li>2. Apply standard practice in operating mechanical tools and component (C3, PLO8)</li> <li>3. Demonstrate continuous learning and information management skills to complete assigned task (A3, PLO12)</li> </ol>
1	DUW10022 OCCUPATIONAL SAFETY AND HEALTH FOR ENGINEERING	OCCUPATIONAL SAFETY AND HEALTH FOR ENGINEERING designed to impart understanding of the self-regulatory concepts and provisions under the Occupational Safety & Health Act (OSHA). This course presents the responsibilities of workers in implementing and complying with the safety procedures at work. Understanding of notifications of accidents, dangerous occurrence, poisoning and diseases and liability for offences will be imparted upon students. This course will also provide an understanding of the key issues in OSH Management, Incident Prevention, Fire Safety, Hazard Identification Risk Control and Risk Assessment (HIRARC), Workplace Environment and Ergonomics and guide the students gradually into this multi-disciplinary science.  Credit(S): 2 Pre-Requisite(S): None	<ol style="list-style-type: none"> <li>1. Explain briefly Occupational Safety and Health (OSH) procedures, regulation and its compliance in Malaysia. (C2, PLO1)</li> <li>2. CLO2: Initiates incident hazards, risks and safe work practices in order to maintain health and safe work environment. (A3, PLO8)</li> <li>3. CLO3: Demonstrate communication skill in group to explain the factor that can lead to accident in workplace. (A3, PLO10)</li> </ol>

SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
2	DJC20022 MACHINING WORKSHOP PRACTICE	<p><b>MACHINING WORKSHOP PRACTICE</b> covers the basic metrologies and machining. Student will learn the application of measuring and gauging, conventional and Computer Numerical Control (CNC) machines that can used in mold making processes. This course also provides the skills to carry out project work.</p> <p>CREDIT(S): 2 PRE-REQUISITE(S): NONE</p>	<ol style="list-style-type: none"> <li>1. Display ability of using instrument and take the right reading in measuring. (P2, PLO 5)</li> <li>2. Perform the operation of conventional and CNC machines according to Standard Operational Procedure (SOP). (P4, PLO5)</li> <li>3. Demonstrate ability to work in team to complete the assigned task during practical work session. (A3, PLO9)</li> </ol>
2	DJJ20053 ELECTRICAL TECHNOLOGY COURSE	<p>ELECTRICAL TECHNOLOGY exposes students to the basic electrical circuit concepts, the application of electromagnetism in electrical machines and transformers. The course focuses on the different types of electrical circuits, the relationship between current and voltage including the resistance. It also provides the skills on the methods of constructing basic circuits and operation of electrical machines and transformers. This course also exposes the students to the demonstration of experiments in Electrical Engineering.</p> <p>Credit(S): 3 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Explain the principles and fundamental of electrical circuits, electromagnetism, transformers and electrical machine (C2, PLO1)</li> <li>2. Solve the problem related to electrical circuits, electromagnetism, transformers and electrical machine (C3, PLO1)</li> <li>3. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4, PLO5)</li> </ol>
2	DJJ20063 THERMODYNAMICS	<p>THERMODYNAMICS provides knowledge of theory, concept and application of principles to solve problems related to thermodynamics. It emphasizes on concept of non-flow process and flow process, properties of steam, Carnot cycle and Rankine cycle. This course also exposes the students to the demonstration of experiments in Thermodynamics by using the real equipment.</p> <p>Credit(S): 3 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Explain fundamentals concept and properties of pure substances in thermodynamics (C2, PLO1)</li> <li>2. Apply Laws of thermodynamics and it processes (C3, PLO1)</li> <li>3. Organize appropriately experiments according to the Standard Operating Procedures (P4, PLO5)</li> </ol>

SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
2	DJC 20012 PLASTIC TECHNOLOGY	<p><b>PLASTIC TECHNOLOGY</b> focuses on theoretical knowledge on the basic plastic and organic materials that is related to its properties. It is also provides knowledge on the process involved in the resin manufacturing. This course will also give knowledge about reinforcing of plastics and the methods involved. The use of plastic technology in the important industries such as in packaging industry, aeronautical, construction and engineering industry will be discussed as well as the economy aspects of plastics. This course also touches about the environmental aspects of plastics which emphasize how plastic is recycled and the methods of disposing plastic wastes.</p> <p>CREDIT(S): 2 PRE-REQUISITE(S): NONE</p>	<ol style="list-style-type: none"> <li>1. Explain the element of plastics material which involved properties, structure and bonding of plastics material. (C2, PLO1)</li> <li>2. Expose of plastics technology in major industries which consideration environmental aspects. (C2, PLO2)</li> <li>3. Demonstrate understanding the uses of plastic technology in various major industries and have good consideration in environmental aspects of plastic. (A3, PLO9)</li> </ol>
2	MPU23052 Sains, Teknologi dan Kejuruteraan Dalam Islam*	<p>Sains Teknologi dan Kejuruteraan dalam Islam memberi pengetahuan tentang Konsep Islam sebagai Ad Din dan seterusnya membincangkan konsep sains, teknologi dan kejuruteraan dalam Islam serta impaknya, pencapaiannya dalam tamadun Islam, prinsip serta peranan syariah dan etika Islam, peranan kaedah fiqh serta aplikasinya.</p> <p>Credit(S): 2 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Melaksanakan dengan yakin amalan Islam dalam kehidupan seharian.</li> <li>2. Menerangkan etika dan profesionalisme berkaitan sains teknologi dan kejuruteraan dalam Islam.</li> <li>3. Menghubungkan minda ingi tahu dengan prinsip syariah, etika dan kaedah fiqh dalam bidang sains, teknologi dan kejuruteraan menurut perspektif Islam.</li> </ol>
2	MPU23042 Nilai Masyarakat Malaysia**	<p>Nilai masyarakat Malaysia membincangkan aspek sejarah pembentukan masyarakat, nilai-nilai agama, adat resam dan budaya masyarakat di Malaysia. Selain itu, pelajar dapat mempelajari tanggungjawab sebagai individu dan nilai pepaduan dalam kehidupan di samping cabaran-cabaran dalam membentuk masyarakat Malaysia.</p> <p>Credit(S): 2 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Membincangkan sejarah dan nilai dalam pembentukan masyarakat di Malaysia</li> <li>2. Menerangkan etika dan profesionalisme terhadap konsep perpaduan bagi meningkatkan semangat patriotisme masyarakat Malaysia.</li> <li>3. Menghubungkan minda ingin tahu dengan cabaran-cabaran dalam membentuk masyarakat Malaysia.</li> </ol>

