



# STUDENT HANDBOOK

DEPARTMENT OF  
PETROCHEMICAL  
ENGINEERING

DPE - 2021/2022 EDITION

# **STUDENT HANDBOOK**

**PETROCHEMICAL ENGINEERING DEPARTMENT**

**2021/2022 Edition**

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## **POLITEKNIK KUCHING SARAWAK**

### **VISION**

To be the Leading-Edge TVET Institution

### **MISION**

To provide wider access to qualified and recognized TVET programmes in order to develop holistic, entrepreneurial, balanced graduates as well as to empower communities through lifelong learning by capitalism smart partnership with stakeholders

### **GOAL**

To Produce Marketable Graduates

## 1.0 INTRODUCTION

Department of Petrochemical Engineering (JKPK) was established in 1992. Earlier it was known as the Department of Petrochemical Technology (JTP). JKPK offers courses related to petroleum and petrochemical industries in Polytechnic Kuching Sarawak, in line with the rapid development of petroleum and petrochemical industries.

Previously, JKPK offered certificate programmes such as Certificate in Electrical Engineering (Petroleum), Electronic Engineering (Petroleum), Mechanical Engineering (Petroleum) and Chemical and Process Engineering. However, in July 2010, the department offered only diploma programme and currently offers Diploma in Process Engineering (Petrochemical).

JKPK is led by the Head of Department, assisted by the Head of Programme, with academic staff as subordinates with various academic backgrounds mainly Electrical Engineering, Mechanical Engineering and Chemical Engineering; and lab assistants as supporting staff.

## 2.0 PROGRAMME INFORMATION

In order to keep abreast with rapid technological advancements and evolving requirements in industries today, Department of Polytechnic Education (DPE) has worked collaboratively with the nation's key industry players in developing competency standard of Diploma in Process Engineering (Petrochemical) programme. This collaboration aims to equip students with up-to- date knowledge, relevant skills and attitudes to meet the global challenges and the requirements of the industries.

This is true especially in the process engineering specifically in petrochemical area where there is a rapid growth in demand for highly skilled and technically savvy workforce. Many industries require sophisticated technical workforce. One of the most important factors in gearing towards the growth of productivity is to have a qualified manpower in this area, allowing the industry to expand and remain competitive in the world market. In addressing these issues the Curriculum Development and Evaluation Division (CDED), DPE cooperates with the industries, Public Higher Learning Institutions and Private Higher Learning Institutions to develop competency standards of this program.

The competency standards integrates the Body of Knowledge recommended by the Engineering Accreditation Council (EAC), American Institute of Chemical Engineers (AIChE), Chemical Engineering Institute of Chemical Engineers (IChemE) UK, Engineering Council UK (ecUK), European Federation of Chemical Engineering (EFCE) and Accreditation Board for Engineering & Technology (ABET).

This initiative is an essential fundamental to the curriculum development of Diploma in Process Engineering (Petrochemical) program with the aim of producing competent and marketable graduates parallel to the needs of the industry.

## **2.1 Programme Synopsis**

This program provides the students with the knowledge and technical skills prior to working as a process technician in the petroleum and petrochemical industries, which covers the areas of plant operating, equipment servicing, troubleshooting and problem solving. The approach includes theoretical knowledge as well as hands-on experience in workshops, mini training plant and laboratories

## **2.2 Programme Educational Objectives (PEO)**

The Diploma in Process Engineering (Petrochemical) programme shall produce semi-professionals who are:

1. Equipped with industry-relevant knowledge and skills in process engineering field
2. Engaging on lifelong and continuous learning to enhance knowledge and skills
3. Instilled with entrepreneurial skills and mind set in the real working environment
4. Established strong linkage with society and players in the industry

## **2.2 Programme Learning Outcome (PLO)**

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

1. Apply knowledge of applied mathematics, applied science, engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices;
2. Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (DK1 to DK4);
3. 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);
4. Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements;

5. Apply appropriate techniques, resources, and modern engineering and IT tools to well- defined engineering problems, with an awareness of the limitations (DK6);
6. 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);
7. 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);
8. Understand and commit to professional ethics and responsibilities and norms of technician practice;
9. Function effectively as an individual, and as a member in diverse technical teams;
10. 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;
11. 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;
12. Recognise the need for, and have the ability to engage in independent updating in the context of specialised technical knowledge;

### **2.3 Job Prospect**

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

- Assistant Engineer
- Process Technician
- Process Supervisor
- General Technician



## 2.4 Programme Structure

### PROGRAMME STRUCTURE FOR DIPLOMA IN PROCESS ENGINEERING (PETROCHEMICAL)

COMPONENTS	COURSE CODE	COURSE	CONTACT HOURS				CREDIT	PREREQUISITE/ CO-REQUISITE
			L	P	T	O		
<b>SEMESTER 1</b>								
Compulsory	DUE10012	Communicative English 1	1	0	2	0	2	
	MPU24XX1	Sukan	0	2	0	0	1	
	MPU24XX1	Unit Beruniform						
Common Core	DUW10022	Occupational, Safety and Health for Engineering	2	0	0	0	2	
	DBM10013	Engineering Mathematics 1	2	0	2	0	3	
	DBS10012	Engineering Science	2	1	0	0	2	
Discipline Core	DGP10013	Electrical Technology	2	2	0	0	3	
	DGP10022	Applied Chemistry	2	0	0	0	2	
	DGP10031	Chemistry Lab	0	2	0	0	1	
	DGP10152	Computer Aided Design	0	3	0	0	2	
		<b>TOTAL</b>	<b>25</b>				<b>18</b>	
<b>SEMESTER 2</b>								
Compulsory	MPU23052	Sains, Teknologi	1	0	2	0	2	

		dan Kejuruteraan Dalam Islam *						
	MPU23042	Nilai Masyarakat Malaysia **						
	MPU24XX1	Kelab/Persatuan	0	2	0	0	1	MPU24XX1
	MPU24XX1	Unit Beruniform 2						MPU24XX1
Common Core	DBM20023	Engineering Mathematics 2	2	0	2	0	3	DBM10013
Discipline Core	DGP20053	Thermodynamics	2	2	1	0	3	
	DGP20062	Process Plant Equipment	1	2	0	0	2	
	DGP20082	Fluid Mechanics	2	0	1	0	2	
Specialization	DGP20093	Chemistry of Petrochemical Processes	2	2	0	0	3	
		<b>TOTAL</b>	<b>24</b>				<b>16</b>	
<b>SEMESTER 3</b>								
Compulsory	DUE30012	Communicative English 2	1	0	2	0	2	DUE10012
Common Core	DBM30033	Engineering Mathematics 3	2	0	2	0	3	DBM20023
Discipline Core	DGP30102	Process Instrumentation and Control	2	0	0	0	2	
	DGP30111	Process Instrumentation and Control Lab	0	2	0	0	1	
	DGP30122	Heat Transfer	2	0	1	0	2	DGP20053
	DGP30132	Mass and Energy Balance	2	0	1	0	2	DGP10022
	DGP30041	Piping and Instrumentation Diagram Workshop	0	2	0	0	1	

