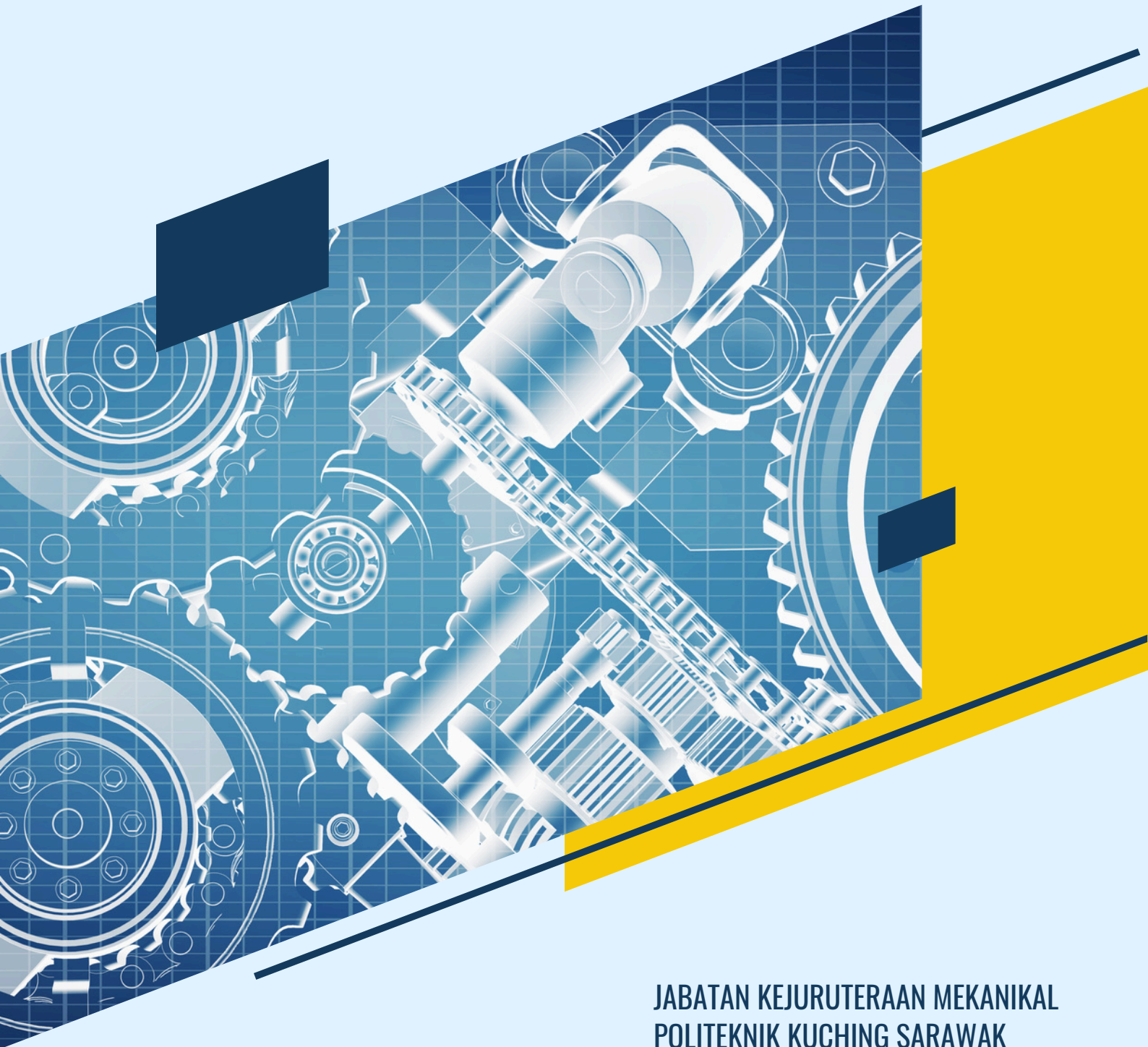


# STUDENT HANDBOOK

MECHANICAL ENGINEERING DEPARTMENT



**2026** v 1.0

JABATAN KEJURUTERAAN MEKANIKAL  
POLITEKNIK KUCHING SARAWAK  
KM22, JALAN MATANG,  
KUCHING, SARAWAK

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# **VISION & MISSION OF POLITEKNIK KUCHING SARAWAK**

## **POLYTECHNIC VISION**

TO BE THE LEADING-EDGE TVET INSTITUTION.

## **POLYTECHNIC MISSION**

TO PROVIDE WIDER ACCESS TO QUALIFIED AND RECOGNIZED TVET PROGRAM IN ORDER TO DEVELOP HOLISTIC, ENTREPRENEURIAL, AND BALANCED GRADUATES AS WELL AS TO EMPOWER COMMUNITIES THROUGH LIFELONG LEARNING BY CAPITALIZING SMART PARTNERSHIPS WITH STAKEHOLDERS.

# INTRODUCTION

## 1.1 INTRODUCTION TO MECHANICAL ENGINEERING DEPARTMENT

The Mechanical Engineering Department (JKM) is one of the largest departments at Politeknik Kuching Sarawak (PKS). The program believes that every individual has potential and aims to develop adaptable and responsible Senior Assistant Mechanical Engineers to support the government's aspiration to increase the workforce in engineering-related fields.

The Eleventh Malaysia Plan was drawn up to produce 60% out of 1.5 million workers in the TVET sector. Until now, 69,475 (51%) of Malaysia's 136,062 technical education and vocational training (TVET) graduates are working as professionals and skilled workers. Thus, the Diploma in Mechanical Engineering at Polytechnic was developed per the 3rd Industrial Malaysia Plan (IMP3), which aims to create innovative and creative human capital by matching talent to expertise with market demand. Its purpose is to provide vocational training with a balanced emphasis on theoretical and practical aspects. To keep abreast with rapid demand in the TVET sector, the Department of Polytechnic and Community College Education (DPCCE) progressively collaborates with major industry players in the country in developing the curriculum. The programme will take six semesters to complete, five academic semesters at their respective polytechnics and one semester of industrial training at relevant industries during the final semester. This programme complies with the Board of Engineer (BEM) requirements.

***“Generate Mechanical Excellence”***

**Work Practice of Mechanical Engineering Department**

**EKSA**

**E – EKOSISTEM**

**K – KONDUSIF**

**S – SEKTOR**

**A – AWAM**

## **1.2 OUTCOME BASED EDUCATION (OBE)**

Outcome-based education (OBE) is an educational model for students to demonstrate their knowledge and ability to perform according to the required outcomes. It is a student-centred 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 are needed before mapping out the curriculum, instruction, and assessment to ensure ultimate learning. Thus, OBE involves restructuring the curriculum and assessment to reflect the achievement of high learning order and mastery learning.

OBE helps students be aware of what they should learn and what they are learning and have 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 to develop originality, self-motivation, and independence while acquiring helpful knowledge and skills. The OBE alignment can be referred to from Figure 1 to Figure 5.

