

STUDENT

HANDBOOK

POLITEKNIK MUKAH

3RD EDITION





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**STUDENT HANDBOOK
POLITEKNIK MUKAH 3rd EDITION**

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Emel: webmaster@pmu.edu.my

Laman Web: <http://www.pmu.edu.my>

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Vision

TO BE THE LEADING-EDGE TVET INSTITUTION

Mission

TO PROVIDE WIDE ACCESS TO QUALITY AND RECOGNIZED TVET PROGRAMMES.
TO EMPOWER COMMUNITIES THROUGH LIFELONG LEARNING.
DEVELOP HOLISTIC, ENTREPRENEURIAL AND BALANCED GRADUATES.
TO CAPITALISE ON SMART PARTNERSHIP WITH STAKEHOLDERS.

Educational Goal

TO PRODUCE HOLISTIC AND COMPETENT TVET GRADUATES CAPABLE OF
CONTRIBUTING TO THE NATIONAL DEVELOPMENT.

Welcome Speech



Assalamualaikum w.b.t. and Salam Sejahtera,

It is my great pleasure to welcome all of you to Politeknik Mukah (PMU), an institution under the Department of Polytechnic and Community College Education (JPPKK), Ministry of Higher Education.

Since its establishment in 2005, PMU has remained committed to producing competent, innovative, and industry-ready graduates in the fields of engineering, commerce, and information technology. Guided by our vision, “To be the leading-edge TVET institution,” we strive to provide quality and recognized Technical and Vocational Education and Training (TVET) programmes that meet the needs of industry and the nation.

At PMU, we place strong emphasis on quality teaching and learning, supported by modern facilities and dedicated academic staff. Our students are encouraged not only to excel academically, but also to develop leadership, communication, ethical values, and entrepreneurial skills. Through various academic, co-curricular, and community activities, students are nurtured to become well-rounded graduates who are adaptable, responsible, and committed to lifelong learning.

This handbook serves as an important guide throughout your academic journey at PMU. I encourage you to read it carefully and make full use of the opportunities available to enrich your learning experience and personal growth. On behalf of Politeknik Mukah, I warmly welcome you and wish you every success in your studies and future endeavors. May your time at PMU be both meaningful and rewarding.

Warm regards,
En Suhaili Bin Aleh P.B.K
Director
Politeknik Mukah



KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

Carta Organisasi Pengurusan POLITEKNIK MUKAH, SARAWAK



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bin Dainis



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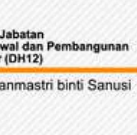
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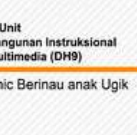
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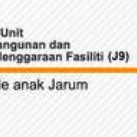
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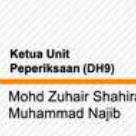
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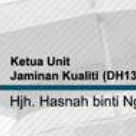
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Kebudayaan (DH13(M))**
Sophian bin Sout



**Ketua Unit
CISEC (DH13(M))**
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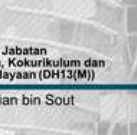
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**Ketua Unit
Pengurusan Aset (DH12(M))**
Zulhan bin Matlin

Lantikan Dalam

Tarikh Kemaskini :
15 Jun 2026

POLITEKNIK
MALAYSIA
MUKAH

Discover

POLITEKNIK MUKAH



Politeknik Mukah (PMU) is the twentieth polytechnic established under the Ministry of Higher Education Malaysia. Located in the heart of Mukah Division, Sarawak, PMU commenced operations in 2004 and welcomed its first student intake in July 2005. Built on a 100-acre campus, the polytechnic is equipped with modern infrastructure, laboratories, workshops, and facilities that support effective teaching and learning. Over the years, PMU has grown into a dynamic institution offering diverse programmes in engineering, information technology, commerce, and related fields.

PMU comprises five academic departments, namely the Department of Electrical Engineering, Department of Mechanical Engineering, Department of Civil Engineering, Department of Commerce, and the Department of General Studies. These departments serve as the core of PMU's academic structure, delivering diploma programmes that combine technical knowledge with practical applications. Guided by its vision to become a leading polytechnic in producing innovative and entrepreneurial graduates for global competitiveness, PMU is committed to its mission of equipping students not only with technical skills but also with creativity, innovation, and an entrepreneurial mindset. Its core values, which include integrity, professionalism, innovation, and sustainability, serve as the foundation of all academic and non-academic activities. As a Technical and Vocational Education and Training (TVET) provider, PMU plays a vital role in meeting the needs of industries and communities, in line with the national agenda. The polytechnic maintains strong collaborations with industries, government agencies, and community partners to ensure its programmes remain relevant and industry-driven. Students benefit from structured industrial training, innovation projects, and competitions that prepare them for the demands of the workplace. PMU also takes pride in its achievements, with students and staff actively participating in research, innovation, and entrepreneurial activities at state, national, and international levels.

OUTCOME BASED EDUCATION

INTRODUCTION

- A model of education whereby students demonstrate what they know and are able to do whatever the required outcomes are. The outcomes are specified in terms of individual student learning.
- OBE focuses on desired results.
- OBE emphasizes setting clear standards for observable, measurable outcomes through which student performances can be measured.
- An approach that focuses on students' learning rather than teaching.
- OBE is concerned with how students demonstrate their learning (called outcomes).

COMPONENTS OF OBE

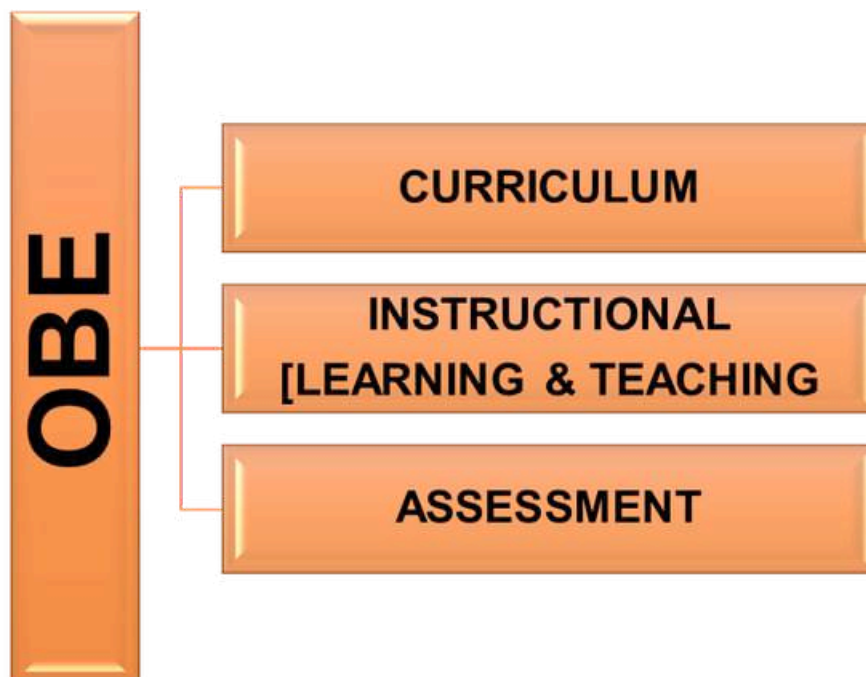


Figure 1: Components of OBE

OUTCOME BASED EDUCATION

PRINCIPLES OF OBE

There are four (4) principles that guide the transformational OBE approach. Each of these principles are explored and applied to practice as shown in Table 1 below;

Table 1: OBE Principles: Explanation and Application (Spady 1994; Killen 2000)

OBE Principles	Explanation	Application to Practice
Clarity of focus	Focus on what want learners able to do successfully.	• Help learners to develop competencies • Enable to predetermined significant outcomes • Clarify short and long term learning intentions • Focus assessments on significant outcomes
Design down	Begin curriculum design with a clear definition of the significant learning that learners are to achieve by the of their formal education.	• Develop systematic education curricula • Trace back desired end results Identify • 'learning building blocks' Link planning, • teaching and assessment decision to significant learner outcomes
High expectations	Establish high, challenging performance standards.	• Engage deeply with learning issues • Push beyond where learners would normally have gone
Expanded opportunities	Do not learn same thing in same way in same time.	• Provide multiple learning opportunities matching learner's needs with teaching techniques.

OUTCOME BASED EDUCATION

ASSESSMENT LEVELS OF OBE

The level of assessment varies from what students should know and achieve upon completion of a topic, to career and professional achievement after 3-5 years of graduation, as shown in Table 2

Table 2: Assessment levels of OBE

PAI/ PEO	Few years after graduation (3 – 5 years) It focus on what graduates are expected to attain within a few years after graduation. Program Aims / Program Educational Objective are based on the needs of the program's constituencies.
PLO	Upon graduation Program Learning Outcomes are statement of what the learner is expected to know, understand or be able to do on successful completion of the entire program that is upon graduation.
CLO	Upon course completion Course Learning Outcomes are assessed upon subject completion by instructors who evaluate students' performance on homework problems, programming and other projects, essays, oral presentations, and quizzes, tests, or examinations.
Topic LO	Upon topic completion Topic Learning Outcomes are statements of what learners know and can do for that particular topic.

OUTCOME BASED EDUCATION

CONTENT BASED LEARNING vs OUTCOME BASED EDUCATION

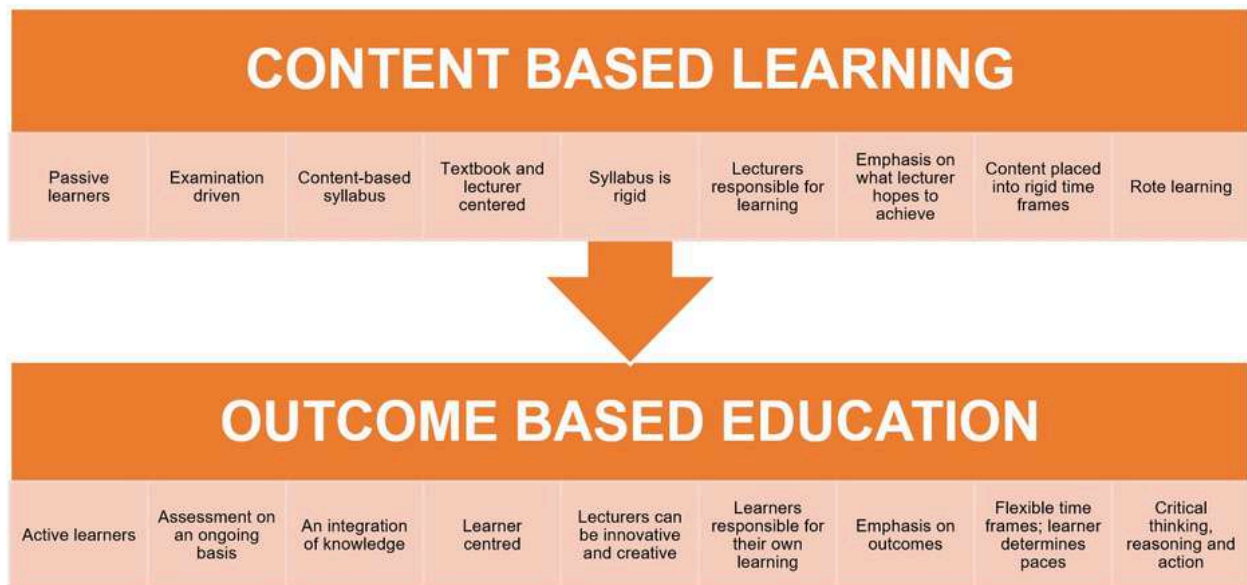


Figure 2: Content (traditional/ transactional) based learning vs outcome (transformational) based education (Spady, 1994)

TEACHER CENTERED vs STUDENT CENTERED

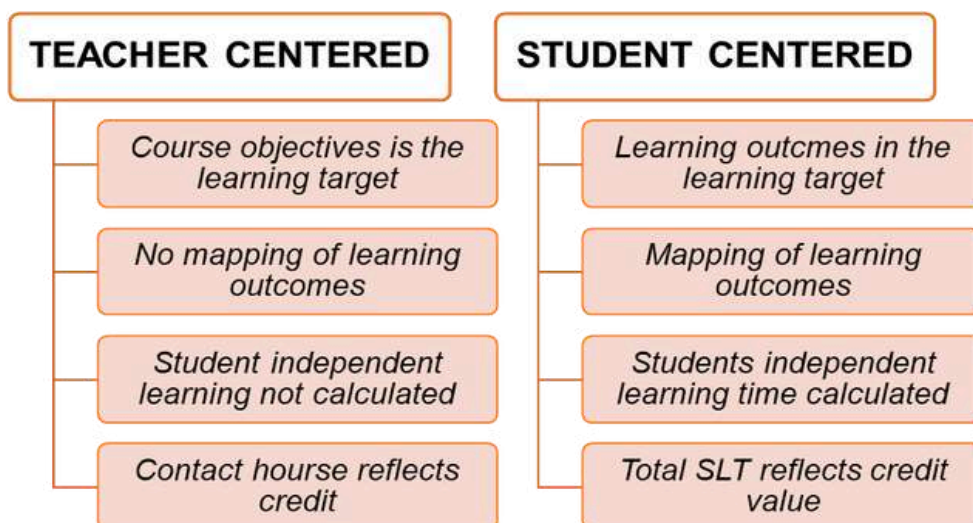


Figure 3: Teacher centered vs student centered

OUTCOME BASED EDUCATION

EFFECTIVENESS OF OBE

- Students are expected to be able to do more challenging tasks other than memorize and reproduce what was taught. Students able to write project proposals, complete projects,
- analyze case studies, give case presentations, show their abilities to think, question, research and make decisions based on the finding. Students could be creative, able to analyze and synthesize information.
- Students able to plan and organize tasks, able to work in a team as a community or in entrepreneurial service teams to propose and market the problem solutions.

DOMAIN/ CLUSTERS OF LEARNING OUTCOMES



Figure 3: Domain/ clusters of learning outcomes

OUTCOME BASED EDUCATION

THE ROLES OF STUDENTS

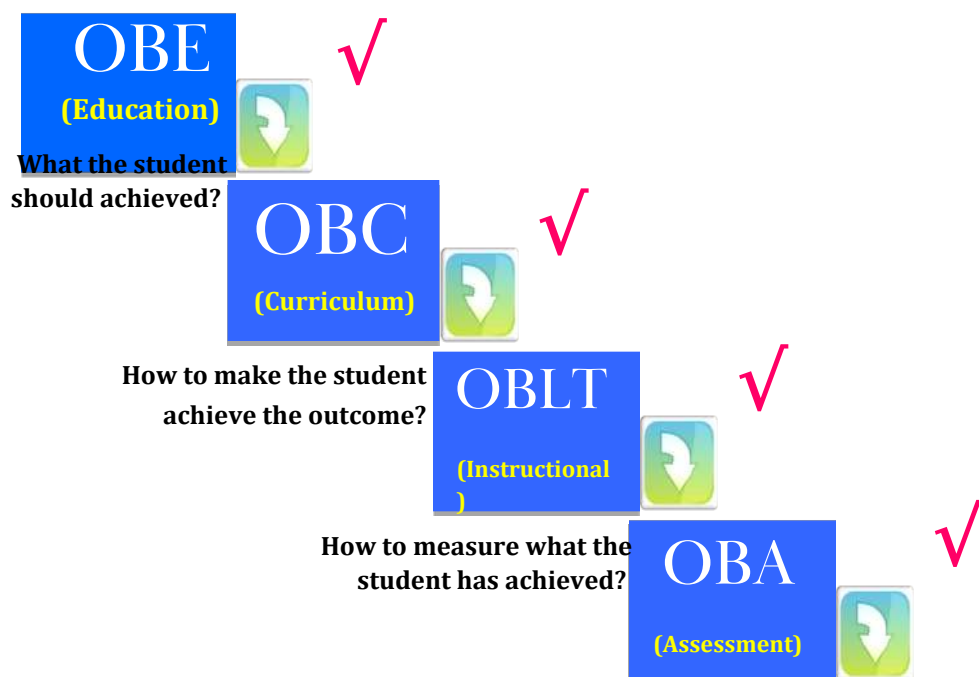
- Takes responsibility for learning.
- Seeks knowledge actively.
- Constructs knowledge by interacting with his/ her lecturer and also information gathered from various sources to be used in problem solving.

THE RESPONSIBILITIES OF STUDENTS

- The students must be responsible for their own learning process as much as the lecturers are responsible for their teaching.
- In OBE, the emphasis is on students' responsibility in their own learning by clearly defining the Student Learning Time (SLT): face-to-face and non face-on-face.

CONCLUSION

"A comprehensive approach to organizing and operating an education system that is focused on and defined by the successful demonstrations of learning sought from each student"



DEPARTMENT OF CIVIL ENGINEERING

INTRODUCTION

Department of Civil Engineering (JKA) is among the pioneer departments in Politeknik Mukah Sarawak, offering an intensive, high-quality diploma with Technical and Vocational Education and Training (TVET) skills. JKA is led by Canarisa Nipi anak Ah Lian, the Head of Civil Engineering Department, and assisted by the Head of Programme for Diploma in Civil Engineering, Mohmad Nazri bin Mahbob, and the Head of Programme for Certificate in Civil Engineering, Dr. Karlvin anak Jungan. JKA comprises 25 well-experienced academic staff accredited by the Board of Engineers Malaysia (BEM) and one non-academic staff member, with expertise and competence in various civil engineering fields.

In line with the Industrial Revolution 4.0, Green Technology, and Sustainable Development initiatives, the programmes offered are designed based on the latest trends in education and the future needs of industries, and have gained accreditation from the Malaysian Qualifications Agency (MQA) and the Engineering Technology Accreditation Council (ETAC).

The full-time Diploma in Civil Engineering programme comprises six semesters of coursework with one full semester of industrial training. Meanwhile, the full-time Certificate in Civil Engineering programme consists of four semesters of coursework with one full semester of industrial training. Apart from technical knowledge and skills, the programmes offered by JKA are designed to develop the individual potential of each student in an integrated and holistic manner through courses such as Islamic Studies, Moral Studies, Soft Skills, and Entrepreneurship. The aspiration of JKA is to ensure that students are well-prepared for real case studies and able to function as highly qualified and competent professionals in the field of engineering.

PROGRAMME

The accredited programmes are designed with various elective courses such as Building Information Modelling and Industrialised Building System, allowing students to specialise in their areas of interest.

CERTIFICATE IN CIVIL ENGINEERING

INTRODUCTION

The Civil Engineering Certificate provides parallel competence with new technology in the field of civil engineering to support the needs for semi-skilled personnel who are able to demonstrate professionalism and work ethics in fulfilling their responsibilities towards creators, clients and society. This programme which includes theory and practice offers engineering courses such as Construction Materials, Civil Engineering Survey, Pavement Engineering, Soil Mechanics, Traffic Engineering, Estimating & Quantity Measurement, Water Engineering and Structural Mechanics. In addition to this course, this programme also offers general courses as well as Industrial Training. The entire programme is designed to shape their potential to be competitive, confident to go far and able to use appropriate communication and interpersonal skills to perform tasks in various situations. They will be able to use appropriate communication and interpersonal skills to perform tasks in various situations. Graduates will demonstrate desired behavioural traits like integrity, teamwork, problem solving and passion in performing the tasks related to their area of specialization. They will possess entrepreneurial skills to contribute to the economic growth for the nation's development in the construction industries. With these additional skills, they will be more competitive in the present job market.

SYNOPSIS

This programme provides students with knowledge and skills in the field of civil engineering covering the construction industry and civil engineering infrastructure development. Graduates from this programme have the potential to work in both the private and government sectors at home and abroad. In addition, they also have the opportunity to continue their studies to the diploma level at other institutions of higher learning in the country and abroad.

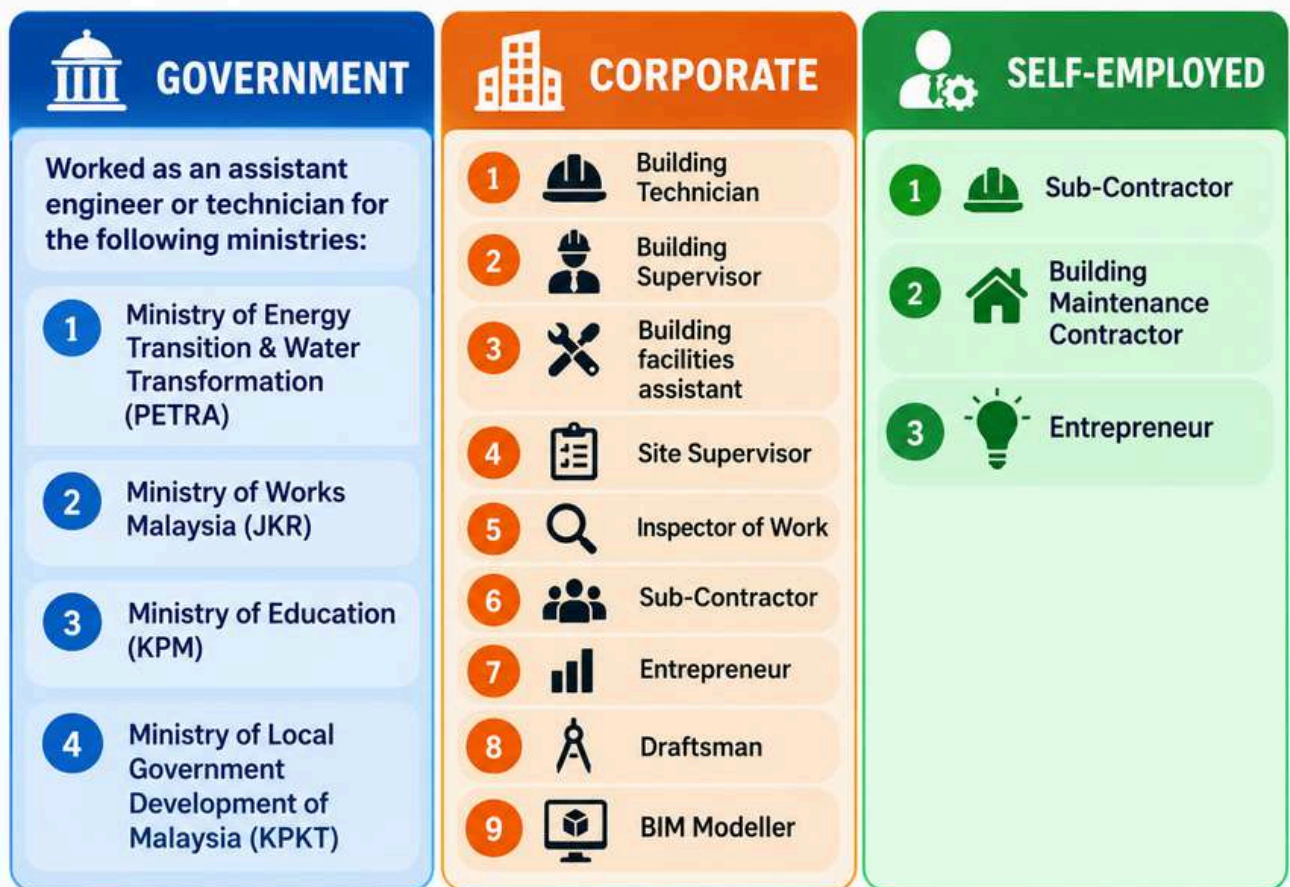
PROGRAMME AIM

This programme believes that every individual has the potential to master the relevant skills in construction industry in support of the country's aspirations towards the advancement of new technologies and challenges in the field of civil engineering.

CERTIFICATE IN CIVIL ENGINEERING

JOB PROSPECT

This programme can be applied to a broad range of careers available. The industrial training in this programme will provide opportunities for students to establish contacts with potential future employers. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market as:



PROGRAMME EDUCATIONAL OBJECTIVES

The civil engineering certificate programme should produce technician who are:

PE01 : Competent with industry-relevant knowledge and skills in civil engineering field.

PE02 : Enhance on lifelong and continuous learning, knowledge and skills.

PE03 : Attain entrepreneurial skills and mindset in the real working environment.

PE04 : Establish links with society and players in the industry.

CERTIFICATE IN CIVIL ENGINEERING

PROGRAMME LEARNING OUTCOMES (PLO)

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

PLO1:	Apply basic knowledge of mathematics, science and engineering fundamentals to routine procedures and practices in specific fields.
PLO2:	Identify specific engineering problems in their discipline with respect to operation and maintenance.
PLO3:	Assist in the investigations and design of solutions for specific engineering systems.
PLO4:	Demonstrate as awareness of societal, health, safety, legal and cultural issues and the consequent responsibilities.
PLO5:	Demonstrate communication and team skills.
PLO6:	Demonstrate an understanding of ethics, responsibilities and norms of engineering practices.
PLO7:	Demonstrate an awareness of management, business practices, entrepreneurship and sustainable development.
PLO8:	Recognise the need for career development and to engage in lifelong learning.

CERTIFICATE IN CIVIL ENGINEERING

SEMESTER 1

CLASSIFICATION	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES
			L	P	T	O	
Compulsory	MPU11032	Pengajian Malaysia	2	0	0	0	2
Common Core	CUW10022	Occupational Safety and Health for Engineering	2	0	0	0	2
	CBM10013	Engineering Mathematics	2	0	2	0	3
Discipline Core	CCC10013	Civil Engineering Drawing	0	4	0	0	3
	CCC10023	Plumbing and Carpentry Workshop	0	4	0	0	3
	CCC10033	Brickworks and Concrete Laboratory	0	4	0	0	3
	CCC10042	Construction Materials	2	0	0	0	2
TOTAL			22	0	0	0	18

SEMESTER 2

CLASSIFICATION	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES
			L	P	T	O	
Compulsory	CUE10012	Technical English	1	0	2	0	2
	CBC10032	Computer Application	1	2	0	0	2
Common Core	CBS10022	Engineering Science	2	1	0	0	2
Discipline Core	CCC20054	Civil Engineering Survey	2	3	0	0	4
	CCC20062	Pavement Engineering	2	0	1	0	2
	CCC20072	Soil Mechanics	2	0	1	0	2
	CCC20083	Soil Mechanic & Pavement Engineering Laboratory	0	3	0	0	3
TOTAL			23				17

CERTIFICATE IN CIVIL ENGINEERING

SEMESTER 3

CLASSIFICATION	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES
			L	P	T	O	
Compulsory	MPU13072	Pendidikan Islam*	2	0	0	0	2
	MPU13082	Pendidikan Moral**	2	0	0	0	2
	MPU13091	Kursus Integriti dan Anti Rasuah	0	0	1	0	1
Common Core	CUU10012	Entrepreneurship	1	2	0	0	2
Discipline Core	CCC30092	Traffic Engineering	2	1	0	0	2
	CCC30102	Estimating and Quantity Measurement	2	0	1	0	2
	CCC30112	Water Engineering	2	1	0	0	2
	CCC30123	Structural Mechanic	3	0	1	0	3
	CCC30133	Structure and Water Laboratory	0	3	0	0	3
TOTAL			22	7	3	0	17

SEMESTER 4

CLASSIFICATION	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES
			L	P	T	O	
Industrial Training	CUT40018	Industrial Training	0	0	0	0	8
TOTAL			0	0	0	0	8

CATEGORY	TOTAL CREDIT
i (a) Compulsory	9
(b) Compulsory (Bahasa Kebangsaan A) ^b	2 ^b
ii Common Core	12
iii Discipline Core	31
iv Specialization	0
Total Credit	52
vi Industrial Training	8
Grand Total Credit	60

CERTIFICATE IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
1	CCC10013: Civil Engineering Drawing CIVIL ENGINEERING DRAWING covers the basic manual drafting of technical drawing to enhance engineering student's ability to communicate ideas in modern technology industry. It provides a platform for students to interpret engineering drawings, use CAD and develop their skills in technical sketching. Students should be able to produce engineering drawing using manual graphics sketching and CAD software related to IR4.0.
	CCC10023: Plumbing and Carpentry Workshop PLUMBING AND CARPENTRY WORKSHOP covers basic practical works of plumbing and carpentry works that emphasizes the related materials used including the safety exposure in the workshop. This course emphasizes the standard related and students need to complete a mini project. This course also encourage students active participation in teamwork during practical activities.
	CCC10033: Brickworks and Concrete Laboratory BRICKWORKS AND CONCRETE LABORATORY covers basic concept of practical works and principles regarding the brickwork and concrete works including the practice of safety in the workshop and laboratory. This course emphasizes the standard related and students need to complete a mini project. This course also enhanced students to active participant in teamwork during practical activities.
	CCC10042: Construction Materials CONSTRUCTION MATERIALS course aims to equip students with a comprehensive knowledge of construction materials in civil engineering field. The curriculum provides a comprehensive overview of civil engineering materials and a detailed exploration of concrete materials comprising cement, aggregate, water and admixtures. The course also covers concrete mixtures extensively and explores the characteristics of both fresh and hardened concrete. Moreover, the course explores the properties of timber, types and characteristics of bricks and concrete blocks, and basic concept of steel materials. This course additionally provides knowledge regarding advanced construction materials and methods for each respective topic.