	DGP30161	Process Engineering Lab 1	0	3	0	0	2	
		<b>TOTAL</b>	<b>22</b>				<b>15</b>	
<b>SEMESTER 4</b>								
Common Core	DJJ40132	Engineering and Society	2	0	0	0	2	
Discipline Core	DGP40172	Process Engineering Lab 2	0	3	0	0	2	
	DGP40182	Project 1	1	2	0	0	2	
	DGP40192	Utility Plant	2	0	0	0	2	
Specialization	DGP40202	Pollution Control in Petrochemicals Industry	2	0	0	0	2	
	DGP40213	Petrochemical Process Technology	3	0	0	0	3	
	DGP40222	Reactor in Petrochemicals Industry	2	0	0	0	2	
Elective		Elective***						
		<b>TOTAL</b>	<b>17</b>				<b>15</b>	
<b>SEMESTER 5</b>								
Compulsory	MPU21032	Penghayatan Etika dan Peradaban	1	0	2	0	2	
	DUE50032	Communicative English 3	1	0	2	0	2	DUE30012
	MPU22012	Entrepreneurship	1	0	2	0	2	
Discipline Core	DGP50232	Process Engineering Lab 3	0	3	0	0	2	
	DGP50242	Project 2	0	4	0	0	2	DGP40182
Specialization	DGP50253	Petrochemical Production Processes	3	0	0	0	3	

	DGP50263	Petrochemical Polymer	3	0	0	0	3	
	DGP50272	Petrochemical Synthesis Product Lab	0	3	0	0	2	
		<b>TOTAL</b>	<b>25</b>				<b>18</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>	
Elective		Elective***						
	DGP42012	Advanced Control Processes						
	DGP42022	Petroleum Technology						
	DGP52032	Industrial Management	2	0	2	0	2	
	DGP52042	Waste Water Engineering						
	DJJ52012	Engineering Plant Technology						
Free Elective	DUD10012	Design Thinking	1	0	0	1	2	
			4				2	
<b>TOTAL</b>			<b>114</b>				<b>94</b>	
<b>Course Classification</b>	<b>Total Credit</b>	<b>%</b>						
i. (a) Compulsory	14	15						
(b) Compulsory (Bahasa Kebangsaan A) <sup>b</sup>	2 <sup>b</sup>	0						
ii. Common Core	15	16						
iii. Discipline Core	35	37						

iv.Specialization	18	19			
<b>Total Credit</b>	<b>82</b>	<b>87</b>			
v. (a) Elective	2	2			
(b) Free Electives <sup>a</sup>	2 <sup>a</sup>	0			
vi. Industrial Training	10	11			
<b>Grand Total Credit</b>	<b>94</b>	<b>100</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

**Notes:**

1. The minimum and maximum credit value of Electives must be referred to the programme standard or professional bodies.
2. **<sup>a</sup>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.
3. **<sup>b</sup>MPU22042 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.
4. Co-curriculum pathways:
  - a. Path 1 : Sport and Club
  - b. Path 2 : Uniform Unit (Students are required to **PASS** Uniform Unit 1 as a pre-requisite to Uniform Unit 2)

**2.5 Total Credit Hours** : 94 credits

### 3.0 MAIN COURSE DESCRIPTION

CourseSynopsis	Pre- Requisite
<p><b>DGP10013 ELECTRICAL TECHNOLOGY</b></p> <p>ELECTRICAL TECHNOLOGY exposes students to concepts of basic electrical, electromagnetism 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 measuring the electrical quantities, constructing basic circuits and operation of transformer.</p>	None
<p><b>DGP10022 APPLIED CHEMISTRY</b></p> <p>APPLIED CHEMISTRY is a study of principles of general chemistry and organic chemistry including analysis of chemistry. Topics include structure of atom, periodic table, mole concept, acid-base concepts, chemical bonding, matter, chemical equilibrium, oxidation-reduction, carbon compounds. The importance of chemistry to many fields of science will be emphasized.</p>	None
<p><b>DGP10031 CHEMISTRY LAB</b></p> <p>APPLIED CHEMISTRY LAB will stress on the proper laboratory techniques, experimental procedure, the scientific method and problem-solving process skills as used in study of general chemistry. This course also help to the critical thinking skills, problem solving skills and data analysis skills of students through chemical experiments.</p>	None
<p><b>DGP10042 PIPING AND INSTRUMENTATION DIAGRAM</b></p> <p>PIPING AND INSTRUMENTATION DIAGRAM (P&amp;ID) provides knowledge on sketches and sketching of symbols used in process flow diagram. This course also provides knowledge and skill practice in developing process networks in piping and instrumentation diagram.</p>	None
<p><b>DGP20052 THERMODYNAMICS</b></p> <p>THERMODYNAMICS gives exposure in fundamental of engineering such as in unit and dimension. This course emphasizes basic thermodynamics concepts such as non-flow process, flow process, first law of thermodynamics, second law of thermodynamics and chemical equilibrium. Students will be exposed with plant process. Student will also provide knowledge and understanding of theory, concept and application of principles to solve problems related to processes in thermodynamics.</p>	None
<p><b>DGP20062 PROCESS PLANT EQUIPMENT</b></p> <p>PROCESS PLANT EQUIPMENT provides knowledge on concepts and basic principles of plant static and rotary equipment. The course emphasis on general uses and basic operating principles of static and rotary equipment such as valve, pipe, heat exchanger, pump, compressor, internal combustion engine and turbine. Students will be introduced to the classifications, types and specific functions of the stated components above.</p>	None
<p><b>DGP20071 PROCESS PLANT EQUIPMENT WORKSHOP</b></p> <p>PROCESS PLANT EQUIPMENT WORKSHOP provides knowledge on concepts and basic principles of plant static and rotary equipment. The course emphasizes on general uses and basic operating principles of static and rotary equipment such as valve, pipe, heat exchanger, pump, compressor, internal combustion engine and turbine. Students will be introduce to the classifications, types and specific functions of the stated components.</p>	None