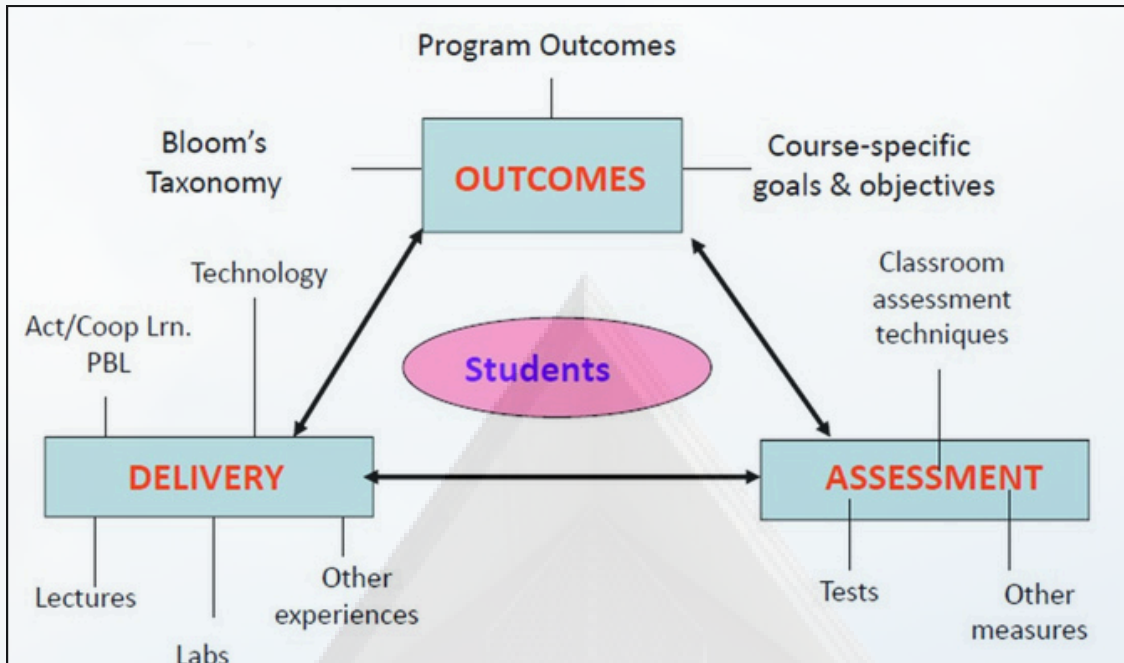


Figure 1: OBE Alignment

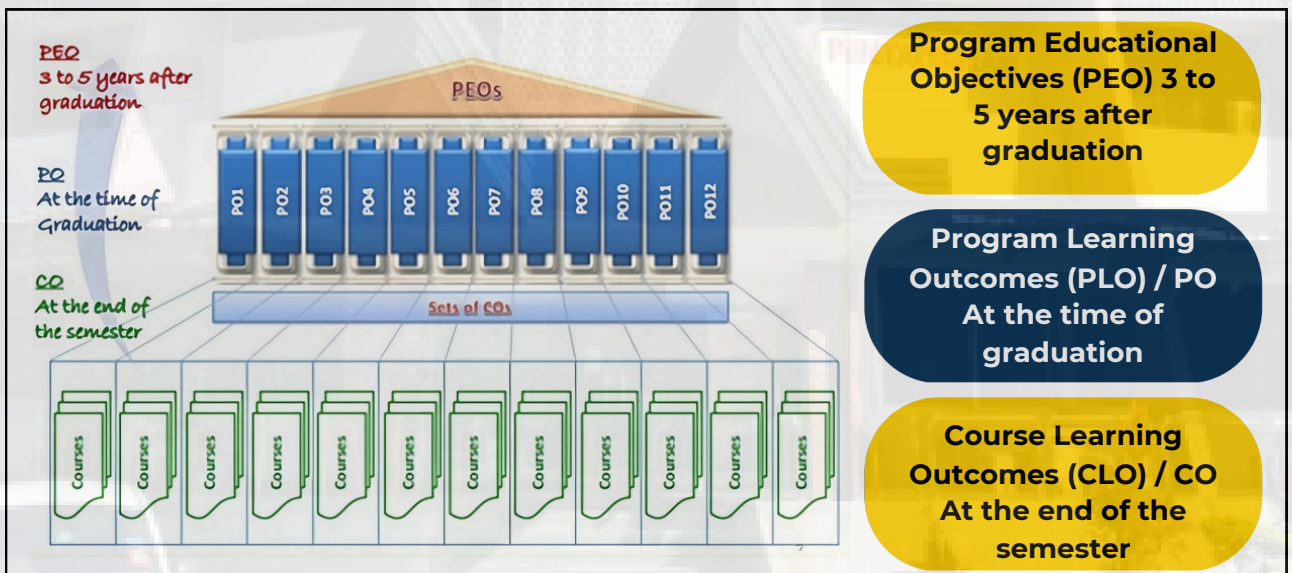


Figure 2: Building Block of OBE Curriculum

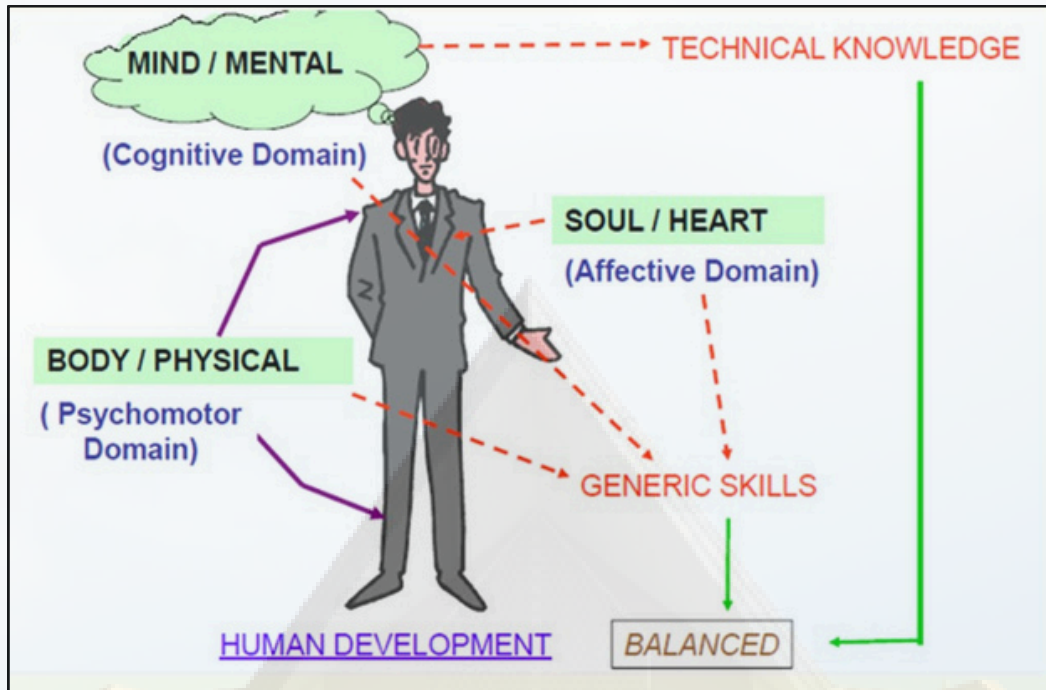


Figure 3: OBE – Human Aspects



Figure 4: Learning Outcomes in OBE

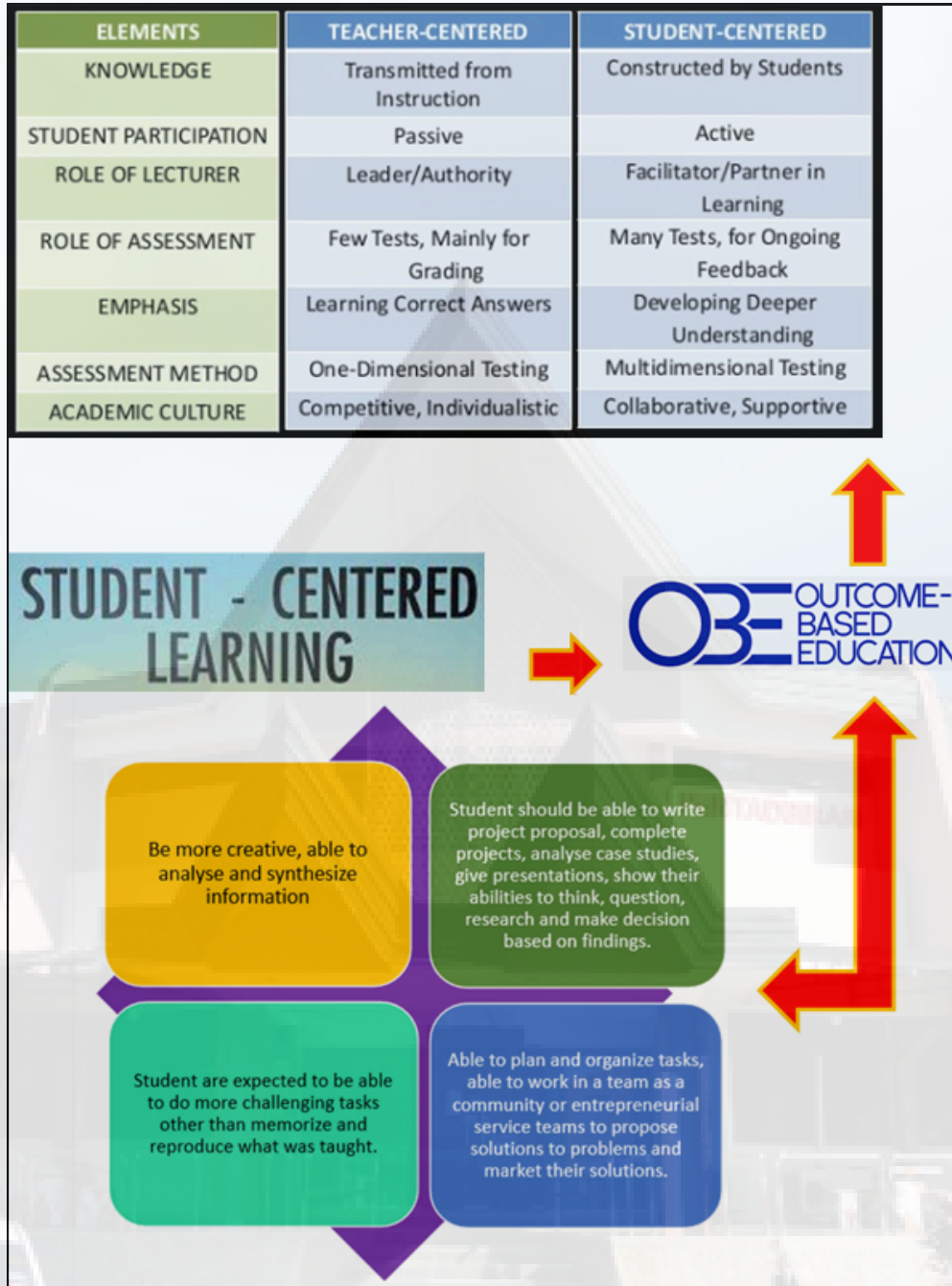


FIGURE 5: OBE Based in Teaching and Learning



### 1.3 INTRODUCTION TO ENGINEERING TECHNOLOGY ACCREDITATION COUNCIL

The Engineering Technology Accreditation Council (ETAC) is a delegated body by the Board of Engineers Malaysia. ETAC started as a Protem Council in 2011 to provide a smooth transition in the accreditation of Engineering Technology and Engineering Technician education programmes. The Protem ETAC initially focused on the Sydney Accord-based education programmes and obtained the approval of its inaugural Engineering Technology Accreditation Manual from the BEM in 2015.