CERTIFICATE IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
2	CCC20054: Civil Engineering Survey CIVIL ENGINEERING SURVEY course is an educational program that provides students with fundamental knowledge and practical skills related to surveying in the field of engineering. Surveying is a crucial aspect of engineering and construction, as it involves measuring and mapping the physical characteristics of land, structures, and infrastructure. This information is essential for designing, planning, and executing various engineering projects.
	CCC20062: Pavement Engineering PAVEMENT ENGINEERING is a field of study that explores the historical aspects of road pavement construction and the organizations involved in Malaysia. This course is designed to impart knowledge about the methods and designs utilized in pavement engineering. The emphasis of this course lies in introducing students to pavement engineering, covering topics such as pavement materials and testing, flexible pavement design, alternative pavement, and pavement maintenance.
	CCC20072: Soil Mechanics SOIL MECHANICS is the scientific discipline that investigates the properties and behavior of soil, a fundamental component of the Earth's crust. It encompasses the study of soil composition, structure, and the interactions between soil particles and water. The primary objectives of soil mechanics are to understand how soils respond to external forces, how they bear loads, and how they deform under different conditions.
	CCC20083: Soil Mechanic & Pavement Engineering Laboratory SOIL MECHANICS & PAVEMENT ENGINEERING LABORATORY cover knowledge in the form of practicals through the experiments which are carried out based on the concepts and theories learned in the class. The emphasis of the course is on the method of conducting experiments, analysis and understanding its relationship with theories learned. The course also focused on geotechnical and highway which, are the core of the civil engineering field.

CERTIFICATE IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
3	CCC30092: Traffic Engineering TRAFFIC ENGINEERING is a branch of civil engineering that deals with the planning, design and management of transportation systems and the efficient flow of traffic on roadways. It involves various aspects such as geometrical design, traffic signal design, traffic safety measures, signage and transportation planning.
	CCC30102: Estimating and Quantity Measurement ESTIMATING AND QUANTITY MEASUREMENT is a study of preliminary estimating method, built-up rate and quantity measurement. An estimate of a project is a forecast of its probable cost. The quantity measurement are calculated by studying and analysing the drawings of the structure (dimensions on the drawings). This module emphasises to determine quantities and costs for material and labor to be used in construction.
	CCC30112: Water Engineering WATER ENGINEERING covers study a broad range of subjects, such as water resources, river discharge, water usage and demand, water treatment, water processing and distribution systems. The primary objectives of water engineering are to understand how the environmental, water usage and demand, water treatment, and social implications of decision-making in the water industry.
	CCC30123: Structural Mechanics STRUCTURAL MECHANICS covers knowledge of facts and basic principles of types of forces, strength of materials, and behavior of loaded structures. This course provides exposure to the impact of loaded structures on normal and bending and shear stress. This exposure will be fundamental to understanding strength and structure design in civil engineering.
	CCC30133: Structure and Water Laboratory STRUCTURE AND WATER LABORATORY course is designed to provide students with a comprehensive understanding of both structural and water engineering principles and practices. The laboratory sessions enabling students to apply theoretical knowledge to practical experiments in both disciplines.

CERTIFICATE IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
4	CUT40018: Industrial Training INDUSTRIAL TRAINING gives students exposure to practice the skills and knowledge learned in a real work environment. This course prepares students with employability skills and current industrial technologies including effective communication, leadership and teamwork as well as ethics and professional.

DIPLOMA IN CIVIL ENGINEERING

INTRODUCTION

Diploma in Civil Engineering provides knowledge, skills and attitude to adapt to new technology in civil engineering with the ability to demonstrate professionalism and work ethics in fulfilling responsibilities towards the creator, client and society. This programme provides theory as well as carries out practical work. This programme also offers courses in Civil Engineering area such as Engineering Graphics, Water & Water Resources Engineering, Environment, Strength & Structural Design, Road & Transportation, Engineering Management and Geotechnics. This programme is specially designed with hands-on training in addition to the theoretical learning in civil engineering. They are required to complete the industrial training to prepare graduates for employment in different sectors of the industry because the skills and knowledge acquired are used throughout modern industry. They will be able to use appropriate communication and interpersonal skills to perform tasks in various situations. Graduates will demonstrate desired behavioural traits like integrity, team work, problem solving and passion in performing the tasks related to their area of specialization. They will possess entrepreneur skill to contribute to the economic growth for the nation's development in the construction industries. With these additional skills, they will be more competitive in the present job market.

SYNOPSIS

This programme is designed to equip students with sound knowledge, skills, attitude and understanding of the environment, construction industries, construction designs and infrastructural development of civil engineering. The knowledge and skills acquired will be useful for success in future or current employment.

PROGRAMME AIM

This programme believes that all individuals have potential to be proactive and responsible senior technicians to support national agenda in transforming construction industry to be highly productive, environmentally sustainable with globally competitive players while focused on safety and quality standards.

DIPLOMA IN CIVIL ENGINEERING

JOB PROSPECT

The knowledge and skills that the students acquire from the program will enable them to participate in the job market such as specified as:

- a. Technical Assistant
- b. Site Supervisor
- c. Inspector of Work
- d. Assistant Engineer
- e. Contractor
- f. Health and Safety Officer
- g. Research Assistant
- h. Quality Control Assistant Engineer
- i. Material Coordinator
- j. Entrepreneur

PROGRAMME EDUCATIONAL OBJECTIVES

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The Diploma in Civil Engineering programme shall produce semi-professionals who are:

PEO1 : Working in the field of civil engineering

PEO2 : Lead or a team member to support their role in industries

PEO3 : Engaged in activities to enhance knowledge or starting/embark their own enterprise

PEO4 : Fulfill professional and communities responsibilities, conforming to ethical and environmental values

DIPLOMA IN CIVIL ENGINEERING

PROGRAMME LEARNING OUTCOMES (PLO)

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

- PLO1:** Apply knowledge of applied mathematics, applied science, computing and engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices
- PLO2:** identify and analyse well defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (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 as well as, cultural, societal, and environmental considerations as required (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 computing 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).
- 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).

DIPLOMA IN CIVIL ENGINEERING

- PL09:** 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.
- PL010:** Demonstrate awareness of engineering management principles as a member or leader in a technical team and to manage projects in multidisciplinary environments.
- PL011:** Recognize the need for and have the ability for i) independent and lifelong 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 subdiscipline
- 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 (inclusive of behaviour and conduct), 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

DIPLOMA IN CIVIL ENGINEERING

SEMESTER 1

	CODE	COURSES	LECTURE (L)	PRACTICAL (P)	TUTORIAL (T)	CREDIT (C)	PRE- REQUISITE
Compulsory	DUE10062	Technical English 1	1	0	2	2	
	MPU24031	Sukan 1	0	2	0	1	
	MPU24041	Kelab/ Persatuan 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	DCC10273	Building Construction Workshop	0	4	0	3	
	DCC10283	Civil Engineering Drawing	0	4	0	3	
	DCC10292	Construction Materials	2	0	0	2	
Total			25			18	

SEMESTER 2

	CODE	COURSES	LECTURE (L)	PRACTICAL (P)	TUTORIAL (T)	CREDIT (C)	PRE- REQUISITE
Compulsory	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	2	
	MPU24051	Sukan 2	0	2	0	1	
	MPU24061	Kelab/Persatuan 2					
	MPU24XX1	Unit Beruniform 2					
Common core	DBM20173	Engineering Mathematics 2	2	0	2	3	DBM10063
Discipline core	DCC20303	Civil Engineering Survey	2	3	0	3	
	DCC20312	Pavement Engineering	2	0	1	2	
	DCC20322	Estimating and Quantity Measurement	2	1	0	2	
	DCC20332	Soil Mechanics	2	0	1	2	
	DCC20342	Soil Mechanic & Pavement Engineering Laboratory	0	3	0	2	
	DCC20391	Technician and Sustainable Development	1	1	0	1	
Total			24			17	

DIPLOMA IN CIVIL ENGINEERING

SEMESTER 3

	CODE	COURSES	LECTURE (L)	PRACTICAL (P)	TUTORIAL (T)	CREDIT (C)	PRE- REQUISITE
Compulsory	DUE30072	Technical English 2	1	0	2	2	
	MPU23182	Sains Teknologi dan Kejuruteraan Islam*	1	0	2	2	
	MPU23172	Nilai Masyarakat Malaysia**					
Common core	DUU10072	Entrepreneurship	1	0	2	2	
Discipline core	DCC30352	Fluids Mechanics	2	0	1	2	
	DCC30362	Geotechnical Engineering	2	0	1	2	
	DCC30373	Structural Mechanic	3	0	1	3	
	DCC30382	Traffic Engineering	2	1	0	2	
Total			22			15	

SEMESTER 4

	CODE	COURSES	LECTURE (L)	PRACTICAL (P)	TUTORIAL (T)	CREDIT (C)	PRE- REQUISITE
Compulsory	DUE50082	Technical English 3	1	0	2	2	DUE30072
Discipline Core	DCC40402	Structure, Hydraulics and Water Quality Laboratory	0	3	0	2	
	DCC40412	Hydraulics	2	0	1	2	DCC30352
	DCC40423	Structural Analysis	3	0	1	3	DCC30373
	DCC40433	Reinforced Concrete Design	3	2	0	3	DCC30373
	DCC40441	Final Year Project 1	0	2	0	1	
	DCC40452	Water Supply & Sewerage System	2	0	0	2	
Elective	DCC4XXX	Electives 1	2	0	0	2	
Total			24			16	

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SEMESTER 5

	CODE	COURSES	LECTURE (L)	PRACTICAL (P)	TUTORIAL (T)	CREDIT (C)	PRE- REQUISITE
Compulsary	MPU22071	Kursus Integriti dan Antirasuah	2	0	0	1	
Discipline Core	DCC50492	Environmental Pollution & Control	2	2	0	2	
	DCC50502	Steel Structure Design	0	5	0	2	DCC30373
	DCC50513	Final Year Project 2	2	1	0	3	DCC40441
	DCC50522	Engineering Hydrology	2	1	0	2	
	DCC50532	Project Management and Practices	2	0	0	2	
Electives	DCC5XXX	Electives 2				2	
Total			21			14	

SEMESTER 6

	CODE	COURSES	LECTURE (L)	PRACTICAL (P)	TUTORIAL (T)	CREDIT (C)	PRE- REQUISITE
Industrial Training	DUT600910	Engineering Industrial Training	20 weeks			10	
Total						10	

ELECTIVES

	CODE	COURSES	LECTURE (L)	PRACTICAL (P)	TUTORIAL (T)	CREDIT (C)	PRE- REQUISITE
Elective course							
Electives	DCC40462	Railway Construction and Maintenance	2	0	0	2	
	DCC40472	Building System and Maintenance	2	0	0	2	
	DCC40482	Smart City and Civil Engineering	2	1	0	2	
	DCC40572	Site Supervisor Competency	2	1	0	2	
	DCC50542	Industrialised Building System (IBS)	0	3	0	2	
	DCC50552	Workmanship in Construction Industry	2	1	0	2	
	DCC50562	Building Information Modelling (BIM)	0	4	0	2	
Free Electives							
<i>(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)</i>							

DIPLOMA IN CIVIL ENGINEERING

COURSE SINOPSIS

SEMESTER	SINOPSIS
1	DCC10273 :BUILDING CONSTRUCTION WORKSHOP aims to provide participants with a comprehensive understanding of the fundamental principles, techniques, and best practices in the field of building construction. The workshop will cover various aspects of the construction process. DCC10283 : CIVIL ENGINEERING DRAWING covers a range of topics in computer-aided drafting and building information modelling for civil engineering. The course involves the fundamentals of drafting using CAD, including recognizing the CAD interface, understanding coordinate systems, and configuring drawing settings. Students will acquire skills in managing elements through the creation of layers, controlling properties, and organizing drawings. Students also explore creating, editing, and annotating objects, such as lines, arcs, circles, and text, with precise control over their attributes. The course extends into basic architectural drawing, teaching the construction of 2D floor plans and structural detail drawings. The next section focuses on BIM for structure, including tools for starting structural projects and building structural elements. DCC10292 : CONSTRUCTION MATERIALS course aims to equip students with a comprehensive knowledge of construction materials in civil engineering field. The curriculum provides a comprehensive overview of civil engineering materials and a detailed exploration of concrete materials comprising cement, aggregate, water and admixtures. The course also covers concrete mixtures extensively and explores the characteristics of both fresh and hardened concrete. Moreover, the course explores the properties of timber, types and characteristics of bricks and concrete blocks, and basic concept of steel materials. This course additionally provides knowledge regarding advanced construction materials and methods for each respective topic.

DIPLOMA IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
2	DCC20303:CIVIL ENGINEERING SURVEY course provides students with fundamental knowledge and practical skills related to surveying in the field of engineering. Surveying is a crucial aspect of engineering and construction, as it involves measuring and mapping the physical characteristics of land, structures, and infrastructure. This information is essential for designing, planning, and executing various engineering projects.
	DCC20312 :PAVEMENT ENGINEERING is a field of study that explores the historical aspects of road pavement construction and the organizations involved in Malaysia. This course is designed to impart knowledge about the methods and designs utilized in pavement engineering. The emphasis of this course lies in introducing students to pavement engineering, covering topics such as pavement materials and testing, flexible pavement design, alternative pavement, and pavement maintenance.
	DCC20332 : SOIL MECHANICS is the scientific discipline that investigates the properties and behavior of soil, a fundamental component of the Earth's crust. It encompasses the study of soil composition, structure, and the interactions between soil particles and water. The primary objectives of soil mechanics are to understand how soils respond to external forces, bear loads and deform under different conditions
	DCC20322 :ESTIMATING AND QUANTITY MEASUREMENT is a study of preliminary estimating method, built-up rate and quantity measurement. An estimate of a project is a forecast of its probable cost. The quantity measurement are calculated by studying and analysing the drawings of the structure (dimensions on the drawings). This module emphasies on an estimate which includes complete quantitative details of the material required to complete the project.

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SEMESTER	SINOPSIS
2	DCC20342:SOIL MECHANIC AND PAVEMENT ENGINEERING LABORATORY covers knowledge in the form of practical through the experiments which are carried out based on the concepts and the theories learned in the class. The emphasis of the course is on the method of conducting experiments, analysis and understanding its relationship with theories learned. The course also focused on the geotechnical and highway which are the core of the civil engineering field
	DCC20391 :TECHNICIAN AND SUSTAINABLE DEVELOPMENT is a course that focuses on the introduction to engineering technician in civil engineering which is covers the roles and responsibility of technician in the context of their employment in industry, the role of professional bodies and IOW in context of civil engineering practice. In this course, students will be exposed to sustainability concept and practices in Malaysia that related to civil engineering field. This course also covers about the connection between Technician and Sustainability Development Goals (SDGs), the implementation of SDGs and the contribution of technician towards SDGs.
	It is also cover a creative and innovative approaches in engineering problem-solving skills and professional codes of ethics. The students will be able to demonstrate excellent teamwork skills for working in group assessment and organizing activities of engineering practices in the society.

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SEMESTER	SINOPSIS
	DCC30352 : FLUID MECHANICS covers the behaviour and characteristics of engineering fluids and their application in hydrostatic and hydrodynamic fluids. This course involves discussion on fluid properties, fluid flow concept and basic equations, moving fluid forces, dimensional analysis, flow in closed conduits and pipe network, and momentum equations.
3	DCC30362: GEOTECHNICAL ENGINEERING is a branch of civil engineering dedicated to understanding and managing the interactions between soil, water, and man-made structures. It involves the application of principles from soil mechanics and engineering geology to address the challenges associated with the development and maintenance of civil engineering projects. It also covers soil improvement works such as seepage, slope stability, lateral earth pressure and retaining wall and foundation. DCC30373: STRUCTURAL MECHANICS encompasses the principles and fundamentals of material strength, the behaviour of loaded structures, and types of forces acting on the structure. The effects of loads on normal, bending, and shear stress, as well as on slope, and deflection are covered in this course. This fundamental is essential for understanding strength and structural design in civil engineering.

DIPLOMA IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
3	DCC30382: TRAFFIC ENGINEERING is a branch of civil engineering that deals with the planning, design and management of transportation systems and the efficient flow of traffic on roadways. It involves various aspects such as geometrical design, traffic signal design, traffic safety measures, signage and transportation planning.
4	DCC40402 : STRUCTURE, HYDRAULICS AND WATER QUALITY LABORATORY covers knowledge in the form of practical through the experiments which are carried out based on the concepts and the theories learned in the class. The emphasis of the course is on the method of conducting experiments, analysis and understanding its relationship with theories learned. The course also focused on the structure, hydraulics and water quality which are the core of the civil engineering field. DCC40412 : HYDRAULICS covers the application of hydrostatic and hydrodynamic fluids. This course involves discussion on hydrostatics concepts and basic equations of stability and buoyancy. This course also emphasizes the application of constituents of the open channel flow concept and pumps appropriately in solving hydraulics problems.

DIPLOMA IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
4	DCC40441: FINAL YEAR PROJECT 1 covers as a comprehensive exploration of knowledge and practical skills within civil engineering, and by integrating the principles of design thinking students are encouraged to approach challenges with a holistic and innovative mindset aligning with Sustainable Development Goals (SDGs). This course emphasizes the cultivation of essential soft skills, including effective communication, collaborative teamwork, meticulous work planning, sound decision-making, and fostering creativity within the available facilities. It also provides a dynamic platform for students to integrate theoretical understanding with hands-on application.
	DCC40452: WATER SUPPLY AND SEWERAGE SYSTEM is a study of water resources, water characteristics, usage and demand of water supply, raw water treatment process and water distribution system. This course also includes the information on the process in sewage treatment plant, sludge treatment and disposal. It also emphasizes on the drinking water parameter and effluent from sewage treatment plant.
	DCC40433: REINFORCED CONCRETE DESIGN covers concepts and methods of design for reinforced concrete structures comprising beams, slabs, columns and foundation. This course emphasizes knowledge and practice of producing double-storey reinforced concrete building designs starting from the layout plan, action analysis, structural design, and detailing according to Eurocode 2 (EC2).
	DCC40423: STRUCTURAL ANALYSIS course is designed to expose the student to analysing statically determinate and statically indeterminate structures, which consist of a beam, a portal frame, and trusses. For statically indeterminate beams and portal frames, the method to analyse the internal moment is moment distribution. Analysis of an indeterminate beam and portal frame, including drawing the shear force and bending moment diagram. Students will also be taught the use of an influence line to solve problems involving determinate beams subjected to a live or moving load. At the end of the course, students should be able to analyse the internal member forces for determinate and indeterminate 2D pin-jointed trusses using the method of joint and force method. It also includes the analysis of the joint displacement for statically determinate trusses using the method of virtual work.

DIPLOMA IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
5	DCC50492 : ENVIRONMENTAL POLLUTION AND CONTROL is a comprehensive course designed to provide students with a strong foundation in understanding, analyzing, and mitigating environmental pollution. The course aims to equip students with the necessary knowledge to address the challenges posed by various pollution and contribute to sustainable environmental management. The students are exposed to the Environmental Quality Act 1974 as the guidelines and procedures in managing national environmental pollution.
	DCC50502 : STEEL STRUCTURE DESIGN covers the fundamental concepts and basic principles required to design steel structures including roof truss, beam, column, and connections. This course enables student to develop understanding basic knowledge related to the theoretical background for the design of steel structures and the practical expertise to translate this background knowledge into successfully performing actual design calculations according to Eurocode 3 (EC3) for a single storey steel building.
	DCC50513 : FINAL YEAR PROJECT 2 covers knowledge and skills in civil engineering practices. The student will be exposed to communication skills, group works, work planning, decision making, recommendation and gain creativity by using related facilities to a design of a system. This course also covers conducting experiments in the laboratory/workshop, field works, and academic research, designing product or method of civil engineering related fields. The student will learn the method to analyze data, prepare presentation and report writing.
	DCC50522 : ENGINEERING HYDROLOGY covers the fundamentals of engineering hydrology, including the hydrologic cycle, the processes involve, rainfall and runoff. It includes the measurement of river discharge, and hydrograph analysis. The importance of stormwater management is also discussed the basic concept of urban drainage design, by compliance with the local guidelines of the Urban Storm Water Management Manual for Malaysia (MSMA).

DIPLOMA IN CIVIL ENGINEERING

SEMESTER	SINOPSIS
5	DCC50532 : PROJECT MANAGEMENT AND PRACTICES course offers basic knowledge of project management and on site practices. The emphasis of the module is to expand student's skill and knowledge in project construction, project planning and scheduling, project supervision and project monitoring and controlling. The application of common software such as Microsoft Project for planning and scheduling also will be exposed to the student.
Electives	DCC40482 : SMART CITY AND CIVIL ENGINEERING course is designed to offer students a comprehensive insight into the seamless integration of smart city technologies with civil engineering principles. It fosters a practical learning approach by engaging students in hands-on projects that highlight the significance of sustainable and intelligent urban development. By delving into real-world applications, students will not only acquire practical skills but also develop a deep understanding of how smart technologies can be effectively leveraged in civil engineering practices. This course empowers students to make meaningful contributions to the dynamic realm of smart cities, equipping them with the expertise needed to navigate and thrive in this evolving field DCC50562:BUILDING INFORMATION MODELLING (BIM) focuses on the designing and analysing building models using techniques, resources and BIM tools. Students will be introduced to building models using BIM process for architectural, structural and plumbing. It covers BIM coordination, clash detection and construction scheduling. This course is a projectbased where students gain knowledge and skills on the implementation of BIM concepts from planning to design stage DCC40472 : BUILDING SYSTEM AND MAINTENANCE focuses on the basic concepts and the principles of the systems in a building. The course emphasizes on the electrical system in building, firefighting system, building transportation system, airconditioning system, plumbing and sanitary system in building and maintenance works.

ELECTRICAL ENGINEERING DEPARTMENT

INTRODUCTION

Department of Electrical Engineering (JKE), among the pioneer departments in Politeknik Mukah Sarawak, offering an intensive high-quality diploma with Technical and Vocational Education and Training (TVET) skills. JKE which is led by the Head Of Department, Samsawi Bin Bujang and assisted by three Heads of Programme, Gordon Kechendai Anak Nyanggau (Diploma in Electrical and Electronic Engineering), Ts. Mohd Ramli Bin Ali (Diploma in Electronic Engineering (Communication)) and Diana Anak Ringgau (Certificate In Electrical Engineering). JKE comprises of well experienced 25 academic staffs and 3 non-academic staffs with expertise and competence in various electrical and electronic fields. In line with the Industrial Revolution 4.0, Green Technology and Sustainable Development initiatives, the programmes offered are designed based on latest trends of education and future needs of industries and have gained accreditation from the Malaysian Qualification Agency (MQA). and The Engineering Technology Accreditation Council (ETAC). The full-time programmes comprising of six semesters course work with one full semester of industrial training built-in for diploma programmes, then four semester course work with one full semester of industrial training built-in for the certificate programme. Apart from the technical knowledge and skills, the programmes offers by JKE are designed to develop an individual potential of each student in an integrated and holistic manner through courses such as Islamic studies, moral studies, soft skills and entrepreneurship. The aspiration of JKE is to ensure the students are well-prepared for real case-studies and function as highly qualified, competent and professionals in the field of engineering.

PROGRAMMES

The accredited programmes are designed with various elective courses such as power engineering, digital computers, telecommunications and control systems that allow students to specialize in areas of interest.

FACILITIES

JKE is equipped with advanced teaching and learning facilities.

- Computer Programming Laboratory
- Electronic Digital Laboratory
- Repairing Laboratory
- Project Presentation Room
- Electrical Machine Laboratory
- Project Laboratory
- Electronic Communication Laboratory
- Lecture Room
- Electrical Wiring Laboratory
- Power Energy Laboratory
- CAD Laboratory
- Electrical Technology Laboratory

CERTIFICATE IN ELECTRICAL ENGINEERING

INTRODUCTION

The Electrical Engineering Certificate graduates of the polytechnic's Ministry of Higher Education are exposed to a comprehensive curriculum consisting of courses in personal development, mathematics, science, electrical engineering disciplines and workplace competencies requirements. The Certificate in Electrical Engineering programme covers broad discipline of electrical and electronics engineering fundamental courses including electrical and electronic principles, wiring installation, basic programming, computer-aided design, embedded system applications, electronic equipment diagnostics, communication system fundamentals, and renewable energy systems. The Certificate in Electrical Engineering graduates have the prospect of working in power generation, transmission and distribution, electrical maintenance, industrial electronics, renewable energy technology, and telecommunications. The programme aims to produce well-rounded Technical and Vocational Education and Training (TVET) graduates who contribute to society ethically, engage in entrepreneurial activities, pursue continuous professional development, and adapt to technological in line with current nation development.

SYNOPSIS

The Certificate in Electrical Engineering programme includes the discipline of electrical and electronics engineering fundamental courses and computer technologies-based courses. The engineering fundamentals courses are electrical wiring, semiconductor devices, electronic circuits, digital electronics, electrical circuit 1 and 2. The computer technology-based courses are comprising of programming fundamentals, computer aided design and embedded system applications. The green technology elements are also incorporate in the curriculum to provide awareness towards the importance of sustainable energy.

PROGRAMME AIM

This programme believes that all individuals have the potential to be resourceful and adaptable technical team to support the nation's aspiration in providing engineering talent.

CERTIFICATE IN ELECTRICAL ENGINEERING

JOB PROSPECT

This programme provides the knowledge and skills in electrical engineering that can be applied to a broad range of careers in most power generation provider and manufacturing industries. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market such as:

- a. Electrical Technician
- b. Electrical Drafter
- c. Maintenance Technician
- d. Electronic Equipment Technician
- e. Technical Assistant
- f. Production Technician
- g. Instrumentation Technician
- h. Renewable Energy Technician.
- i. Telecommunications Technician
- j. Technopreneur

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The engineering programme should produce balanced TVET graduates who are:

PEO1 : competent with industry-relevant knowledge and skills in electrical engineering field.

PEO2 : enhance in lifelong and continuous learning, knowledge and skills.

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

PEO4 : able to establish links with society and players in the industry.

CERTIFICATE IN ELECTRICAL ENGINEERING

PROGRAMME LEARNING OUTCOMES (PLO)

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

PL01 : apply basic knowledge of mathematics, science and engineering fundamentals to routine procedures and practices in specific fields.

PL02 : identify specific engineering problems in their discipline with respect to operation and maintenance.

PL03 : assist in the investigations and design of solutions for specific engineering systems.

PL04 : demonstrate as awareness of societal, health, safety, legal and cultural issues and the consequent responsibilities.

PL05 : demonstrate communication and team skills.

PL06 : demonstrate an understanding of ethics, responsibilities and norms of engineering practices.

PL07 : demonstrate an awareness of management, business practices, entrepreneurship and sustainable development.

PL08 : recognise the need for career development and to engage in lifelong learning.