CourseSynopsis	Pre- Requisite
<p><b>DGP20082 FLUID MECHANICS</b></p> <p>FLUID MECHANICS introduce and provide knowledge of the basic principles and concepts of fluid mechanics with applications to practical engineering situations. This course will enable the students to learn about fluid properties, fluid statics and fluid dynamics. This course also exposes the students to solve fluid mechanics problems in flow system, pipe system and dimensional analysis.</p>	None
<p><b>DGP20093 CHEMISTRY OF PETROCHEMICAL PROCESSES</b></p> <p>CHEMISTRY OF PETROCHEMICAL PROCESSES focuses on chemistry and technology of various petrochemical processes. This includes functional group and chemical reaction of hydrocarbon. Student should be able to describe the reaction and processes involved in transforming petroleum-based hydrocarbons into the chemicals of petrochemicals industry.</p>	None
<p><b>DGP30103 PROCESS INSTRUMENTATION AND CONTROL</b></p> <p>PROCESS INSTRUMENTATION AND CONTROL provides knowledge about measurement equipment used in the industry, understanding basic principle and the job lists of instruments. Exposure will include the basic theory, construction, operation and the usage of pneumatic equipment, control valve, transmitter, converter and controller. Students will understand the basic principle for control system and its usage according to petrochemical plant situation.</p>	DGP10042
<p><b>DGP30111 PROCESS INSTRUMENTATION AND CONTROL LAB</b></p> <p>PROCESS INSTRUMENTATION AND CONTROL LAB provides knowledge integrated with technical skills for using measurement equipment used in the industry, understanding basic principle and the job lists of instruments. Exposure will include the basic theory, construction, operation and the usage of pneumatic equipment, control valve, transmitter, converter and controller. Students will handle the basic principle for control system and its usage according to petrochemical plant situation</p>	DGP10042
<p><b>DGP30122 HEAT TRANSFER</b></p> <p>HEAT TRANSFER emphasize on the principles of the Heat Transfer in steady state by conduction, convection and radiation. Principles of steady-state and transient heat conduction in solid are investigated. Laminar and turbulent boundary layer flows are treated, as well as condensation and boiling phenomena, thermal radiation, and radiation heat transfer between surfaces. Students will be exposed to the procedure for general problem solving and its application on heat exchanger.</p>	DGP20052
<p><b>DGP30132 MASS AND ENERGY BALANCE</b></p> <p>MASS AND ENERGY BALANCE is designed as an introduction to fundamentals of material and energy balances. The emphasis is on understanding the principles of material and energy balances in chemical process systems. This course will develop the student's ability to formulate and solve material and energy balances problems for chemical process systems.</p>	DGP10022
<p><b>DGP30111 PROCESS INSTRUMENTATION AND CONTROL LAB</b></p> <p>PROCESS INSTRUMENTATION AND CONTROL LAB provides knowledge integrated with technical skills for using measurement equipment used in the industry, understanding basic principle and the job lists of instruments. Exposure will include the basic theory, construction, operation and the usage of pneumatic equipment, control valve, transmitter, converter and controller. Students will handle the basic principle for control system and its usage according to petrochemical plant situation</p>	DGP10042

CourseSynopsis	Pre- Requisite
<p><b>DGP30122 HEAT TRANSFER</b></p> <p>HEAT TRANSFER emphasize on the principles of the Heat Transfer in steady state by conduction, convection and radiation. Principles of steady-state and transient heat conduction in solid are investigated. Laminar and turbulent boundary layer flows are treated, as well as condensation and boiling phenomena, thermal radiation, and radiation heat transfer between surfaces. Students will be exposed to the procedure for general problem solving and its application on heat exchanger.</p>	DGP20052
<p><b>DGP30132 MASS AND ENERGY BALANCE</b></p> <p>MASS AND ENERGY BALANCE is designed as an introduction to fundamentals of material and energy balances. The emphasis is on understanding the principles of material and energy balances in chemical process systems. This course will develop the student's ability to formulate and solve material and energy balances problems for chemical process systems.</p>	DGP10022
<p><b>DGP30142 UNIT OPERATION</b></p> <p>UNIT OPERATION provides knowledge regarding the equipment or process unit as well as its function use in the industry. This course exposes the concepts and methods for the separation process of solids, liquids and gases. Therefore, it will emphasize in various unit operations, namely drying, crystallization, filtration, evaporation, distillation, absorption, adsorption and extraction. By completing the course, the student will understand the basic mechanisms of the unit operations in chemical engineering fields and will be able to make a selection of the most suitable unit to be use in a process depending on certain factors.</p>	None
<p><b>DGP30152 COMPUTER AIDED DESIGN</b></p> <p>COMPUTER AIDED DESIGN introduces and provides knowledge to Computer Aided Design (CAD) software application in developing engineering drawing particularly in technical drawing. This course will enable students to explore the software from its graphical user interface to command features including data entry, draw, modify, display control, drawing aids, layer, block, insert, dimensioning, hatching and plotting.</p>	None
<p><b>DGP30161 PROCESS ENGINEERING LABORATORY 1</b></p> <p>PROCESS ENGINEERING LABORATORY 1 provides practical skills through simulation and workshop conducted based on concepts and theories learned in class. The emphasis of the module is to introduce students to process application in fluid mechanics, thermodynamics and heat transfer.</p>	None
<p><b>DGP40171 PROCESS ENGINEERING LABORATORY 2</b></p> <p>PROCESS ENGINEERING LAB 2 provides practical skills through experiments conducted based on concepts and theories learned in class. In this course, skills for accurate data collection, analysis and communication are developed. Students learn to operate equipment and modern instrumentation with precision. The emphasis of the course is to practice the start-up procedure of the chemical process equipment.</p>	None
<p><b>DGP40182 PROJECT 1</b></p> <p>PROJECT 1 provides knowledge on the implementation methods and project production based on the hardware or analysis from laboratory test or research data / information. This course provides exposure to the selection and initial project planning, preparation methods, presentation proposals and production projects. This course also prepare the knowledge and training skills to solve problems and decision making before going into the nature of employment in the future.</p>	None