The ETAC was instrumental in ensuring Malaysia's accredited engineering technology bachelor's degree, engineering diploma, and engineering technology diploma programmes are substantially equivalent to the engineering degrees of the signatories of the Sydney Accord (SA) and Dublin Accord (DA). This will ensure that through its accreditation process, the qualities of graduates of accredited programmes meet global standards.

Accredited programmes are placed in the ETAC and MQA registers. BEM-ETAC is in the process of joining the Sydney and Dublin Accords. It is hoped that by July 2017, BEM-ETAC will be accepted as a Provisional Signatory for both Accords. By becoming a signatory to these Accords, BEM-ETAC will be able to ensure that Malaysian engineering technology and technician graduates meet international standards. It will accord for mutual recognition of engineering technology degrees and diplomas and their graduates across the member countries. The same education standards for engineering technology and technicians for all member countries are maintained through the guidelines provided by the International Engineering Alliance (IEA – [www.ieagreements.org](http://www.ieagreements.org)) custodian of the SA and DA. ETAC is determined to uphold the high standard of the accreditation process on behalf of BEM to become the primary catalyst for change in Malaysia and the region.



## ACCREDITATION OBJECTIVES

The objectives of ETAC are to ensure:

1. The graduates of the accredited engineering programs meet the minimum academic requirements to be registered as graduate engineer with BEM.
2. The Continual Quality Improvement (CQI) is being practiced by Institutions of Higher Learning (IHLs). Accreditation may also serve as a tool to benchmark engineering programs offered by IHLs in Malaysia.

## ADVANTAGES FOR STUDENT AND ORGANIZATION

1. Assurance that the diploma programs offered meet the high standards set by ETAC.
2. Enable students to further studies at local or overseas institutions.
3. Institution will be given opportunities to offer technology and TVET programs.
4. Graduates with diploma in engineering will be accepted to be Engineering Technician/ Inspector of Work (IOW) - registered with BEM.



# PROGRAMME INFORMATION

## DIPLOMA IN MECHANICAL ENGINEERING - DKM

### PROGRAMME SYNOPSIS

The Diploma in Mechanical Engineering 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 focuses on the area of Solid Mechanics, Statics & Dynamics, Thermodynamics & Heat Transfer, Fluid Mechanics, Materials, Mechanical Design, Workshop Practices, Manufacturing, Instrumentation & Control, Mechanical Maintenance, Electrical & Electronic Technology and computer programming.

### JOB PROSPECT

This programme provides the knowledge and skills in Mechanical Engineering 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:

- Assistant Engineer
- Technical Assistant
- Assistant Service Manager
- Service Advisor
- Supervisor
- Technician
- Technical Instructor OR Lecturer
- Technical Sales Executive/ Engineer
- Draughter / Designer
- Machinist
- Entrepreneur

### PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Whitin a few years after completing Diploma in Mechanical Engineering, graduates are able to:

PEO1 : Proficient with industry-relevant knowledge and skills in mechanical engineering field.

PEO2 : Engaging on lifelong and continuous learning to enhance knowledge and skills.

PEO3 : Acquire with entrepreneurial skills and mindset in the real working environment

PEO4 : Establish links with society and players in the industry

### PROGRAMME LEARNING OUTCOMES (PLO)

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

**PLO1** : Apply knowledge of applied mathematics, applied science, computer and engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices in area of mechanical engineering.

**PLO2** : Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to mechanical engineering. (DK1 to DK4)

**PLO3** : 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 in area of mechanical engineering. (DK5)

**PLO4** : Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements.

**PLO5** : Apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems, with an awareness of the limitations. (DK6)

**PLO6** : Consider sustainable development impacts to: society, the economy, sustainability, health and safety, legal frameworks, and the environment, in solving well- defined engineering problems. (DK1,DK5 and DK7)

**PLO7** : Understand and commit to professional ethics and responsibilities and norms of technician practice and including compliance with national and international laws. Demonstrate an understanding of the need for diversity and inclusion. (DK9)

## DIPLOMA IN MECHANICAL ENGINEERING - DKM

**PLO8** : Function effectively as an individual, and as a member in diverse and inclusive teams in multi-disciplinary, face-to-face, remote and distributed settings (DK9)

**PLO9** : Communicate effectively and inclusively 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.

**PLO10** : Demonstrate awareness of engineering management principles as a member or leader in a technical team and to manage projects in multidisciplinary environments.

**PLO11** : Recognise the need for, and have the ability for i) independent and life long learning and ii) critical thinking in the face of specialised technical knowledge.(DK8).

Notes:

**DK 1:** A descriptive, formula-based understanding of the natural sciences applicable in a sub-discipline and awareness of directly relevant social sciences.

**DK 2:** Procedural mathematics, numerical analysis, statistics applicable in a sub-discipline.

**DK 3:** A coherent procedural formulation of engineering fundamentals required in an accepted sub-discipline.

**DK 4:** Engineering specialist knowledge that provides the body of knowledge for an accepted sub-discipline.

**DK 5:** Knowledge that supports engineering design and operations based on the techniques and procedures of a practice area.

**DK 6:** Codified practical engineering knowledge in recognized practice area.

**DK 7:** Knowledge of issues and approaches in engineering technician practice, such as public safety and sustainable development\*

**DK 8:** Engagement with the current technological literature of the practice area.

**DK 9:** Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.

DK: Knowledge Profile

Dublin Knowledge refers to the Knowledge Profile as listed in the Manual of Engineering Technician Education Programme Accreditation Standard (ETAC) for diploma programmes.

## DIPLOMA IN MECHANICAL ENGINEERING - DKM

### PROGRAMME STRUCTURE DIPLOMA IN MECHANICAL ENGINEERING

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS			CREDIT VALUES	PREREQUISITE / CO-REQUISITE
			L	P	T		
<b>SEMESTER 1</b>							
Compulsory	DUE10062	Technical English 1	1	0	2	2	
	MPU24031	Sukan 1					
	MPU24041	Kelab / Persatuan 1	0	2	0	1	
	MPU24XX1	Unit Beruniform 1					
Common Core	DUW10042	Occupational, Safety and Health for Engineering	2	0	0	2	
	DBM10163	Engineering Mathematics 1	2	0	2	3	
	DBS10042	Engineering Science	2	1	0	2	
Discipline Core	DJJ10223	Engineering Drawing	1	3	0	3	
	DJJ10232	Mechanical Workshop Practice 1	0	4	0	2	
	DJJ10243	Workshop Technology	3	0	0	3	
<b>TOTAL</b>			<b>25</b>			<b>18</b>	
<b>SEMESTER 2</b>							
Compulsory	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	2	
	MPU24051	Sukan 2					MPU24031
	MPU24061	Kelab / Persatuan 2	0	2	0	1	MPU24041
	MPU24XX1	Unit Beruniform 2					MPU24XX1
MPU22071	Kursus Integriti dan Anti-Rasuah	0	0	2	1		
Common Core	DBM20173	Engineering Mathematics 2	2	0	2	3	DBM10163
Discipline Core	DJJ20252	Mechanical Workshop Practice 2	0	4	0	2	DJJ10232
	DJJ20263	Electrical and Electronic Technology	2	1	1	3	
	DJJ20273	Fluid Mechanics	2	2	0	3	
	DJJ20282	Computer Aided Design	1	2	0	2	DJJ10223
<b>TOTAL</b>			<b>26</b>			<b>17</b>	
<b>SEMESTER 3</b>							
Compulsory	DUE30072	Technical English 2	1	0	2	2	
Common Core	DBM30183	Engineering Mathematics 3	2	0	2	3	DBM20173
	DJJ30332	Engineering and Society	2	0	0	2	
Discipline Core	DJJ30302	Mechanical Workshop Practice 3	0	4	0	2	DJJ20252
	DJJ30313	Engineering Mechanics	2	1	1	3	
	DJJ30323	Strength of Materials	2	1	1	3	
	DJJ30293	Thermodynamics	2	1	1	3	
<b>TOTAL</b>			<b>25</b>			<b>18</b>	