CERTIFICATE IN ELECTRICAL ENGINEERING

PROGRAM STRUCTURE

SEMESTER 1

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				Credit Value
			L	P	T	O	
Compulsory	MPU11032	Pengajian Malaysia	2	0	0	0	2
	MPU13091	Kursus Integriti dan Anti Rasuah	0	0	1	0	1
	CUW10022	Occupational Safety and Health	2	0	0	0	2
Common Core	CBM10013	Engineering Mathematics	2	0	2	0	3
	CEE10011	Computer Aided Electrical Drawing	0	2	0	0	1
	CEE10023	Measurement Devices	2	2	0	0	3
Discipline Core	CEE10033	Electrical Circuits 1	2	2	0	0	3
	CEE10042	Electrical Wiring	1	3	0	0	2
TOTAL			23				17

SEMESTER 2

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				Credit Value
			L	P	T	O	
Compulsory	CUE10012	Technical English	1	0	2	0	2
	CBC10032	Computer Application	1	2	0	0	2
Common Core	CBS10022	Engineering Science	2	1	0	0	2
	CEE20051	Electronic Computer Aided Design	0	2	0	0	1
Discipline Core	CEE20062	Programming Fundamentals	1	2	0	0	2
	CEE20073	Semiconductors Devices	2	2	0	0	3
	CEE20083	Digital Electronics	2	2	0	0	3
	CEE20093	Electrical Circuits 2	2	2	0	0	3
TOTAL			26				18

CERTIFICATE IN ELECTRICAL ENGINEERING PROGRAM STRUCTURE

SEMESTER 3

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				Credit Value
			L	P	T	O	
Compulsory	MPU13072	Pendidikan Islam	2	0	0	0	2
	MPU13082	Pendidikan Moral					
Common Core	CEE30102	Technopreneur in the Engineering World	1	2	0	0	2
Discipline Core	CEE30112	Embedded System Applications	1	2	0	0	2
	CEE30123	Electronic Circuits	2	2	0	0	3
	CEE30132	Electronic Equipment Diagnostic	1	3	0	0	2
	CEE30143	Renewable Energy Systems	2	2	0	0	3
	CEE30153	Communication System Fundamentals	2	2	0	0	3
TOTAL			24				17

SEMESTER 4

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				Credit Value
			L	P	T	O	
Industrial Training	CUT40018	Industrial Training	0	0	0	0	8
TOTAL			0				8

DIPLOMA IN ELECTRICAL & ELECTRONIC ENGINEERING (DEE) (VERSION 06062024)

INTRODUCTION

The Electrical Engineering Diploma graduates of the polytechnic's Ministry of Higher Education are exposed to a comprehensive curriculum consisting of courses in personal development, mathematics, science, electrical engineering disciplines and workplace competencies requirements. The Diploma in Electrical and Electronic Engineering programme covers broad discipline of electrical and electronics engineering fundamental courses, computer technologies-based courses and specialization courses. The electrical and electronic engineering is the field of study which generally deals with the application of electrical and electronics towards designing, testing and development of circuitry and equipment for well-defined engineering activities. It requires the application of scientific and engineering knowledge and methods combined with practical skills in supporting well-defined engineering activities to prepare students for their future role in the industry. The Diploma in Electrical and Electronic Engineering graduates of the programme have the prospect of working in the electric and electronic industries, computer-based technology industry and integrated circuit design, fabrication and packaging industry. The programme will produce balanced Technical and Vocational Education and Training (TVET) graduates who contribute to society ethically, engage in enterprising activities, continuously developing professionally and adapt to technology changes.

SYNOPSIS

The Diploma in Electrical and Electronic Engineering programme includes the discipline of electrical and electronics engineering fundamental courses, computer technologies based courses and specialization courses. The engineering fundamental courses are electrical wiring, semiconductor devices, electronic circuits, digital electronics, electrical circuit 1 and 2 . The computer technology- based courses are comprised of programming fundamentals, computer aided design and embedded system applications. The specialization courses are renewable energy, programable logic control, power electronic, power system and final year project. The green technology elements are also incorporate in the curriculum to provide awareness towards the importance of the sustainable energy.

PROGRAMME AIM

This programme believes that all individuals have the potential to be resourceful and adaptable technicians to support the nation's aspiration in providing engineering talent.

DIPLOMA IN ELECTRICAL & ELECTRONIC ENGINEERING (DEE) (VERSION 06062024)

JOB PROSPECT

This programme provides the knowledge and skills in electrical engineering that can be applied to a broad range of careers in most power generation provider and manufacturing industries. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market such as:

- a. Electrical/Electronic Technician
- b. Electrical Engineering Service Advisor
- c. Technical Assistant
- d. Electrical/Electronic Engineering Supervisor
- e. Assistant Engineer
- f. Maintenance technician

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The engineering programme should produce balanced TVET graduates who are:

PEO1: practising technician in electrical and electronic engineering-related field.

PEO2: contributing to society with professional ethics and responsibilities.

PEO3: engaging in enterprising activities that apply engineering knowledge and technical skills.

PEO4: engaging in continuous professional development in response to technological and social challenges.

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PROGRAMME LEARNING OUTCOMES (PLO)

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

PL01: apply knowledge of applied mathematics, applied science, computing and engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices

PL02: identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (DK1 to DK4)

PL03: 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, as well as cultural, societal, and environmental considerations as required (DK5)

PL04: conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements (DK8)

PL05: apply appropriate techniques, resources, and modern engineering computing and IT tools to well-defined engineering problems, with an awareness of the limitations (DK2 and DK6)

PL06: 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)

PL07: 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)

PL08: function effectively as an individual, and as a member in diverse and inclusive teams in multidisciplinary, face-to-face, remote and distributed settings (DK9)

PL09: 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

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PL010: demonstrate awareness of engineering management principles as a member or leader in a technical team and to manage projects in multidisciplinary environments

PL011: 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)

*Represented by the 17 UN Sustainable Development Goals (UN-SDG)

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 recognised 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: Ethics, inclusive behaviour, and conduct. Knowledge of professional ethics, responsibilities, and norm 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.

*Represented by the 17 UN Sustainable Development Goals (UN-SDG)

DK: Knowledge Profile

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

DIPLOMA IN ELECTRICAL & ELECTRONIC ENGINEERING (DEE) (VERSION 06062024)

PROGRAM STRUCTURE

SEMESTER 1

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DET10103	Electrical Circuits 1	2	2	0	3	-
	DEE10133	Measurement Devices	2	2	0	3	-
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	-
COMPULSORY	DUE10062	Technical English 1	1	0	2	2	-
	MPU24031	Sukan 1					-
	MPU24041	Kelab/Persatuan 1	0	2	0	1	-
	MPU24XX1	Unit Beruniform 1					-
Total			22			16	

SEMESTER 2

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DET20123	Electrical Circuits 2	2	2	0	3	DET10103
	DEE20143	Semiconductors Devices	2	2	0	3	-
	DEE20153	Digital Electronics	2	2	0	3	-
	DEC20162	Programming Fundamentals	1	2	0	2	-
	DET10112	Electrical Wiring	1	3	0	2	-
COMMON CORE	DBM20173	Engineering Mathematics 2	2	0	2	3	DBM10163
COMPULSORY	MPU24051	Sukan 2					MPU24031
	MPU24061	Kelab/Persatuan 2	0	2	0	1	MPU24041
	MPU24XX1	Unit Beruniform 2					MPU24XX1
Total			25			17	

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PROGRAM STRUCTURE

SEMESTER 3

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DEE30163	Electronic Circuits	2	2	0	3	-
	DEE30172	Electronic Equipment Diagnostic	1	3	0	2	DEE20143
	DEE30191	Electronic Computer Aided Design (ECAD)	0	2	0	1	-
	DEC30182	Embedded System Application	1	2	0	2	DEC20162
	DEE30181	Computer Aided Electrical Drawing	0	2	0	1	-
	DEG30073	Renewable Energy Systems	2	2	0	3	-
COMMON CORE	DBM30193	Electrical Engineering Mathematics	2	0	2	3	DBM20173
COMPULSORY	DUE30072	Technical English 2	1	0	2	2	-
Total			26			17	-

SEMESTER 4

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DET30143	Power System (Pre: DET20123)	2	2	0	3	DET20123
	DEE40202	Project 1	1	2	0	2	-
	DEJ40093	Programmable Logic Controller (PLC) And Automation	2	2	0	3	-
	DET40163	Power Electronics	2	2	0	3	-
COMMON CORE	DEE40252	Technopreneur in the Engineering World	1	2	0	2	-
COMPULSORY	MPU22071	Kursus Integriti dan Antirasuah	0	0	2	1	-
	DUE50082	Technical English 3	1	0	2	2	-
Total			23			16	-

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PROGRAM STRUCTURE

SEMESTER 5

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DEE50233	Project 2	0	4	0	3	DEE40202
	DET30133	Electrical Machine	2	2	0	3	-
	DEC50263	CMOS Integrated Circuit Design and Fabrication	2	2	0	3	DEE20143 DEE20153
ELECTIVE	DXXXXXX2	<i>Elective 1</i>				2	-
COMPULSORY	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	2	-
	MPU23182	Sains Teknologi Dan Kejuruteraan Islam*	1	0	2	2	-
	MPU23172	Nilai Masyarakat Malaysia**	1	0	2		-
Total			18			15	-

SEMESTER 6

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
LATIHAN INDUSTRI	DUT600910	Engineering Industrial Training	0	0	0	10	-
Total			0			10	-

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PROGRAM STRUCTURE

ELECTIVE

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
ELECTIVE	DEC50242	Embedded Robotic	1	2	0	2	-
	DEE50242	Circuit Analysis	2	0	1	2	-

LEGEND/NOTES:

PREQ	:	Prerequisite (s)
L	:	Lecture
P	:	Practical/Lab
T	:	Tutorial
O	:	Others
*		For Muslim students
**		For non-Muslim students
#		Path 1 : Sport and Club
##		Path 2 : Uniform Unit

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

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COURSE SINOPSIS

SEMESTER	SINOPSIS
1	DET10103: Electrical Circuits 1 Electrical Circuits 1 course introduces students to the principles related to DC electrical circuits. It covers the fundamental laws, theorems, and circuit techniques of the electrical technology fundamentals. This course also covers inductor, capacitor, magnet, and electromagnetic circuits.
	DEE10133: Measurement Devices Measurement Devices introduces students to the basic concept of electrical instruments and measurement. It covers the basic principles of measurement, safety precautions and meter calibration. Students will also use measurement devices such as analogue meters, DC meters, analogue and digital multimeters, oscilloscopes, signal generators and power meters during the practical sessions. This course also covers the basic concept and simple application of the DC Bridge
2	DET20123: Electrical Circuits 2 Electrical Circuits 2 is designed to provide students with the knowledge related to Alternating Current (AC) of electrical circuits. It focuses on the principles of an alternating current AC waveform and sinusoidal steady state circuit analysis. This course also covers the operations of various types of transformers and applications of three phase system.
	DEE20143: Semiconductors Devices Semiconductor Devices introduces students to basic electronic theories and devices. It covers the fundamentals of electronic devices which include diodes, bipolar junction transistors and field effect transistors. The content encompasses device structure to biasing basic applications.
	DEE20153: Digital Electronics Digital Electronics introduces the theories on the basics of digital systems. This course emphasizes digital system fundamentals and applications. This course mainly covers number systems, code systems, logic gates, Boolean operations, data processing, flip-flops, counters, and registers.

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DEC20162: Programming Fundamentals

Programming Fundamentals provides the skills necessary for the effective application of computation and computer programming in engineering applications. Students develop their programming skills through a variety of assignments and labs and by reviewing case studies and example programs. The learning outcome is proficiency in writing small to medium programs in a procedural programming language.

DET10112: Electrical Wiring

Electrical Wiring exposes students to the various aspects of wiring installation according to the Electricity Supply Act 1990 and Electricity Regulation 1994. Students will be able to relate the theoretical aspects to practical work on electrical wiring during workshop sessions. This course also provides students with the knowledge and skills in doing different types of wiring installation, wiring protection, wiring inspection, wiring testing and instill a commitment to decent work practices in electrical wiring for achieving sustainable development.

3

DEE30163: Electronic Circuits

Electronic Circuits emphasize the concept of electronic device applications. The course covers the fundamentals of electronic circuit application which include power supply units, oscillators, operational amplifiers, timers, filters and AD/DA converters. The content covers circuit configurations, operation, and application of the electronic circuits.

DEE30172: Electronic Equipment Diagnostic

Electronic Equipment Diagnostic provides the fundamental knowledge and hands-on skills to diagnose and troubleshooting electronics equipment. This course focuses on common faults in regulated dc power supply, audio equipment and television system. This course also provides knowledge and skills on troubleshooting broken cell phones.

DEE30191: Electronic Computer Aided Design

Electronic Computer Aided Design covers the basic concepts and fundamentals of electronic circuit simulation. It also covers the applications of electronic packages for electronic circuit simulation at the circuit level and the logic level. Emphasis is given to the simulation for analogue, digital logic and mixed-signal circuits using various types of simulation analysis. A printed Circuit Board (PCB) layout is then produced for the circuits. The simulation and the PCB layout are done using electronic software packages such as Protel/Altium Designer, ORCAD, PSpice, Circuit Maker, Electronic Workbench, NI Multisim or Proteus.

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3	DEC30182: Embedded System Application Embedded System Applications covers the basic concept and application of microcontroller systems based on ATmega328. Students learn software and hardware development on ATmega328 microcontrollers. Students are exposed to Arduino Programming Framework during software development and understand how to interface the Microcontroller Unit (MCU) with external devices using suitable peripheral features. DEE30181: Computer Aided Electrical Drawing Computer Aided Electrical Drawing provides knowledge and exposure on the usage of AutoCAD software. The course focuses on the application of the software to produce drawings of graphics, electrical / electronic component symbols, circuit schematics and electrical wiring layout diagram. The skills acquired from this course will also equip students with the ability to learn and use other similar software. DEG30073: Renewable Energy Systems Renewable Energy Systems course covers the fundamental principles and practical applications of different Renewable Energy Power Systems. Its focuses on Solar Photovoltaic, Wind Energy, Hydroelectric, Bioenergy and Other Renewable Energy Power System, emphasizing the significance of Renewable Energy usage. The environmental impact of these systems are also be discussed.
4	DET30143: Power System The Power System course will provide the students with knowledge of the generation of electrical energy by using non-renewable and renewable energy concepts and environmental control systems that are used in power plants. This course focuses on the concepts of transmission, including exposure to the short-line model and distributed voltage at network string calculation. This course also introduces the students to distribution systems and the consumption of electrical power by the consumer. DEE40202: Project 1 Project 1 provides knowledge regarding the implementation and development methods of a project based on hardware or software or a combination of hardware and software. This course provides exposure to project management and finance, techniques to develop project and proposal preparation. The students are allowed to do an individual or group project but will be assessed individually through the project assessment tasks throughout the course.

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DEJ40093: Programmable Logic Controller (PLC) And Automation

Programmable Logic Controller (PLC) and Automation provides a basic understanding of the concept and principle of automation system. This course emphasises the relationship between conventional/hardwired/relay ladder logic (RLL) and PLC system, application of various industrial input and output devices of PLC, designing process, programming and constructing method. This course also provides knowledge and skills in designing environmentally-friendly automation control system based on conventional/hardwired/relay ladder logic (RLL) and PLC.

DET40163: Power Electronics

Power Electronics course is aimed to equip students with the knowledge and skills related to power electronic devices and its application in power conversion. This course also focuses on the operational principle of rectifiers, choppers, inverters and AC to AC converter circuits. Emphasis is given more on producing the output voltage waveforms of the converters.

DEE40252: Technopreneur in the Engineering World

Technopreneur in the Engineering World course explores the role of technicians in modern world society, with particular emphasis on reverse engineering, entrepreneurial skills, and social entrepreneurship. It offers a comprehensive, approach that combines theoretical knowledge with practical skills for technopreneurship, empowering students to develop innovative solutions that address both commercial and social challenge. This course can help students become technopreneurs and encourage them to pursue this career path while also fostering an awareness of socially responsible business ideas through developed technical business plans, investigative skills in existing technical products, and financial planning that students have learned. In addition, this course also equips students to plan strategically in marketing technical products using digital marketing trends.

DIPLOMA IN ELECTRICAL & ELECTRONIC ENGINEERING (DEE) (VERSION 06062024)

5	DEE50233: Project 2 Project 2 is the continuation of DEE40202 Project 1 course. The course focuses on methods of circuit construction, testing, troubleshooting, debugging, repair and also completion of the project which was planned during the previous semester. This course also requires students to manage an economical engineering based project, prepare a project report in a given format and deliver a project presentation at the end of the semester. The students are allowed to do an individual or group project but will be assessed individually through the project assessment tasks throughout the course.
	DET30133: Electrical Machine Electrical Machine course exposes students to the basic construction, principle of operation and control of various types of motors and generators. This course provides students with the basic knowledge and skills to solve various problems related to motors and generators.
	DEC50263: CMOS Integrated Circuit Design and Fabrication CMOS Integrated Circuit Design and Fabrication exposes the students to the basic integrated circuit (IC) and CMOS IC fabrication processes which include oxidation, doping, photolithography, metallization and etching. This course also covers IC testing, reliability and failure analysis. The students will be equipped with the knowledge of inverter design and simple to complex CMOS logic gates. The students will experience developing the physical layout of integrated circuit based on specific transistor feature size and using CAD tools while adhering to specific design rules. Finally, this course also covers the topic on design methodology used in designing integrated circuits.
ELECTIVES	DEC50242: Embedded Robotic Embedded Robotic presents the combination of mobile robots and embedded systems, from introductory to intermediate level. It is structured in three parts, which are embedded systems, mobile robot, and mobile robot applications. These parts are essential to students in mastering the crucial steps of building a complete working robotic system. They will help them to develop robots that not only can move, but intelligent as well with the assistance of dedicated computer program such as Visual Studio, VB, C++, C#, Java, Python, RoboRealm or OpenCV.
	DEE50242: Circuit Analysis Circuit Analysis provides exposure on how to analyze electrical circuits that have alternating current (AC) voltage or current sources using various circuit analysis techniques and theorems. Application of mathematic theorem of Laplace Transform is also introduced as another method of AC circuit analysis and the use of mathematic theorem of Fourier Series to analyze electrical waveforms.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

INTRODUCTION

The Electrical Engineering Diploma graduates of the polytechnic's Ministry of Higher Education are exposed to a comprehensive curriculum consisting of courses in personal development, mathematics, science, electrical engineering disciplines and workplace competencies requirements. The Diploma in Electronic Engineering (Communication) covers broad discipline of electronics engineering fundamentals, computer-based technology, and specialization. The computer-based technologies and specialization disciplines are comprised of software-hardware interfacing application through the internet, data networking, wired and wireless communication technology. Additionally, the program emphasizes practical skills essential for tasks such as system maintenance, installation, testing and troubleshooting.

The graduates of the programme will have the prospect of working in the electronics, telecommunications, and networking industry. The programme will produce balanced Technical and Vocational Education and Training (TVET) graduates who contribute to society ethically, engage in enterprising activities, continuously developing professionally and adapt to technology changes.

SYNOPSIS

The Diploma in Electronic Engineering (Communication) programme includes the discipline of electronics engineering fundamental courses, computer technologies-based courses and specialization courses. The engineering fundamental courses are electrical wiring, semiconductor devices, measurement, electronic circuits, digital electronics, electrical technology, programming fundamentals, computer aided electrical drawing, electronic computer aided design, electronic equipment repair and fundamental communication system. The computer technology-based courses are comprised of computer vision programming, and internet of things devices applications. The specialization courses are microwaves engineering, data communication and networking, cellular communication system, fiber optic communication system and final year project.

PROGRAMME AIM

This programme believes that all individuals have the potential to be resourceful and adaptable technicians to support the nation's aspiration in providing engineering talent.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

JOB PROSPECT

This programme provides the knowledge and skills in electrical engineering that can be applied to a broad range of careers in most power generation provider and manufacturing industries. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market such as:

- a. Electrical/Electronic Technician
- b. Electrical Engineering Service Advisor
- c. Technical Assistant
- d. Electrical/Electronic Engineering Supervisor
- e. Assistant Engineer
- f. Maintenance technician

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The engineering programme should produce balanced TVET graduates who are:

PEO1: practising technician in electrical and electronic engineering-related field.

PEO2: contributing to society with professional ethics and responsibilities.

PEO3: engaging in enterprising activities that apply engineering knowledge and technical skills.

PEO4: engaging in continuous professional development in response to technological and social challenges.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

JOB PROSPECT

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

- a. Assistant Engineer
- b. Assistant Radio Frequency
- c. Engineer Technical Executive
- d. Marketing Executive
- e. Technical Supervisor
- f. Assistant Technical Designer
- g. Assistant Network Engineer
- h. Assistant Network Administrator
- i. Assistant Drive Test Engineer
- j. Assistant Drive Test Analyser Engineer
- k. Network Planner
- l. Electrical/Electronic Technician
- m. Technopreneur
- n. Technical Officer
- o. Project Administrator

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The engineering programme should produce balanced TVET graduates who are:

PEO1: practising technician in electrical and electronic engineering-related field.

PEO2: contributing to society with professional ethics and responsibilities.

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PEO4: engaging in continuous professional development in response to technological and social challenges.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

PROGRAMME LEARNING OUTCOMES (PLO)

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

PL01: apply knowledge of applied mathematics, applied science, computing and engineering fundamentals and an engineering specialisation as specified in DK1 to DK4 respectively to wide practical procedures and practices

PL02: identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (DK1 to DK4)

PL03: 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, as well as cultural, societal, and environmental considerations as required (DK5)

PL04: conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements (DK8)

PL05: apply appropriate techniques, resources, and modern engineering computing and IT tools to well-defined engineering problems, with an awareness of the limitations (DK2 and DK6)

PL06: 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)

PL07: 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)

PL08: function effectively as an individual, and as a member in diverse and inclusive teams in multidisciplinary, face-to-face, remote and distributed settings (DK9)

PL09: 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

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

PL010: demonstrate awareness of engineering management principles as a member or leader in a technical team and to manage projects in multidisciplinary environments

PL011: 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)

*Represented by the 17 UN Sustainable Development Goals (UN-SDG)

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 recognised 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: Ethics, inclusive behaviour, and conduct. Knowledge of professional ethics, responsibilities, and norm 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.

*Represented by the 17 UN Sustainable Development Goals (UN-SDG)

DK: Knowledge Profile

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

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024) PROGRAM STRUCTURE

SEMESTER 1

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DET10103	Electrical Circuits 1	2	2	0	3	-
	DEE10133	Measurement Devices	2	2	0	3	-
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	-
COMPULSORY	DUE10062	Technical English 1	1	0	2	2	-
	MPU24031	Sukan 1					-
	MPU24041	Kelab/Persatuan 1	0	2	0	1	-
	MPU24XX1	Unit Beruniform 1					-
Total			22			16	

SEMESTER 2

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DET20123	Electrical Circuits 2	2	2	0	3	DET10103
	DEE20143	Semiconductors Devices	2	2	0	3	-
	DEE20153	Digital Electronics	2	2	0	3	-
	DET10112	Electrical Wiring	1	3	0	2	-
COMMON CORE	DBM20173	Engineering Mathematics 2	2	0	2	3	DBM10163
	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	2	-
COMPULSORY	MPU24051	Sukan 2					MPU24031
	MPU24061	Kelab/Persatuan 2	0	2	0	1	MPU24041
	MPU24XX1	Unit Beruniform 2					MPU24XX1
Total			25			17	

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024) PROGRAM STRUCTURE

SEMESTER 3

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DEE30163	Electronic Circuits	2	2	0	3	-
	DEE30172	Electronic Equipment Diagnostic	1	3	0	2	DEE20143
	DEE30191	Electronic Computer Aided Design (ECAD)	0	2	0	1	-
	DEC20162	Programming Fundamentals	1	2	0	2	-
	DEP30093	Communication System Fundamentals	2	2	0	3	-
COMMON CORE	DBM30193	Electrical Engineering Mathematics	2	0	2	3	DBM20173
COMPULSORY	MPU22071	Kursus Integriti dan Antirasuah	0	0	2	1	-
	DUE30072	Technical English 2	1	0	2	2	-
Total			26			17	-

SEMESTER 4

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
DICIPLINE CORE	DEC30252	Internet of Things Devices Applications	1	2	0	2	-
	DEE30181	Computer Aided Electrical Drawing	0	2	0	1	-
SPECIALISATION	DEE40202	Project 1	0	3	0	2	-
	DEP40103	Data Communication and Networking	2	2	0	3	-
	DEP40123	Fiber Optic Communication System	2	2	0	3	-
COMMON CORE	DEE40252	Technopreneur in the Engineering World	1	2	0	2	-
COMPULSORY	DUE50082	Technical English 3	1	0	2	2	-
Total			22			15	-

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024) PROGRAM STRUCTURE

SEMESTER 5

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
SPECIALISATION	DEE50233	Project 2	0	4	0	3	DEE40202
	DEP50113	Microwave Engineering	2	2	0	3	-
	DEP50133	Cellular Communication	2	2	0	3	-
ELECTIVE	DXXXXXX2	<i>Elective 1</i>				2	-
DICIPLINE CORE	DEC40213	Computer Vision Programming	1	4	0	3	DEC20162
COMPULSORY	MPU23182	Sains Teknologi Dan Kejuruteraan Islam*	1	0	2	2	-
	MPU23172	Nilai Masyarakat Malaysia**	1	0	2		-
Total			20			16	-

SEMESTER 6

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
LATIHAN INDUSTRI	DUT600910	Engineering Industrial Training	0	0	0	10	-
Total			0			10	-

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024) PROGRAM STRUCTURE

ELECTIVE

COMPONENT	COURSE CODE	COURSE	CONTACT HOUR			CREDIT VALUES	PREQ
			L	P	T		
ELECTIVE	DEC50242	Embedded Robotic	1	2	0	2	-
	DEE50242	Circuit Analysis	2	0	1	2	-
	DEC30182	Embedded System Application	1	2	0	2	DEC20162

LEGEND/NOTES:

PREQ	:	Prerequisite (s)
L	:	Lecture
P	:	Practical/Lab
T	:	Tutorial
O	:	Others
*		For Muslim students
**		For non-Muslim students
#		Path 1 : Sport and Club
##		Path 2 : Uniform Unit

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

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

COURSE SINOPSIS

SEMESTER	SINOPSIS
1	DET10103: Electrical Circuits 1 Electrical Circuits 1 course introduces students to the principles related to DC electrical circuits. It covers the fundamental laws, theorems, and circuit techniques of the electrical technology fundamentals. This course also covers inductor, capacitor, magnet, and electromagnetic circuits. DEE10133: Measurement Devices Measurement Devices introduces students to the basic concept of electrical instruments and measurement. It covers the basic principles of measurement, safety precautions and meter calibration. Students will also use measurement devices such as analogue meters, DC meters, analogue and digital multimeters, oscilloscopes, signal generators and power meters during the practical sessions. This course also covers the basic concept and simple application of the DC Bridge
2	DET20123: Electrical Circuits 2 Electrical Circuits 2 is designed to provide students with the knowledge related to Alternating Current (AC) of electrical circuits. It focuses on the principles of an alternating current AC waveform and sinusoidal steady state circuit analysis. This course also covers the operations of various types of transformers and applications of three phase system. DEE20143: Semiconductors Devices Semiconductor Devices introduces students to basic electronic theories and devices. It covers the fundamentals of electronic devices which include diodes, bipolar junction transistors and field effect transistors. The content encompasses device structure to biasing basic applications.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

2

DEE20153: Digital Electronics

Digital Electronics introduces the theories on the basics of digital systems. This course emphasizes digital system fundamentals and applications. This course mainly covers number systems, code systems, logic gates, Boolean operations, data processing, flip-flops, counters, and registers.

DET10112: Electrical Wiring

Electrical Wiring exposes students to the various aspects of wiring installation according to the Electricity Supply Act 1990 and Electricity Regulation 1994. Students will be able to relate the theoretical aspects to practical work on electrical wiring during workshop sessions. This course also provides students with the knowledge and skills in doing different types of wiring installation, wiring protection, wiring inspection, wiring testing and instill a commitment to decent work practices in electrical wiring for achieving sustainable development.

3

DEE30163: Electronic Circuits

Electronic Circuits emphasize the concept of electronic device applications. The course covers the fundamentals of electronic circuit application which include power supply units, oscillators, operational amplifiers, timers, filters and AD/DA converters. The content covers circuit configurations, operation, and application of the electronic circuits.

DEE30172: Electronic Equipment Diagnostic

Electronic Equipment Diagnostic provides the fundamental knowledge and hands-on skills to diagnose and troubleshooting electronics equipment. This course focuses on common faults in regulated dc power supply, audio equipment and television system. This course also provides knowledge and skills on troubleshooting broken cell phones.

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3

DEE30191: Electronic Computer Aided Design

Electronic Computer Aided Design covers the basic concepts and fundamentals of electronic circuit simulation. It also covers the applications of electronic packages for electronic circuit simulation at the circuit level and the logic level. Emphasis is given to the simulation for analogue, digital logic and mixed-signal circuits using various types of simulation analysis. A printed Circuit Board (PCB) layout is then produced for the circuits. The simulation and the PCB layout are done using electronic software packages such as Protel/Altium Designer, ORCAD, PSpice, Circuit Maker, Electronic Workbench, NI Multisim or Proteus.