CourseSynopsis	Pre- Requisite
<p><b>DGP40192 UTILITY PLANT</b></p> <p>UTILITY PLANT introduces and provides knowledge on different types of plant and its importance including various utility flow diagrams. It also exposes students to utility system and its function, the basic design, the philosophy of control and interlock, this includes the main equipment, functions, mechanical characteristics and the operating procedures. This course also imparts general knowledge and exposes the students with common problems of utility plant.</p>	None
<p><b>DGP40202 POLLUTION CONTROL IN PETROCHEMICALS INDUSTRY</b></p> <p>POLLUTION CONTROL IN PETROCHEMICALS INDUSTRY focuses on the understanding the types of pollution such as air pollution, water pollution, solid wastes and hazardous wastes in petrochemicals industry. Students will be able to explain the impact of environmental pollution and have an understanding of the procedures to control or prevent environmental pollution in petrochemicals industry. Student should be able to demonstrate awareness to improve environmental quality and</p>	None
<p><b>DGP40213 PETROCHEMICAL PROCESS TECHNOLOGY</b></p> <p>PETROCHEMICAL PROCESS TECHNOLOGY provides exposure to the basic processes involved in oil and gas processing plant in relationship with petrochemical industry. This course also provides exposure to the various processing technology carried out in petrochemical plants. The students will be able to learn the processes involved in the production of petrochemical products and thus can complete process flow diagram.</p>	None
<p><b>DGP40223 REACTOR IN PETROCHEMICALS INDUSTRY</b></p> <p>REACTOR IN PETROCHEMICALS INDUSTRY provides exposure to the knowledge of the most important types of reactors applied in the petrochemicals industry. This course also applied to the characteristics of reactor types. The students will be able to explain the application of reactors in petrochemicals industry.</p>	None
<p><b>DGP50231 PROCESS ENGINEERING LAB 3</b></p> <p>PROCESS ENGINEERING LAB 3 provides practical skills through plant operation workshop and simulation conducted based on concepts and theories learned in class. The emphasis of this course is to perform the mini plant exercise, boiler simulation exercise and boiler operation exercise.</p>	None
<p><b>DGP50242 PROJECT 2</b></p> <p>PROJECT 2 is emphasized on the method of construction, testing, detection and project preparation planned in the previous semester. This course also trains students to prepare project reports accordance with the prescribed format and performing projects through the semester.</p>	DGP40182
<p><b>DGP50253 PETROCHEMICAL PRODUCTION PROCESSES</b></p> <p>PETROCHEMICAL PRODUCTION PROCESSES provides exposure to the basic processes involved in petrochemical processing plant. This course also provides exposure to the various processing technology carried out in petrochemical plants. The students will be able to learn the processes involved in the production of petrochemical products and thus can complete process flow diagram.</p>	None
<p><b>DGP50263 PETROCHEMICAL POLYMER</b></p> <p>PETROCHEMICAL POLYMER focuses on theoretical knowledge of the basic polymer and plastic classification. The course will provide the students to plastic production process. The student will be able to describe the plastic production process and related to environmental aspects.</p>	None

CourseSynopsis	Pre- Requisite
<p><b>DGP42012 ADVANCED CONTROL PROCESSES</b></p> <p>ADVANCED CONTROL PROCESSES provides knowledge of the basic concept of process control system. Exposure to use mathematical tools and techniques to model and solve the process control system problem. Students will understand the engineering principles underlying process dynamics and control applied in process plant.</p>	None
<p><b>DGP42022 PETROLEUM TECHNOLOGY</b></p> <p>PETROLEUM TECHNOLOGY provides the knowledge on concepts and principles of petroleum and processes. It emphasizes on the basic methods and techniques in petroleum covering the following items; geology of petroleum, drilling operations, offshore platform production facilities and plant operations.</p>	None
<p><b>DGP52032 INDUSTRIAL MANAGEMENT</b></p> <p>INDUSTRIAL MANAGEMENT provides students with a strong fundamental understanding of industrial management prospect and production system planning such as inventory, scheduling, production system operation, facilities, plant location, layout and line balancing. This course also provides knowledge in quality control and human resource management.</p>	None
<p><b>DGP52042 WASTE WATER ENGINEERING</b></p> <p>WASTEWATER ENGINEERING focuses on characteristics of wastewater and treatment technologies that been used in industries. This course gives exposure to the student on current environmental situation and the need to protect the environment for future generation. The topics cover on regulation and policies, characterization of wastewater, theory and fundamental of wastewater treatment process and sustainability towards the environment.</p>	None

## **4.0 NON ACADEMIC DEPARTMENTS AND UNITS IN POLITEKNIK KUCHING SARAWAK**

### **4.1 Student Affairs Department (JHEP)**

The Student Affairs Department (JHEP) 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. This department strives to optimize the intakes with high quality students and to implement a more systematic Student Management System. The objectives of the Student Affairs 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.

## 4.2 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.
  - Public Services Department Scholarship
  - State Government Educational Fund Scholarship
  - Kuok Foundation Study Grant
  - Financial Assistance For The Disabled / Bkoku Scholarship
  - Private Companies And Cooperatives Grant

- State Islamic Department Educational Assistance (Zakat Negeri) Grant
  - 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.*

### **4.3 Services Provided by the Student Affairs Department (JHEP)**

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
2. Change of Programme
3. Deferment of Study
4. Discontinuation of Study
5. Student Card
6. Student Personal file
7. Certification of Documents

## 4.4 Application Procedures for the Services provided by JHEP

### 4.4.1 Inter Polytechnic Transfer

Successful candidates will be offered a place in one of the polytechnics in Malaysia and the decision of placement to that particular polytechnic as stated in the offer letter is **FINAL**. However there is allowance for appeal and candidates should abide to the following procedures:

- For candidates who have not reported to the Polytechnic. Candidates need to write an official letter of appeal for a transfer to another Polytechnic. The letter should be addressed to the Student Intake Division, Department of Polytechnic Education, Putrajaya.
- For candidates who have reported to the Polytechnic. Applications for a transfer to another polytechnic can be made between the fourteenth (14th) week to the sixteenth (16th) week of the academic session. The application must be endorsed by the Director of the polytechnic and the students' academic interests are to be taken into account. The result of the transfer will be made known by the eighteenth (18th) week of the academic session. For critical cases, applications must be sent immediately and directly to the Student Intake Division, Department of Polytechnic Education, Putrajaya.
- Cancellation of application for the Inter Polytechnic Transfer Students must submit their application of cancellation of interpolytechnic transfer directly to the Student Intake Division, Department of Polytechnic Education. However, the approval of the cancellation of transfer is under the jurisdictions of the abovementioned department. Students who are given a transfer to another polytechnic while undergoing their industrial training or during deferment of study can register with their new polytechnic during the coming semester. Students who are involved with police case must make sure that their transfer will not affect the police investigation.

#### **4.4.2 Change of Programme**

The course offered to student as stated in the letter of offer is **FINAL**. For students who wish to appeal for the change of programme, the following steps should be taken.