DIPLOMA IN MECHANICAL ENGINEERING - DKM

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS			CREDIT VALUES	PREREQUISITE / CO-REQUISITE
			L	P	T		
<b>SEMESTER 4</b>							
Discipline Core	DJJ40343	Material Science and Engineering	2	1	1	3	
	DJJ40373	Pneumatic and Hydraulics	2	2	0	3	
	DJJ40383	Engineering Design	2	2	0	3	DJJ20282
	DJJ40363	Mechanics of Machines	2	2	0	3	DJJ30323
	DJJ40392	Project 1	2	0	0	2	
Elective	DXXXXX	Elective				2	
<b>TOTAL</b>			<b>18</b>			<b>16</b>	
<b>SEMESTER 5</b>							
Compulsory	MPU23182	Sains Teknologi dan Kejuruteraan Islam*	1	0	2	2	
	MPU23172	Nilai Masyarakat Malaysia**					
		DUE50082	Technical English 3	1	0	2	2
Common Core	DUU10072	Entrepreneurship	1	2	0	2	
Discipline Core	DJJ50193	Project 2	1	3	0	3	DJJ40392
	DJJ50413	Troubleshooting and Maintenance for Mechanical Components	2	1	1	3	
	DJJ50422	Maintenance Engineering and Management	2	0	0	2	
<b>TOTAL</b>			<b>19</b>			<b>14</b>	
<b>SEMESTER 6</b>							
Industrial Training	DUT600910	Engineering Industrial Training	0	0	0	10	
<b>TOTAL</b>			<b>0</b>			<b>10</b>	
<b>TOTAL CREDIT VALUES</b>						<b>93</b>	

<b>ELECTIVES COURSES</b>							
1	DJJ40432	Engineering Plant Technology	2	0	0	2	
2	DJJ40442	Industrial Management	2	0	0		
3	DJF52092	Quality Control	2	0	0		
4	DJA20132	Automotive Workshop Practice 1	0	4	0		
5	DJU20112	Basic Air Conditioning and Refrigeration Workshop	0	4	0		
6	DJF32052	Manufacturing Workshop Practice 2	0	4	0		

**Remark:**

Please refer to your academic advisor/ head of programme for a complete list of elective courses.

**Legend:**

**L:** Lecture, **P:** Practical / Lab, **T:** Tutorial, **O:** Others

(The numbers indicated under L, P, T & O represent the contact hours per week, to be used as a guide for time table preparation)

\*For Muslim Students.

\*\*For Non-Muslim Students.

**Notes:**

1. The total hours of **SLT** for **Industrial Training** is 800 hours or equivalent to 20 weeks.
2. The minimum and maximum credit value of Electives must be referred to the programme standard or professional bodies.
3. **Elective** courses offered are cross-disciplinary and can be chosen from courses listed in the program structure or any courses listed in the inventory of other disciplines; but must adhere to prerequisite requirement in the Programme Information.
4. **Free Electives** are courses which are not included in any programme structure but if taken, will contribute towards students' CGPA, provided that institutions adhere to the Jabatan Pendidikan Politeknik & Kolej Komuniti Free Electives Guidelines.
5. **MPU22212 Bahasa Kebangsaan A** is **COMPULSORY** for students who did not attain credit in Bahasa Melayu at Sijil Pelajaran Malaysia (SPM) level and will contribute to students' CGPA.
6. Co-curriculum pathways:
  - Path 1: Sukan
  - Path 2: Kelab/Persatuan
  - Path 3: Unit beruniform

# PROGRAMME INFORMATION

## DIPLOMA IN MECHANICAL ENGINEERING (AUTOMOTIVE) - DAD

### PROGRAMME SYNOPSIS

The Diploma in Mechanical Engineering (Automotive) programme is designed to produce holistic graduates that have knowledge and competent skills in the field of mechanical engineering with added specialization subjects in the automotive engineering to fulfil the demand of workers in engineering sector. The programme structure focuses on the area of Solid Mechanics, Statics & Dynamics, Thermodynamics & Heat Transfer, Fluid Mechanics, Materials, Mechanical Design, Workshop Practices, Manufacturing, Instrumentation & Control, Mechanical Maintenance, Electrical & Electronic Technology, Vehicle System, Vehicle Technology and Workshop Practice & Management.

### JOB PROSPECT

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

- Assistant Engineer
- Service Advisor
- Technical Assistant
- Quality Officer
- After Sales Service Officer
- Sales Executive
- Technical Instructor or Lecturer
- Technical Specialist
- Workshop Supervisor
- Team Leader Service Advisor
- Service Manager
- Entrepreneur

## DIPLOMA IN MECHANICAL ENGINEERING (AUTOMOTIVE) - DAD

### PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Whitin a few years after completing Diploma in Mechanical Engineering (Automotive) graduates are able to:

**PEO1** : Proficient with industry-relevant knowledge and skills in mechanical engineering (automotive) field.

**PEO2** : Engaging on lifelong and continuous learning to enhance knowledge and skills.

**PEO3** : Acquire with entrepreneurial skills and mindset in the real working environment

**PEO4** : Establish links with society and players in the industry

### PROGRAMME LEARNING OUTCOMES (PLO)

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

**PLO1** : Apply knowledge of applied mathematics, applied science, computer and engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices in area of mechanical engineering (automotive).

**PLO2** : Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to mechanical engineering (automotive) field. (DK1 to DK4)

**PLO3** : 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 in area of mechanical engineering (automotive). (DK5)

**PLO4** : Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements.

**PLO5** : Apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems, with an awareness of the limitations. (DK2 and DK6)

**PLO6** : Consider sustainable development impacts to: society, the economy, sustainability, health and safety, legal frameworks, and the environment, in solving well- defined engineering problems. (DK1,DK5 and DK7)

## DIPLOMA IN MECHANICAL ENGINEERING (AUTOMOTIVE) - DAD

**PLO7 :** Understand and commit to professional ethics and responsibilities and norms of technician practice and including compliance with national and international laws. Demonstrate an understanding of the need for diversity and inclusion. (DK9)

**PLO8 :** Function effectively as an individual, and as a member in diverse and inclusive teams in multi-disciplinary, face-to-face, remote and distributed settings (DK9)

**PLO9 :** Communicate effectively and inclusively 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.

**PLO10 :** Demonstrate awareness of engineering management principles as a member or leader in a technical team and to manage projects in multidisciplinary environments.

**PLO11 :** Recognise the need for, and have the ability for independent and life long learning and critical thinking in the face of specialised technical knowledge.(DK8).

Notes:

**DK 1:** A descriptive, formula-based understanding of the natural sciences applicable in a sub-discipline and awareness of directly relevant social sciences.

**DK 2:** Procedural mathematics, numerical analysis, statistics applicable in a sub-discipline.

**DK 3:** A coherent procedural formulation of engineering fundamentals required in an accepted sub-discipline.

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**DK 6:** Codified practical engineering knowledge in recognized practice area.

**DK 7:** Knowledge of issues and approaches in engineering technician practice, such as public safety and sustainable development\*

**DK 8:** Engagement with the current technological literature of the practice area.

**DK 9:** Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.

DK: Knowledge Profile

Dublin Knowledge refers to the Knowledge Profile as listed in the Manual of Engineering Technician Education Programme Accreditation Standard (ETAC) for diploma programmes.

**DIPLOMA IN MECHANICAL ENGINEERING  
(AUTOMOTIVE) - DAD**

**PROGRAMME STRUCTURE  
DIPLOMA IN MECHANICAL ENGINEERING (AUTOMOTIVE)**

COURSE TYPE	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PREREQUISITE / CO-REQUISITE
			L	P	T	O		
<b>SEMESTER 1</b>								
Compulsory	DUE10062	Technical English 1	1	0	2	0	2	
	MPU 24031	Sukan 1						
	MPU 24041	Kelab / Persatuan 1	0	2	0	0	1	
	MPU 24XX1	Unit Beruniform 1						
Common Core	DUW10042	Occupational, Safety and Health for Engineering	2	0	0	0	2	
	DBM10163	Engineering Mathematics 1	2	0	2	0	3	
	DBS10042	Engineering Science	2	1	0	0	2	
Discipline Core	DJJ10223	Engineering Drawing	1	3	0	0	3	
	DJJ10232	Mechanical Workshop Practice 1	0	4	0	0	2	
	DJJ10243	Workshop Technology	3	0	0	0	3	
<b>TOTAL</b>			<b>25</b>				<b>18</b>	
<b>SEMESTER 2</b>								
Compulsory	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	0	2	
	MPU 24051	Sukan 2						MPU 24031
	MPU 24061	Kelab / Persatuan 2	0	2	0	0	1	MPU 24041
	MPU 24XX1	Unit Beruniform 2						MPU 24XX1
Common Core	DBM20173	Engineering Mathematics 2	2	0	2	0	3	DBM10163
Discipline Core	DJJ30293	Thermodynamics	2	1	1	0	3	
Specialization	DJA20132	Automotive Workshop Practice 1	0	4	0	0	2	
	DJA20103	Automotive Electrical and Electronics	3	1	0	0	3	
	DJA20113	Automotive Technology 1	3	0	0	0	3	
<b>TOTAL</b>			<b>24</b>				<b>17</b>	
<b>SEMESTER 3</b>								
Compulsory	DUE30072	Technical English 2	1	0	2	0	2	
Common Core	DBM30183	Engineering Mathematics 3	2	0	2	0	3	DBM20173
	DJJ30332	Engineering and Society	2	0	0	0	2	
Discipline Core	DJJ30313	Engineering Mechanics	2	1	1	0	3	
	DJJ20282	Computer Aided Design	1	2	0	0	2	DJJ10223
Specialization	DJA30123	Automotive Technology 2	3	0	0	0	3	DJA20113
	DJA30132	Automotive Workshop Practice 2	0	4	0	0	2	DJA20132
<b>TOTAL</b>			<b>23</b>				<b>17</b>	