DEC20162: Programming Fundamentals

Programming Fundamentals provides the skills necessary for the effective application of computation and computer programming in engineering applications. Students develop their programming skills through a variety of assignments and labs and by reviewing case studies and example programs. The learning outcome is proficiency in writing small to medium programs in a procedural programming language.

DEP30093: Communication System Fundamentals

Communication System Fundamentals introduces the students to the concepts of communication systems. This course covers the principles of communications, analog and digital modulation techniques, multiplexing, and transmission medium. The concepts of sampling, quantization, and line coding techniques in rendering an information signal to be compatible with digital systems are explained before the study of pulse code modulation (PCM). It also exposes the students to the basics of data transmission and communication codes in communication systems.

4

DEE30181: Computer Aided Electrical Drawing

Computer Aided Electrical Drawing provides knowledge and exposure on the usage of AutoCAD software. The course focuses on the application of the software to produce drawings of graphics, electrical / electronic component symbols, circuit schematics and electrical wiring layout diagram. The skills acquired from this course will also equip students with the ability to learn and use other similar software.

DEC30252: Internet of Things Devices Application

Internet of Things Devices Applications provides knowledge and exposure in advanced technology such as Internet of Things (IoT) platform, basic concept of cloud computing and real time monitoring and controlling. The course focuses on the basic knowledge of hardware, software and connectivity encompasses public safety and sustainable development to construct the IoT applications as a key technology of Industry Revolution 4.0 (IR4.0).

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5

DEE50233: Project 2

Project 2 is the continuation of DEE40202 Project 1 course. The course focuses on methods of circuit construction, testing, troubleshooting, debugging, repair and also completion of the project which was planned during the previous semester. This course also requires students to manage an economical engineering based project, prepare a project report in a given format and deliver a project presentation at the end of the semester. The students are allowed to do an individual or group project but will be assessed individually through the project assessment tasks throughout the course.

DEP50113: Microwave Engineering

Microwave Engineering introduces the fundamental principles of microwave theory and the analysis of transmission lines and antennas utilized in microwave systems. It commences by exploring the basics of microwave engineering, transmission line theory, passive and active microwave devices, microwave components, and systems. Additionally, it encompasses the study of RADAR systems functionality and various applications.

DEP50133: Cellular Communication

Cellular Communication introduces to students the basics of wireless communication, the technology and evolution of cellular communication systems according to The International Telecommunication Union (ITU) standards, cellular network channels, techniques used to enhance capacity and speed, interferences, radio wave propagation, and multiple access techniques. This course also exposes the students to the awareness of cellular technology to the public safety and environment-friendly related to the Sustainable Development Goals (SDGs).

DEC40213: Computer Vision Programming

Computer Vision Programming covers the processing of image using a Python language, image, and video capture basic, followed by image and video capture filtering, color spaces, ending with image and video capture detection. These parts are essential to students in mastering fundamental of image processing. It will help them to understand the flow from capturing of image or video to detect of objects in the image or video source.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

ELECTIVES

DEC50242: Embedded Robotic

Embedded Robotic presents the combination of mobile robots and embedded systems, from introductory to intermediate level. It is structured in three parts, which are embedded systems, mobile robot, and mobile robot applications. These parts are essential to students in mastering the crucial steps of building a complete working robotic system. They will help them to develop robots that not only can move, but intelligent as well with the assistance of dedicated computer program such as Visual Studio, VB, C++, C#, Java, Python, RoboRealm or OpenCV.

DEE50242: Circuit Analysis

Circuit Analysis provides exposure on how to analyze electrical circuits that have alternating current (AC) voltage or current sources using various circuit analysis techniques and theorems. Application of mathematic theorem of Laplace Transform is also introduced as another method of AC circuit analysis and the use of mathematic theorem of Fourier Series to analyze electrical waveforms.

DEC30182: Embedded System Application

Embedded System Applications covers the basic concept and application of microcontroller systems based on ATmega328. Students learn software and hardware development on ATmega328 microcontrollers. Students are exposed to Arduino Programming Framework during software development and understand how to interface the Microcontroller Unit (MCU) with external devices using suitable peripheral features.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION) (DEP) (VERSION 06062024)

4

DEE40202: Project 1

Project 1 provides knowledge regarding the implementation and development methods of a project based on hardware or software or a combination of hardware and software. This course provides exposure to project management and finance, techniques to develop project and proposal preparation. The students are allowed to do an individual or group project but will be assessed individually through the project assessment tasks throughout the course.

DEP40103: Data Communication and Networking

Data Communication and Networking introduces students to the fundamentals of data communications and computer networking technologies such as the concepts, models, protocols and standards, transmission medium, and error detection during data transmission. The course equips students with the knowledge and skills necessary for managing the operations and ensuring the security of data communication networks, with a particular focus on Local Area Network (LAN).

DEP40123: Fiber Optic Communication System

Fiber Optic Communication System introduces students to the basic concept of fiber optics in communication systems. This course covers fiber optic characteristics, components in fiber optic systems, losses in fiber optic cable, and the fundamental concept of optical measurement and testing. This course also provides knowledge in splicing techniques with safety awareness, multiplexing techniques, and design considerations in fiber optic communication links.

DEE40252: Technopreneur in the Engineering World

Technopreneur in the Engineering World course explores the role of technicians in modern world society, with particular emphasis on reverse engineering, entrepreneurial skills, and social entrepreneurship. It offers a comprehensive, approach that combines theoretical knowledge with practical skills for technopreneurship, empowering students to develop innovative solutions that address both commercial and social challenge. This course can help students become technopreneurs and encourage them to pursue this career path while also fostering an awareness of socially responsible business ideas through developed technical business plans, investigative skills in existing technical products, and financial planning that students have learned. In addition, this course also equips students to plan strategically in marketing technical products using digital marketing trends.

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

INTRODUCTION

This programme provides the knowledge and skills in electrical engineering that can be applied to a wide range of careers in most power generation provider and manufacturing industries. The Diploma in Electrical and Electronic Engineering programme is designed to cover the wide discipline of electrical and electronic engineering which includes electrical and electronic principles, computer fundamental and programming, computer aided design, semiconductor devices, communication systems, wiring installation, power system, electrical machine and programmable logic controller. The green technology elements are also incorporate in the curriculum to provide awareness towards the importance of the sustainable energy.

SYNOPSIS

The Diploma in Electrical and Electronic Engineering programme is designed to cover the broad discipline of electrical and electronic engineering which includes electrical and electronic principles, computer fundamental and programming, computer aided design, semiconductor devices, communication systems, wiring installation, power system, electrical machine and programmable logic controller. The green technology elements are also incorporate in the curriculum to provide awareness towards the importance of the sustainable energy.

PROGRAMME AIM

This programme believes that all individuals have potential to be a resourceful and adaptable technician to support the nation aspiration in providing engineering talent

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

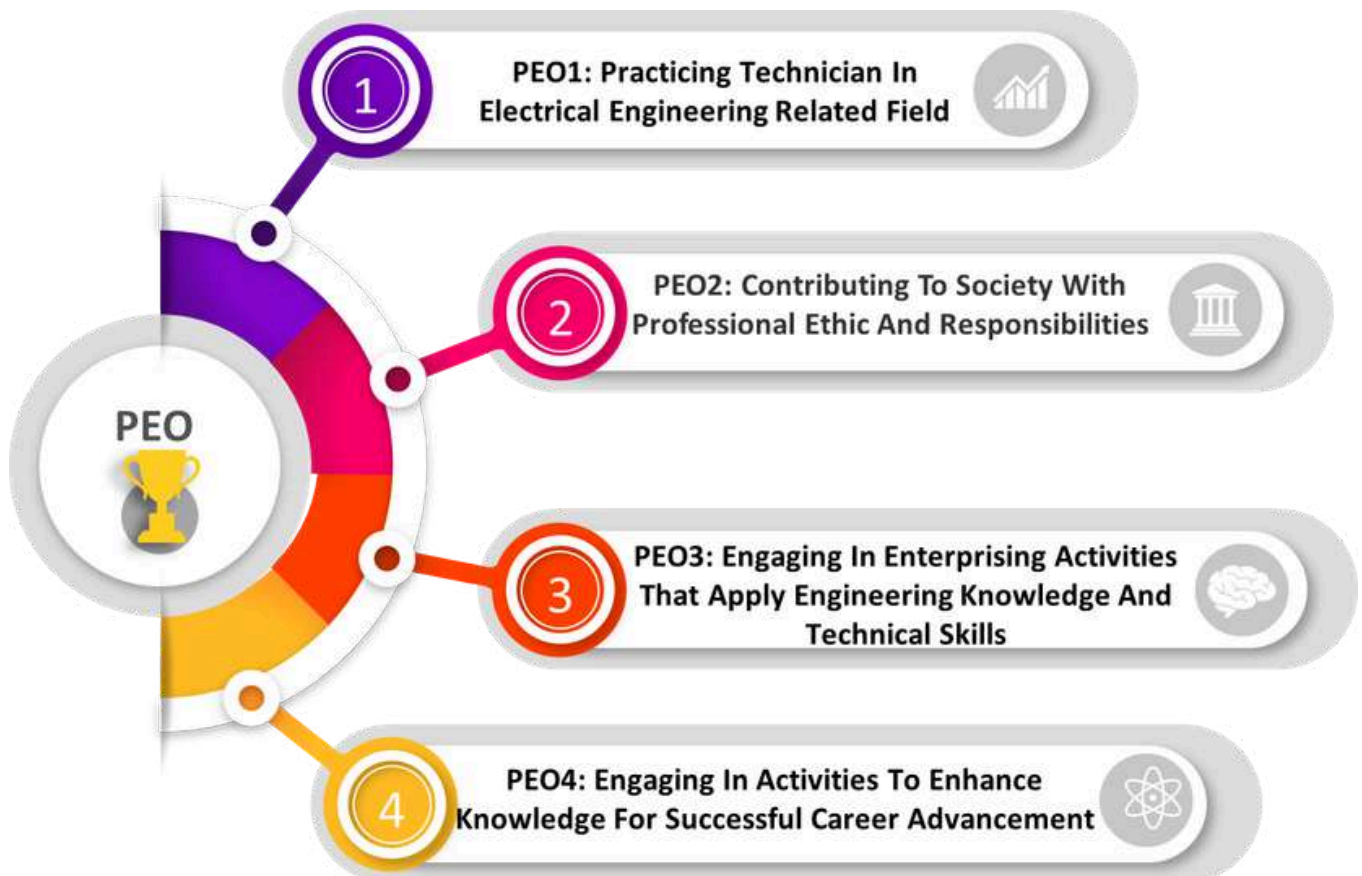
JOB PROSPECT

This programme provides the knowledge and skills in electrical engineering that can be applied to a broad range of careers in most power generation provider and manufacturing industries. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market as:

- Electrical/Electronic Engineering Supervisor
- Electrical Engineering Service Advisor
- Technical Assistant
- Electrical/Electronic Technician
- Assistant Engineer.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The engineering programme should produce balanced TVET graduates who are:



DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

PROGRAMME LEARNING OUTCOMES (PLO)

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

- PLO1: 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
- PLO2: Identify and analyse well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (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 (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: 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)
- PLO7: 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)
- PLO8: Understand and commit to professional ethics and responsibilities and norms of technician practice.
- PLO9: Function effectively as an individual, and as a member in diverse technical teams

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

- PL010: 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
- PL011: Demonstrate knowledge and understanding of engineering management technical team and to manage projects in multidisciplinary environments.
- PL012: Recognise the need for, and have the ability to engage in independent updating in the context of specialised technical knowledge.

NOTES

- DK 1: A descriptive, formula-based understanding of the natural sciences applicable in sub-discipline
- DK 2: Procedural mathematics, numerical analysis, statistics applicable in a subdiscipline A
- DK 3: 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 based on the techniques and procedures of a practice area
Codified practical engineering knowledge in recognized practice area
- DK 6:
- DK 7: Knowledge of issues and approaches in engineering technician practice: ethics, financial, cultural, environmental and sustainability impacts

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

PROGRAM STRUCTURE

SEMESTER 1

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY		Communicative English 1	1	0	2	0	2	-
	MPU24XX1	<i>Sukan</i>	0	2	0	0	1	-
	MPU24XX1	<i>Unit Beruniform 1</i>						
COMMON CORE	DUW10022	Occupational, Safety and Health	2	0	0	0	2	-
	DBM10013	Engineering Mathematics 1	2	0	2	0	3	-
	DBS10012	Engineering Science	2	1	0	0	2	-
DISCIPLINE CORE	DET10013	Electrical Technology	2	2	0	0	3	-
	DET10022	Electrical Wiring	1	3	0	0	2	-
	DEE10013	Measurement Devices	2	2	0	0	3	-
TOTAL			26				18	

SEMESTER 2

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU21032	Penghayatan Etika dan Peradaban	1	0	2	0	2	-
	MPU24XX1	<i>Kelab/Persatuan</i>	0	2	0	0	1	
	MPU24XX1	<i>Unit Beruniform 2</i>						MPU24XX1
COMMON CORE	DBM20023	Engineering Mathematics 2	2	2	2	0	3	DBM10013
DISCIPLINE CORE	DET20033	Electrical Circuits	2	2	0	0	3	DET10012
	DEE20023	Semiconductor Devices	2	2	0	0	3	-
	DEE20033	Digital Electronics	2	2	0	0	3	-
	DEC20012	Programming Fundamentals	1	2	4	0	2	-
TOTAL							17	

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SEMESTER 3

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	DUE30012	Communicative English 2	1	0	2	0	2	DUE10012
COMMON CORE	DBM30043	Electrical Engineering Mathematics	2	0	2	0	3	DBM20023
DISCIPLINE CORE	DEE30043	Electronic Circuits	2	2	0	2	3	-
	DEE30061	Computer Aided Electrical Drawing	0	0	3	0	1	-
	DEE30052	Electronic Equipment Repair	1	2	0	2	2	DEE20023
	DEE30071	Electronic Computer Aided Design	0	0	2	0	1	-
	DEP30013	Communication System Fundamentals	2				3	-
	DET30053	Power System	2				3	DET20033
TOTAL			27				18	

SEMESTER 4

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	DUE50032	Communicative English 3	1	0	2	0	2	DUE30022
	MPU22012	Entrepreneurship	1	0	2	0	2	-
DISCIPLINE CORE	DEC40053	Embedded System Application	2	2	0	0	3	DEC20012
	DEJ40033	Programmable Logic Controller (PLC) and Automation	2	2	0	0	3	-
	DEC30023	Computer Networking Fundamentals	2	2	0	0	3	-
	DEE40082	Project 1	1	2	0	0	2	-
ELECTIVE		Elektif 1 ***	0	0	0	0	2	-
TOTAL			21				17	

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SEMESTER 5

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU23052 MPU23042	<i>Sains Teknologi & Kejuruteraan Dalam Islam*</i> Nilai Masyarakat Malaysia**	1	0	2	0	2	-
DISCIPLINE CORE	DEG30013	Fundamental of Renewable Energy	2	2	0	0	3	-
	DET40073	Power Electronics	2	2	0	0	3	-
	DEE50102	Project 2	0	3	0	0	2	DEE40082
	DET30043	Electrical Machine	2	2	0	0	3	-
ELECTIVE		Elektif 2 ***	0	0	0	0	2	-
TOTAL			18				15	

SEMESTER 6

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
INDUSTRIAL TRAINING	DUT600610	Engineering Industrial Training	0	0	0	0	10	-
TOTAL			0				10	-
TOTAL CREDIT VALUE							95	-

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

ELECTIVES

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
ELECTIVE	DEE40113	Signal and System	2	2	0	0	3	DBM20023
	DEP40053	Fibre Optic Communication System	2	2	0	0	3	-
	DEC50122	Embedded Robotic	1	2	0	0	2	DEC20012
	DEE50122	Circuit Analysis	2	0	1	0	2	-
	DEP50063	Wireless Communication	2	2	0	0	3	-

LEGEND/NOTES:

PREQ	:	Prerequisite (s)
L	:	Lecture
P	:	Practical/Lab
T	:	Tutorial
O	:	Others

* For Muslim students

** For non-Muslim students

Path 1 : Sport and Club

Path 2 : Uniform Unit

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

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
1	DEE10013: MEASUREMENT DEVICES introduce students to the basic concept of electrical instrument and measurement. It covers the basic principles of measurement, safety precautions and meter calibration. Students will also use measurement devices such as analogue meters, DC meters, analogue and digital multimeters, oscilloscopes, signal generators and power meters during practical session. This course also covers the basic concept and simple application of DC Bridge
	DET10013: ELECTRICAL TECHNOLOGY course will introduce students to the principles related to DC electrical circuits. It covers the fundamental laws, theorems and circuit techniques of the electrical technology basic fundamental. This course also covers inductor, capacitor, magnetic and electromagnetic circuits.
	DET10022: ELECTRICAL WIRING course exposes students to the various aspects of wiring installation according to the MS IEC 60364 standard. Students will be able to relate theoretical aspect in practical work on electrical wiring during workshop sessions. This course also provides students with the knowledge and skill in doing different types of wiring installation, wiring protection, wiring inspection, wiring testing and sustainable energy practices in electrical wiring.
2	DEE20033: DIGITAL ELECTRONICS introduces the theories on the basic of digital systems. This course emphasizes on the digital system fundamentals and applications. This course mainly covers number systems, code systems, logic gates, Boolean operations, flip-flops, counters and registers.

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

SEMESTER	SYNOPSIS
2	DEE20033: DIGITAL ELECTRONICS introduces the theories on the basic of digital systems. This course emphasizes on the digital system fundamentals and applications. This course mainly covers number systems, code systems, logic gates, Boolean operations, flip-flops, counters and registers.
	DET20033: ELECTRICAL CIRCUITS designed to provide students with the knowledge of electrical circuits. It emphasizes the principles of an alternating current AC waveform and sinusoidal steady-state circuit analysis. This course also covers the applications of three phase system and operation of various types of transformers.
	DEE20023: SEMICONDUCTOR DEVICES is an introduction to the basic electronic theories and devices. The course covers the fundamentals of electronic devices which includes diodes, bipolar junction transistors and field effect transistors. The content encompasses devices structure to biasing basic applications.
	DEC20012: PROGRAMMING FUNDAMENTAL course provides the skills necessary for the effective of application of computation and computer programming in engineering applications. Students will develop their programming skills through a variety of assignments and labs and by reviewing case studies and example programs. The learning outcome is proficiency in writing small to medium programs in a procedural programming language.
3	DEE30071: ELECTRONIC COMPUTER AIDED DESIGN covers the general introduction to the basic concept and fundamentals of electronic simulation and the applications of electronic packages for electronic circuit simulation at the circuit level and the logic level. Attention is also given to the concept of simulation for analogue, digital logic and mixedsignal circuits using various types of simulation analysis using an electronic simulation package such as Protel / Altium Designer, ORCAD, PSpice, Circuit Maker or Electronic Workbench.

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

SEMESTER	SYNOPSIS
3	DET30053: POWER SYSTEM course will provide students with the concepts of non-renewable and renewable energy. It also annotates on the environmentally friendly electrical power generation, transmission, distribution and consumerization of the electrical power.
	DEE30052: ELECTRONIC EQUIPMENT REPAIR provides the knowledge and skills on troubleshooting and repairing the electronics equipment. This course focuses on the identification of faults in regulated dc power supply, audio equipment and television system. This course also provides knowledge and skills on troubleshooting and repairing broken cell phones
	DEP30013: COMMUNICATION SYSTEM FUNDAMENTALS introduce the students to the concepts of communication system. This course covers the principles of communications, analog and digital modulation techniques, multiplexing and transmission medium. It also exposes the students to the basic data communication system.
	DEE30043: ELECTRONIC CIRCUITS emphasizes the concept of electronic devices applications. The course covers the fundamental of electronic circuit applications which include power supply unit, filters, operational amplifier, timer, oscillator and AD/DA converters. The contents cover circuit configurations, operations and applications of the electronic circuits.
	DEE30061: COMPUTER AIDED ELECTRICAL DRAWING provides knowledge and exposure on the usage of AutoCAD software. The course focuses on the application of the software to produce drawings of graphics, electrical / electronic component symbols, circuit schematics and electrical wiring layout diagram. The skills acquired from this course will also equip students with the ability to learn and use other similar software .

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

SEMESTER	SYNOPSIS
5	DEE50102: PROJECT 2 is the continuation of DEE40082 PROJECT 1 course. The course focuses on methods of circuit construction, testing, troubleshooting, debugging, repair and also completion of the project which was planned during the previous semester. This course also requires students to manage an economical engineering-based project, prepare a project report in a given format and deliver a project presentation at the end of the semester. The students are allowed to do an individual or group project but will be assessed individually through the project assessment tasks throughout the course.
	DET40073: POWER ELECTRONICS course is aimed to equip students with the knowledge and skills related to power electronic devices and its application in power conversion. This course also will focus on the operational principle of rectifiers, choppers, inverters and AC voltage controller circuits. Emphasis is given more on producing the output voltage waveforms of the converters.
	DEG30013: FUNDAMENTAL OF RENEWABLE ENERGY course is aimed to provide students with the knowledge and skills related to meet the demands of the new economy that will rely on the primary source. The focus is on the renewable energy sources such as solar, wind, bioenergy, geothermal, hydroelectric, tidal and fuel cell. The importance and public benefits of renewable energy used and the environmental impact of renewable energy technologies will also be discussed.
	DET30043: ELECTRICAL MACHINE course expose students to the basic construction, principle of operation and control of various type of motor and generator. This course provides students with the basic knowledge and skills to solve various problem related to motors and generators.

DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

SEMESTER	SYNOPSIS
Electives	DEE40113: SIGNAL AND SYSTEM provides knowledge on the signals and systems, the Linear Time-Invariant (LTI) systems, the Laplace transform the Z-transform and Fourier analysis. The course focuses on the mathematical description of signals and systems, the input-output relationship for Linear Time-Invariant (LTI) systems, the Laplace transform and Z-transform and their application techniques for analyzing the systems and Fourier analysis of signals and systems.
	DEP40053: FIBER OPTIC COMMUNICATION SYSTEM introduces students to the basic concept of fiber optic in communication systems with environmental sustainability. This course covers fiber optic characteristics, components in fiber optic system, losses in fiber optic cable and the fundamental concept of optical measurement. This course also provides knowledge in splicing techniques with safety awareness, multiplexing techniques and design consideration in fiber optic communication link
	DEP50063: WIRELESS COMMUNICATION introduces student to the basic of wireless communication includes several specialized topics. Students are expose to wireless networking, evolution of mobile communication, cellular network channels, techniques used to enhance capacity and speed, interferences, radio wave propagation and multiple access techniques. This course also exposes the student to the awareness of wireless technology to the health and environmental.
	DEE50122: CIRCUIT ANALYSIS provides knowledge and exposure on how to analyze electrical circuits that have alternating current (AC) voltage or current sources using various circuit analysis techniques and theorems. Application of mathematic theorem of Laplace Transform is also introduced as another method of AC circuit analysis and the use of mathematic theorem of Fourier Series to analyze electrical waveforms

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

INTRODUCTION

This programme provides the knowledge and skills in communication engineering that can be applied to a wide range of careers in most electronic communication field. The Diploma in Electronic Engineering (Communication) covers wide discipline of electronics engineering, with specialization in communication technology which includes, electrical and electronic fundamentals, computer fundamentals and programming, communication system fundamentals, semiconductor devices, and computer aided design, while emphasizing the area of specialization. The specialization courses include telecommunication network, fibre optic communication system, data communication and networking, wireless communication and microwave devices.

PROGRAM SINOPSIS

The Diploma in Electronic Engineering (Communication) covers broad discipline of electronics engineering, with specialization in communication technology which includes, electrical and electronic fundamentals, computer fundamentals and programming, communication system fundamentals, semiconductor devices, and computer aided design, while emphasizing the area of specialization. The specialization courses include telecommunication network, fibre optic communication system, data communication and networking, wireless communication and microwave devices

PROGRAMME AIMS (PAI)

This programme believes that all individuals have potential to be a resourceful and adaptable technician to support the nation's aspiration in providing engineering talent

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

JOB PROSPECT

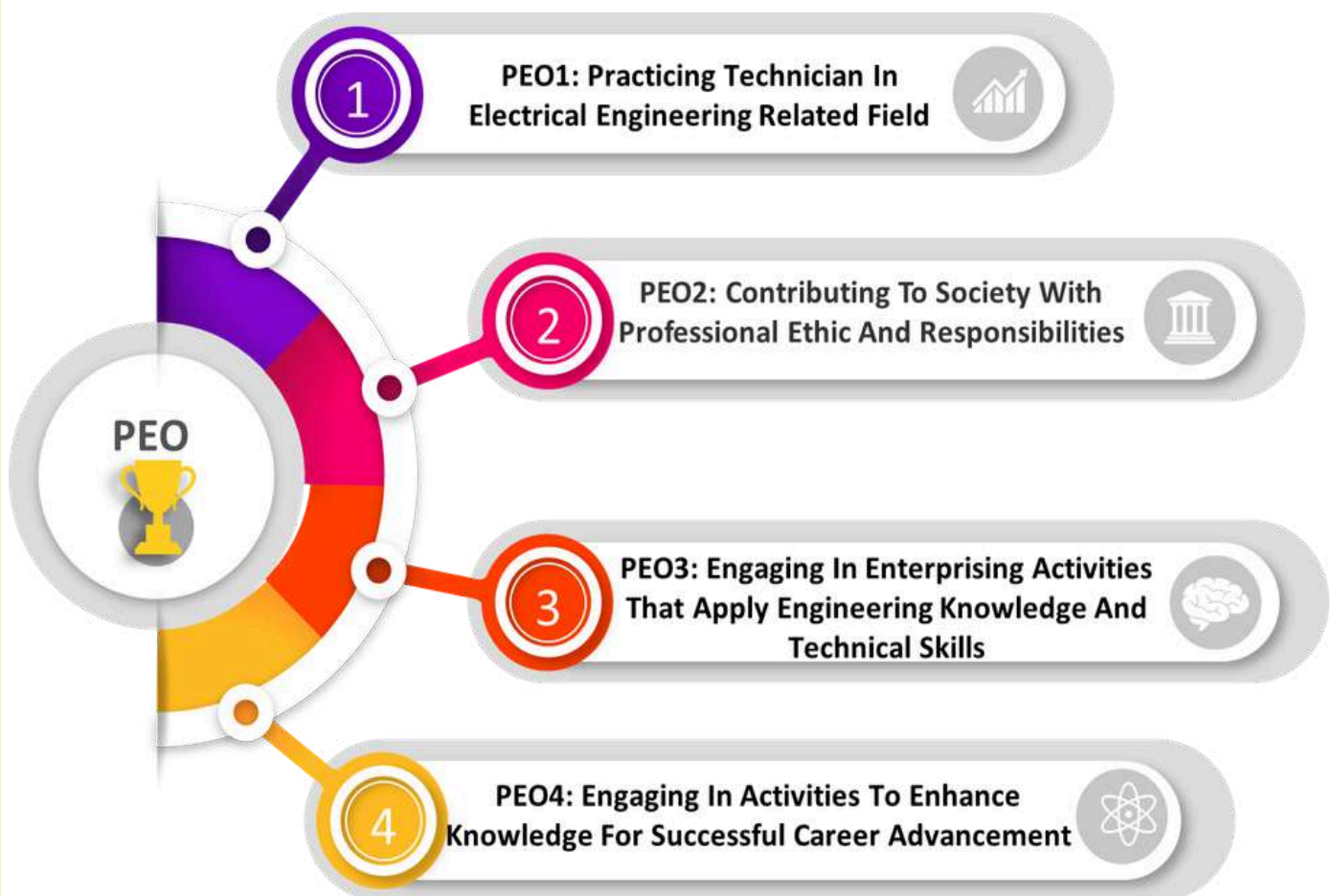
This programme provides the knowledge and skills in communication engineering that can be applied to a broad range of careers in most electronic communication field. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market as:

- a. Assistant Engineer
- b. Assistant Radio Frequency Engineer
- c. Technical Executive
- d. Marketing Executive
- e. Technical Supervisor
- f. Assistant Technical Designer
- g. Assistant Network Engineer
- h. Assistant Network Administrator
- i. Assistant Drive Test Engineer
- j. Assistant Drive Test Analyser Engineer
- k. Network planner
- l. Electrical/Electronic Technician