2	DBM20023 Engineering Mathematics 2	<p>ENGINEERING MATHEMATICS 2 exposes students to the basic laws of indices and logarithms. This course introduces the basic rules of differentiation concepts to solve problems that relates maximum, minimum and calculate the rates of changes. This course discusses integration concepts in order to strengthen student's knowledge for solving area and volume bounded region problems. In addition, students will learn application of both techniques of differentiation and integration.</p> <p>Credit(S): 3          Pre-Requisite(S): DBM10013</p>	<ol style="list-style-type: none"> <li>1. Use algebra and calculus knowledge to describe relationship between various physical phenomena. (C3,CLS 1)</li> <li>2. Solve the mathematical problems by using appropriate and relevant fundamental calculus techniques. (C3,CLS 3c)</li> <li>3. Use mathematical language to express mathematical ideas and arguments precisely, concisely and logically in calculus (A3,CLS 3b )</li> </ol>
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SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
3	DJJ20073 FLUID MECHANICS	<p><b>FLUID MECHANICS</b> provides students with a strong understanding of the fundamentals of fluid mechanics principles related to the fluid properties and behaviour in static and dynamic situations. This course also exposes the students to the demonstration at the real equipment of fluid mechanics.</p> <p>CREDIT (S): 3 PRE-REQUISITE: NONE</p>	<ol style="list-style-type: none"> <li>1. Explain the fundamental of fluid. (C2, PLO1)</li> <li>2. Solve the problem related to fluid properties, fluid static and fluid dynamics. (C3, PLO1)</li> <li>3. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4, PLO5)</li> </ol>
3	DJC30032 COMPOSITE PLASTIC	<p><b>PLASTIC COMPOSITES</b> will provide the concepts of plastic composites with several fabrication techniques. This course also provides knowledge on fiber reinforcement of polymer matrices and their corresponding properties. The course includes the mechanics of composites and some composite testing method.</p> <p>CREDIT(S) : 2 PRE-REQUISITE: NONE</p>	<ol style="list-style-type: none"> <li>1. Explain the concepts of polymer composites related to their properties. (C2, PLO1)</li> <li>2. Interpret material and structure with mechanical properties of plastics composites and fabrication techniques. (C3, PLO4)</li> <li>3. Demonstrate understanding uses of plastic composites in various major plastics composites industries. (A3, PLO9)</li> </ol>
3	DJJ30093 ENGINEERING MECHANICS	<p><b>ENGINEERING MECHANICS</b> focuses on theoretical knowledge in statics and dynamics. This course provides students with fundamental understanding of forces and equilibrium, resultants, equilibrium of a particles and structural analysis. This course also covers kinematics and kinetics of particles. This course also exposes the students to the demonstration of experiments in Engineering Mechanics.</p> <p>Credit(S): 3 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Solve problems related to static and dynamics based on the concepts and principle of engineering mechanics (C3, PLO 1)</li> <li>2. Analyze engineering related problems based on fundamentals of static and dynamics (C4, PLO 2)</li> <li>3. Organize appropriately experiment in groups according to Standard Operation Procedures (P4, PLO 5)</li> </ol>

3	DJJ30113 MATERIAL SCIENCE AND ENGINEERING	<p>MATERIALS SCIENCE AND ENGINEERING course introduces students a comprehensive coverage of basic fundamentals of materials science and engineering. The course focuses on material structures, properties, fabrication methods, corrosion, thermal processing and material testing mostly of metals and alloys. New fabrication method of powder metallurgy are introduces to student to cater the fabrications of devices, sensors for Industry 4.0 technology.</p> <p>Credit(S): 3 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Apply the fundamental of material science to identify the materials, properties, behavior, processes and treatment.(C3 ,PLO1)</li> <li>2. Performed appropriate material testing according to the Standard Operating Procedures. (P4, PLO5)</li> <li>3. Demonstrate the ability to work individually and in groups to complete assigned tasks during the practical work session.</li> </ol>
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SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
3	COMPUTER AIDED DESIGN COURSECODE: DJJ30122	COMPUTER AIDED DESIGN exposes the students to the fundamentals and principles of 3D drawing using 3D CAD software. Students also equip with various method of creating a solid model using extrude, revolve, swept, assembly, simulation and animation. Hands-on exercises drawing of mechanical engineering will also be covered in this course.  Credit(S): 3 Pre-Requisite(S): DJJ10013	<ol style="list-style-type: none"> <li>1. Apply CAD commands in order to produce engineering drawing. (C3, PLO1)</li> <li>2. Construct 3D drawing of Mechanical Components according Drawing Standards. (P4, PLO5)</li> <li>3. Demonstrate a presentation with following technical standard Communication. (A3, PLO10)</li> </ol>
3	DBM30033 ENGINEERING MATHEMATICS 3	ENGINEERING MATHEMATICS 3 exposes students to the statistical and probability concepts and their applications in interpreting data. The course also introduces numerical methods concept to solve simultaneous equations by using Gaussian Elimination method, LU Decomposition using Doolittle and Crout methods, polynomial problems using Simple Fixed-Point Iteration and Newton-Raphson methods. In order to strengthen the students in solving engineering problems, Ordinary Differential Equation (ODE) is also included. In addition, the course also discusses optimization problems by using Linear Programming. It is designed to build students' teamwork and problems solving skill.  Credit(S): 3 Pre-Requisite(S): DBM20023	<ol style="list-style-type: none"> <li>1. Demonstrate an understanding of the common body of knowledge in mathematics. (C3, CLS 1)</li> <li>2. Demonstrate problems solving skills in engineering problems. (C3, CLS 3c)</li> <li>3. Use mathematical expression in describing real engineering problems precisely, concisely and logically. (A3, CLS 3b)</li> </ol>
3	DUE30022 COMMUNICATIVE ENGLISH 2	<b>COMMUNICATIVE ENGLISH 2</b> emphasises the skills required at the workplace to describe products or services as well as processes or procedures. It also focuses on the skills to give and respond to instructions. This course will also enable students to make and reply to enquiries and complaints.  CREDIT(S): 2 PRE-REQUISITE(S): DUE1012 COMMUNICATIVE ENGLISH 1	<ol style="list-style-type: none"> <li>1. Describe products or services related to their field of studies using appropriate language. (C3, A3)</li> <li>2. Transfer information of a process or procedure accurately from linear to non-linear form and vice versa. (C3)</li> <li>3. Listen and respond to enquiries using appropriate language. (C3)</li> <li>4. Make and respond to complaints using appropriate language. (C3)</li> </ol>

SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
4	DJC40062 PRODUCT DESIGN & CAE MODELING	<p><b>PRODUCT DESIGN &amp; CAE MODELING</b> provides knowledge about the design management, design process and the activities involved in the process of designing product include the concept generation. The emphasis of this course is on the principles of plastic product design and produce 3d modeling sketch for plastic part design using CAD software. This course also provides knowledge about analysis of product design using CAE software. Experience will be gained in producing a model of product and mock-up model using rapid prototyping process and silicon casting process.</p> <p>CREDIT(S): 2 PRE-REQUISITE(S): NONE</p>	<ol style="list-style-type: none"> <li>1. Sketch a design concept and plastic part 3D modelling using CAD software according to the principle of plastic product design. (P3, PLO5)</li> <li>2. Organize the process to produce rapid prototype product and analysis using CAE software related to the plastic product. (P4, PLO3)</li> <li>3. Demonstrate awareness in project management and ing to develop a project. (PLO11)</li> </ol>
4	DJC40052 PLASTIC WORKSHOP PRACTICE	<p>PLASTIC WORKSHOP PRACTICE exposes the students to common plastic production machines operation or equipment base according to Standard Operational Procedure (SOP). Injection Molding Machine, Blow Molding, Pipe Extrusion/Blown Film Machine, Compression Molding, and Thermoforming are among the machines involved. Students are also taught to emphasize on mold and die service and maintenance, safety procedures and cleanliness in the workshop.</p> <p>CREDIT(S): 2 PRE-REQUISITE(S): NONE</p>	<ol style="list-style-type: none"> <li>1. Identify the concept of process to classify the types of plastic production correctly (P1, PLO1)</li> <li>2. Perform the operation of plastic production machines or equipment base according to Standard Operational Procedure (SOP). (P4, PLO5)</li> <li>3. Demonstrate ability to identify plastic production process correctly and work in team to complete the assigned task</li> </ol> <p>ng practical work session. (A3, PLO9)</p>