**DIPLOMA IN MECHANICAL ENGINEERING  
(AUTOMOTIVE) - DAD**

SEMESTER 4								
Discipline Core	DJJ20273	Fluid Mechanics	2	1	1	0	3	
	DJJ40392	Project 1	2	0	0	0	2	
	DJJ30323	Strength of Materials	2	1	1	0	3	
Specialization	DJA40192	Electric and Hybrid Vehicle	2	1	0	0	2	
	DJA40143	Internal Combustion Engine	3	0	1	0	3	DJJ30293
	DJA40152	Automotive Workshop Practice 3	0	4	0	0	2	DJA30132
Electives	DJJXXXX	Elective					2	
<b>TOTAL</b>			<b>21</b>				<b>17</b>	
SEMESTER 5								
Compulsory	MPU23182	Sains Teknologi dan Kejuruteraan Islam*	1	0	2	0	2	
	MPU23172	Nilai Masyarakat Malaysia**						
	DUE50082	Technical English 3	1	0	2	0	2	
	MPU22071	Kursus Integriti dan Anti-Rasuah	0	0	2	0	1	
Common Core	DUU10072	Entrepreneurship	1	2	0	0	2	
Discipline Core	DJJ50403	Project 2	1	3	0	0	3	DJJ40392
Specialization	DJA50162	Vehicle Dynamics	3	0	0	0	2	DJJ30313
	DJA50172	Automotive Workshop Service Management	1	2	0	0	2	
<b>TOTAL</b>			<b>21</b>				<b>14</b>	
SEMESTER 6								
Industrial Training	DUT600910	Engineering Industrial Training	0	0	0	0	10	
<b>TOTAL</b>			<b>0</b>				<b>10</b>	
ELECTIVES COURSE								
1	DJA40182	Mobile Hydraulic	2	0	0	0	2	
2	DJJ40352	Computer Programming	1	2	0	0	2	
2	DJM50302	Autonomous Vehicles System	2	0	0	0	2	
4	DJF52092	Quality Control	2	0	0	0	2	
5	DJI30142	Automotive Product Design 1	0	4	0	0	2	

(SOURCE: DAD PROGRAMME INFORMATION Version: 06062024\_4\_Effective: Session\_II\_2025/2026)

**Legend:**

**L:** Lecture, **P:** Practical / Lab, **T:**Tutorial, **O:** Others  
(The numbers indicated under L, P, T & O represent the contact hours per week, to be used as a guide for time table preparation)

\*For Muslim Students.

\*\*For Non-Muslim Students.

**DIPLOMA IN MECHANICAL ENGINEERING  
(AUTOMOTIVE) - DAD****Notes:**

1. The total hours of **SLT** for **Industrial Training** is 800 hours or equivalent to 20 weeks.
2. The minimum and maximum credit value of Electives must be referred to the programme standard or professional bodies.
3. **Elective** courses offered are cross-disciplinary and can be chosen from courses listed in the program structure or any courses listed in the inventory of other disciplines; but must adhere to prerequisite requirement in the Programme Information.
4. **Free Electives** are courses which are not included in any programme structure but if taken, will contribute towards students' CGPA, provided that institutions adhere to the Jabatan Pendidikan Politeknik & Kolej Komuniti Free Electives Guidelines.
5. **MPU22212 Bahasa Kebangsaan** is **COMPULSORY** for students who did not attain credit in Bahasa Melayu at Sijil Pelajaran Malaysia (SPM) level and will contribute to students' CGPA.
6. Co-curriculum pathways:
  - Path 1: Sukan
  - Path 2: Kelab/Persatuan
  - Path 3: Unit beruniform

# PROGRAMME INFORMATION

## DIPLOMA IN MECHANICAL ENGINEERING (AIR CONDITIONING AND REFRIGERATION) - DPU

### PROGRAMME SYNOPSIS

The Diploma in Mechanical Engineering (Air Conditioning and Refrigeration) programme is designed to produce holistic graduates with comprehensive knowledge and competent skills in the field of mechanical engineering, specifically focusing on air conditioning and refrigeration. This program aims to meet the demand for skilled workers in the engineering sector. The curriculum emphasizes various essential areas including Solid Mechanics, Statics & Dynamics, Thermodynamics, Fluid Mechanics, Mechanical Design, Workshop Practices, Instrumentation & Control, Electrical & Electronic Technology, as well as Air Conditioning and Refrigeration (covering System, Workshop, Design, and Control), and Refrigerant Handling.

### JOB PROSPECT

This programme provides the knowledge and skills in mechanical engineering and air conditioning and refrigeration field that can be applied to a broad range of careers in building services and manufacturing industries. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market as:

- Air-Conditioning & Refrigeration Technical Assistant.
- Air-Conditioning & Refrigeration Technician
- Air-Conditioning & Refrigeration Designer
- Air-Conditioning & Refrigeration Site Supervisor
- Air-Conditioning & Refrigeration Mechanic Maintenance
- Air-Conditioning & Refrigeration Assistant Engineer
- Air-Conditioning & Refrigeration Entrepreneur
- Technical Sales Executive
- Mechanical Technician
- Laboratory Technician
- Draughtsman
- Project Coordinator

## DIPLOMA IN MECHANICAL ENGINEERING (AIR CONDITIONING AND REFRIGERATION) - DPU

### PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Within a few years after completing Diploma in Mechanical Engineering (Air Conditioning and Refrigeration), graduates are able to:

**PEO1** : Proficient with industry-relevant knowledge and skills in mechanical engineering field.

**PEO2** : Engaging on lifelong and continuous learning to enhance knowledge and skills.

**PEO3** : Acquire with entrepreneurial skills and mindset in the real working environment.

**PEO4** : Establish links with society and players in the industry.

### PROGRAMME LEARNING OUTCOMES (PLO)

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

**PLO1** : Apply knowledge of applied mathematics, applied science, computer and engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices in area of mechanical engineering.

**PLO2** : Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to mechanical engineering field. (DK1 to DK4)

**PLO3** : 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 in area of mechanical engineering. (DK5)

**PLO4** : Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements (DK8).

**PLO5** : Apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems, with an awareness of the limitations. (DK2 and DK6)

**PLO6** : Consider sustainable development impacts to: society, the economy, sustainability, health and safety, legal frameworks, and the environment, in solving well- defined engineering problems. (DK1,DK5 and DK7)

## DIPLOMA IN MECHANICAL ENGINEERING (AIR CONDITIONING AND REFRIGERATION) - DPU

**PLO7 :** Understand and commit to professional ethics and responsibilities and norms of technician practice and including compliance with national and international laws. Demonstrate an understanding of the need for diversity and inclusion. (DK9)

**PLO8 :** Function effectively as an individual, and as a member in diverse and inclusive teams in multi-disciplinary, face-to-face, remote and distributed settings (DK9)

**PLO9 :** Communicate effectively and inclusively 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.

**PLO10 :** Demonstrate awareness of engineering management principles as a member or leader in a technical team and to manage projects in multidisciplinary environments.

**PLO11 :** Recognise the need for, and have the ability for independent and life long learning and critical thinking in the face of specialised technical knowledge.(DK8).

Notes:

**DK 1:** A descriptive, formula-based understanding of the natural sciences applicable in a sub-discipline and awareness of directly relevant social sciences.

**DK 2:** Procedural mathematics, numerical analysis, statistics applicable in a sub-discipline.

**DK 3:** A coherent procedural formulation of engineering fundamentals required in an accepted sub-discipline.

**DK 4:** Engineering specialist knowledge that provides the body of knowledge for an accepted sub-discipline.

**DK 5:** Knowledge that supports engineering design and operations based on the techniques and procedures of a practice area.