- For students who have not yet registered with the Polytechnic All appeals for change of courses programme should be directed to the Student Intake Division, Department of Polytechnic Education, Department of Polytechnic Education.
- For students who have registered with the polytechnic Application for change of programme can be submitted to the Director of the polytechnic within one (1) month from the date of the first registration. Applications can be submitted by students at any semester. Successful applicants will be placed in the first semester of the new programme

*Note: Upon approval, the student's matrix card for the previous programme should be returned to the Student Affairs Department.*

#### **4.4.3 Change of Programme mode**

Only students who have enrolled for a full-time programme will be allowed to change their programme. They are only permitted to change to a part-time programme that is being offered in the same polytechnic. Application for change of programme should be addressed to the Director of Students In-take Division, Department of Polytechnic Education, through the Director of Polytechnic of the applicant.

*Note: Students' Matrix Card should be returned to the Student Affairs Department upon the approval by the Director of Students In-take Division, Department of Polytechnic Education.*

#### **4.4.4 Deferment of Study**

a. For applicants who have not registered with the polytechnic. Applicants who wish to apply for postponement of study should write a letter of appeal to the Director of Students In-take Division, Department of Polytechnic Education. They can apply for readmission in the coming session / semester.



b. For applicants who have registered with the polytechnic and Senior Students Applicants who wish to apply for postponement of study should write to the Director of polytechnic for approval. However, application for deferment of study is only given to those who are on medical grounds. Upon approval, the current semester will not be taken into account or considered as waived.

*Note: The period of postponement of study should not exceed 2(two) semesters except on medical grounds.*

#### **4.4.5 Discontinuation of study**

a. Students who wish to quit from polytechnic are required to fill in the “**Discontinuation Study Form**”. The duly completed form must be commented by the Academic Advisor, the Public Relations Officer, the Head of Industrial Training Unit and the Librarian before submitting to the JHEPP for verification. The Director of the polytechnic will make the final decision pertaining to the approval of the application.

b. An official letter for the result of the appeal will be sent to the applicant and copy to the following:Head of Academic Department students

- Examinations Officer
- Librarian
- Head of Industrial Training Department
- Head of Co-curriculum Sports Department
- Student Personal File

c. The officer in-charge will have to update the student’s data in the database and student’s personal file.

#### **4.4.6 Student Card**

JHEPP is responsible for preparing the Polytechnic student card. Students who have received their cards must acknowledge receipt.

#### 4.4.7 Student Personal files

The officer-in-charge of Student Personal file is PHEP (PD) and is responsible for the following;

a. Prepare and open new Student Personal File for every new student. Each file should include the following: -

- Reply for the Letter of Acceptance (BJT-BAP).
- A copy of SPM slip or Certificate / Result Slip of Overseas Academic and Letter of Declaration of National Accreditation Board (LAN) / Semester 4 Result Slip / Certificate or Results Slip for Skills Certificate / Result Slip or Certificate of Community Colleges.
- Copies of Certificate of Co-curriculum
- A copy of identity card or My Card
- A copy of the School Leaving Certificate
- Form BHEP1 to BHEP 6 completed and duly signed.

*Note: Copies of the above documents must be certified.*

b. Updating Student Personal File

c. Students are required to replace any missing, incomplete or damaged documents.

d. This file will be stamped with the words "for use in Polytechnic only" or used as "Crossed file".

#### 4.4.8 Certification of Documents

Officers who are eligible to certify the certificates and documents are as follows:

a. Government Officer Management and Professional / Group A

b. Judicial and Legal Officer, Chief Judge, Lawyer, Magistrate / Justice

c. Peace and All Doctors Working in Central Government Health only.

d. Principal / Headmaster

e. Police Officer of the rank of ASP and above

f. Staff of the Army rank of Captain and above

g. Superintendent of Prisons, Fire Authority, the Superintendent of Customs

- h. MP / Senator
- i. Felda Manager or Felcra Manager
- j. Headman / Warden / Pemanca / Community Leaders (Sabah and Sarawak).

### **Office Opening Hours**

Monday to Thursday: 0800 - 1230 & 1400 - 1700

Friday: 0800 - 1130 & 1415 - 1700

Closed on Public holidays

## **4.5 Examination Unit**

### **4.5.1 Roles and Duties of Examination Unit:**

- a. Preparing Final Examination Timetable
- b. Distributing latest examination related information by means of notice boards and PKS website
- c. Handling Final Examination at the end of each semester
- d. Preparing the Invigilation Timetable for lecturers
- e. Managing the process of receiving and delivering examination papers
- f. Receiving the answer scripts and preparing them for moderation by appointed moderators or answer script markers
- g. Preparing examination results master sheets for endorsement purposes during the PKS Examination Committee Meeting.
- h. To be the Secretarial for the PKS Examination Committee Meeting
- i. To keep record of student examination marks
- j. To prepare certificates and awards for qualified students
- k. To prepare supporting documents pertaining to student's appealing letters to be used during the PKS Examination Appeal Meeting
- l. To play the role as Secretarial for the PKS Examination Appeal Meeting
- m. To act as the Certification Committee during PKS Convocation

#### **4.5.2 Services for Students:**

- a. To provide the latest information regarding Final Examinations
- b. To receive and handle feedback from students/clients and respond within 14 days
- c. To reproduce lost or damaged certificates upon request
- d. To manage students Final Examination's appeal letters
- e. To dispatch student's certificates, exam related documents as well as gifts for those who are not able to attend the convocation
- f. To safe keep student's certificates which are either not received or cannot be contacted
- g. To prepare Letter of Confirmation for student who has just successfully completed their study
- h. To verify and endorsed Final Exam Result Slip for the purpose of application for Study Loan, Scholarship or admission to Polytechnic Hostel (KAMSIS)
- i. To prepare alternative Final Exam timetable for student in case of clashes in the original timetable
- j. To assist the Academic Departments in making a join decision should there be exam related cases.

#### **4.5.3 Workflow**

Student who has any enquiries pertaining to examination unit, or anything related with examination should first approach our Assistant Administrative Officer at the Examination Unit Counter which is located to the left of the main entrance of Examination Unit.

Enquiries that need further action or clarification will be forwarded to the appropriate officer(s). According to our policy, any enquiries received must be responded and action taken within twenty one (21) days. However, should the enquiries require further investigation such as involvement of other units or departments, then the handling process may exceed twenty one (21) days and students will be informed about it.