4	DJC40042 PLASTIC PRODUCTION PROCESS	PLASTIC PRODUCTION PROCESS is divided into two parts: Part 1 provides the main plastics molding process such as injection moulding, blow moulding, blown film, extrusion, compression moulding, transfer moulding and thermoforming. While parts two is about the other plastic moulding process and secondary process consists of plastic fabrication process and printing process such as hot stamping process, silk screen printing and pad printing.  CREDIT(S): 2 PRE-REQUISITE(S): NONE	<ol style="list-style-type: none"> <li>1. Explain the plastic production methods related to plastic products. (C2, PLO1)</li> <li>2. Sketch the appropriate production processes related to plastic products according to the correct method. (C3, PLO4)</li> <li>3. Discuss the theory of plastic production process related to plastic engineering field in groups. (A3, PLO9)</li> </ol>
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SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
4	DJJ 30103 STRENGTH OF MATERIALS	<p>STRENGTH OF MATERIALS provides knowledge on concepts and calculation of forces on materials, thermal stress, shear force and bending moment, bending stress, shear stress and torsion in shafts. It also deals with the experiments conducted on tensile test, bending moment, shearing force and torsion and deflection.</p> <p>Credit(S): 2 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Apply the concepts of strength of materials to solve related problems. (C3, PLO1)</li> <li>2. Analyse problems correctly related to strength of materials (C4, PLO2)</li> <li>3. Organize appropriately experiment in groups according to Standard Operation Procedures (SOP).(P4, PLO5)</li> </ol>
4	DJJ 40132 ENGINEERING AND SOCIETY	<p>ENGINEERING AND SOCIETY focuses on the introduction to professional ethics, theory and philosophy of ethics, values in professional ethics, engineering bylaws and standards, issues in professional ethics and sustainability. It also relates towards IR 4.0 introduction and green engineering.</p> <p>Credit(S): 2 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Implement the roles of engineering profession towards the developing of society and its challenges in globalization (C3, PLO6)</li> <li>2. Determine the important of work ethics, by laws and professionalism in engineering profession. (C4, PLO8)</li> <li>3. Determine the needs for sustainable and green engineering towards providing the solutions in engineering field. (C4, PLO7)</li> </ol>
4	DJJ 40153 PNEUMATIC & HYDRAULICS	<p>PNEUMATIC &amp; HYDRAULICS provides knowledge and understanding to the importance of pneumatics and hydraulics circuits, equipment and design along with its usage in the industry.</p> <p>Credit(S): 3 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Analyze the basic concept and function of pneumatics and hydraulics system. (C3, PLO1)</li> <li>2. Design pneumatic, electro-pneumatic and hydraulic circuit according to assigned tasks. (C5, PLO3)</li> <li>3. Perform experiment on pneumatic, electro-pneumatic and hydraulic circuit during practical session. (P4, PLO5)</li> </ol>

SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
4	DJJ40182 PROJECT 1	PROJECT 1 provides students with solid foundation on knowledge and skills in formulating project proposal preparation, writing and presentation  Credit(S): 2 Pre-Requisite(S): None	<ol style="list-style-type: none"> <li>1. Identify the engineering problems to be solved (C4, PLO2)</li> <li>2. Analyze methods to solve problems (C4, PLO7)</li> <li>3. Propose a solution to problems (A3, PLO11)</li> </ol>
5	MPU21012 PENGAJIAN MAYSIA	PENGAJIAN MALAYSIA membincangkan sejarah dan politik, perlembagaan Malaysia dan sistem pemerintahan negara, kemasyarakatan dan perpaduan, pembangunan negara dan isu-isu keperihatinan negara. Kursus ini adalah bertujuan untuk melahirkan graduan yang mempunyai identiti kebangsaan dan semangat patriotisme yang unggul	<ol style="list-style-type: none"> <li>1. CLO1 :Menerangkan nilai sejarah bangsa dan negara di Malaysia ( A3 , CLS 5 )</li> <li>2. CLO2 :Menghubungkait sikap dan tanggungjawab yang signifikan dengan sistem pemerintahan negara ( A4 , CLS 5 )</li> <li>3. CLO3 :Membentuk minda ingin tahu menerusi aktiviti kemasyarakatan atau patriotisme dalam kalangan pelajar ( A3 , CLS 4 )</li> </ol>
5	DUE50032 COMMUNICATIVE ENGLISH 3	<b>COMMUNICATIVE ENGLISH 3</b> aims to develop the necessary skills in students to analyse and interpret graphs and charts from data collected as well as job hunting mechanics. Students will learn to present data through the use of graphs and charts. Students will learn the process of job hunting which includes job search strategies and making enquiries. They will also learn to write resumes and cover letters. The students will develop skills to introduce themselves, highlight their strengths and abilities, present ideas, express opinions and respond appropriately during job interviews.  CREDIT(S): 2 PRE-REQUISITE(S): DUE3012 COMMUNICATIVE ENGLISH 2	<ol style="list-style-type: none"> <li>1. Describe and analyze information contained in graphs and charts clearly and accurately based on a mini project. (C4, A3)</li> <li>2. Write an effective resume and a supporting cover letter for a relevant job opening. (C3)</li> <li>3. Handle a job interview effectively and confidently. (C3)</li> </ol>