**DK 6:** Codified practical engineering knowledge in recognized practice area.

**DK 7:** Knowledge of issues and approaches in engineering technician practice, such as public safety and sustainable development\*

**DK 8:** Engagement with the current technological literature of the practice area.

**DK 9:** Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.

DK: Knowledge Profile

Dublin Knowledge refers to the Knowledge Profile as listed in the Manual of Engineering Technician Education Programme Accreditation Standard (ETAC) for diploma programmes.

**DIPLOMA IN MECHANICAL ENGINEERING  
(AIR CONDITIONING AND REFRIGERATION) - DPU**

**PROGRAMME STRUCTURE  
DIPLOMA IN MECHANICAL ENGINEERING  
(AIRCONDITIONING AND REFRIGERATION)**

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS			CREDIT VALUES	PREREQUISITE / CO-REQUISITE
			L	P	T		
<b>SEMESTER 1</b>							
Compulsory	DUE10062	Technical English 1	1	0	2	2	
	MPU 24031	Sukan 1	0	2	0	1	
	MPU 24041	Kelab / Persatuan 1					
	MPU 24XX1	Unit Beruniform 1					
Common Core	DUW10042	Occupational, Safety and Health for Engineering	2	0	0	2	
	DBM10163	Engineering Mathematics 1	2	0	2	3	
	DBS10042	Engineering Science	2	1	0	2	
Discipline Core	DJJ10223	Engineering Drawing	1	3	0	3	
	DJJ10232	Mechanical Workshop Practice 1	0	4	0	2	
	DJJ10243	Workshop Technology	3	0	0	3	
<b>TOTAL</b>			<b>25</b>			<b>18</b>	
<b>SEMESTER 2</b>							
Compulsory	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	2	
	MPU24051	Sukan 2	0	2	0	1	MPU24031
	MPU24061	Kelab / Persatuan 2					MPU24041
	MPU24XX1	Unit Beruniform 2					MPU24XX1
Common Core	DBM20173	Engineering Mathematics 2	2	0	2	3	DBM10163
Discipline Core	DJJ20263	Electrical and Electronic Technology	2	1	1	3	
	DJJ20282	Computer Aided Design	1	2	0	2	DJJ10223
	DJJ30293	Thermodynamics	2	1	1	3	
Specialization	DJU20102	Air Conditioning and Refrigeration System	2	0	0	2	
	DJU20112	Basic Air Conditioning and Refrigeration	0	4	0	2	
<b>TOTAL</b>			<b>26</b>			<b>18</b>	

**DIPLOMA IN MECHANICAL ENGINEERING  
(AIR CONDITIONING AND REFRIGERATION) - DPU**

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS			CREDIT VALUES	PREREQUISITE / CO-REQUISITE
			L	P	T		
<b>SEMESTER 3</b>							
Compulsory	DUE30072	Technical English 2	1	0	2	2	
Common Core	DBM30183	Engineering Mathematics 3	2	0	2	3	DBM20173
	DJJ30332	Engineering and Society	2	0	0	2	
Discipline Core	DJJ20273	Fluid Mechanics	2	1	1	3	
	DJJ30313	Engineering Mechanics	2	1	1	3	
Specialization	DJU30122	Air Conditioning and Refrigeration System Principle	2	0	0	2	DJU20102
	DJU30132	Intermediate Air Conditioning and Refrigeration Workshop	0	4	0	2	DJU20112
<b>TOTAL</b>			<b>23</b>			<b>17</b>	
<b>SEMESTER 4</b>							
Common Core	MPU22071	Kursus Integriti dan Anti-Rasuah	0	0	2	1	
Discipline Core	DJJ30323	Strength of Materials	2	1	1	3	
	DJJ40373	Pneumatic and Hydraulics	2	2	0	3	
	DJJ40392	Project 1	2	0	0	2	
Specialization	DJU40142	Air Conditioning and Refrigeration System Component	2	0	0	2	DJU30122
	DJU40153	Air Conditioning System Design and Drawing	2	2	0	3	
	DJU40162	Refrigerant Handling	2	1	0	2	
<b>TOTAL</b>			<b>21</b>			<b>16</b>	
<b>SEMESTER 5</b>							
Compulsory	MPU23182	Sains Teknologi dan Kejuruteraan Islam*					
	MPU23172	Nilai Masyarakat Malaysia**	1	0	2	2	
	DUE50082	Technical English 3	1	0	2	2	
Common Core	DUU10072	Entrepreneurship	1	0	2	2	
Discipline Core	DJJ50403	Project 2	1	3	0	3	
Specialization	DJU50172	Advance Air Conditioning and Refrigeration Workshop	0	4	0	2	DJJ40392
	DJU50183	Air Conditioning System & Accessories	2	2	0	3	DJU30132
	DJU50192	Air Conditioning and Refrigeration Control System	2	0	0	2	DJU40153
<b>TOTAL</b>			<b>23</b>			<b>16</b>	
<b>SEMESTER 6</b>							
Industrial Training	DUT600610	Engineering Industrial Training	0	0	0	10	
<b>TOTAL</b>			<b>0</b>			<b>10</b>	
<b>TOTAL CREDIT VALUES</b>						<b>95</b>	

**Legend:**

**L:** Lecture, **P:** Practical / Lab, **T:**Tutorial, **O:** Others  
(The numbers indicated under L, P, T & O represent the contact hours per week, to be used as a guide for time table preparation)

\*For Muslim Students.

\*\*For Non-Muslim Students.

**DIPLOMA IN MECHANICAL ENGINEERING  
(AIR CONDITIONING AND REFRIGERATION) - DPU****Notes:**

1. The total hours of **SLT** for **Industrial Training** is 800 hours or equivalent to 20 weeks.
2. The minimum and maximum credit value of Electives must be referred to the programme standard or professional bodies.
3. **Elective** courses offered are cross-disciplinary and can be chosen from courses listed in the program structure or any courses listed in the inventory of other disciplines; but must adhere to prerequisite requirement in the Programme Information.
4. **Free Electives** are courses which are not included in any programme structure but if taken, will contribute towards students' CGPA, provided that institutions adhere to the Jabatan Pendidikan Politeknik & Kolej Komuniti Free Electives Guidelines.
5. **MPU22212 Bahasa Kebangsaan** is **COMPULSORY** for students who did not attain credit in Bahasa Melayu at Sijil Pelajaran Malaysia (SPM) level and will contribute to students' CGPA.
6. Co-curriculum pathways:
  - Path 1: Sukan
  - Path 2: Kelab/Persatuan
  - Path 3: Unit beruniform

# PROGRAMME INFORMATION

## DIPLOMA IN MECHANICAL ENGINEERING (MANUFACTURING) - DTP

### PROGRAMME SYNOPSIS

The Diploma in Mechanical Engineering (Manufacturing) programme is designed to produce holistic graduates with knowledge and competent skills in mechanical engineering to fulfil the demand of workers in the engineering sector. The programme focuses on Solid Mechanics, Statics & Dynamics, Thermodynamics & Heat Transfer, Fluid Mechanics, Materials, Electrical & Electronic Technology, Manufacturing Workshop Practices, CAD CAM, Jig, Fixture, Tool Design, Quality Control and Manufacturing System and Control.

### JOB PROSPECT

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

- Assistant Engineer
- Production/Process Supervisor
- Technical Assistant
- Technician
- Product Designer
- Quality Officer
- CNC Programmer Technical Assistant
- Precision Machinist
- Production / Process Executive
- Procurement Executive
- Technical Specialist
- Technical Instructor or Lecturer
- Entrepreneur

## DIPLOMA IN MECHANICAL ENGINEERING (MANUFACTURING) - DTP

### PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Whitin a few years after completing Diploma in Mechanical Engineering (Manufacturing) graduates are able to:

**PEO1** : Proficient with industry-relevant knowledge and skills in mechanical and manufacturing engineering field.

**PEO2** : Engaging on lifelong and continuous learning to enhance knowledge and skills.

**PEO3** : Acquire with entrepreneurial skills and mindset in the real working environment.

**PEO4** : Establish links with society and players in the industry.

### PROGRAMME LEARNING OUTCOMES (PLO)

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

**PLO1** : Apply knowledge of applied mathematics, applied science, computer and engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices in area of manufacturing engineering.

**PLO2** : Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to mechanical engineering specialized in manufacturing (DK1 to DK4).

**PLO3** : 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 in area of mechanical engineering specialized in manufacturing. (DK5)

**PLO4** : Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements (DK8).

**PLO5** : Apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems, with an awareness of the limitations. (DK2 and DK6)

**PLO6** : Consider sustainable development impacts to: society, the economy, sustainability, health and safety, legal frameworks, and the environment, in solving well- defined engineering problems. (DK1,DK5 and DK7)

## DIPLOMA IN MECHANICAL ENGINEERING (MANUFACTURING) - DTP

**PLO7 :** Understand and commit to professional ethics and responsibilities and norms of technician practice and including compliance with national and international laws. Demonstrate an understanding of the need for diversity and inclusion. (DK9)

**PLO8 :** Function effectively as an individual, and as a member in diverse and inclusive teams in multi-disciplinary, face-to-face, remote and distributed settings (DK9)

**PLO9 :** Communicate effectively and inclusively 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 (NA).

**PLO10 :** Demonstrate awareness of engineering management principles as a member or leader in a technical team and to manage projects in multidisciplinary environments.