### **Operating Hours:**

Monday to Thursday : 8.30 am – 12.30 pm, 2.00 pm – 4.30 pm

Friday : 8.30 am – 11.30 am, 2.30 pm – 4.30 pm

Closed on Public Holidays

## **4.6 Department of Sports, Co-Curriculum & Culture (JSKK)**

### **4.6.1 Introduction**

The role of this department is to organize as well as to supervise all co-curricular and co-curriculum activities in Politeknik Kuching Sarawak (PKS). Its main objective is to enhance the soft skills of PKS students especially in areas of social interaction, leadership, discipline and levels of confidence.

The structure of JSKK, Politeknik Kuching Sarawak is as followed:

- a. Sports Unit
- b. Co-curriculum Unit
- c. Culture & Heritage Unit

JSKK is responsible for all matters related to sports, co-curriculum and culture in the polytechnic. This includes planning, organizing, implementing, coordinating, supervising and monitoring the overall activities of sports, cultural as well as managing the equipment. This department also ensures that all facilities are in tip-top conditions and at the same time provides quality and excellence services to all our customers.

JSKK also ensures that all sports activities, co-curriculum and culture are progressing according to schedule and complied with the Polytechnic Calendar. It is also actively involved with outside activities related to sports, culture and co-curriculum. Apart from that, JSKK always plans in advance to ensure that lecturers performing the following courses are given opportunity to equip themselves with the required knowledge and ample training to enable them to be qualified trainers in the areas of sports, co-curriculum and culture.

JSKK also manages the development and promotion of sports for students and staff.

This department is also engaging experts from within and outside the Polytechnic in promoting sports training programs, co-curriculum and cultural activities.

#### **4.6.2 Sports Unit**

This unit is responsible for managing and coordinating all sports programs in polytechnics. Under this unit, there are several student sports clubs managed by lecturers who are very keen, committed and qualified as a coach in this field. Kejohanan Sukan Politeknik Kuching Sarawak or also known as KESUPKU is one of the internal activities which involved sports competition among the students between the academic departments. KESUPKU also gets the staff to get involved with the competition. The involvement and achievement in sports by Polytechnic Kuching Students is very encouraging.

Students are provided with the chances to join tournaments such as Sports Carnival organized by Majlis Sukan Politeknik Malaysia (MSPM), Kejohanan Sukan Jemputan from IPTA and IPTS, Kejohanan Sukan Jemputan from Sports Association and Organization. Students also can join sports tournament on a higher level which is Sukan Institusi Pengajian Tinggi (SUKIPT). SUKIPT is actually organized by Sports Department of Ministry of Higher Education, held once in two years' time since it was introduced for the first time in 2012. The students who are excellent in sports might have the chances to represent Sarawak in Sukan Malaysia (SUKMA) in which the practices would be handled by Majlis Sukan Negeri Sarawak.

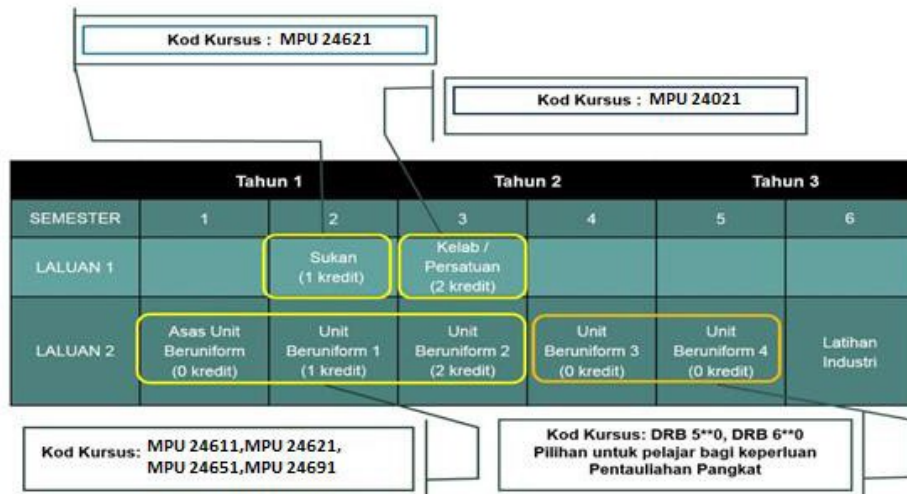
#### **4.6.3 Co-curriculum Unit**

The Co-curriculum Unit is responsible for ensuring that all co-curricular programs can be implemented smoothly and effectively. All these modules will expose students to the various aspects of the basic skills of individuals as well as groups. Continuous assessment is made through the course in the form of student practical work and theory. Students would be given choices just like in Figure 5.3 for Co-curriculum Course. This course is actually compulsory for Semester 2 and Semester 3 students.

“Laluan 1” is a choice where it involves sports in semester 2 (1 credit) and club/society in semester 3 (2 credits). “Laluan 2” is a uniformed unit choice which starts in semester 1 (0 credit), semester 2 (1 credit), semester 3 (2 credits) and students can get a

chance to get “pentauliahan Pangkat” in this uniformed unit when they managed to get through the courses in semester 4 (0 credit) and semester 5 (0 credit). There are 4 uniformed units offered which are:

- a. Territorial Army (*Askar Wataniah*)
- b. Malaysian Royal Navy Reserve (PLAS Tldm)
- c. Civil Defence Force (Pispa)
- d. Student Volunteer Brigade (Relasis)



**Figure 4.0 Co-Curriculum Choice**

#### 4.6.4 Culture & Heritage Unit

Under this unit, there are several activities planned to be implemented and a number of activities organized by JSKK and lead by Culture Officer with a group of students from Kebudayaan dan Warisan (KEWARIS). Among the activities involved KEWARIS are Majlis Konvokesyen Politeknik Kuching Sarawak, Sambutan Hari Perayaan, as well as performances inside and outside of Politeknik Kuching Sarawak.

At the level of Politeknik Malaysia, Seketeriat Kebudayaan Politeknik Malaysia or SEKEW was established in 2016. The main purpose of SEKEW is to plan, coordinate and organize cultural events for polytechnics. SEKEW is also responsible in planning

festivals, seminars, explorations and various courses on cultures to help the polytechnic students and staff develop their skills, knowledge and expertise in various areas. The council also acts as a resource centre to assist the polytechnics in various matters pertaining cultures towards achieving excellence in cultures and heritage.

#### **4.7 Industrial Liaison & Training Unit (UPLI)**

The industrial training has played an important role in providing polytechnic students with opportunities for hands-on experience and exposes students to related workplace competencies demanded by the industries. This training provides exposure to students in term of technology literacy, effective communication, practice social skills and teamwork, policies, procedures and regulations, professional ethics and reporting. It also equips students with the real work experience, thus helping students to perform as novice workers.