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The engineering programme should produce balanced TVET graduates who are:



DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING

SEMESTER	SYNOPSIS
4	DEJ40033: PROGRAMMABLE LOGIC CONTROLLER (PLC) AND AUTOMATION provides knowledge regarding the concept and principle of automation system. This course emphasizes the relationship between conventional/hardwired/relay ladder logic (RLL) and PLC system, application of various industrial input and output devices of PLC, designing process, programming, constructing and PLC maintenance method. This course also provides knowledge and skills in designing environmentally friendly of automation control system based on conventional/hardwired/relay ladder logic (RLL) and PLC. DEE40082: PROJECT 1 provides knowledge regarding the implementation and development methods of a project based on hardware or software or a combination of hardware and software. This course provides exposure to the project management and finance, techniques to develop project and proposal preparation. The students are allowed to do an individual or group project but will be assessed individually through the project assessment tasks throughout the course
	DEC40053: EMBEDDED SYSTEM APPLICATIONS cover the basic concept and application of microcontroller system based on Peripheral Interface Controller (PIC) microcontroller. Students will learn software and hardware development on PIC16F/ PIC18F microcontroller development system and understand how to do interfacing with external devices using suitable internal chip features. Students are exposed to the new Microcontroller Unit (MCU) simulation software such as Proteus
	DEC30023: COMPUTER NETWORK FUNDAMENTALS introduce students to the concepts and principles of data transmission and computer networks. This course enables students to correctly use standard terminology in describing the main Local Area Network (LAN) topologies, hardware and software components used in networking. This course provides students with the knowledge and skills to build a network infrastructure using copper cabling, and wireless devices wisely. Students also learn to troubleshoot and secure the network.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

- PL08:** Understand and commit to professional ethics and responsibilities and norms of technician practice
- PL09:** Function effectively as an individual, and as a member in diverse technical teams
- PL010:** 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
- PL011:** Demonstrate knowledge and understanding of engineering management principles and apply these to one's own work, as a member leader in a technical team and to manage projects in multidisciplinary environments
- PL012:** Recognise the need for, and have the ability to engage in independent updating in the context of specialised technical knowledge

NOTES

- DK 1:** Adescriptive, formula-based understanding of the natural sciences applicable in a sub-discipline
- DK 2:** Procedural mathematics, numerical analysis, statistics applicable in a subdiscipline
- 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 based on the techniques and procedures of a practice area
- DK 6:** Codified practical engineering knowledge in recognised practice area
- DK 7:** Knowledge of issues and approaches in engineering technician practice: ethics,

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

PROGRAM STRUCTURE

SEMESTER 1

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	DUE10012	Communicative English 1	1	0	2	0	2	-
	MPU24XX1	Sukan MPU24XX1 Unit Beruniform 1	0	2	0	0	1	-
COMMON CORE	DUW10022	Occupational, Safety and Health	2	0	2	0	2	-
	DBM10013	Engineering Mathematics 1	2	1	0	0	3	-
	DBS10012	Engineering Science	2	2	0	0	2	-
DISCIPLINE CORE	DET10013	Electrical Technology	2	3	0	0	3	-
	DET10022	Electrical Wiring	1	2	0	0	2	-
	DEE10013	Measurement Devices	2			0	3	-
TOTAL			26				18	

SEMESTER 2

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU21032	Penghayatan Etika dan Peradaban		1	0	2	2	-
	MPU24XX1	Kelab/Persatuan	0	2	0	0	1	-
	MPU24XX1	Unit Beruniform 2						MPU24XX1
COMMON CORE	DBM20023	Engineering Mathematics 2	2	0	2	0	3	DBM10013
								DET10013
DISCIPLINE CORE	DET20033	Electrical Circuits	2	2	0	0	3	
	DEE20023	Semiconductor Devices	2	2	0	0	3	-
	DEE20033	Digital Electronics	2	2	0	0	3	-
	DEC20012	Programming Fundamentals	1	2	0	0	2	-
TOTAL			0				17	

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

PROGRAMME LEARNING OUTCOME (PEO)

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

- PL01:** Apply knowledge of applied mathematics, applied science, engineering fundamentals and an engineering specialization as specified in DK1 to DK4 respectively to wide practical procedures and practices
- PL02:** Identify and analyses well-defined engineering problems reaching substantiated conclusions using codified methods of analysis specific to their field of activity (DK1 to DK4)
- PL03:** 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)
- PL04:** Conduct investigations of well-defined problems; locate and search relevant codes and catalogues, conduct standard tests and measurements
- PL05:** Apply appropriate techniques, resources, and modern engineering and IT tools to well-defined engineering problems, with an awareness of the limitations (DK6)
- PL06:** 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)
- PL07:** 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)

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

SEMESTER 3

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR					CREDIT VALUES	PREQ
			L	T	P		O		
COMPULSORY	DUE30012	Communicative English 2	1	2	0		0	2	DUE10012
COMMON CORE	DBM30043	Electrical Engineering Mathematics	2	2	0		0	3	DBM20023
DISCIPLINE CORE	DEE30043	Electronic Circuits	2	0	2		0	3	-
	DEP30013	Communication System Fundamentals	2	0	2		0	3	-
	DEE30052	Electronic Equipment Repair	1	0	3		0	2	DEE20023
	DEE30071	Electronic Computer Aided Design	0	0	2		0	1	-
SPECIALISATION	DEP 30083	Telecommunication Network	2	0	2		0	3	-
TOTAL			25					17	

SEMESTER 4

COMPONENTS	COURSE CODE	COURSE	CONTACT HOUR					CREDIT VALUES	PREQ
			L	P	T	O			
COMPULSORY	DUE50032	Communicative English 3	1	0	2	0		2	DUE30022
	MPU22012	Entrepreneurship	1	0	2	0		2	-
DISCIPLINE CORE	DEC40053	Embedded System Application	2	2	0	0		3	DEC20012
	DEP40053	Fibre Optic Communication System	2	2	0	0		3	-
SPECIALISATION			2	2	0	0		3	DBM20023
	DEE40113	Signal and System	2	2	0	0		2	-
	DEE40082	Project 1	1	2	0	0		2	-
ELECTIVE		Elektif 1 ***	0	0	0	0		2	-
TOTAL			21					17	

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

SEMESTER 5

COMPONENTS	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU23052	Sains Teknologi & Kejuruteraan Dalam Islam*	1	0	2	0	2	-
	MPU23042	Nilai Masyarakat Malaysia**						-
DISCIPLINE CORE	DEE30061	Computer Aided Electrical Drawing	0	2	0	0	1	-
SPECIALISATION	DEP50033	Data Communication and Networking	2	2	0	0	3	DEP30013
	DEE50102	Project 2	0	3	0	0	2	DEE40082
	DEP50063	Wireless Communication	2	2	0	0	3	-
	DEP50043	Microwave Devices	2	2	0	0	3	-
ELECTIVE		Elektif 2 ***	0	0	0		2	-
TOTAL			20				16	-

SEMESTER 6

COMPONENTS	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PREQ
			L	P	T	O		
INDUSTRIAL TRAINING	DUT600610	Engineering Industrial Training	0	0	0	0	10	-
TOTAL							10	-
TOTAL CREDIT VALUE							95	

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

ELECTIVES

COMPONENTS	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PREQ	
				L	P	T O			
ELECTIVES	DEJ40033	Programmable Logic Controller & Automation	2	2	0	0		3	-
	DEC50122	Embedded Robotic	1	2	0	0		2	DEC20012
	DEE50122	Circuit Analysis	2	0	1	0		2	-
	DET40073	Power Electronics	2	2	0	0		3	-

LEGEND/NOTES:

PREQ	:	Prerequisite (s)
L	:	Lecture
P	:	Practical/Lab
T	:	Tutorial
O	:	Others
*		For Muslim students
**		For non-Muslim students
#		Path 1 : Sport and Club
##		Path 2 : Uniform Unit

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

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

COURSE SINOPSIS

SEMESTER

SYNOPSIS

1

DEE10013: MEASUREMENT DEVICES introduce students to the basic concept of electrical instrument and measurement. It covers the basic principles of measurement, safety precautions and meter calibration. Students will also use measurement devices such as analogue meters, DC meters, analogue and digital multimeters, oscilloscopes, signal generators and power meters during practical session. This course also covers the basic concept and simple application of DC Bridge.

DET10013: ELECTRICAL TECHNOLOGY course will introduce students to the principles related to DC electrical circuits. It covers the fundamental laws, theorems and circuit techniques of the electrical technology basic fundamental. This course also covers inductor, capacitor, magnetic and electromagnetic circuits.

DET10022: ELECTRICAL WIRING course exposes students to the various aspects of wiring installation according to the MS IEC 60364 standard. Students will be able to relate theoretical aspect in practical work on electrical wiring during workshop sessions. This course also provides students with the knowledge and skill in doing different types of wiring installation, wiring protection, wiring inspection, wiring testing and sustainable energy practices in electrical wiring.

DEE20033: DIGITAL ELECTRONICS introduces the theories on the basic of digital systems. This course emphasizes on the digital system fundamentals and applications. This course mainly covers number systems, code systems, logic gates, Boolean operations, flip-flops, counters and registers.

2

DET20033: ELECTRICAL CIRCUITS designed to provide students with the knowledge of electrical circuits. It emphasizes the principles of an alternating current AC waveform and sinusoidal steady-state circuit analysis. This course also covers the applications of three phase system and operation of various types of transformers.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

SEMESTER	SYNOPSIS
2	DEC20012: PROGRAMMING FUNDAMENTAL course provides the skills necessary for the effective of application of computation and computer programming in engineering applications. Students will develop their programming skills through a variety of assignments and labs and by reviewing case studies and example programs. The learning outcome is proficiency in writing small to medium programs in a procedural programming language.
	DEE20023: SEMICONDUCTOR DEVICES is an introduction to the basic electronic theories and devices. The course covers the fundamentals of electronic devices which includes diodes, bipolar junction transistors and field effect transistors. The content encompasses devices structure to biasing basic applications.
3	DEP30083: TELECOMMUNICATION NETWORK provides students with the basic knowledge of telecommunication network of Next Generation Networks (NGN). This course focuses on NGN architectures, protocols and services, including technologies and regulation. Students are also expose to NGN convergence between the traditional telecommunications and the internet to facilitate voice and data communications.
	DEE30071: ELECTRONIC COMPUTER AIDED DESIGN covers the general Introduction to the basic concept and fundamentals of electronic simulation and the applications of electronic packages for electronic circuit simulation at the circuit level and the logic level. Attention is also given to the concept of Simulation for analogue, digital logic and mixedsignal circuits using various types of simulation analysis using an electronic simulation package such as Protel / Altium Designer, ORCAD, PSpice, Circuit Maker or Electronic Workbench.
	DEE30043: ELECTRONIC CIRCUITS emphasizes the concept of electronic devices applications. The course covers the fundamental of electronic circuit applications which include power supply unit, filters, operational amplifier, timer, oscillator and AD/DA converters. The contents cover circuit configurations, operations and applications of the electronic circuits.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

SEMESTER	SYNOPSIS
3	DEE30052: ELECTRONIC EQUIPMENT REPAIR provides the knowledge and skills on troubleshooting and repairing the electronics equipment. This course focuses on the identification of faults in regulated dc power supply, audio equipment and television system. This course also provides knowledge and skills on troubleshooting and repairing broken cell phones
	DEE30052: ELECTRONIC EQUIPMENT REPAIR provides the knowledge and skills on troubleshooting and repairing the electronics equipment. This course focuses on the identification of faults in regulated dc power supply, audio equipment and television system. This course also provides knowledge and skills on troubleshooting and repairing broken cell phones
	DEP30013: COMMUNICATION SYSTEM FUNDAMENTALS introduce the students to the concepts of communication system. This course covers the principles of communications, analog and digital modulation techniques, multiplexing and transmission medium. It also exposes the students to the basic data communication system.
4	DEE40113: SIGNAL AND SYSTEM provides knowledge on the signals and systems, the Linear Time-Invariant (LTI) systems, the Laplace transform the Z-transform and Fourier analysis. The course focuses on the mathematical description of signals and systems, the input-output relationship for Linear Time-Invariant (LTI) systems, the Laplace transform and Z-transform and their application techniques for analyzing the systems and Fourier analysis of signals and systems.
	DEE40082: PROJECT 1 provides knowledge regarding the implementation and development methods of a project based on hardware or software or a combination of hardware and software. This course provides exposure to the project management and finance, techniques to develop project and proposal preparation. The students are allowed to do an individual or group project but will be assessed individually through the project assessment tasks throughout the course.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

SEMESTER	SYNOPSIS
4	DEP40053: FIBER OPTIC COMMUNICATION SYSTEM introduces students to the basic concept of fiber optic in communication systems with environmental sustainability. This course covers fiber optic characteristics, components in fiber optic system, losses in fiber optic cable and the fundamental concept of optical measurement. This course also provides awareness, multiplexing, knowledge in splicing techniques with safety techniques and design consideration in fiber optic communication link.
	DEC40053: EMBEDDED SYSTEM APPLICATIONS cover the basic concept and application of microcontroller system based on Peripheral Interface Controller (PIC) microcontroller. Students will learn software and hardware development on PIC16F/ PIC18F microcontroller development system and understand how to do interfacing with external devices using suitable internal chip features. Students are exposed to the new Microcontroller Unit (MCU) simulation software such as Proteus.
5	DEE50102: PROJECT 2 is the continuation of DEE40082 PROJECT 1 course. The course focuses on methods of circuit construction, testing, troubleshooting, debugging, repair and also completion of the project which was planned during the previous semester. This course also requires students to manage an economical engineering-based project, prepare a project report in a given format and deliver a project presentation at the end of the semester. The students are allowed to do an individual or group project but will be assessed individually through the project assessment tasks throughout the course.
	DEE30061: COMPUTER AIDED ELECTRICAL DRAWING provides knowledge and exposure on the usage of AutoCAD software. The course focuses on the application of the software to produce drawings of graphics, electrical /electronic component symbols, circuit schematics and electrical wiring layout diagram. The skills acquired from this course will also equip students with the ability to learn and use other similar software.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

SEMESTER	SYNOPSIS
5	DEP50063: WIRELESS COMMUNICATION introduces student to the basic of wireless communication includes several specialized topics. Students are expose to wireless networking, evolution of mobile communication, cellular network interference, techniques used to enhance capacity and speed, wave propagation and multiple access techniques. This course also exposes the student to the awareness of wireless technology to the health and environmental
	DEP50043: MICROWAVE DEVICES introduces the existence, characteristic and the effect of electromagnetic wave to the surrounding. This course also focuses on the devices used in microwave communication system such as waveguide (transmission lines), basic accessories, sources, microwave antennas as well as the techniques of measurement used in microwave system.
	DEP50043: MICROWAVE DEVICES introduces the existence, characteristic and the effect of electromagnetic wave to the surrounding. This course also focuses on the devices used in microwave communication system such as waveguide (transmission lines), basic accessories, sources, microwave antennas as well as the techniques of measurement used in microwave system.
ELECTIVES	DET40073: POWER ELECTRONICS course is aimed to equip students with the knowledge and skills related to power electronic devices and its application in power conversion. This course also will focus on the operational principle of rectifiers, choppers, inverters and AC voltage controller circuits. Emphasis is given more on producing the output voltage waveforms of the converters.

DIPLOMA IN ELECTRONIC ENGINEERING (COMMUNICATION)

SEMESTER SYNOPSIS

DEG30013: FUNDAMENTAL OF RENEWABLE ENERGY course is aimed to provide students with the knowledge and skills related to meet the demands of the new economy that will rely on the primary source. The focus is on the renewable energy sources such as solar, wind, bioenergy, geothermal, hydroelectric, tidal and fuel cell. The importance and public benefits of renewable energy used and the environmental impact of renewable energy technologies will also be discussed.

ELECTIVES

DEJ40033: PROGRAMMABLE LOGIC CONTROLLER (PLC) & AUTOMATION provides knowledge regarding the concept and principle of automation system. This course emphasizes the relationship between conventional/hardwired/relay ladder logic (RLL) and PLC system, application of various industrial input and output devices of PLC, designing process, programming, constructing and PLC maintenance method. This course also provides knowledge and skills in designing environmentally friendly of automation control system based on conventional/hardwired/relay ladder logic (RLL) and PLC.

MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA IN MECHANICAL ENGINEERING

INTRODUCTION

The New Industrial Master Plan 2030 (NIMP 2030) targets to build Malaysia's industrial capacity and resilience for long-term and sustainable growth. NIMP 2030 is designed to drive Malaysia's trajectory as a global leader in industrial development, extend the domestic linkages to create wealth across the nation as well as strengthen its position in the global value chain. Three key global trends are; first is leverage mature industrial infrastructure with good connectivity, strategic location and reputation. Second, step up efforts to develop high-skilled talent and enhance TVET programmes. Third, to create new growth opportunities in green manufacturing, electric vehicles, and carbon capture, utilisation, and storage (CCUS). NIMP 2030 missions have been formulated to drive industry transformation at a large scale: to advance economic complexity, to tech up for a digitally vibrant nation, to push for net zero, to safeguard economic security and inclusivity.

The Twelfth Malaysia Plan (12MP) policy improving the educational ecosystem and technical and vocational training (TVET) to develop talent available time the front will be known as the driver changes to meet demand industry better. Industry 4.0 refers to the intelligent networking of machines and processes using information and communication technology (ICT). Industry 4.0 transforms manufacturing processes from product design to fabrication, operation, and maintenance. It fosters automation and data exchange in manufacturing technologies and processes through physical-cyber systems. Industry 4.0, a subset of the 4IR, focuses on the manufacturing sector, whereas 4IR encompasses almost every industry and all aspects of human life.

Diploma in Mechanical Engineering for polytechnic is developed to give balance emphasis on theoretical and practical aspects. Thus, to keep abreast with rapid demand in TVET sector, Department of Polytechnic and Community College Education (DPCCE) progressively collaborates with major industry players in the country in developing the curriculum. The Diploma in Mechanical Engineering 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 Malaysian Qualifications Agency (MQA) and Board of Engineer Malaysia (BEM) / Engineering Technology Accreditation Council (ETAC).

MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA IN MECHANICAL ENGINEERING

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, Fluid Mechanics, Materials, Mechanical Design, Workshop Practices, Manufacturing, Instrumentation & Control, Mechanical Maintenance, Electrical & Electronic Technology and Computer Programming.

PROGRAMME AIM

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

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:

- a. Assistant Engineer
- b. Technical Assistant
- c. Assistant Service Manager
- d. Service Advisor
- e. Supervisor
- f. Technician
- g. Technical Instructor or Lecturer
- h. Technical Sales Executive / Engineer
- i. Draughter / Designer
- j. Adjuster
- k. Product Demonstrator
- l. Fitter
- m. Machinist
- n. Entrepreneur

DIPLOMA IN MECHANICAL ENGINEERING

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The Diploma in Mechanical Engineering programme should produce balanced and competent technical workers who are:



PROGRAM LEARNING OUTCOME (PLO)

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

PLO1: Knowledge

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: Problem Analysis

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

PLO3: Design/development of solution

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 as well as, cultural, societal and environmental considerations in area of mechanical engineering (DK5)

PLO4: Investigation

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

PLO5: Tool Usage

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

PLO6: The Engineer and the World

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: Ethics

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: Individual and Collaborative Team Work

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).

PL09: Communication

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

PL010: Project Management and Finance

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

PL011: Lifelong learning

Recognise the need for, and have the ability for i) independent and lifelong 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.

DIPLOMA IN MECHANICAL ENGINEERING

PROGRAM STRUCTURE

SEMESTER 1

COURSE TYPE	COURSE CODE	COURSE NAME	CONTACT HOUR				CREDIT VALUES	Prerequisite
			L	P	T	O		
Compulsory	DUE10062	Technical English 1	1	0	2	0	2	-
	MPU 24031	Sukan 1	0	2	0	0	1	-
	MPU 24041	Kelab/Persatuan 1	0	2	0	0	1	-
	MPU 24XX1	Unit Beruniform 1	0	2	0	0	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	-
TOTAL			11	14	4	0	20	

SEMESTER 2

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	0	2	-
	MPU 24051	Sukan 2	0	2	0	0	1	MPU 24031
	MPU 24061	Kelab / Persatuan 2	0	2	0	0	1	MPU 24041
	MPU 24XX1	Unit Beruniform 2	0	2	0	0	1	MPU 24XX1
	MPU22071	Integriti dan Anti-Rasuah	0	0	2	0	1	-
COMMON CORE	DBM20173	Engineering Mathematics 2	2	0	2	0	3	DBM10163
DISCIPLINE CORE	DJJ20252	Mechanical Workshop Practice 2	0	4	0	0	2	DJJ10232
	DJJ20263	Electrical and Electronic Technology	2	1	1	0	3	-
	DJJ20273	Fluid Mechanics	2	1	1	0	3	DJJ10232
	DJJ20282	Computer Aided Design	1	2	0	0	2	DJJ10223
TOTAL			8	10	8	0	17	

DIPLOMA IN MECHANICAL ENGINEERING

SEMESTER 3

COURSE TYPE	COURSE CODE	COURSE NAME	CONTACT HOUR				CREDIT VALUES	Prerequisite
			L	P	T	O		
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	DJJ30302	Mechanical Workshop Practice 3	0	4	0	0	2	DJJ20252
	DJJ30313	Engineering Mechanics	2	1	1	0	3	-
	DJJ30323	Strength of Materials	2	1	1	0	3	-
	DJJ30293	Thermodynamics	2	1	1	0	3	-
TOTAL			11	7	7	0	18	

SEMESTER 4

COURSE TYPE	COURSE CODE	COURSE NAME	CONTACT HOUR				CREDIT VALUES	Prerequisite
			L	P	T	O		
Discipline Core	DJJ40343	Material Science and Engineering	2	1	1	0	3	-
	DJJ40373	Pneumatic and Hydraulics	2	1	1	0	3	-
	DJJ40383	Engineering Design	2	1	1	0	3	DJJ20282
	DJJ40363	Mechanics of Machines	2	1	1	0	3	DJJ30323
	DJJ40392	Project 1	2	0	0	0	2	-
Electives	DJJXXXX	Elective	-	-	-	-	2	-
TOTAL			10	4	4	0	16	

DIPLOMA IN MECHANICAL ENGINEERING

SEMESTER 5

COURSE TYPE	COURSE CODE	COURSE NAME	CONTACT HOUR				CREDIT VALUES	Prerequisite
			L	P	T	O		
Compulsory	MPU23182	Sains Teknologi dan Kejuruteraan Islam	1	0	2	0	2	-
	MPU23172	Nilai Masyarakat Malaysia	1	0	2	0	2	-
	DUE50082	Technical English 3	1	0	2	0	2	-
	MPU22062	Entrepreneurship	1	0	2	0	2	-
Discipline Core	DJJ50403	Project 2	1	0	3	0	3	DJJ40392
	DJJ50413	Troubleshooting and Maintenance	2	1	1	0	3	-
	DJJ50422	Maintenance Engineering and Management	2	0	0	0	2	-
TOTAL			6	11	2	0	15	

SEMESTER 6

COURSE TYPE	COURSE CODE	COURSE NAME	CONTACT HOUR				CREDIT VALUES	Prerequisite
			L	P	T	O		
Industrial Training	DUT600910	Engineering Industrial Training	0	0	0	0	10	-
TOTAL			0	0	0	0	10	

DIPLOMA IN MECHANICAL ENGINEERING

ELECTIVES COURSES

COURSE TYPE	COURSE CODE	COURSE NAME	CONTACT HOUR				CREDIT VALUES	Prerequisite
			L	P	T	O		
Electives	DJJ40432	Engineering Plant Technology	2	0	0	0	2	-
	DJJ40442	Industrial Management	2	0	0	0	2	-
	DJJ40462	Railway track system	2	0	0	0	2	-
	DJJ40452	Instrumentation and control	2	0	0	0	2	-
	DJJ40472	Renewable and Sustainable Energy	2	0	0	0	2	-
	DJM40242	Programmable Logic Control	1	2	0	0	2	-
	DJJ40352	Computer Programming	1	2	0	0	2	-
	DJF52092	Quality Control	2	0	0	0	2	-
	DJA20132	Automotive Workshop Practice 1	0	4	0	0	2	-
	DJV20062	Automation Practice	0	4	0	0	2	-
	DJL30092	Plant Engineering Practice 1	0	4	0	0	2	-
	DJB20082	Materials Workshop Practice	0	4	0	0	2	-
	DJP40132	Packaging Workshop Practice 2	0	4	0	0	2	-
	DJX30132	Textile Workshop Practice 1	0	4	0	0	2	-
	DGM50272	Static And Rotating Equipment Workshop Practice	0	4	0	0	2	-
	DJT30132	Automation & Robotic in Agriculture	1	3	0	0	2	-
	DJU20112	Basic Air Conditioning and Refrigeration Workshop	0	4	0	0	2	-
	DJD20092	Product Design	1	3	0	0	2	-
	DJF32052	Manufacturing Workshop Practice 2	0	4	0	0	2	-
	DJI20132	Automotive Technology Practice	0	4	0	0	2	-
	DJC40142	Plastic Workshop Practice 2	0	4	0	0	2	-

LEGENDS / NOTES

L	: Lecture
P	: Practical/Lab
T	: Tutorial
O	: Others
* For Muslim students	
** For non-Muslim students	
#	Path1 : SportandClub
##	Path 2 : Uniform Unit

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

DIPLOMA IN MECHANICAL ENGINEERING

COURSE SINOPSIS

SEMESTER	SINOPSIS
1	DJJ 10223: ENGINEERING DRAWING course provides the students with the fundamentals of technical drawings and the application Computer Aided Design (CAD) software. For technical drawing, it emphasizes on the practical knowledge of drawing instruments and drawing techniques while for CAD the student will learn to navigate and use the software to create 2D drawing design in engineering. Students shall be able to demonstrate competency in using some standard available features of technical drawing and CAD application to create and manipulate objects or elements in engineering drawing.
	DJJ 10232: MECHANICAL WORKSHOP PRACTICE 1 exposes the students to welding, machining and fitting which involve the use of arc and and gas welding machine, lathe machine, drilling machine, grinding, hand tools, marking out tools, measuring and testing tools. Students are also taught to emphasize on safety procedures and cleanliness in the workshop.
	DJJ 10243: WORKSHOP TECHNOLOGY provides exposure and knowledge in using hand tools, machine operation such as drilling, lathe, milling and computer numerical control. It also covers on gear measurement and inspection welding process in oxy acetylene. Shielded Metal Arc Welding (SMAW) . Gas Tungsten Arc Welding (GTAW) and Gas Metal Arc Welding (GMAW)
2	DJJ20252: MECHANICAL WORKSHOP PRACTICE 2 exposes the students to TIG and MIG welding, foundry and machining works. Safety procedure practice is heavily emphasized in the workshop.
	DJJ 20273: FLUID MECHANICS is designed to provide students with the knowledge to the fundamentals of fluid mechanics. It emphasizes on the principle related to the fluid properties and behavior in static and dynamic condition. This course also covers the principle and application of fluid properties, Reynolds Numbers, Bernoulli Theorem and losses in pipeline system.

COURSE SINOPSIS

SEMESTER	SINOPSIS
2	DJJ 20263: ELECTRICAL AND ELECTRONIC TECHNOLOGY exposes students to the basic electrical circuit concept and electronic components, the application of electromagnetism in electrical machine, transformers and usage of renewable energy. The course focuses on the different types of electrical circuits, the relationship between current and voltage including the resistance and function of electronic components. This course also exposes the students to the demonstration of experiments in Electrical and Electronic Engineering.
	DJJ 20282: COMPUTER AIDED DESIGN exposes the students to the fundamentals and principles of 3D drawing using 3D CAD software. Students are also equipped with various method of creating a solid model using extrude, revolve, swept, assembly, simulation an animation and details drawing. Hands-on exercises drawing of mechanical engineering will also be covered in this course.
3	DJJ 30293: THERMODYNAMICS provides knowledge and application of fundamentals concepts to solve problems related to thermodynamics. It emphasizes analyzing non-flow process, flow process, heat engine and vapor power cycle. This course also exposes the students to the demonstration of experiments by using the real equipment.
	DJJ30302: MECHANICAL WORKSHOP PRACTICE 3 course allows the students to operate machine tools, extends their experiences in indexing, precision grinding, CAD/CAM Software, CNC machine and able to work in a clean and safe workshop environment.
	DJJ 30313: ENGINEERING MECHANICS focuses on theoretical knowledge in statics and dynamics. This course provides students with fundamental understanding of forces and equilibrium, resultants, equilibrium of a particles and structural analysis. This course also covers kinematics and kinetics of particles and exposes the students to the demonstration of experiments in Engineering Mechanics.