**PLO11 :** Recognise the need for, and have the ability for independent and life long learning and critical thinking in the face of specialised technical knowledge.(DK8).

Notes:

**DK 1:** A descriptive, formula-based understanding of the natural sciences applicable in a sub-discipline and awareness of directly relevant social sciences.

**DK 2:** Procedural mathematics, numerical analysis, statistics applicable in a sub-discipline.

**DK 3:** A coherent procedural formulation of engineering fundamentals required in an accepted sub-discipline.

**DK 4:** Engineering specialist knowledge that provides the body of knowledge for an accepted sub-discipline.

**DK 5:** Knowledge that supports engineering design and operations based on the techniques and procedures of a practice area.

**DK 6:** Codified practical engineering knowledge in recognized practice area.

**DK 7:** Knowledge of issues and approaches in engineering technician practice, such as public safety and sustainable development\*

**DK 8:** Engagement with the current technological literature of the practice area.

**DK 9:** Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.

DK: Knowledge Profile

Dublin Knowledge refers to the Knowledge Profile as listed in the Manual of Engineering Technician Education Programme Accreditation Standard (ETAC) for diploma programmes.

**DIPLOMA IN MECHANICAL ENGINEERING  
(MANUFACTURING) - DTP**

**PROGRAMME STRUCTURE  
DIPLOMA IN MECHANICAL ENGINEERING (MANUFACTURING)**

CLASSIFICATION	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
<b>SEMESTER 1</b>								
Compulsory	DUE10062	Technical English 1	1	0	2	0	2	
	MPU24031	Sukan 1						
	MPU24041	Kelab / Persatuan 1	0	2	0	0	1	
	MPU24XX1	Unit Beruniform 1						
Common Core	DUW10042	Occupational, Safety and Health for Engineering	2	0	0	0	2	
	DBM10163	Engineering Mathematics 1	2	0	2	0	3	
	DBS10042	Engineering Science	2	1	0	0	2	
Discipline Core	DJJ10223	Engineering Drawing	1	3	0	0	3	
	DJJ10232	Mechanical Workshop Practice 1	0	4	0	0	2	
	DJJ10243	Workshop Technology	3	0	0	0	3	
<b>TOTAL</b>			<b>25</b>				<b>18</b>	
<b>SEMESTER 2</b>								
Compulsory	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	0	2	
	MPU24051	Sukan 2						MPU24031
	MPU24061	Kelab / Persatuan 2	0	2	0	0	1	MPU24041
	MPU24XX1	Unit Beruniform 2						MPU24XX1
Common Core	DBM20173	Engineering Mathematics 2	2	0	2	0	3	DBM10163
Specialization	DJF22042	Manufacturing Workshop Practice 1	0	4	0	0	2	
Discipline Core	DJJ20263	Electrical and Electronic Technology	2	1	1	0	3	
	DJJ20273	Fluid Mechanics	2	1	1	0	3	
	DJJ20282	Computer Aided Design	1	2	0	0	2	DJJ10223
<b>TOTAL</b>			<b>24</b>				<b>16</b>	
<b>SEMESTER 3</b>								
Compulsory	MPU22071	Kursus Integriti dan Anti-Rasuah	0	0	2	0	1	
	DUE30072	Technical English 2	1	0	2	0	2	
Common Core	DBM30183	Engineering Mathematics 3	2	0	2	0	3	DBM20173
Specialization	DJF32052	Manufacturing Workshop Practice 2	0	4	0	0	2	DJF22042
Discipline Core	DJJ30313	Engineering Mechanics	2	1	1	0	3	
	DJJ30323	Strength of Materials	2	1	1	0	3	
	DJJ30293	Thermodynamics	2	1	1	0	3	
<b>TOTAL</b>			<b>25</b>				<b>17</b>	

**DIPLOMA IN MECHANICAL ENGINEERING  
(MANUFACTURING) - DTP**

CLASSIFICATION	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
<b>SEMESTER 4</b>								
Compulsory	MPU23182	Sains Teknologi dan Kejuruteraan Islam*						
	MPU23172	Nilai Masyarakat Malaysia**	1	0	2	0	2	
Common Core	DJJ30332	Engineering and Society	2	0	0	0	2	
Discipline Core	DJJ40373	Pneumatic and Hydraulics	2	1	1	0	3	
	DJJ40392	Project 1	2	0	0	0	2	
Specialization	DJF42062	Manufacturing Workshop Practice 3	0	4	0	0	2	DJF32052
	DJF42072	CAD CAM	1	3	0	0	2	DJJ20282
	DJF42112	Manufacturing Process	2	0	0	0	2	
Electives	DJFXXXX	Elective***					2	
<b>TOTAL</b>			<b>21</b>				<b>17</b>	
<b>SEMESTER 5</b>								
Compulsory	DUE50082	Technical English 3	1	0	2	0	2	
Common Core	DUU10072	Entrepreneurship	1	2	0	0	2	
Discipline Core	DJJ50403	Project 2	1	3	0	0	3	DJJ40392
Specialization	DJF52083	Jig, Fixture and Tool Design	1	3	0	0	3	
	DJF52092	Quality Control	2	0	0	0	2	
	DJF52103	Manufacturing System and Control	3	0	0	0	3	
<b>TOTAL</b>			<b>19</b>				<b>15</b>	
<b>SEMESTER 6</b>								
Industrial Training	DUT600910	Engineering Industrial Training	0	0	0	0	10	
<b>TOTAL</b>			<b>0</b>				<b>10</b>	
<b>TOTAL CREDIT VALUES</b>						<b>93</b>		
<b>ELECTIVES</b>								
1	DJF52122	Manufacturing Economy	2	0	0	0	2	
2	DJJ40352	Computer Programming	1	2	0	0	2	
3	DJJ40452	Instrumentation and control	2	0	0	0	2	
4	DJJ40472	Renewable and Sustainable Energy	2	0	0	0	2	
5	DJM40242	Programmable Logic Control	1	2	0	0	2	
<b>FREE ELECTIVES</b>								
1	DUD10012	Design Thinking	1	0	0	1	2	

(SOURCE : DTP PROGRAMME INFORMATION Version: 06062024\_2\_Effective: Session\_1\_2025/2026)

**Legend:**

**L:** Lecture, **P:** Practical / Lab, **T:**Tutorial, **O:** Others  
(The numbers indicated under L, P, T & O represent the contact hours per week, to be used as a guide for time table preparation)

\*For Muslim Students.

\*\*For Non-Muslim Students.

DIPLOMA IN MECHANICAL ENGINEERING  
(MANUFACTURING) - DTP

**Notes:**

1. The total hours of **SLT** for **Industrial Training** is 800 hours or equivalent to 20 weeks.
2. The minimum and maximum credit value of Electives must be referred to the programme standard or professional bodies.
3. **Elective** courses offered are cross-disciplinary and can be chosen from courses listed in the program structure or any courses listed in the inventory of other disciplines; but must adhere to prerequisite requirement in the Programme Information.
4. **Free Electives** are courses which are not included in any programme structure but if taken, will contribute towards students' CGPA, provided that institutions adhere to the Jabatan Pendidikan Politeknik & Kolej Komuniti Free Electives Guidelines.
5. **MPU22212 Bahasa Kebangsaan** is **COMPULSORY** for students who did not attain credit in Bahasa Melayu at Sijil Pelajaran Malaysia (SPM) level and will contribute to students' CGPA.
6. Co-curriculum pathways:
  - Path 1: Sukan
  - Path 2: Kelab/Persatuan
  - Path 3: Unit beruniform

# UNITS IN POLITEKNIK KUCHING SARAWAK

## STUDENT AFFAIRS DEPARTMENT (JHEPP)

The Student Affairs Department (JHEPP) comprises of two units namely the Student Intake & Data Unit (IDU) and the Welfare & Discipline Unit (WDU). This department assists Politeknik Kuching Sarawak (PKS) in the processing of students' intakes as well as students' registrations, keeping and updating the students' records and monitoring their welfare.

The Student Intake & Data Unit (IDU) helps and facilitates the management of all applications for admission, registration and updating of students' records whereas the Welfare & Discipline Unit (WDU) is mainly concerned with the welfare of the students such as assisting students' application for financial aids, monitoring their discipline and obtaining study permit for students from other states.

The department is managed by the Head of the Student Affairs Department assisted by the Student Intake & Data Unit Head, and the Welfare & Discipline Unit Head. Apart from that, there are three other officers entrusted to three units namely the Students' Registration unit the Scholarship unit and the Disciplinary unit.