The duration of each training session is one semester, that is, **approximately 20 weeks**. Students are required to undergo industrial training in their field of studies with participating organisations. Before the students are eligible for training, they have to fulfill all the following requirements as stated in part 5 of the *“Arahan-arahan Peperiksaan dan Kaedah Penilaian”* dated 12th February, 2009.

The placement of training venue will be made known to the students before the commencement of training. Students will be attached to an organisation based on their respective fields of study. **During their internship**, they will be guided by supervisors appointed by the organization. Students are constantly advised to maintain a high level of discipline. **At the end of internship, students will be evaluated by organization supervisors based on their overall performance.**

In Kuching Polytechnics, the **Industrial Liaison & Training Unit (UPLI)** is situated at 1<sup>st</sup> floor of the Cisek’s building that is next to the PKS library. This unit is headed by a unit head, two officers and an administration clerk that is responsible for managing students’ industrial training affairs. Apart from that, this unit is assisted by lecturers from other academic department who will be the training coordinators to the students.



For further information pertaining to industrial training, students are welcomed to seek advice and assistance from any staff of the Industrial Training Unit.

## **4.8 Library**

### **4.8.1 PKS Library Services:**

- a. Loan Services (Borrow, Return & Renew library materials)
- b. Web OPAC (Online Public Access Catalog)/ Book Search
- c. References and Information Search Services
- d. Multimedia Services
- e. Interlibrary Loan (ILL)
- f. User Education Service
- g. Institutional Repository (DSpace)
- h. ISBN, ISSN & e-ISBN Application Services
- i. Online Resources (Journal & e-Book)

### **4.8.2 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 multimedia services, users too can request assistance from the Library assistants

### **4.8.3 Library Service Procedure:**

- a. Loan services is provided to all registered users and they are eligible to borrow library materials. All loan are computerised. Borrowers are responsible for returning books on or before the due date. Fine will be imposed for items that are overdue.
- b. Web OPAC is accessible to all users via internet. Users can visit the library website at [www.library.poliku.edu.my](http://www.library.poliku.edu.my) to check on any titles or materials that are available.
- c. The Reference and Information Search Service is available at the reference/

- loan counter. This service helps users to solve problems pertaining to library usage. It also provides guidance and information through the OPAC service.
- d. Users can also make enquiries by using phone, email or letter through the internet. The multimedia Service is located at the first floor of library PKS. This service provides the usage of computer and internet service. Users should fill in the log book before using the multimedia service.
  - e. Interlibrary Loan is a service that applies resource-sharing concept with other libraries or resource centre. This service is the first point of call if the material needed is not available in PKS collection. It is a cooperative service among libraries in Malaysia. Interlibrary loan includes acquiring of journal articles and loaning of books, etc. The delivery of the materials requested depends on their availability.
  - f. The Library has been providing User Education Service for new intake students PKS. They will be able to know how to search and retrieve documents of their interest through this service.
  - g. Institutional Repository (DSpace) is a digital repository system that collects, stores, preserves and disseminates materials owned by/related to Politeknik Kuching Sarawak (PKS) in digital form. Users will be able to have a quick access to the information in the system. Stored materials include PKS's archive, examination papers, research papers, conference papers and staff's publications.
  - h. International Standard Book Number (ISBN), International Standard Serial Number (ISSN), eBook International Standard Book Number(e-ISBN) application service is a services that help the PKS staff to apply the ISBN, ISSN and e-ISBN number from The National Library of Malaysia for their publication.
  - i. Online Resources is accessible for all users. It includes journals, e-book and reports that offer a rich source of information for research, reference and management needs.

#### **Operating Hours:**

During semester: 8.00 a.m-4.50 pm

Inter Semester Break: 8.00 a.m – 1.00 p.m, 2.00 p.m – 4.00 pm

Closed: Saturday, Sunday and Public Holidays

## **4.9 Psychology and Career Unit (UPK)**

### **4.9.1 Services Offered**

#### **a. Individual Counseling**

*For Individual or Group counselling pertaining to the following:*

- Self-development
- • Performance
- • Personal
- • Health
- • Career Guidance

#### **b. Group Counseling**

*For staff and students:*

- c. Self-development
- d. Performance
- e. Personal
- f. Health
- g. Career Guidance

#### **c. Psychology Development**

*Plan and implement the program*

- Motivation Camp
- Psychology Talk

#### **d. Psychology Testing**

*Assisting students in psychology testing*

- Sidek Personality Inventory
- Sidek Career Interest Inventory
- Self-Directed Search
- Color Personality Inventory

#### **e. AKRAB/Malaysian Civil Servant Peer Guide PRSP/ Student Peer Guide**

*For staff and students:*

- Staff Psychological Development Activities
- Student Psychological Development Activities

#### **4.9.2 Procedures of UPK**

PKS students are welcome to seek services from any Psychology Officers during office hours by first making an appointment at the UPK office. Referral cases from the following parties will be given appointments too.

- Referrals from Academic Advisors
- Referrals from the coordinator of Consultation and Counselling
- Referrals from PKS *Pembimbing Rakan Siswa*

There are currently 3 Psychology Officers (Registered Counselor) attached to the unit.

#### **Operating Hours:**

Monday to Thursday: 8.00am - 1.00 pm, 2.00pm - 5.00 pm

Friday: 8.00am - 11.30am, 2.30pm - 5.00pm

Saturday: *By appointment only*

#### 4.10 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 boys hostels are serviceable. Current capacity for the boys’ hostels & the girls’ hostels are shown in the table below.

<b>The Boys’ Hostels</b>		<b>The Girls’ Hostels</b>	
<b>Block</b>	<b>Capacity</b>	<b>Block</b>	<b>Capacity</b>
<b>A</b>	<b>230</b>	<b>A</b>	<b>624</b>
<b>B</b>	<b>232</b>	<b>B</b>	<b>570</b>
<b>C</b>	<b>228</b>		
<b>D</b>	<b>188</b>		
<b>E</b>	<b>84</b>		
<b>F</b>	<b>0</b>		
<b>Total</b>	<b>962</b>	<b>Total</b>	<b>1194</b>

The student hostel’s room is based on twin-sharing basis. Each room is equipped with the following facilities such as two single beds, two study tables, two student cabinets, two mattresses, two chairs and two shelved cabinets. The hostels are equipped with the following amenities. There is a television room, a study room, a recreation room, a pray room, few water dispensers and pantries. There is also a multi-purpose common room for students and a meeting room for the student’s bodies known as “**Jawatankuasa Perwakilan Pelajar (JPP)**” and “**Jawatankuasa Pelajar Kamsis (JPK)**”

First semester students are given the priority to stay at hostel. Senior students are required to apply via Residential College Unit (Unit Kamsis) every semester if they want the accommodation. Hostel fee at just RM 60 / 14.34 USD per semester.