DIPLOMA IN MECHANICAL ENGINEERING

SEMESTER	SINOPSIS
3	DJJ 30323: STRENGTH OF MATERIALS provides knowledge on concepts and calculation of forces on materials, thermal stress, shear force and bending moment, bending stress, shear stress and torsion in shafts. It also deals with the experiments conducted on tensile test, bending moment, shearing force and torsion and deflection.
	DJJ 30332: ENGINEERING AND SOCIETY focuses on the introduction to professional ethics, theory and philosophy of ethics, values in professional ethics, engineering bylaws and standards, issues in professional ethics and sustainability. It also relates towards IR 4.0 introduction and green engineering.
4	DJJ 40343: MATERIALS SCIENCE AND ENGINEERING course is an introduction to students to learn the fundamentals of materials science and engineering (structure, properties, design and performance). The key step in engineering process is selection of materials for the applications. In the course, students will learn about different classifications of materials, atomic structure and bonding, material properties, phase diagram and processes involved to produce a final product. This includes advance techniques in metal fabrication such as powder metallurgy and 3D printing technology. Students will also learn to analyze the materials failure in the structure, applications and environments. Laboratory work will be used to perform the testing techniques employed by materials engineers to determine the properties and evaluate the materials tested. In order to cater for Industry 4.0 technology, students will be given case study and examples based on the current trends in materials and applications.
	DJJ 40363: MECHANICS OF MACHINES exposes the students with knowledge and designed to provide students with the knowledge on techniques and concepts of mechanics of machines and analyzing problems related to hoists, simple harmonic motion, velocity and acceleration diagram, and belt drive. This course also exposes the students to the demonstration of experiments in Mechanics of Machines by using the real equipment.

DIPLOMA IN MECHANICAL ENGINEERING

SEMESTER	SINOPSIS
4	DJJ 40373: PNEUMATIC & HYDRAULICS provides knowledge and understanding to the importance of pneumatics and hydraulics circuits, equipment and design along with its usage in the industry.
	DJJ40383: ENGINEERING DESIGN course offers a comprehensive coverage of basic concept engineering design. Student will learn the fundamental concepts for designing process, designing consideration, ergonomic, materials selection and emphasizes on mathematical analysis for simple components designs in engineering. and practical on 3D printing.
	DJJ40392: PROJECT 1 provides students with solid foundation on knowledge and skills in formulating project proposal preparation, writing and presentation.
5	DJJ 50403: PROJECT 2 is a continuation of Project 1 focusing on project planning, development, project report and presentation. This course introduces students with abilities and skills in conducting project planning, development and management based on their project design. It also provides the student with practical product, report writing and presentation skills. The project will be implemented in a group and each group will work on a project under lecturer(s) supervision. Project titles will be based on specialization and students will be assessed individually.
	DJJ 50413: TROUBLESHOOTING AND MAINTENANCE FOR MECHANICAL COMPONENTS course covers necessary mechanical components needed in Industries. The topics include maintenance and troubleshooting principles and procedures, power transmission, bearing and pump. This course provides knowledge and skills on maintenance and troubleshooting lubrication, bearing, power transmission and pump.
	DJJ 50422: MAINTENANCE ENGINEERING AND MANAGEMENT covers topic such as maintenance organization, maintenance strategies system, system approach to maintenance, maintenance planning and scheduling and computerized maintenance management system (CMMS).

MECHANICAL ENGINEERING DEPARTMENT CERTIFICATE IN MECHANICAL ENGINEERING

INTRODUCTION

The New Industrial Master Plan 2030 (or NIMP 2030) aims to improve the manufacturing as a pivotal force to propel Malaysia's economic growth and development, being a significant contributor to the nation's GDP, providing employment for 2.7 million individuals. Therefore, there is a need to increase the efforts to develop high-skilled talent and enhance TVET programmes to empower the Malaysian workforce to enhance efficiency and accelerate innovative capability. Thus, to keep abreast with rapid demand in TVET sector, Department of Polytechnic and Community College Education (DPCCE) progressively collaborates with major industry players in the country in developing the curriculum. The Certificate in Mechanical Engineering (CME) is one of the curricular designed by DPCCE for training and developing a skilled workforce for the needs of industries and to equip individuals for further career self-improvement. This programme will take four semesters to complete: three academic semesters at their respective polytechnics and one semester of industrial training at relevant industries during the final semester. It complies with the MQA accreditation.

SYNOPSIS

The Certificate in Mechanical Engineering programme is designed to produce holistic graduates who have knowledge and competent skills in the field of mechanical engineering to fulfill the demand of workers in engineering sector. Besides that, this programme further aims to instill lifelong and continuous learning, entrepreneurial skills, and connections with society. The programme structure focuses on both theory and practical skills in the subjects of Occupational Safety and Health for Engineering, Engineering Mathematics, Engineering Drawing, Workshop Technology, Computer Aided Design, Mechanical Workshop Practices and so on.

CERTIFICATE IN MECHANICAL ENGINEERING

TECHNICAL ENGINEERING DEPARTMENT

PROGRAMME AIM

This programme believes that every individual has the potential to be trained as an adaptable and responsible skilled technician to support the government aspiration to increase workforce in the field of mechanical engineering.

JOB PROSPECT

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

- a. Technician
- b. Assistant Supervisor
- c. Penolong Pemeriksa Kilang di Jentera (JA29)
- d. Draughter/ Designer
- e. Entrepreneur

CERTIFICATE IN MECHANICAL ENGINEERING

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The Certificate in Mechanical Engineering programme should produce balanced and competent technical workers who are:



CERTIFICATE IN MECHANICAL ENGINEERING

PROGRAM LEARNING OUTCOMES (PLO)

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

PLO1 : Apply basic knowledge of mathematics, science and engineering fundamentals to routine procedures and practices in specific fields.

PLO2 : Identify specific engineering problems in their discipline with respect to operation and maintenance.

PLO3 : Assist in the investigations and design of solutions for specific engineering systems.

PLO4 : Demonstrate as awareness of societal, health, safety, legal and cultural issues and the consequent responsibilities.

PLO5 : Demonstrate communication and team skills.

PLO6 : Demonstrate an understanding of ethics, responsibilities and norms of engineering practices.

PLO7 : Demonstrate an awareness of management, business practices, entrepreneurship and sustainable development.

PLO8 : Recognise the need for career development and to engage in lifelong learning.

CERTIFICATE IN MECHANICAL ENGINEERING

MQF Clusters of Learning Outcomes

CERTIFICATE IN MECHANICAL ENGINEERING

MQF CLUSTERS OF LEARNING OUTCOMES

Graduates will be equipped with a comprehensive set of knowledge, skills and values to excel in the mechanical engineering industry and beyond.

1 **CLS1**



KNOWLEDGE & UNDERSTANDING
Demonstrate a systematic understanding of core concepts, theories, principles and practices in mechanical engineering.

2 **CLS2**



COGNITIVE SKILLS
Apply critical thinking, problem solving, analysis and innovation to solve engineering problems effectively.

3A **CLS3A**



PRACTICAL SKILLS
Apply technical skills and use appropriate tools, techniques and technologies to perform tasks and complete projects.

3B **CLS3B**



INTERPERSONAL SKILLS
Work effectively with others, demonstrate teamwork, respect diversity and contribute positively in a group environment.

3C **CLS3C**



COMMUNICATION SKILLS
Communicate ideas and information clearly and effectively in oral, written, visual and technical formats.

3D **CLS3D**



DIGITAL SKILLS
Utilise digital technologies and tools confidently and responsibly to support learning, work and innovation.

3E **CLS3E**



NUMERACY SKILLS
Apply mathematical concepts, calculations and data interpretation to support decision making and problem solving.

3F **CLS3F**



LEADERSHIP, AUTONOMY & RESPONSIBILITY
Demonstrate leadership, take initiative, manage tasks independently and act responsibly in various situations.

4A **CLS4A**



PERSONAL SKILLS
Exhibit positive attitudes, ethical values, adaptability and a commitment to personal and professional growth.

4B **CLS4B**



ENTREPRENEURIAL SKILLS
Demonstrate initiative, creativity and business awareness to identify opportunities and create value.

CERTIFICATE IN MECHANICAL ENGINEERING

PROGRAM STRUCTURE

PROGRAMME STRUCTURE FOR CERTIFICATE IN MECHANICAL ENGINEERING (CME)

CLASSIFICATION	COURSE CODE	COURSE NAME	CONTACT HOURS				CREDIT VALUES	PREREQUISITE / CO-REQUISITE
			L	P	T	O		
SEMESTER 1								
Compulsory	MPU11032	Pengajian Malaysia	2	0	0	0	2	
	MPU13091	Kursus Integriti dan Anti Rasuah	0	0	1	0	1	
Common Core	CUW10022	Occupational Safety and Health	2	0	0	0	2	
	CBM10013	Engineering Mathematics	2	0	2	0	3	
	CME10013	Engineering Drawing	1	3	0	0	3	
Discipline Core	CME10024	Mechanical Workshop Practice 1	0	8	0	0	4	
	CME10033	Workshop Technology	3	0	0	0	3	
TOTAL			24				18	
SEMESTER 2								
Compulsory	CUE10012	Technical English	1	0	0	0	2	
	CBC10032	Aplikasi Komputer	1	2	0	0	2	
Common Core	CBS10022	Engineering Science	2	1	0	0	2	
Discipline Core	CME20042	Computer Aided Design	1	3	0	0	2	CME10013
	CME20054	Mechanical Workshop Practice 2	0	8	0	0	4	CME10024
	CME20063	Electrical and Electronic Technology	2	2	0	0	3	
	CME20072	Thermofluid	2	1	1	0	2	
TOTAL			27				17	
SEMESTER 3								
Compulsory	MPU13072	Pendidikan Islam*	2	0	0	0	2	
	MPU13082	Pendidikan Moral**						
Common Core	CUU10012	Entrepreneurship	1	2	0	0	2	
Discipline Core	CME30084	Mechanical Workshop Practice 3	0	8	0	0	4	CME20054
	CME30092	Engineering Mechanics	2	1	1	0	2	
	CME30102	Strength of Materials	2	1	1	0	2	
	CME30112	Engineering and Society	2	0	0	0	2	
	CME30123	Engineering Design	2	2	0	0	3	CME20042
TOTAL			27				17	
SEMESTER 4								
Industrial	CUT40018	Industrial Training	0	0	0	0	8	
TOTAL			0					
TOTAL CREDIT VALUE							60	

CERTIFICATE IN MECHANICAL ENGINEERING

COURSE SYNOPSIS

SEMESTER	SYNOPSIS
1	CME10013: ENGINEERING DRAWING course provides the students with the fundamentals of technical drawings and the application Computer Aided Design (CAD) software. For technical drawing, it emphasises on the practical knowledge of drawing instruments and drawing techniques. Students will also learn to navigate and use the software to create 2D drawing design in engineering. Students shall be able to demonstrate competency in using some standard available features of technical drawing and CAD application to create and manipulate objects or elements in engineering drawing.
	CME10024: MECHANICAL WORKSHOP PRACTICE 1 exposes the students to welding, machining and fitting which involve the use of arc and gas welding machine, lathe machine, drilling machine, grinding machine, hand tools, marking out tools and measuring and testing tools. Students are also taught to emphasise on safety procedures and cleanliness in the workshop.
	CME10033: WORKSHOP TECHNOLOGY provides exposure and knowledge in using hand tools, machine operation such as drilling, lathe, milling and computer numerical control. It also covers on gear measurement and inspection welding process in oxy acetylene, Shielded Metal Arc Welding (SMAW).

CERTIFICATE IN MECHANICAL ENGINEERING

COURSE SYNOPSIS

SEMESTER	SYNOPSIS
2	CME20042: COMPUTER AIDED DESIGN (CAD) introduces students to the fundamentals and principles of 3D drawing using CAD software. Students are also exposed to various methods for creating solid models, making assemblies, and presentations. Practical training in producing technical drawings for mechanical engineering will also be covered in this course.
	CME20054: MECHANICAL WORKSHOP PRACTICE 2 exposes the students to TTG and MTG welding, foundry and machining work. Safety procedure practice and teamwork ability are emphasized throughout this course.
	CME20063: ELECTRICAL AND ELECTRONIC TECHNOLOGY exposes students to the basic electrical circuit concept and electronic components, the application of electromagnetism in electrical machine, transformers and usage of renewable energy. The course focuses on the different types of electrical circuit, the relationship between current and voltage including the resistance and function of electronic components. This course also exposes the students to the demonstration of experiments related in electrical and electronic engineering.
	CME20072: THERMOFLUID provides students with the basic concepts of thermodynamics and fluid mechanics into one integrated course. This course emphasizes conceptual principles in thermofluid, fluid applications, properties of pure substances and the first law of thermodynamics. This course also provides knowledge and understanding of theories, concepts and principles that can be used to solve problems related to thermofluid processes.

CERTIFICATE IN MECHANICAL ENGINEERING

COURSE SYNOPSIS

SEMESTER	SYNOPSIS
3	CME30084: MECHANICAL WORKSHOP PRACTICE 3 exposes the students to operating machine tools, extending their experiences in indexing, precision grinding, and CNC machines, and working in a clean and safe workshop environment.
	CME30092: ENGINEERING MECHANICS focuses on theoretical knowledge in statics and dynamics. This course provides the students with fundamental understanding of forces and equilibrium, resultants, and equilibrium of a particle analysis. This course also covers kinematics and kinetics of particles and exposes the students to the demonstration of experiments in Engineering Mechanics.
	CME30112: ENGINEERING AND SOCIETY focuses on the introduction to professional ethics, theory and philosophy of ethics, values in professional ethics, engineering bylaws and standards, issues in professional ethics and sustainability. It also relates to the introduction of IR 4.0 and green engineering.
	CME20072: THERMOFLUID Engineering and Society focuses on the introduction to professional ethics, theory and philosophy of ethics, values in professional ethics, engineering bylaws and standards, issues in professional ethics and sustainability. It also relates to the introduction of IR 4.0 and green engineering.
	CUU10012: ENTREPRENEURSHIP focuses on the fundamentals and concept of entrepreneurship in order to inculcate the value and interest in students to choose entrepreneurship as a career. This course can help students to initiate creative and innovative entrepreneurial ideas. It also emphasizes on online and offline business learning in line with the changing needs of current market.

COMMERCE DEPARTMENT

INTRODUCTION

COMMERCE DEPARTMENT offers Diploma in Accounting, Diploma in Business Studies and Diploma in Secretarial Science programmes. All programmes are approved and accredited by Malaysia Qualification Agency (MQA). Commerce Department is led by Adi Jaya Bin Adam and assisted by three Heads of Programme, Nur - Adibah Raihan binti Affendy (Diploma in Accounting) and Annatasia anak Ambang (Diploma in Secretarial Science) and Shatilla binti Shani (Diploma In Business Studies)

Diploma in Accounting



Diploma in Business Studies



Diploma in Secretarial Science



DIPLOMA IN BUSINESS STUDIES

INTRODUCTION

The business world is continuing to grow, expand and develop both in terms of scale and complexity. In this era of knowledge, challenges for competing and surviving today's businesses are great. However, the advent of technology and globalisation has led to the development of several new strategies to meet the current demands and challenges and to be responsive to global needs which include the demand for multi-skilled workers. Hence, the Department of Polytechnic and Community College Education (DPCCE) has collaborated with relevant industries in curriculum revision for Diploma in Business Studies Program by getting their feedback on the latest information, knowledge and skills required to fulfil the job market requirements. The graduates in this program are expected to be proficient in core business-oriented subjects such as management, entrepreneurship, administration, human resource, economics, business process management and marketing. In addition, for planning a career path for graduates of this program, they will also be attached to the relevant industry for a semester of industrial training.

SYNOPSIS

Diploma in Business Studies (DPM) is a full-time program that consists of five academic semesters and a semester of industrial training which aims to increase and enrich students' knowledge across a broad range of business disciplines and helps to prepare students for career challenges in contemporary business. This program provides students with value-added and transferable skills which enable them to adapt to new technologies and business challenges. The program structure ensures that all courses are connected and built on each other throughout the course, leading to a coherent education that matches the era of industrial revolution 4.0 (IR 4.0) and is embedded with Sustainable Development Goals (SDG) elements hence complies with the Program Standards of Business Studies issued by Malaysian Qualification Agency (MQA).

PROGRAM AIM

This program aims to produce potential graduates who are focused and dedicated to excel in the business field in supporting the national agenda to spur the development of industrial activities towards enhancing Malaysia's economic growth and thus becoming a developed nation. Diploma in Business Studies (DPM) equips graduates with knowledge and skills acquired by every business practitioner. Thus, they are well-trained to lead successful businesses in the global market, with strong skills in leadership, entrepreneurship and effective communication

DIPLOMA IN BUSINESS STUDIES

JOB PROSPECT

Diploma in Business Studies will provide graduates with knowledge and skills that allow a broad range of career opportunities in management, entrepreneurship, administration, human resource, economics, business process management and marketing either in government organizations or corporate sectors. The industrial training in this program will provide opportunities for students to establish contacts with potential future employers. Graduates of this diploma will also be able to take up middle management positions in the following operational departments of the business.

GOVERNMENT / CORPORATE	SELF- EMPLOYED
1. Assistant Manager 2. Assistant Human Resource Officer 3. Assistant Administrative Officer 4. Assistant Operation Officer 5. Assistant Marketing/Sales Officer 6. Personal Assistant Officer	1. Business Owner 2. Content Creator 3. Entrepreneur 4. Retail Entrepreneur 5. Freelancer



DIPLOMA IN BUSINESS STUDIES

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Within a few years after completing Diploma in Business Studies, graduates are able to:

-  **PEO 1** Demonstrate competency in solving business problems that meet societal needs.
-  **PEO 2** Practice entrepreneurial skills and foster social interactions in the glocal business environment.
-  **PEO 3** Capable to analyse numerically and use digital technology advancement for business solutions.
-  **PEO 4** Demonstrate high professionalism, good leadership qualities and acquire new business knowledge for career advancement.

PROGRAMME LEARNING OUTCOME (PLO)

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

- PL01:** Apply relevant business discipline knowledge in managing business activities.
- PL02:** Analyse issues and problems by providing solutions in conducting business activities.
- PL03:** Apply business skills in related business activities.
- PL04:** Develop good relationships and effective interactions with people in working communities.
- PL05:** Practice effective communication skills to establish good rapport with others in managing business activities.
- PL06:** Apply relevant digital applications in managing business activities.
- PL07:** Analyse numerical and graphical data with relevant tools.
- PL08:** Adopt leadership skills to manage diverse team and be responsible within an organization.
- PL09:** Develop personal skills for self-improvement and career development.
- PL010:** Demonstrate entrepreneurial skills in business activities.
- PL011:** Portray professionalism, positive attitude and values in engaging with society and stakeholders

DIPLOMA IN BUSINESS STUDIES

PROGRAM STRUCTURE

SEMESTER 1

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
COMPULSORY	DUE10112	Communicative 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	DBC20022	Computer Application	1	2	0	0	2	
	DPB10033	Business Accounting	2	2	0	0	3	
	DPB10053	Microeconomics	2	2	0	0	3	
	DPB10063	Principles of Management	3	0	1	0	3	
	DPM20033	Fundamentals of Marketing	3	0	1	0	3	
TOTAL			24				17	

SEMESTER 2

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
COMPULSORY	MPU23152	Pengajian Islam*	1	0	2	0	2	
	MPU23172	Nilai Masyarakat Malaysia**						
	MPU24051	Sukan 2						MPU24031 Sukan 1
	MPU24061	Kelab/Persatuan 2	0	2	0	0	1	MPU24041 Kelab/Persatuan 1
	MPU24XX1	Unit Beruniform 2						MPU24XX1 Unit Beruniform 1
	MPU22071	Kursus Integriti Antirasuah	0	0	2	0	1	
COMMON CORE	DPB20042	Management Information System	1	2	0	0	2	
	DPB20073	Macroeconomics	2	2	0	0	3	DPB10053 Microeconomics
	DPB20082	Business Communication	1	2	0	0	2	
	DPB20093	Business Mathematics	2	2	0	0	3	DPB10013
DISCIPLINE CORE	DPM20043	Effective Presentation Skills	1	3	0	0	3	
TOTAL			25				17	-

DIPLOMA IN BUSINESS STUDIES

SEMESTER 3

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
COMPULSORY	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	0	2	
COMMON CORE	DPP20023	Introduction to International Business	3	1	0	0	3	
	DPB30103	Introduction to Human Resource Management	2	2	0	0	3	
	DPB30093	Quantitative Methods	2	2	0	0	3	
DISCIPLINE CORE	DPR20043	Retail Customer Service	1	3	0	0	3	
	DPP30053	Fundamentals of Supply Chain Management	3	1	0	0	3	
TOTAL			23				17	

SEMESTER 4

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
COMMON CORE	DPB40153	Digital Entrepreneurship	1	3	0	0	3	
	DPB40113	Business Ethics	3	0	1	0	3	
	DPB40123	Business Finance	3	1	0	0	3	
	DPB40133	Business Process Management	2	2	0	0	3	
	DPB40143	Organizational Behavior	3	1	0	0	3	
DISCIPLINE CORE	DPM40113	Consumer Behavior	3	0	1	0	3	DPM20033 Fundamentals of Marketing
TOTAL			24				18	

DIPLOMA IN BUSINESS STUDIES

SEMESTER 5

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
COMPULSORY	DUE50132	Communicative English 3	1	0	2	0	2	
DISCIPLINE CORE	DPB50183	Business Project	1	3	0	0	3	
	DPB50193	Human Resource Development	2	2	0	0	3	
	DPB50213	Organizational Management	3	0	1	0	3	DPB10063 Principles of Management
	DPP50113	Principles of Risk Management & Insurance	3	0	1	0	3	
	DPS30153	e-Commerce	1	3	0	0	3	
TOTAL					23		17	

SEMESTER 6

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
INDUSTRIAL TRAINING	DUT60089	Industrial Training	0	0	0	0	9	
TOTAL							9	
TOTAL CREDIT VALUE							95	

DIPLOMA IN BUSINESS STUDIES

FREE ELECTIVES

		FREE ELECTIVES	CONTACT HOUR				CREDIT VALUES	PREREQUISITE
			L	P	T	O		
FREE ELECTIVES	DUD10012	Design Thinking	1	0	0	1	2	
	DPA10212	Personal Financial Management	2	0	1	0	2	

LEGEND/NOTES:

PREQ	:	Prerequisite(s)
L	:	Lecture
P	:	Practical/Lab
T	:	Tutorial
O	:	Others
* For Muslim students		
** For non-Muslim students		

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

DIPLOMA IN BUSINESS STUDIES

COURSE SINOPSIS

SEMESTER	SYNOPSIS
1	DBC20022: COMPUTER APPLICATION exposes students to different packages of applications software such as Word processor, Spreadsheet and Presentation. This course mainly emphasizes on the practical aspects of using applications software and awareness in digital world activity. Students will develop teamwork and leadership skills to present ideas and organize project. Students are able to use the information and technology skills attained for future.
	DPB10033: BUSINESS ACCOUNTING enables students to develop knowledge and skills necessary in the operational aspects of accounting system and procedures. Students are able to comply with the approved accounting standards to maintain accounting records in preparation and analysis of financial statements. Students are also able to apply in accounting cycle related to principles and practice of accounting.
	DPB20033: FUNDAMENTALS OF MARKETING provides knowledge to students regarding the concepts and terminologies in marketing. This course focuses the marketing mix with a focus on the consumer and business markets, as well as the environment, segmentation, targeting, and positioning.
1	DPB10063: PRINCIPLES OF MANAGEMENT provide information on basic functions in management which are planning, organizing, leading, controlling and staffing as practiced in an organization. Also, this course covers the fundamentals of strategic management which serves as a brief introduction to the real-life operation of an organization. Thus, students will be able to apply basic management functions to ensure the efficiency and effectiveness of organizations.
	DPB10053: MICROECONOMICS provides information on the concepts and basic theories related to the economic problems and the best method to allocate scarce resources. The course considers how units in economy (individuals and firms) make decisions and coordinate consumptions and productions. The course emphasizes the demand and supply theory, elasticity as well as market equilibrium. This course also introduces the theory of production and cost, and models of market structure to determine the efficiency in a market.

DIPLOMA IN BUSINESS STUDIES

COURSE SINOPSIS

SEMESTER	SYNOPSIS
2	DPB20042: MANAGEMENT INFORMATION SYSTEM introduces the fundamental concepts of information systems that are used in modern business operations. This course provides students with the basic knowledge of the role and significance of information systems in general. It also discusses related security and ethical issues in digital era.
	DPB20073: MACREOCONOMICS provides information on the concepts of economies. The course emphasizes the role of economics sectors in determining the Gross Domestic Product (GDP). This course also provides information on the importance of government policy to overcome the economics problem.
	DPB20082: BUSINESS COMMUNICATION course is designed to provide a fundamental overview of business communications, its principles, its importance, and the written and verbal communication skills that are the latest trends in workplace communication.
2	DPB20093: BUSINESS MATHEMATICS provides knowledge of various basic mathematical concepts, management problems and basic operational research techniques based on financial and quantitative methods. The course emphasizes the application of mathematical concepts and solutions in business and management. This course provides information and exposes the student to basic practices in the world of business and finance.
	DPM20043: EFFECTIVE PRESENTATION SKILLS develop skills to identify the presentation objectives, the audience needs as well as their expectations. Students also will use the presentation techniques to leverage business presentation and persuasion strategies. Students will be introduced to the use of visual effects and related software to prepare effective presentation notes, handle questions and practice aspects.

DIPLOMA IN BUSINESS STUDIES

COURSE SINOPSIS

SEMESTER	SYNOPSIS
3	DPP20023: INTRODUCTION TO INTERNATIONAL BUSINESS provides an overview of how international business is conducted by taking into consideration various mechanism for dealing with government and the changing political landscape, different business laws and regulations, local customs and culture. This course fulfills the need to ensure that students are well versed in global operations.
	DPB30103: INTRODUCTION TO HUMAN RESOURCE MANAGEMENT covers principles and approaches applicable to the human resource management in an organizational. It also offers students an understanding about activities of human resource management department and the statutory requirement regarding the human resource functions. Through this course, students also have the opportunity to have an overview of Malaysian industrial relations practices and problems.
	DPB30093: QUANTITATIVE METHODS introduce the basic concepts of data analysis and statistical computing. both methods have been used in the social sciences and humanities. The emphasis is on the practical application of quantitative reasoning, visualization, and data analysis. The course also exposes students to using software and conducting their own basic statistical analysis as well as providing an understanding of how to use statistical data in related fields.
3	DPR20043: RETAIL CUSTOMER SERVICE is a multifaced discipline that involves understanding the concept of customer service, effective communication, and complaint handling. It also encompasses diverse service offerings, customer retention strategies, and the use of technology to enhance the customer experience.
	DPP30053: FUNDAMENTALS OF SUPPLY CHAIN MANAGEMENT is a management approach and strategies to increase the efficiency and effectiveness of an organization's operations. Some of the key areas that will be discussed are the activities involved in managing the supply chain. This course is designed for the students to optimize the supply chain management decisions at the operational, tactical and strategic level in this fast-changing business world currently.