### AIMS

This department strives to optimize the intakes with high quality students and to implement a more systematic Student Management System.

## **OBJECTIVES / ROLES**

The objectives of the Student Affair Department are to ensure that the students' intake and registration process are smoothly implemented and at the same time this department will provide a more systematic management system in line with the aspiration of Politeknik Kuching Sarawak by;

- a. Assisting the Polytechnic Management Sector (SP Poli) in handling the intake of new students.
- b. Disseminating information regarding learning and educational opportunities at Polytechnics in the Ministry of Education nationwide.
- c. Recording the statistics of students' intake and development.
- d. Managing the students' welfare pertaining to procuring of sponsorship.
- e. Providing information pertaining to students' welfare and performance.

## **ACTIVITIES OF THE STUDENT AFFAIRS DEPARTMENT**

### **a. Students' Intake**

Disseminating information pertaining to admission for the first and second intakes. Receiving the BJT-BPP, the candidates' acceptance forms, and verifying the consistency of the information provided by the candidates. Mailing the relevant forms to the candidates for registration purposes.

### **b. Registration**

Coordinating and managing the registration of new and senior students. Managing the Orientation Week programme for the new students. Managing matters pertaining to courses, referrals and inter polytechnic transfers.

### **c. Students' Records**

- Recording and updating students' records.
- Updating the students' databases.
- Preparing and producing students' statistics.

### **d. Study Permit**

Assisting students from outside Sarawak to procure the documents. Collaborating with the Immigration Department in matters pertaining to application, issuance and renewal of necessary travel documents.

#### E. Sponsorship, Scholarship and Study Loans

Collaborating with sponsors by providing relevant sponsorship information to students. Assisting students throughout the application processes. Facilitating the interview sessions conducted by the sponsors at PKS premise.

Facilitating the signing of the “Sponsorship Agreement” .

#### F. Students’ Discipline & Conduct

Setting and implementing the rules and the code of conduct of PKS students. Overseeing and implementing the Act 174. Monitoring and enforcing discipline and the conduct of road users in PKS.

#### G. Students’ Welfare

Helping students in getting medical attention. Helping students in attaining suitable accommodation. Assisting students who need assistance.

#### H. Students’ Insurance

Helping students to acquire group insurance.

Helping students to file claim(s) in case of accidents.

#### I. Committee for Students Representatives

Monitoring the committee activities through the bureau advisors.

Coordinating the Orientation Week programme for the new students.

Note: For information pertaining to Officer-in-charge of the various activities stated above, kindly refer to the attached Organization Chart of Student Affairs Department.

### **SERVICES PROVIDED BY THE STUDENT AFFAIRS DEPARTMENT (JHEPP)**

The Student Affairs Department provides services to all students. When seeking assistance at the service counter of Student Affairs Department, students are advised to comply with the dress code as prescribed in the polytechnic dress code rules and regulations. The Department uses student’s registration number or student’s matrix card number as a guide to track or extract student’s information when dealing with the following services. The services provided by the department are as follows;

1. Inter Polytechnic Transfer Change of
2. Programme Deferment of Study
3. Discontinuation of Study
4. Student Card
5. Student Personal file
6. Certification of Documents

# UNITS IN POLITEKNIK KUCHING SARAWAK

## LIBRARY (Perpustakaan Sri Kenyalang)

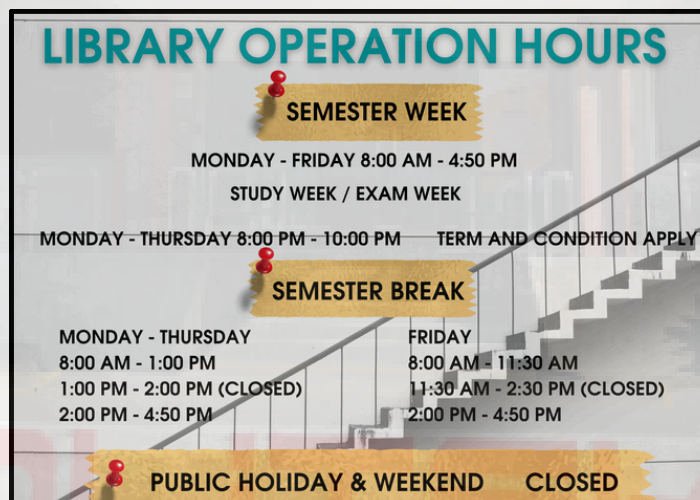
### PKS LIBRARY SERVICES:

- Loan Services
- Web OPAC (Online Public Access Catalog) & Facebook
- References and Information Search Services
- Media Services
- Interlibrary Loan
- User Education Service
- Repository Dspace@Politeknik Kuching Sarawak
- Printing & Photocopying

### OFFICER-IN-CHARGE:

For general customer services such as returning of loan, requesting for reference and retrieval of information, users can seek the assistance of the Library assistants. For Media services, users too can request assistance from the Library assistants.

Please refer to <http://library.poliku.edu.my/> for more informations on types of service provided by library.



LIBRARY OPERATION HOURS	
<b>SEMESTER WEEK</b>	
MONDAY - FRIDAY 8:00 AM - 4:50 PM	
STUDY WEEK / EXAM WEEK	
MONDAY - THURSDAY 8:00 AM - 10:00 PM	
TERM AND CONDITION APPLY	
<b>SEMESTER BREAK</b>	
MONDAY - THURSDAY	FRIDAY
8:00 AM - 1:00 PM	8:00 AM - 11:30 AM
1:00 PM - 2:00 PM (CLOSED)	11:30 AM - 2:30 PM (CLOSED)
2:00 PM - 4:50 PM	2:00 PM - 4:50 PM
<b>PUBLIC HOLIDAY &amp; WEEKEND</b> <b>CLOSED</b>	

# UNITS IN POLITEKNIK KUCHING SARAWAK

## PSYCHOLOGY AND CAREER UNIT (UPK)

The Psychological Management Unit (UPPsi) of PKS provides services to Polytechnic Kuching Sarawak students and staff.

### SERVICES OFFERED

#### 1. COUNSELLING SESSION

For Individual or Group counselling pertaining to the following:

- Career
- Communication
- Academic
- Relationship
- Emotion etc.

#### 2. PSYCHOLOGY TEST

For staff and students:

Personality Interest and Career Attitude (anger management, time management, financial management)

#### 3. CAREER GUIDANCE

Operating Career Consultation Clinic which includes careerpath, resume writing, and interview techniques

#### 4. ACADEMIC ADVISOR CLINIC

Assisting students in academic matters.

#### 5. MOTIVATION AND LEARNING CLINIC

Providing motivation and counselling services to students who find difficulties in their studies.

### OPERATION HOURS

Monday to Thursday:

8.00am to 1.00 pm

2.00pm to 5.00 pm

Friday:

8.00am to 11.30am

2.30pm to 5.00pm

# UNITS IN POLITEKNIK KUCHING SARAWAK

## HOSTEL (“KAMSIS DESA SERAPI”)

Politeknik Kuching Sarawak provides students’ hostels which is known as “Kamsis Desa Serapi”. These hostels are situated beneath the beautiful mountain known as “Gunung Serapi”. These hostels - “Kamsis Desa Serapi” can accommodate about 2258 students. Out of this, 1200 places are allocated for girls and 1058 places are reserved for boys. Currently 6 blocks of the boy’s hostels are serviceable.

Current capacity for the boys’ hostels & the girls’ hostels are as below:

- Male : 1058
- Female : 1200



## HOSTEL SUPERVISOR’S DUTIES

To assist students who require medical attention and treatment to a clinic or hospital. To manage the student’s application for hostel accommodation. To manage the student’s check in and checkout process. To provide approval for student’s application for the required hostel facilities.

## WARDEN’S DUTIES

To assist students who require medical attention and treatment to a clinic or hospital. To oversee student’s discipline, safety and health. To provide emergency treatment where able necessary

# UNITS IN POLITEKNIK KUCHING SARAWAK

## INFORMATION & COMMUNICATION TECHNOLOGY UNIT (UICT)

### A. PKS-WIFI

PKS provides free Wi-Fi services for students within the campus namely as PKS-WIFI. PKS- WIFI is an open WIFI so no need user id or password to set. There will be a pre-registration username with default password for all students, however, manual activation are require before student can access the internet from PKS-WIFI.

Please refer to the link below for steps to activate the pre-registered user ID and password for PKS-WIFI:

**[Click Here](#)**

# PKS ORGANIZATION CHART



# LECTURE ROOM LAYOUT PLAN



# COMMITTEE MEMBER OF JKM STUDENT HANDBOOK

## **Advisor :**

Rexca Anak Jamit

## **Head of Programme :**

Abu Harfiz Bin Hassan (DAD)

Siti Amelia Binti Shaik Pawan Chee (DPU)

Saifuldin Bin Abdul Jalil (DKM)

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