5	DJC50073 PLASTIC TESTING	<p><b>PLASTIC MATERIALS TESTING</b> exposes the various test methods carried out on Plastic Materials materials. This course emphasizes on the use and operation of the various Plastic Materials testing equipments. The tests include mechanical testing, physical testing, thermal testing, environmental testing, optical testing and electrical testing.</p> <p>CREDIT(S): 3          PRE-REQUISITE(S): NONE</p> <ol style="list-style-type: none"> <li>1. Determine the standard and equipment used in Plastic materials testing. (C3, PLO1)</li> <li>2. Perform various types of Plastic Materials testing independently using Standard Operation Procedure (SOP). (P4, PLO5)</li> <li>3. Demonstrate ability to lead a team to complete assigned tasks during practical task sessions. (A3, PLO9)</li> </ol>
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SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
5	DJC50083 MOULD DESIGN	<p><b>MOULD DESIGN</b> provides knowledge about mould base construction, plastic part design and specification of mould. In plastic part design it emphasis on wall thickness, draft angle, parting line, rib and bosses while in mould it emphasis on mould base set, core and cavity insert, feed system, ejection system, cooling system and mould shrinkage. The development of mould base assembly and mould fabrication tooling is done using CAD/CAM software.</p> <p>CREDIT(S): 3 PRE-REQUISITE(S): CAD 2</p>	<ol style="list-style-type: none"> <li>1. Apply fundamental mould design knowledge in designing a mould for plastic injection moulding. (C3, PLO3)</li> <li>2. Display ability to sketch mould base assembly and mould fabrication tooling with the aid of CAD CAM software. (P4, PLO5)</li> <li>3. Demonstrate continuous learning and information management skill while engaging in independent acquisition of new knowledge and skill to develop a project. (A3, PLO12)</li> </ol>
5	DJJ 50193 PROJECT 2	<p>PROJECT 2 is a continuation of Project 1 focusing on project planning, development, project report and presentation. This course introduces students with ability and skills in conducting project planning, development and management based on their project design. It also provides the student with technical writing and presentation skills. The project will be implemented in a group and each group will work on a project under lecturer(s) supervision. Project titles will be based on specialization and students will be assessed individually.</p> <p>Credit(S): 2 Pre-Requisite(S): None</p>	<ol style="list-style-type: none"> <li>1. Demonstrate appropriate and creative solution in solving project problems. (P5, PLO3)</li> <li>2. Perform project plan to achieve objectives with valid and reliable results. (P4, PLO4)</li> <li>3. Explain the project work and defend project outcomes effectively with good communication skills. (A4, PLO10)</li> <li>4. Organize project activities and outcomes in report accordance to the specified standard format that applies engineering management principles. (P4, PLO11)</li> </ol>
5	DJJ6192 <b>INDUSTRIAL MANAGEMENT (ELECTIVE)</b>	<p><b>INDUSTRIAL MANAGEMENT</b> provides students with a strong fundamental understanding of industrial management prospect and production system planning such as inventory, scheduling, production system operation, facilities, plan location, layout and line balancing. This course also provides knowledge in quality control and human resource management.</p> <p>CREDIT(S): 2 PRE-REQUISITE(S): NONE</p>	<ol style="list-style-type: none"> <li>1. Apply the basic concepts of industrial management system in Industry to solve related problems. (C3, PLO1)</li> <li>2. Analyze problems related to industrial management. (C4, PLO2)</li> <li>3. Demonstrate good written communication skills in case study on assigned topics in groups. (A3, PLO6)</li> </ol>