DIPLOMA IN BUSINESS STUDIES

SEMESTER	SYNOPSIS
4	DPB40153: DIGITAL ENTREPRENEURSHIP focuses on the fundamentals and concepts of entrepreneurship to inculcate the value and interest in students to choose entrepreneurship as a career. This course can help students to initiate offline and online business. It also emphasize on the preparation of a business plan using business model canvas. It introduces strategies to develop creativity and innovation and managing risk in starting up a conventional and digital business environment. This course will also guide the students on ways to conduct a business using several online marketing platforms in social media marketing. It also discusses about the application and duplication of artificial intelligence, blockchain and digital currency in digital business.
	DPB40113: BUSINESS ETHICS examines the personal, professional, and corporate relationships, values, justice, and culture in a national and global business setting. It provides a basic framework for examining the range of ethical issues arising in a business context. This course discusses issues of right and wrong actions or decisions for business reputation in decision-making at all levels. It explains corporate culture, ethical leadership, corporate governance, corporate social responsibility, employee responsibilities, diversity, and discrimination.
	DPB40123: BUSINESS FINANCE exposes students on the concepts of finance and techniques used to manage financial planning of an organization. Students learn the theories and concepts of basic financial as a benchmark and input for consideration, in order to make short and long term financial decisions from the aspect of financing and investment. Organization's financial analysis is included to enable students to analyze the organization's financial position.
4	DPB40133 BUSINESS PROCESS MANAGEMENT provides knowledge of concept in business process management. This course emphasizes overview operations management and productivity, manufacturing and service operation, plant location strategies, work measurement, inventory management, project management and maintenance, supply chain and quality management concept. This course also provides knowledge and skills in planning, decision and control of business process management in organization.
	DPB40143 : ORGANIZATIONAL BEHAVIOR combines the functions of management with the psychology of leading and managing people. This organizational behavior course encompasses the study of individual and group behavior in organizational settings. As a result, students may apply organizational behavior in many other discipline of organization.
	DPM40113: CONSUMER BEHAVIOR is social psychology applied to consumption situations. This situation includes buying, selling, using and disposing of consumer goods and services. At the end of the course, students should possess knowledge of attitude, perception, consumer's decision-making process and external factors that influence consumer behavior.

DIPLOMA IN BUSINESS STUDIES

SEMESTER	SYNOPSIS
5	DPB50183 : BUSINESS PROJECT provides students with an opportunity to apply knowledge and skills on how to construct new ideas in order to provide solutions and suggestions for future innovation. Students will be able to apply business concepts and strategies acquired throughout their studies to address a specific business issues in business related fields.
5	DPB50193 : HUMAN RESOURCE DEVELOPMENT is a key activity that systematically leads to the growth and development of people in organization, and makes organization more effective. This course explains and demonstrate the contribution of human resource development in an organization and enable student to develop training needs. DPB50213 :ORGANIZATIONAL MANAGEMENT introduces students to the concepts, tools and issues of management in organizations of all types. The emphasis is on the role as a supervisor and manager of staff in an open social system, and the relationships necessary with other specialists within the organization. This course aims to provide students with an awareness of the skills required to operate effectively as a manager in the organization. DPS30153 :E-COMMERCE is a course that provides students with essential knowledge of running a business through electronics medium. This course allows students to have a good understanding of e-commerce business model and concept, ethical, social and political issues, building an e-commerce website, e-commerce marketing concept and e-commerce security. It also explores the online retailing and services in e-commerce. DPP50113: PRINCIPLES OF RISK MANAGEMENT AND INSURANCE imparts knowledge about the concept of risk and insurance for international business. This course emphasises on the relationship between risk and insurance, classes of insurance and insurance coverage for international trade activities.

SEMESTER	SYNOPSIS
FREE ELECTIVES	DUD10012: DESIGN THINKING This course offers the basic concept of Design Thinking through experiential learning. Students learn the five iterative phases of Design Thinking, which are Empathy, Define ,Ideate, Prototype and Testing. Students will apply these design thinking principles, process and techniques to solve a real-world problem and come up with an innovative solution in the form of a product, system or service prototype.
	DPA10212: PERSONAL FINANCIAL MANAGEMENT provides basic knowledge on personal financial management that is related to the day-to-day life of students. Students will learn about cash flow management, borrowing basics, managing debts, protection, investment, retirement and financial landscape. At the end of the course, students should be able to apply the information given in managing their financial issues after graduation.

DIPLOMA IN ACCOUNTING

INTRODUCTION

A career in accounting provides a wealth of employment opportunities as well as significant career progression potential. The body of knowledge in accounting is to develop and communicate financial and non-financial information to associated parties and stakeholders with the aim of decision making. Therefore, there is a need for graduates with an adequate combination of technical expertise, regulatory knowledge, soft skills, and ethical standards to excel in their profession and meet the diverse needs of clients and stakeholders. Additionally, the government will continue to develop the educational system to guarantee graduates have the necessary skills to satisfy the demand for generating 60,000 accountants by the year 2030. In response to this need, the Department of Polytechnic and Community College Education offers the Diploma in Accounting programme. With a comprehensive and practical education, graduates of the programme are ready for a range of career opportunities in accounting and related industries. By incorporating industrial relevance, practical skills, theoretical knowledge, and chances for professional growth, the curriculum equips students with the abilities required to succeed in today's highly competitive labour market. The curriculum ensures that graduates are well-prepared to excel in their careers and make valuable contributions to the field.

SYNOPSIS

The Diploma in Accounting programme provides a thorough curriculum that aims to equip students with the knowledge and skills necessary for a successful career in accounting. Students learn financial and management accounting, financial management, taxation, auditing, and professional ethics through an integration of theoretical foundations and practical applications. The curriculum places a high value on interactive teaching and learning strategies such as lectures, tutorials, group discussions, and practical tasks. Students are given the opportunity to develop their critical thinking, problem-solving, and communication skills through a variety of assessment methods, including case studies, practical exercises, problem-based scenarios, presentations, and industrial-based projects. Encouraging professionalism, integrity and accountability in the field of accounting is highlighted throughout the curriculum. Students are encouraged to develop critical thinking skills and ethical decision-making abilities.

DIPLOMA IN ACCOUNTING

PROGRAMME AIMS

This programme believes every individual has potential and the programme aims to produce well-rounded graduates who possess not only technical competence but also ethical awareness, critical thinking skills, and a commitment to lifelong learning. By achieving these aims, graduates will be prepared to thrive in the fast evolving discipline of accounting and significantly contribute to the sustainability of organizations in the fast-paced business environment of today.

JOB PROSPECT

The job prospects for graduates of this programme are abundant and promising, reflecting the nation's robust economic landscape and the increasing demand for skilled accounting professionals. Students graduating from this programme will be able to land in various job opportunities, such as in accounting firms, the corporate sector, government agencies, financial institutions, small and medium enterprises, and consulting services. The knowledge, skills and abilities gained from the programme will enable them to explore rewarding career opportunities such as:

- a. Account Executive/ Officer/ Assistant
- b. Accounting Technician
- c. Junior Auditor/ Audit Assistant
- d. Tax Assistant/ Technician
- e. Finance Assistant
- f. Payroll Administrator
- g. Credit Analyst
- h. Government officer – accounting/ auditing/ public sector management/ taxation policies/ regulatory compliance
- i. Entrepreneur
- j. Company Secretary

DIPLOMA IN ACCOUNTING

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Within a few years after completing a Diploma in Accounting, graduates are able to:

PEO1 : To produce accounting technicians who have relevant and related knowledge with practical skills capable of solving problems using appropriate numerical techniques and digital technologies in the accounting settings.

PEO2 : To produce accounting technicians who can lead, communicate and interact with internal and selected external stakeholders when working in various accounting settings.

PEO3 : To produce accounting technicians who are professional and ethical in carrying out their duties in all accounting settings.

PEO4 : To produce accounting technicians positive attitude and entrepreneurial mind set in developing their career in the accounting sector.

DIPLOMA IN ACCOUNTING

PROGRAMME LEARNING OUTCOME (PLO)

Upon completion of this programme, students should be able to:

- PLO1 :** Describe broad-based principles and theories in accounting, taxation and auditing.
- PLO2 :** Apply broad-based accounting, taxation and auditing knowledge to solve routine and non-routine problems in organisations, including identification of financial and non-financial information in the decision-making process.
- PLO3 :** Perform routine and non-routine tasks/operations ethically and flexibly within organisations.
- PLO4 :** Demonstrate basic interpersonal and collaborative skills.
- PLO5 :** Demonstrate effective written and oral communication and collaborative skills.
- PLO6 :** Demonstrate relevant digital skills for work/study.
- PLO7 :** Interpret numerical and graphical data with relevant tools.
- PLO8 :** Demonstrate responsibility for organisations for self and others with minimal guidance.
- PLO9 :** Demonstrate self-improvement for academic and career development.
- PLO10 :** Demonstrate broad entrepreneurship skills.
- PLO11 :** Adopt ethical principles and values related to accounting as a personal belief system.

DIPLOMA IN ACCOUNTING

PROGRAM STRUCTURE

SEMESTER 1

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	DUE10112	Communicative English 1	1	0	2	0	2	-
	MPU24031	Sukan 1	0	2	0	0	1	-
	MPU24041	Kelab/Persatuan 1						-
	MPU24XX1	Unit Beruniform 1						-
COMMON CORE	DPA10223	Introduction to Marketing	3	0	1	0	3	-
	DPA10233	Introduction to Management	3	0	1	0	3	-
	DPA10243	Economics 1	2	2	0	0	3	-
	DPA10253	Statistics	2	2	0	0	3	-
DISCIPLINE CORE	DPA10263	Financial Accounting 1	2	2	0	0	3	-
TOTAL			25				18	

SEMESTER 2

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	DUE50132	Communicative English 3	1	0	2	0	2	-
	MPU22071	Kursus Integriti dan Antirasuah	0	0	2	0	1	-
	MPU23152	Pengajian Islam*	1	0	2	0	2	-
	MPU23172	Nilai Masyarakat Malaysia**						-
	MPU24051	Sukan 2	0	2	0	0	1	MPU24031
	MPU24061	Kelab/Persatuan 2						MPU24041
	MPU24XX1	Unit Beruniform 2						MPU24XX1
COMMON CORE	DPA20273	Commercial Law	3	0	1	0	3	-
	DPA20283	Economics 2	2	2	0	0	3	DPA10243
DISCIPLINE CORE	DPA20293	Financial Accounting 2	2	2	0	0	3	DPA10263
	DPA20303	Introduction to Accounting for Islamic-based Transactions	3	1	0	0	3	DPA10263
TOTAL			26				18	

DIPLOMA IN ACCOUNTING

PROGRAM STRUCTURE

SEMESTER 3

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	0	2	-
COMMON CORE	DPA30313	Corporate Law	3	1	0	0	3	DPA20273
	DPA30323	Organizational Attitude and Behavior	3	1	0	0	3	-
DISCIPLINE CORE	DPA30333	Financial Accounting 3	2	2	0	0	3	DPA20293
	DPA30343	Management Accounting 1	2	2	0	0	3	DPA10263
	DPA30354	Accounting Information System	3	3	0	0	4	DPA10263
TOTAL			25				18	

SEMESTER 4

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PREQ
			L	P	T	O		
DISCIPLINE CORE	DPA40363	Financial Accounting 4	2	2	0	0	3	DPA30333
	DPA40373	Management Accounting 2	2	2	0	0	3	DPA30343
	DPA40383	Malaysian Taxation 1	2	2	0	0	3	-
	DPA40393	Audit 1	2	0	2	0	3	-
	DPA40403	Financial Management	2	2	0	0	3	-
ELECTIVE		Elective	1	3	0	0	3	-
TOTAL			24				18	

DIPLOMA IN ACCOUNTING

PROGRAM STRUCTURE

SEMESTER 5

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOURS				CREDIT VALUES	PREQ
			L	P	T	O		
DISCIPLINE CORE	DPA50413	Financial Accounting 5	2	2	0	0	3	DPA40363
	DPA50443	Ethics and Governance	2	2	0	0	3	-
	DPA50423	Malaysian Taxation 2	2	2	0	0	3	DPA40383
	DPA50433	Audit 2	2	2	0	0	3	DPA40393
	DPA50453	Public Sector Accounting	3	0	1	0	3	-
ELECTIVE	DPA50463	Accounting Project	1	4	0	0	3	-
TOTAL			25				18	
TOTAL CREDIT VALUE							90	

LEGEND/NOTES:

PREQ	:	Prerequisite(s)
L	:	Lecture
P	:	Practical/Lab
T	:	Tutorial
O	:	Others
*		For Muslim students
**		For non-Muslim students
#		Path 1 : Sport and Club
##		Path 2 : Uniform Unit

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

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
1	DPA10243 - ECONOMICS 1 focuses on the principles, concepts and basic theories related to the microeconomics problems and issues as well as the applicable method to allocate scarce resources. It also includes the consideration on how the individuals and firms in the economy make decisions and coordinate consumptions and productions. Beside it also emphasizes on the demand and supply theory, elasticity as well as market equilibrium. This course also introduces the theory of production and cost, and models of market structure to determine the efficiency in a market.
	DPA10233 - INTRODUCTION TO MANAGEMENT furnishes insights into the fundamental managerial functions including planning, organizing, leading, controlling, staffing, and decision-making, as applied within organizational settings. Emphasizing these principles, the course aims to enhance organizational efficiency and effectiveness.
	DPA10223 - INTRODUCTION TO MARKETING exposes students to the managerial approach in understanding marketing decision making. This course emphasizes in developing the marketing mix and marketing strategies.
	DPA10253 - STATISTICS introduces the basic concepts of data analysis and statistical computing. Both methods have been used in the social sciences and humanities. The emphasis is on the practical application of quantitative reasoning, visualization, and data analysis. The course also exposes students to using software and conducting their own basic statistical analysis, as well as providing an understanding of how to use statistical data in related fields.

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
1	DPA10263 - FINANCIAL ACCOUNTING 1 develops knowledge and understanding of accounting concepts and principles, as well as to develop the capability to perform the basic accounting knowledge. This course covers the accounting cycle on recording, processing and reporting business transactions and events. Students will be able to prepare trial balance and financial statements in accordance to accounting standards.

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
2	DPA20303 - INTRODUCTION TO ACCOUNTING FOR ISLAMIC-BASED TRANSACTIONS provides a comprehensive overview of concepts, principles, practices, and regulatory bodies that govern Islamic Financial Institutions in embracing the Islamic worldview towards accounting. The course also delves into accounting for Islamic based transactions consisting of various Islamic contracts applied to products of deposit, investment and financing at Islamic bank.
	DPA20283 - ECONOMICS 2 provides information on the concepts of macroeconomics issues and problems. The course emphasizes on the role of economics sectors in determining the Gross Domestic Product. This course also provides information on the importance of government policy to overcome the economics problem. The money equilibrium and international economics also been included in.
	DPA20273 - COMMERCIAL LAW provides knowledge regarding legal aspects and conducts of business transactions in Malaysia. The course is related to an introduction to the legal principles in Malaysia, basic principles of contracts, agency, sale of goods, hire purchase and partnership.
	DPA20293 - FINANCIAL ACCOUNTING 2 covers topic on accounting for non-profit organisation, accounting for partnership, accounting for cash, accounting for inventories, accounting for property, plant and equipment, accounting for provisions and contingent liability/assets and accounting for revenues. This course enables students to gain comprehensive understanding on various category of accounting treatments. Students are also will be able to extract the financial statements in accordance to the approved accounting standards.

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
3	DPA30313 - CORPORATE LAW introduces students to Malaysian Corporate Law. It covers foundational concepts, legal frameworks, practical applications, and assessment methods to equip students with essential knowledge and skills for navigating the complexities of corporate legal matters within the accounting profession.
	DPA30323 - ORGANIZATIONAL ATTITUDE AND BEHAVIOR combines the functions of management with the psychology of leading and managing people. This organizational behavior course encompasses the study of individual and group behavior in organizational settings. As a result, students may apply organizational behavior to many other disciplines of organization.
	DPA30333 - FINANCIAL ACCOUNTING 3 course covers essential aspects of financial reporting and accounting standards under the Malaysian Financial Reporting Standards (MFRS) framework, effective from January 1, 2020. The topics discussed are Intangible Assets: MFRS 138 & MFRS 17, Equity Shares: MFRS 9 and MFRS 132, Financial Instruments: MFRS 7, MFRS 9 and MFRS 132, Financial Statements for Company: MFRS 101 and Statement of Cash Flow: MFRS 107.
	DPA30343 - MANAGEMENT ACCOUNTING 1 provides a foundation understanding of how management accounting information is utilized in planning, controlling, and decision-making processes. Through theoretical knowledge and practical applications, students learn to apply management accounting concepts, tools, and techniques relevant to various industries, including manufacturing and services.

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

	SYNOPSIS
3	DPA30354 - ACCOUNTING INFORMATION SYSTEM is generally a computer-based method for tracking accounting activity in conjunction with information technology resources. It offers knowledge on the concept of accounting information systems and the technology used. It also offers skills for students to use computer as an accounting tool in producing financial reports. Students will be exposed to the latest technology in accounting and external sources to collect and present financial reports.

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
4	DPA40363 - FINANCIAL ACCOUNTING 4 covers the definition, recognition, measurement, presentation and disclosure requirements under the relevant Malaysian Financial Reporting Standards (MFRS) for the topics of agriculture, investment property, and borrowing costs. This course also covers the MFRS requirements in the preparation of the company's comprehensive financial statements and the accounting policies, changes in accounting estimates, and errors.
	DPA40373 - MANAGEMENT ACCOUNTING 2 empowers students to integrate management accounting techniques for decision-making and navigate diverse managerial challenges. It emphasizes entrepreneurial skills and strategic application of financial and non-financial insights to achieve organizational objectives that will contribute significantly to business success through informed decision-making.
	DPA40383 - MALAYSIAN TAXATION 1 providing an overview of fundamental concepts and administration of income tax law pertaining to individuals. The coverage of topics includes the determination of residence status and the tax payable for individual with employment income, other sources of income and/or business income inclusive of capital allowance, personal reliefs and other deductions under separate assessment and/or joint assessment.
	DPA40393 - AUDIT 1 focuses on providing students with theoretical knowledge and principles for the audit phase framework. Student will be exposed to auditing process planning in accordance with an approved auditing standard with integrated ethics and professionalism requirements.

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
4	DPA40403 - FINANCIAL MANAGEMENT offers skills in financial techniques while evaluating financial resources and emphasises on demonstrating relevant financial methods and theories in business environment. It involves planning, organizing, directing, and controlling an organization's financial resources.

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
5	DPA50413 - FINANCIAL ACCOUNTING 5 prepares students to produce relevant financial statements in accordance with the approved accounting standards and Companies Act 2016. Students should be able to apply the particular transactions, accounting treatment and other accounting information or other non financial data in reporting the relevant financial statements. Students will be exposed to the reporting standards for leases, impairment of assets, consolidated financial statement and events after reporting periods.
	DPA50423 - MALAYSIAN TAXATION 2 covers tax computation for partnerships and companies, which includes real property gain tax and capital gains tax, deduction allowances for industrial building allowances, forest allowances, and agriculture allowances, descriptions of investment incentives, tax planning for individuals and companies, and sales and service tax, among other tax-related services.
	DPA50433 - AUDIT 2 is a continuation of Audit 1. Students will strengthen their understanding of the auditing process, which will prepare them to face challenges in their professional lives as Assistant Auditors. It involves the analysis, evaluation, and review of pertinent information in the context of professional best practices and recent developments in auditing. Therefore students will learn the auditing framework by introducing the code of ethics of auditors and the quality control of auditing firms. Among the topics that will be discussed are the audit procedures for each account in the companies' financial statements. Along with the advancement of artificial intelligence, students are exposed to the skills of computer-aided audit procedures and techniques. For further audit procedures, students will also learn about group audits and using the work of others. In the final part of the audit procedure, students will discuss the completing audit process and try to understand the preparation of the auditor's report procedure. Finally, it will disclose the auditor's liabilities and students will also get to know the current issues faced in the auditing profession.

DIPLOMA IN ACCOUNTING

COURSE SINOPSIS

SEMESTER	SYNOPSIS
5	DPA50443 - ETHICS AND GOVERNANCE provides students an understanding of the underlying ethical theories, philosophies and values in individual, organizational and professional. The focus will be on the practical developments of skills and competence needed in dealing with ethical issues in accounting and corporate. The application of these ethical principles is best discussed within the framework of ethical behavior, professional skepticism, codes of ethics and corporate governance.
	DPA50453 - PUBLIC SECTOR ACCOUNTING focuses on providing students with an understanding of management and accounting practices in Malaysian Public Sector. Students will be exposed to the implementations of financial accounting system, budgeting, auditing and accountability in accordance to Malaysian Public Sector and other Approved Accounting Standards related to public sector organisations.
	DPA50463 - ACCOUNTING PROJECT provides students with an opportunity to apply accounting knowledge and technical skills on how to construct new ideas and provide solutions to current issues or challenges faced by an organization. Students will be able to apply relevant financial and non-financial knowledge acquired throughout their studies to address a specific business accounting issue in areas such as accounting and reporting, taxation, management accounting, audit and ethics, accounting information system, financial management, commercial and corporate law and entrepreneurship.

DIPLOMA IN SECRETARIAL SCIENCE

INTRODUCTION

The Diploma in Secretarial Science (DSK) is a comprehensive, full-time programme spanning five academic semesters, culminating in an industrial training component during the final semester. DSK adopts an interdisciplinary approach, preparing students to tackle real-world secretarial challenges effectively. Secretaries hold pivotal roles within organisations, adapting their duties to technological advancements and shifts in organisational structures. Their responsibilities include ensuring the proper filing, accessibility, and security of vital reports, files, and data, along with coordinating administrative activities and facilitating information dissemination. The curriculum is meticulously designed to equip students with the requisite knowledge, skills, and mindset to excel in the field. Through specialised training, students develop essential secretarial competencies and cultivate the confidence needed to thrive in today's competitive job market upon graduation.

SYNOPSIS

The Diploma in Secretarial Science (DSK) offers comprehensive training to prepare students for successful careers by providing insights into the latest business technology and management techniques. Designed to cultivate essential skills for administrative roles across diverse organisational settings, the programme covers fundamental theories and practical applications in the curriculum includes essential skills to help students thrive in a challenging work environment. Key areas of the study include speed typing, document processing, Shorthand, Trengkas, office administration, office applications, personality development, event management, and business accounting. Students gain value-added and transferable skills to adapt to emerging technologies and industrial challenges. Upon completion, graduates are equipped to assist in various administrative tasks within any organisation or industry.

PROGRAMME AIM

This programme aims to cultivate adaptable and responsible secretaries who play a vital role in advancing the national agenda to modernise, globalise, and revolutionise industries and organisations. By nurturing essential administrative skills and instilling a commitment to national development objectives, the programme contributes to Malaysia's economic growth and progression towards becoming a developed nation.

DIPLOMA IN SECRETARIAL SCIENCE

JOB PROSPECT

The knowledge and skills that the students acquire from the program will enable them to participate in the job market as:

01		Secretary
02		Personal Assistant
03		Administrative Secretary
04		Executive Secretary
05		Office Administrator
06		Administrative Executive
07		Administrative Assistant
08		Administrative Coordinator
09		Assistant Event Coordinator
10		Junior Human Resource Executive
11		Customer Service Officer
12		Business Development Executive
13		Special Officer
14		Sales Assistant
15		Sales Administrative Assistant
16		Entrepreneur

DIPLOMA IN SECRETARIAL SCIENCE

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The Diploma in Secretarial Science programme shall produce semi-professionals who are able to :

PEO1



Demonstrate proficiency in resolving secretarial challenges to effectively meet the needs of the organisation.

PEO2



Practice entrepreneurial skills and cultivate effective social interaction within dynamic global and local business organisation, while enhancing secretarial expertise.

PEO3



Capable of numerically analysing and using digital technology advances for organisational management solutions.

PEO4



Demonstrate exceptional professionalism, strong leadership capabilities, and a continuous commitment to acquiring advanced secretarial knowledge for career growth and development.

DIPLOMA IN SECRETARIAL SCIENCE

PROGRAMME LEARNING OUTCOME (PLO)

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

PLO1



Apply pertinent secretarial expertise to efficiently manage administrative tasks and activities.

PLO2



Analyse issues and challenges to offer effective solutions in the management of secretarial tasks and activities.

PLO3



Apply secretarial skills relatable to administrative tasks and activities.

PLO4



Develop strong relationships and effective interactions within working communities.

PLO5



Practice effective communication skills to foster positive relationships and collaboration while managing administrative tasks and activities.

PLO6



Apply appropriate digital tools and applications to effectively manage administrative tasks and activities.

PLO7



Utilise relevant tools to analyse numerical and graphical data for managing organisational operations.

PLO8



Demonstrate leadership abilities to effectively manage diverse teams and assume responsibility within organisational settings.

PLO9



Develop personal skills to foster self-improvement and advance career development.

PLO10



Demonstrate entrepreneurial skills in administrative tasks and activities.

PLO11



Portray professionalism, positive attitudes, and values when interacting with society and stakeholders.

DIPLOMA IN SECRETARIAL SCIENCE

PROGRAM STRUCTURE

SEMESTER 1

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUE	PREQ
			L	P	T	O		
COMPULSORY	DUE10112	Communicative English 1	1	0	2	0	2	
	MPU24031	Sukan 1	0	2	0	0	1	
	MPU24041	Kelab/Persatuan 1	0	2	0	0	1	
	MPU24XX1	Unit Beruniform 1	0	2	0	0	1	
DISCIPLINE CORE	DPK10063	Administrative Management	2	2	0	0	3	
	DPK10073	Office Applications	1	3	0	0	3	
	DPK10083	Keyboarding for Office Professionals	1	3	0	0	3	
	DPK10093	Shorthand 1	1	3	0	0	3	
	DPK10103	Trengkas 1	1	3	0	0	3	
TOTAL			25				18	

SEMESTER 2

CLASSIFICATION	COURSE CODE	COURSE	CREDIT				CREDIT VALUE	PREREQUISITE
			L	P	T	O		
COMPULSORY	MPU21072	Penghayatan Etika dan Peradaban	1	0	2	0	2	
	MPU23152	Pengajian Islam*	1	0	2	0	2	
	MPU23172	Nilai Masyarakat Malaysia**	1	0	2	0	2	
	MPU24051	Sukan 2	0	2	0	0	1	MPU24031
	MPU24061	Kelab/Persatuan 2	0	2	0	0	1	MPU24041
	MPU24XX1	Unit Beruniform 2	0	2	0	0	1	MPU24XX1
DISCIPLINE CORE	DPK20103	Office Document Processing	1	3	0	0	3	DPK10083
	DPK20113	Professional Personality	1	3	0	0	3	
	DPK20123	Shorthand 2	1	3	0	0	3	DPK10093
	DPK20133	Trengkas 2	1	3	0	0	3	DPK10103
TOTAL			24				17	

DIPLOMA IN SECRETARIAL SCIENCE

SEMESTER 3

CLASSIFICATION	CODE	COURSE	CREDIT				CREDIT VALUE	PREREQUISITE
			L	P	T	O		
COMPULSORY	DUE30122	Communicative English 2	1	0	2	0	2	
COMMON CORE	DPB20042	Management Information System	1	2	0	0	2	
	DPB20082	Business Communication	1	2	0	0	2	
	DPK30143	Fundamentals of Accounting	2	2	0	0	3	
DISCIPLINE CORE	DPK30153	Professional Administrative	2	2	0	0	3	
	DPK30163	Records Management	2	2	0	0	3	
ELECTIVE	DBC20032	Introduction to Artificial Intelligence					2	
TOTAL			21				17	

SEMESTER 4

CLASSIFICATION	CODE	COURSE	CREDIT				CREDIT VALUE	PREREQUISITE
			L	P	T	O		
COMPULSORY	MPU22071	Kursus Integriti dan Antirasuah	0	0	2	0	1	
COMMON CORE	DPB40113	Business Ethics	3	0	1	0	3	
	DPB40153	Digital Entrepreneurship	1	3	0	0	3	
DISCIPLINE CORE	DPB30103	Introduction to Human Resource Management	2	2	0	0	3	
	DPK40173	Corporate Meeting	2	2	0	0	3	
	DPK40183	Executive Note Taking	1	3	0	0	3	DPK20103 DPK20123 DPK20133
TOTAL			22				16	

DIPLOMA IN SECRETARIAL SCIENCE

SEMESTER 5

CLASSIFICATION	CODE	COURSE	CREDIT				CREDIT VALUE	PREREQUISITE
			L	P	T	O		
COMPULSORY	DUE50132	Communicative English 3	1	0	2	0	2	
COMMON CORE	DPB40143	Organizational Behavior	3	1	0	0	3	
DISCIPLINE CORE	DPK50193	Event Management Project	1	3	0	0	3	
	DPK50203	Office Practice	1	4	0	0	3	DPK40183
ELECTIVE	DPA10212	Personal Financial Management					2	
TOTAL			16				13	

SEMESTER 6

CLASSIFICATION	CODE	COURSE	CREDIT				CREDIT VALUE	PREREQUISITE
			L	P	T	O		
INDUSTRIAL TRAINING	DUT60089	Industrial Training	0	0	0	0	9	
TOTAL			0				9	
TOTAL CREDIT							90	

DIPLOMA IN SECRETARIAL SCIENCE

ELECTIVES

CLASSIFICATION	CODE	COURSE	CREDIT				CREDIT VALUE	PREREQUISITE
			L	P	T	O		
ELECTIVES	DBC20032	Introduction to Artificial Intelligence (AI)	2	1	0	0	2	
	DPA10212	Personal Financial Management	2	0	1	0	2	
	DUF10212	Bahasa Arab 1	1	0	2	0	2	
	DUF20242	Bahasa Arab 2	1	0	2	0	2	
	DUF10222	Mandarin 1	1	0	2	0	2	
	DUG30032	Green Technology Compliance	1	2	0	0	2	
	DUW10032	Occupational Safety and Health	2	0	0	0	2	
FREE ELECTIVES	DUD10012	Design Thinking	1	0	0	1	2	

LEGEND/NOTES:

PREQ	:	Prerequisite (s)
L	:	Lecture
P	:	Practical/Lab
T	:	Tutorial
O	:	Others

* For Muslim students

** For non-Muslim students

Path 1 : Sport and Club

Path2 : UniformUnit

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

DIPLOMA IN SECRETARIAL SCIENCE

SEMESTER	SINOPSIS
1	DPK10093 :SHORTHAND 1 equips students with the knowledge and skills of Shorthand Pitman 2000. This course helps students understand that shorthand is written based on spoken sounds. Students should also be able to recognize and illustrate each outline and word without hesitation by performing the correct writing and transcribing techniques. DPK10063: ADMINISTRATIVE MANAGEMENT is an introductory subject to provide the students with a basic foundation of knowledge that covers the role and functions of an office, office accommodation, layout and environment, telephone and technology services, office stationery, office automation, and procedures in office mail services that give impacts on the efficiency of a secretary or an administrator in an organization DPK10083: KEYBOARDING FOR OFFICE PROFESSIONALS provide students with hands on knowledge and skills on proper typing techniques and procedures. The course covers the Introduction to typing, keyboarding the alphabet, the numbers, and symbols. At the same time this course also emphasizes on building accuracy and increasing their typing speed progressively. Typescripts in English and Bahasa Malaysia are used for this purpose. DPK10103: TRENGKAS 1 memberi pengetahuan kepada pelajar tentang teori-teori penulisan Trengkas dengan menggunakan Trengkas Sistem Pitman 2000. Kursus ini memberi penekanan kepada kemahiran memahami, mengguris dan mentranskrip semua perkataan dalam Bahasa Malaysia. Kursus ini memberi penekanan dengan memastikan gurisan dapat diguris dengan pantas dan tepat. Kursus ini juga dapat membantu pelajar untuk membuat latihan tubi dan mengguris perkataan mengikut peraturan Trengkas Sistem Pitman 2000. DPK10073: OFFICE APPLICATIONS enables students to acquire and apply hands-on knowledge in using office application. It helps students to improve their fundamental and advanced features of each program, including document creation and formatting in Word Processing, data analysis in Spreadsheet, presentation slide design in Presentation Software, calendar management and gantt chart in Task Planning Software and basic of advertising design using graphic software. It also prepares students the concept of working as a group that work together dynamically and effectively.