Apart from that, the polytechnic information technology centre provides free Wi-Fi services for all students in the hostels. These services will be updated to meet the capacity of the students from time to time. Besides, the polytechnic cooperative “Koperasi - PKS” also provides a cyber café, washing machines as well as smart machine.

Within hostel campus, there is a cafeteria operating from 6.30 am to 11.00 pm daily. There is a canteen which provides services from 7.00 am to 5.00 pm (weekdays only) and a “G-Mart” providing basic necessities for the students.

#### **4.10.1 Hostel Supervisor’s Duties**

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

#### **Hostel Supervisor’s Office Hours**

Monday – Thursday: 8.00 am – 12.45 pm

Friday: 2.15 pm – 5.00 pm

*(Except weekend, public holiday and semester break)*

#### **4.10.3 Warden’s Duties**

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

## 4.11 Information & Communication Technology Unit (UICT)

### 4.11.1 PKS-WIFI

PKS provides free Wi-Fi services for students within the campus namely as **PKS-WIFI**. PKS-WIFI is an open WIFI and the student can accessed the wifi using the username & password which had been registered by the network team at UICT.

The wifi coverage are expected mostly at the lecture room area not including all the boy & girl hostels. But they can used Sunner wifi kiosks which is very cheap to subscribe to use per hour.

### 4.11.2 Officer in Charge

If there be any problems accessing the PKS-WIFI service, student may contact the officer in charge at ICT Unit. We will provide reference services and solve your problem related this matter.

## 4.12 Clinic

PKS Clinic is under KAMSIS Unit and it is situated in the middle of the male hostel building. It has started to operate since 1<sup>st</sup> August 2013 and it gives the facilities of basic medical treatment for all of PKS members especially the students. It is managed by one Medical Assistant, helped by one pekerja sambilan harian (PSH). However, starting from April 2015, the position had been managed under JHEP.

The existence of this clinic is a need since its distance from the other health care centres is quite far from one another.

No.	Health Care Centre	Distance	Operation Hour	No Phone
1.	Hospital Umum Sarawak (A&E)	23 KM	24 hours	082-276 666
2.	Klinik Kesihatan Telaga Air	10 KM	8 am – 5 pm	082-843 200

3.	Klinik 1 Malaysia Taman Malihah	15 KM	9 am – 9 pm	082-640 429
4.	Poliklinik Jalan Masjid	23 KM	8 am – 5 pm	082-427 110
5.	Klinik 1 Malaysia Matang	16 KM	9 am – 9 pm	082-649 644
6.	Klinik Kesihatan Petrajaya	20 KM	8 am – 5 pm	082-228 228

The total number of students who are staying at the hostel every semester is more than 2000 and this Polytechnic needs to have a certified officer to handle all the medical issues and treatments. Apart from that, the existence of this clinic can actually lessen the work done in hospitals and other health care centres since it helps with all the mild cases. It also can decide whether those cases are in need of reference to the next level or not.

#### 4.12.1 Services

To give early medical treatment in emergency cases and non-emergency cases.

#### Operating Hours:

Monday – Thursday: 8.00 am – 1.00 pm, 2.00pm-5.00pm

Friday: 8.00 am – 11.45 am, 2.15 pm – 5.00 pm

Saturday, Sunday & PublicHolidays: Closed

**Emergency Cases- 24 hours (on-call)**

PKS Clinic also provides outside-patient-treatment to the students, staffs, and the family members who are entitled to get the treatment. For the part-timed workers, the treatment is for themselves only.



#### **4.12.2 Medical Services**

- a. Outside-patient-treatment to adults only.
- b. Early medical treatment to emergency cases and accidents.
- c. Reference cases to medical clinics and Sarawak General Hospital (if necessary)
- d. Observation Room
- e. Medical treatment fee is free for students and staffs of Politeknik Kuching Sarawak only.

#### **4.12.3 General Medical Services**

- One-to-one counselling service while treatment is given.
- Displaying related posters at the Health Corner near to the clinic.
- Health talk (the speakers would be invited)

#### **4.12.4 Urgent Treatment**

- Injuries from accidents
- Breathing problem like asthma/panic attack etc.
- Intolerable pain such as stomach ache
- Unconsciousness like fainted for more than 10-15 minutes.
- Epilepsy
- Massive bleeding due to any reasons.

#### **4.12.5 Examples of Non-Emergency Case**

- Cough and fever
- Skin problems – scabies, lice infection
- Non-serious ache on the body.
- Sprained ankles
- Sore throat
- Headache
- Small wound or bruise
- Daily dressing
- Non-serious insects bites
- Contagious diseases
- Bleeding faeces

- Tolerable pain when urinate
- Ulcer
- No appetite

#### **4.12.6 Out-of-control Cases (emergency)**

Early treatment would be given by me and if in need of reference, it would be:

- Office hour : Clinic/ hostel warden
- After office hour : Warden on duty
- Usually, these cases would be sent to Klinik Kesihatan Telaga Air, Klinik Kesihatan Batu Kawa, Klinik Kesihatan Petrajaya, Klinik Kesihatan Jalan Masjid or Sarawak General Hospital.

#### **4.12.7 Getting Treatment Ethics**

- Students have to bring their matrix card or identity card (I.C.) to get the confirmation whether they are PKS students or not.
- For non-emergency cases, please get the treatment during office hour only.
- For emergency cases (after office hour), please do contact the warden on duty first before heading to the PKS Clinic.
- Please follow the attire acknowledged by Politeknik.
- Female students who are in need of treatment need to be accompanied by at least another one female student and a female warden (in case of after office hour).
- Only Medical Assistant can prescribe medicines to the patients.
- “Surat Pengecualian Kuliah” would only be given after the check-ups are done by the Medical Assistant and any request for the letter is not allowed. Only those who are in need of it, will get it.

#### **4.12.8 Exception Letter:**

- Exception letter would only be given after it is confirmed that the patients are not fit to go to class.
- Any request for the letter is not allowed.
- The letter would only be issued at the time when the patients come to get the treatment.

- d. The letter is not going to be issued after the working hours (office hour) which is (Monday-Friday) after 5 p.m., Saturday, Sunday and Public Holidays.
- e. This letter needs to be approved by the lecturers, Academic Advisors or the Head of Departments.
- f. This letter can only be given to the same student 3 times and it must not exceed 15 days in total or both of them in one semester.