SEM	COURSE	SYNOPSIS	COURSE LEARNING OUTCOMES
6	DUT600610 ENGINEERING INDUSTRIAL TRAINING	<p>ENGINEERING INDUSTRIAL TRAINING course will provide student with first-hand experience in an engineering practice environment outside the polytechnic. Students will practice their knowledge and skill based on knowledge learned in polytechnic through industry supervision to acquire the craft skill and essential. Student also need to demonstrate their responsibilities and professional ethics, communication, teamwork, and interpersonal and lifelong learning skills at the workplace</p> <p>Credit(S): 10 Pre-Requisite(S): Fulfill requirement industrial training guideline</p>	<ol style="list-style-type: none"> <li>1. Perform the assigned task accordingly based on job scope requirement (P4, PLO5)</li> <li>2. Initiate responsibilities as engineering technician while dealing with societal, health, safety, legal, cultural and other issues (A3, PLO6)</li> <li>3. Practice professional ethic and responsibility as an engineering technician. (A5, PLO8)</li> <li>4. Display ability to work in team or independently based on the given task (P4, PLO9)</li> <li>5. Explain the task by using effectively verbal/ visual communication skill in performing job requirement (A4, PLO 10)</li> <li>6. Write a report based on the given task accordingly to technical practice (C3, PLO 10)</li> <li>7. Display life long-learning skill in completing the given task (P4, PLO12)</li> </ol>



## 8.0 SUPPORT SERVICES

### 8.1 STUDENT AFFAIRS DEPARTMENT (HEP)

The Student Affairs Department basically has two main wings namely:

a. Admission and Data

The main function of this unit is to conduct the admission process efficiently and effectively. The process is conducted twice a year. Coordination and consultation with all the Head of Academic Departments is done in order to ensure the maximum enrolment of students.

b. Welfare and Discipline

The responsibilities of the Welfare and Discipline include the following:

- Scholarship and Education
- Insurance Policy
- Orientation Week
- Discipline
- Welfare
- Registration Of Student Vehicles
- Students' Representative Council

Each student will be covered under the insurance scheme known as *Accident Takaful* and *Family Group Takaful*. Insurance Policy from Takaful Company has been selected to cover the scope and amount of coverage as follows:

Company	Scope	Sum Assured
Takaful Malaysia Premium: RM15.00 yearly Students are insured 24 hours during their studies in POLIMAS	Death caused by accident Total Permanent/ Disablement Burial expenses Medical Expenses	RM20,000.00 RM20,000.00 RM1000.00 RM1000.00 @ RM40.00 per day

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Actions to be taken during the occurrence of accidents are as follows: -

- a. Students can get treatment from government or private hospitals in case of accidents.
- b. Academic Advisors / Coordinators of Welfare / Students / Students Next Kin of Guardians / Guardians must report the accident to the Student Affairs Department (HEP), POLIMAS within 14 days from the date of accident. HEP will notify Takaful within 30 days after the report is made for further actions to be taken.
- c. In the case of the student's location is far from POLIMAS and he or she may want to apply for claims from insurance companies, POLIMAS will hand the "Insurance Claim Form" to the student / family / guardian for follow-up actions. The completed claim form and supporting documents can be delivered or mailed to HEP POLIMAS.

Documents that need to be attached with the claim form are: -

- a. A copy of the identity card and student card
- b. A copy of the police report / industry
- c. A copy of driver's license
- d. Doctor report / Original medical bills
- e. A copy of discharge letter
- f. A copy of the death certificate / post mortem
- g. Pictures (scene location / physical)

## 8.2 EXAMINATION UNIT

Each Polytechnic Ministry of Education is responsible for providing guidance on learning, assessment, control and conduct of the examination. Certificate and Diploma to each student is subject to approval and confirmation of Board of Examination and Certificate / Diploma Polytechnic after students have passed all examinations and meet all the requirements of the course. For a polytechnic, Examination Unit is the unit where responsible for planning, managing and implementing all activities related to student assessment based on the guidelines and evaluation set.

Grading System:

Marks	Grade Points	Grade	Status
90-100	4.00	A+	Excellent
80-89	4.00	A	Excellent
75-79	3.67	A-	Distinction
70-74	3.33	B+	Distinction
65-69	3.00	B	Distinction
60-64	2.67	B-	Passed
55-59	2.33	C+	Passed
50-54	2.00	C	Passed
47-49	1.67	C-	Passed
44-46	1.33	D+	Passed
40-43	1.00	D	Passed
30-39	0.67	E	Failed
20-29	0.33	E-	Failed
0-19	0.00	F	Failed

Complete information about Examination Unit can be referred to **ARAHAN-ARAHAN PEPERIKSAAN DAN KAEDAH PENILAIAN**.

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### 8.3 LIAISON & INDUSTRIAL TRAINING UNIT

The Liaison & Industrial Training Unit (UPLI) is responsible for managing students' industrial training affairs. Students will be assigned to a particular organization during their training period based on their respective fields of study.

The placement process is finalized before training commences. Students are constantly advised to maintain a high level of discipline. They should abide by the rules and regulations of both the polytechnic and organization. Organizations are advised to consult the polytechnic immediately if there are any disciplinary problems.

Complete information about Liaison & Industrial Training Unit can be referred to ***PENGURUSAN DAN KAEDAH PENILAIAN LATIHAN INDUSTRI POLITEKNIK***.

### 8.4 LIBRARY UNIT

POLIMAS library provides academic resources and services to all students, staff and other members of POLIMAS community. The library provides quality and up to date information to everyone in terms of managing and providing access to information resources. Taking the role as a centre of knowledge, the library acts as a catalyst and assist in the teaching and learning and research in the process of producing creative and innovative semiprofessional.

Business Hour:

<b>Sunday-Wednesday</b>	<b>8.30am – 4.45pm</b>
<b>Thursday</b>	8.30am – 3.15 pm
<b>Friday, Saturday and Public Holiday</b>	Closed

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## 8.5 PSYCHOLOGY, COUNSELING AND CAREER UNIT

The main objective of the Psychology, Counselling and Career Unit is to facilitate students' self-development by helping them make the most of their polytechnic experiences. This unit offers to help students in finding and searching for alternative ways to overcome their emotional and psychological difficulties in dealing with problem encountered during their course of study at the polytechnic, guiding students in their career planning as well as helping the acquire better access to the job market in the private and public sectors. The unit helps students to exercise self-determination, achieve and realize their potentials and become positive contributors to the society.

Psychology, Counselling and Career Unit is ready to guide and help students to overcome existing challenges in campus. It is hoped that through the counselling and consultation process offered by this unit, the students are able to achieve:

- Understanding of oneself
- Developing awareness of self-potential
- Able to make wise decision
- Actively participate in academic and co-curriculum activities

## 8.6 HALLS OF RESIDENCE UNIT

The management and administration consist of two parts:

- a. Hostel management manage the hostel building and equipment
- b. Hostel resident management in-out management, welfare activities, discipline and the resident security.

About 1100 new students been offered to stay at hostel with ratio 550 boys and 550 girls.

All information about support services and be referred to ***BUKU PANDUAN DAN PERATURAN AM.***

## EDITORIAL COMMITTEES

Chairman : Wan Abdul Aziz Bin Wan Kadir (Head of Department)  
Editors : Mohd Hairol Mizzam Bin Haris (Head of Programme)  
Nazera Binti Dan  
Suzana Binti Safei