DIPLOMA IN SECRETARIAL SCIENCE

SEMESTER	SINOPSIS
2	DPK20123:SHORTHAND 2 equips students with the knowledge and skills of Shorthand Pitman 2000. The focus of the course is to take notes quickly and accurately using the Shorthand outline and be able to transcribe the text into handwritten and typewritten forms. This course also helps students to practice their outlines and take dictation at a speed range of 30 w.p.m. to 70 w.p.m with 96% accuracy according to Shorthand rules.
	DPK20113: PROFESSIONAL PERSONALITY DEVELOPMENT provides knowledge of the personality attributes of secretarial personnel, encompassing personal traits, strategies for maintaining a healthy lifestyle, and techniques for enhancing one's professional image. Its objective is to equip students with the skills necessary to establish a polished professional identity within secretarial roles. The emphasis is placed on fostering the development of self-assurance, positive attitudes, and effective decision-making skills throughout the duration of the course
	DPK20103: OFFICE DOCUMENT PROCESSING equips students with advanced skills in word processing and document formatting using Microsoft Office. The course focuses on creating various types of business documents, emphasizing speed, accuracy, and the ability to prepare documents according to business documents format.
	DPK20092 :TRENGKAS 2 memberi pengetahuan kepada pelajar tentang teori-teori penulisan Trengkas dengan menggunakan sistem Trengkas Pitman 2000. Kursus ini memberi penekanan kepada kemahiran memahami, mengguris dan mentranskrip semua perkataan dalam Bahasa Malaysia. Kursus ini memberi penekanan dengan memastikan gurisan dapat diguris dengan pantas dan tepat ketika mengambil catatan kepantasan dan boleh mentranskrip rencana secara bertulis atau bertaip. Kursus ini juga dapat membantu pelajar untuk membuat latihan tubi, mengguris perkataan dan mengambil catatan pada kelajuan 30 p.s.m hingga 70 p.s.m dan mentranskrip rencana menggunakan komputer dengan ketepatan 96% mengikut peraturan Trengkas Pitman 2000.
3	DPK30143: FUNDAMENTALS OF ACCOUNTING develop the knowledge on accounting concepts and principles, as well as technicality of accounting treatment that covered the accounting cycle on recording, processing and reporting business transactions and events. Students will be able to prepare trial balance and financial statements in accordance to approved accounting standard. Apart from that, organization's financial analysis is included to enable students to analyze the organization's financial position.

DIPLOMA IN SECRETARIAL SCIENCE

SEMESTER	SINOPSIS
3	DPK30163: RECORDS MANAGEMENT introduces students to the principles and practices of effective records management for manual and electronic record systems. This programme emphasises students on the application of appropriate records management systems. The course also includes comprehensive coverage of the records management system for the effective operation of modern business firms
	DPK30153: PROFESSIONAL ADMINISTRATIVE MANAGEMENT provides students with an understanding of the secretarial functions in managing the office. The course emphasizes on abilities and capabilities of students in leading and assisting other staff as well as providing specific training in the real workplace. This course will help them to develop skills that will be important in their career as a professional or business position.
	DPB20082: BUSINESS COMMUNICATION course is designed to provide a fundamental overview of business communications, its principles, its importance, and the written and verbal communication skills that are the latest trends in workplace communication.
	DPB20042: MANAGEEMNT INFORMATION SYSTEM introduces the fundamental concepts of information systems that are used in modern business operations. This course provides students with the basic knowledge of the role and significance of information systems in general. It also discusses related security and ethical issues in digital era.

DIPLOMA IN SECRETARIAL SCIENCE

SEMESTER	SINOPSIS
4	DPB40113: BUSINESS ETHICS examines the personal, professional, and corporate relationships, values, justice, and culture in a national and global business setting. It provides a basic framework for examining the range of ethical issues arising in a business context. This course discusses issues of right and wrong actions or decisions for business reputation in decision-making at all levels. It explains corporate culture, ethical leadership, corporate governance, corporate social responsibility, employee responsibilities, diversity, and discrimination.
	DPK40183: EXECUTIVE NOTE TAKING stresses knowledge and competence application of in applying Shorthand, Trengkas, and document processing. This course concentrates on note-taking and producing business documents in appropriate format according to the instructions given by the instructor. The exercises will be delivered either verbally or recorded using two languagesm Bahasa Malaysia and English.
	DPB30103: INTRODUCTION TO HUMAN RESOURCE MANAGEMENT covers principles and approaches applicable to the human resource management in an organizational. It also offers students an understanding about activities of human resource management department and the statutory requirement regarding the human resource functions. Through this course, students also have the opportunity to have an overview of Malaysian industrial relations practices and problems.
	DPK40173: CORPORATE MEETING aims to equip students with the necessary knowledge and skills to manage meetings in a corporate world effectively. It covers understanding the principles and practices of different types of meetings held in corporate environments. This course explores the role of a company secretary in the operation and administration of company meetings, the management of the company, and proceedings at meetings. It also covers the essentials of writing minutes and the important practices involved in meetings. This enables students to gain comprehensive knowledge of the importance of some provisions under the Companies Act 2016.
	DPU40153: DIGITAL ENTREPRENEURSHIP introduces how to develop creativity and innovation and managing risk in starting up a digital business environment. This course will also guide the students on ways to conduct a business using online marketing platform such as social media marketing, website, mobile marketing and email marketing. This course also emphasis on the development of e-business via ecommerce platform to reach a bigger market.

DIPLOMA IN SECRETARIAL SCIENCE

SEMESTER	SINOPSIS
5	DPB40143: ORGANIZATIONAL BEHAVIOR combines the functions of management with the psychology of leading and managing people. This organizational behavior course encompasses the study of individual and group behavior in organizational settings. As a result, students may apply organizational behavior in many other discipline of organization.
	DPK50203: OFFICE PRACTICE explores the natures of administration and management in office practice, set in a simulated environment with the mock task assigned to students. Students will be given various office practice simulations based on different topics. By doing these tasks, they can apply the theory they have learned in their simulated situation that the secretary usually performs in the administrative services.
	DPK50193: EVENT MANAGEMENT PROJECT is a course that allows students to develop suitable event and display organizing skills in event management project. Student will be exposed to each aspect of event planning from prioritizing the budget to day-off coordination. Students will be guided to plan all aspects of events which includes the elements of Sustainable Development Goals (SDGs).
ELECTIVES	DPA10212: PERSONAL FINANCIAL MANAGEMENT provides the skills on how to manage personal money wisely and can spend within the means and achieve the financial goals with ease. The course emphasises on being in control of own finances regardless of whether or not facing financial problems.
FREE ELECTIVES	DUD 10012: DESIGN THINKING. This guideline must be read together with the course information document for DUD10012 Design Thinking. This course is a 2-credit free elective course that aims to equip polytechnic students with creative and critical thinking skills via the Design Thinking approach. The approach consists of five iterative phases: Empathy, Define, Ideate, Prototype and Testing. Students will apply Design Thinking principles, process and techniques to solve real-world problems and come up with innovative solutions in the form of products, systems or services prototypes.

INFORMATION & COMMUNICATION TECHNOLOGY DEPARTMENT

INTRODUCTION

The Information & Communication Technology Department (JTMK) is one of the main Academic Departments at Mukah Polytechnic (PMU), Sarawak. Its establishment is in line with the beginning of the operation of PMU with the recruitment of the first group of students consisting of students in the field of Information Technology Certificate in the study session July 2005. JTMK is the main mover in Mukah Polytechnic (niche area) and offers study programs in the field of Information & Communication Technology (ICT) which has been fully accredited by the Malaysian Qualifications Agency (MQA). Currently, JTMK produces skilled ICT graduates through Diploma in Information Technology (Digital Technology) Software and Application Development Track (MQA / FA3339) and Diploma in Information Technology (Digital Technology) Network Systems Track (MQA / FA3338) study programs.

JTMK is equipped with the best and most complete training and educational facilities or training facilities to support the achievement of practical and theoretical learning outcomes for all courses, in line with the needs of outcome-based education (OBE). JTMK Premises is equipped with a Mini Lecture Hall (Capacity 200 students), 17 classrooms, 6 Application Development Laboratories, 2 Network and Communication Laboratories, 2 Computer and Digital Systems Laboratories, 3 Hypermedia Laboratories, 4 Information Technology Laboratories, 2 Project Rooms, a Presentation Rooms, Lecture Rooms include 2 TECC Rooms.

PROGRAMME

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

- Track Networking Systems (MQA/FA3338)
- Track Software and Application Development (MQA/FA3339)

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

INTRODUCTION

In order to keep abreast with rapid technological advancements and evolving requirements in industries today, Department of Polytechnic & College Community Education (DPCCE) has worked collaboratively with the nation's key industry players in developing and reviewing the curriculum of Information and Communication Technology (ICT) programme. This collaboration aims to equip students with timely knowledge and relevant skills to meet the global challenges and the requirements of the ICT industries. In achieving blended learning, this aim pedagogy that blends classroom instructions with structured simulated real-life working experience is fully utilised to prepare students for the competitive edge in today's workplace.

The growly demand for highly skilled and technically savvy workplace drives the need to produce area for qualified men power in this industry to remain competitive in the world market. To address these issues the Curriculum Division (CD), DPCCE cooperates with the industries, Private Higher Learning Institutions and Public Higher Learning Institutions to develop and review the curriculum of the ICT programme. This curriculum integrates with the curriculum of professional certification and industry-led curriculum such as Computer Technology Industry Association (CompTIA A+), Oracle Java Certification, Microsoft Computer System Administrator (MCSA) and Microsoft Certified Desktop Service Technician (MCDST), Cisco Certified Network Associates (CCNA), EC-Council Network Security (ENSA), Certified Ethical Hacker (CEH), and Infosys Campus Connect programme, so as to give the opportunities for the students to sit for professional certificate examinations by the end of the final semester. This will give the students an added value and ensure that the knowledge and skills acquired through this programme are relevant with the needs of the ICT industries specifically.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SINOPSIS

This programme provides education and training in Computing field with a specific emphasis on Information Technology area. The courses provide opportunities for students to get into a broad range of careers in a variety of ICT sectors. This programme also provides the students with transferable skills and multiskilling which enable them to adapt to new technologies. In addition to the technical courses, students are also taught English for Digital Technology, Penghayatan Etika dan Peradaban, Pengajian Islam or Pendidikan Moral and Co-Curriculum, to enhance their competencies in soft skills. As the programme emphasizes self-initiated learning and hands-on competencies, graduates of this programme should be ready to take the challenges in the world of computing technologies.

PROGRAMME AIM

The programme believes that every individual has potential to foster adaptable and responsible Information and Communication Technology (ICT) Assistant with new technological advancement in supporting the national digital initiative transformation agenda

JOB PROSPECT

Research by Malaysian Digital Economy Corporation (MDEC) shows a globally. Thus, graduates from this programme are equipped with the knowledge, skills, attitude and abilities that can be applied to a broad range of careers in the ICT industrial worlds and businesses. The knowledge and skills that the students acquire from the programme will enable them to participate in the job market such as:

1. Computer Application Programmer
2. Internet Programmer
3. Web Programmer
4. Database Programmer
5. System Analysts Assistant
6. Software Developer



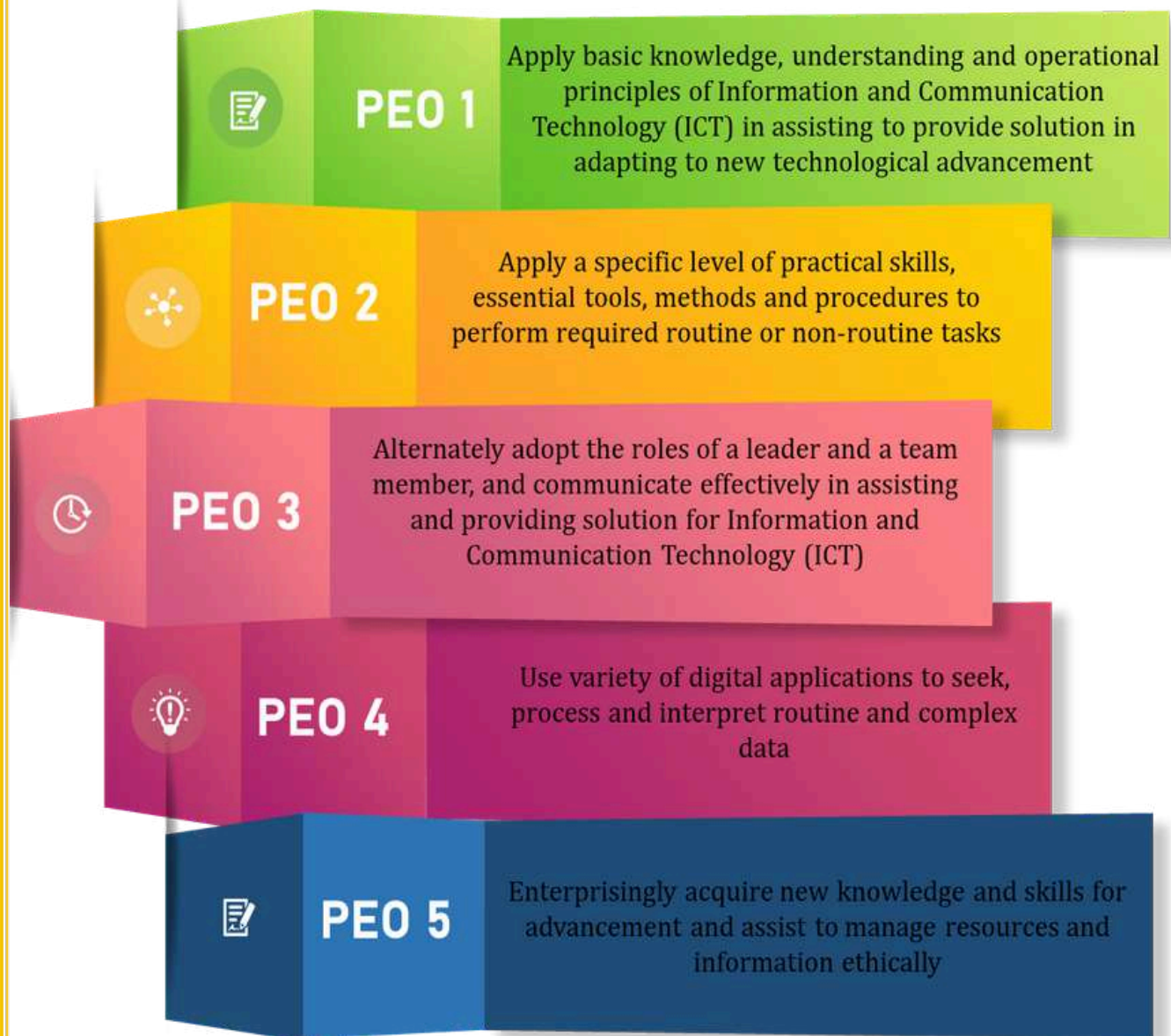
DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

7. Database Administrator
8. Software Tester
9. System Support Personnel
10. System Programmer
11. Network Support Personnel
12. Network Administrator
13. IT Supporting Engineer
14. Assistant Network Engineer
15. Technical Helpdesk / Support
16. Assistant Game Programmer
17. Game Designer
18. 3D Animator
19. Storyboard Artist
20. 2D Concept Artist
21. 3D Artist
22. Assistant Security Analysis
23. Assistant Information Security Engineer
24. Assistant Game Developer
25. Computer Hardware Technician
26. Assistant Penetration Tester
27. Assistant Data Scientist
28. Assistant Data Analyst
29. Business Intelligence Analyst
30. Junior Data Visualization
31. Junior Statistician
32. Junior Data Insights and Virtualization
33. Web Designer

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

PROGRAMME EDUCATIONAL OBJECTIVES

The Diploma In Information Technology (DigitalTechnology) programme shall produce semi-professionals ICT practitioners who are capable to:



DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

PROGRAMME LEARNING OUTCOMES (PLO)

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

- PLO1:** Practice Information and Communication Technology (ICT) skill in performing diagnostic and documenting processes in ICT related fields
- PLO2:** Analyse issues and provide solutions in Information and Communication Technology (ICT) by implementing appropriate scientific approaches and reasoning
- PLO3:** Display Information and Communication Technology (ICT) skill in performing diagnostic and documenting processes in ICT related fields
- PLO4:** Demonstrate effective communication both orally and in writing to others including peers, experts and non-experts
- PLO5:** Demonstrate social skills and responsibilities by taking alternate role as a leader or member of a diverse team
- PLO6:** Demonstrate ability to use Information and Communication Technology (ICT) in quantitative skills to support work and studies
- PLO7:** Demonstrate entrepreneurial and good managerial skills in working environment
- PLO8:** Demonstrate positive values, ethics and accountability in engaging with society

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

PROGRAM STRUCTURE

SEMESTER 1

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU24XX1	Sukan	0	2	0	0	1	-
	MPU24XX1	Unit Beruniform 1	0	2	0	0	1	-
	MPU22053	English for Digital Technology	2	0	2	0	3	-
COMMON CORE	DBM10063	Mathematical Computing	2	0	2	0	3	-
	DFC10033	Introduction to Computer System	2	3	0	0	3	-
	DFC10042	Problem Solving and Program Design	2	2	0	0	2	-
	DFC10093	Computer System Architecture	3	1	0	0	3	-
	DFC10103	Operating System	2	3	0	0	3	-
TOTAL			28				18	

SEMESTER 2

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU23032	Pengajian Islam*	1	0	2	0	2	-
	MPU23142	Pendidikan Moral**	1	0	2	0	2	-
	MPU24XX1	Kelab/Persatuan	0	2	0	0	1	MPU24XXX1
	MPU24XX1	Unit Beruniform 2	0	2	0	0	1	
COMMON CORE	DBM20083	Discrete Mathematics	2	0	2	0	3	-
	DFC20123	Database Design	2	3	0	0	3	-
	DFC20143	Introduction to Networks	2	3	0	0	3	-
	DFC20113	Programming Fundamentals	2	3	0	0	3	DFC10042
	DFT20083	Security Basics and IT Professional	3	2	0	0	3	-
TOTAL			29				18	

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SEMESTER 3

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMPULSORY	MPU21032	Penghayatan Etika dan Peradaban	1	0	2	0	2	-
COMMON CORE	DFC30153	Data Structures	3	1	0	0	3	DFC20113
	DFP30033	Human Computer Interaction	3	1	0	0	3	-
SPECIALISATION	DFT30103	Cyberpreneurship	2	3	0	0	3	-
		TRACK : SUBJECT 1					3	-
		TRACK : SUBJECT 2					3	-
TOTAL			16				17	

SEMESTER 4

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
COMMON CORE	DFC40163	System Analysis and Design	3	1	0	0	3	-
SPECIALISATION		TRACK : SUBJECT 3					3	-
SPECIALISATION		TRACK : SUBJECT 4					3	-
SPECIALISATION		TRACK : SUBJECT 5					3	-
ELECTIVES		TRACK : ELECTIVES 1					2	-
ELECTIVES		TRACK : ELECTIVES 2					3	-
TOTAL			4				17	

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SEMESTER 5

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
SPECIALISATION		TRACK : SUBJECT 6					3	-
SPECIALISATION		TRACK : SUBJECT 7					3	-
SPECIALISATION		TRACK : SUBJECT 8					4	-
ELECTIVES		TRACK : ELECTIVES 3					3	-
TOTAL			0				13	-

SEMESTER 6

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES
			L	P	T	O	
INDUSTRIAL TRAINING	DUT60019	Industrial Training	0	0	0	0	9
TOTAL			0				9
TOTAL CREDIT VALUE							92

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SPECIALISATION COURSES OF TRACK SOFTWARE AND APPLICATION DEVELOPMENT

TRACK	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
SUBJECT 1	DFT30043	Digital Multimedia	1	4	0	0	3	-
SUBJECT 2	DFC30133	Object Oriented Programming	2	4	0	0	3	DFC10042
SUBJECT 3	DFT40043	Web Design Technology	1	4	0	0	3	-
SUBJECT 4	DFP40023	Visual Basic Programming	1	4	0	0	3	DFC30133
SUBJECT 5	DFP40093	Mobile Application Development	2	3	0	0	3	DFC30133
SUBJECT 6	DFP50043	Integratives Programming & Technologies	2	3	0	0	3	DFC30133
SUBJECT 7	DFP50123	Secure Mobile Computing	2	3	0	0	3	DFT20083
SUBJECT 8	DFT50114	Integrated Project	2	3	0	0	4	All Common Core Course

ELECTIVES COURSES OF TRACK SOFTWARE AND APPLICATION DEVELOPMENT

TRACK	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
ELECTIVES 1	DFP40182	Software Requirement & Design	1	2	0	0	2	-
ELECTIVES 1	DFP40162	Business Intelligence	1	2	0	0	2	DFC20123
ELECTIVES 2	DFP40053	Database Administration	2	3	0	0	3	DFC20123
ELECTIVES 2	DFP40203	Python Programming	2	3	0	0	3	DFC20113
ELECTIVES 2	DFP40103	IOS Application Development	2	3	0	0	3	DFC30113
ELECTIVES 3	DFP50173	Web Development Technology	1	4	0	0	3	DFC20123, DFT40043
ELECTIVES 3	DFP50193	Web Programming	2	3	0	0	3	DFC20123, DFT40043

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SPECIALISATION COURSES OF TRACK NETWORKING SYSTEM

TRACK	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
SUBJECT 1	DFN30273	Switching Essentials	2	3	0	0	3	DFC20143
SUBJECT 2	DFN30053	Open Sources Operating Systems	2	3	0	0	3	DFC10103
SUBJECT 3	DFN40283	Routing Essentials	2	3	0	0	3	DFC20143
SUBJECT 4	DFN40183	Open Sources Server Administration	2	3	0	0	3	-
SUBJECT 5	DFN40143	Network Security	2	3	0	0	3	DFC20143
SUBJECT 6	DFN50173	Connecting Wan	2	2	0	0	3	DFC20143
SUBJECT 7	DFN50223	Windows Server Administration	2	3	0	0	3	DFC10103
SUBJECT 8	DFT50114	Integrated Project	2	3	0	0	4	All Common Core Course

ELECTIVES COURSES OF TRACK NETWORKING SYSTEM

TRACK	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
ELECTIVES 1	DFN40232	Fiber Optic Communication System	1	3	0	0	2	-
ELECTIVES 1	DFN40242	Embedded Internet Of Things (IOT)	1	3	0	0	2	-
ELECTIVES 2	DFN40253	Cloud Computing	2	3	0	0	3	DFC20143
ELECTIVES 2	DFN40263	Programming Essentials In Python	2	3	0	4	3	-
ELECTIVES 2	DFC30133	Object Oriented Programming	2	0	3	0	3	DFC10042
ELECTIVES 3	DFN50133	Network Design	2	3	0	0	3	DFC20143
ELECTIVES 3	DFN50153	Socket Programming	2			0	3	DFC20113

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

FREE ELECTIVES COURSE FOR TRACK NETWORKING SYSTEM & TRACK SOFTWARE APPLICATION DEVELOPMENT

CLASSIFICATION	COURSE CODE	COURSE	CONTACT HOUR				CREDIT VALUES	PREQ
			L	P	T	O		
SUBJECT 1	DUD10012	Design Thinking	1	0	0	1	2	-

LEGEND/NOTES:

PREQ	:	Prerequisite (s)
L	:	Lecture
P	:	Practical/Lab
T	:	Tutorial
O	:	Others
*		For Muslim students
**		For non-Muslim students
#		Path 1 : Sport and Club
##		Path 2 : Uniform Unit

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

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

COURSE SINOPSIS

SEMESTER	SINOPSIS
1	DFC10033: INTRODUCTION TO COMPUTER SYSTEM introduces students to the Information Technology (IT) hardware, software and foundation of the basic knowledge and skills necessary for ICT professionals. This course covers the study of personal computer (PC) hardware including PC assembly, installing and connecting peripherals. Student will learn hardware troubleshooting techniques used to identify and rectify computer faults. Student are exposed to the principles and good practices in environmentally sustainable computing and the use of appropriate technologies, methodologies in managing IT environment. DFC10042: PROBLEM SOLVING AND PROGRAM DESIGN introduces the techniques in problem solving and program design. The concepts learned in this course can be applied to many of the real life problems which can be solved by writing computer programs. A multiphase program development life cycle and two basic phases of problem solving and program design are emphasized. Problem analysis and the stepwise specification of the algorithms, pseudo code and flow chart are also defined. DFC10093 :COMPUTER SYSTEM ARCHITECTURE. This course is a continuation of foundational knowledge in computer system and technology which is a part of the requirement in the body of knowledge in Information Technology field. It is the basic computer machinery skills needed to progress to the next level. DFC10103: OPERATING SYSTEM introduces the design and implementation of operating systems. This course will cover briefly the evolution and major components of operating system. Particular emphasis will be given to three major OS subsystems; memory management, processes management, file systems and operating systems in mobile devices today that supporting distributed systems.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SEMESTER SINOPSIS

2

DFC20143 :INTRODUCTION TO NETWORK is an introductory computer networks subject and it aims to provide a wide overview of networking and its technologies such as the seven layers of OSI and TCP/ IP model. This course also provides students with the knowledge in wireless networking device and network troubleshooting. Students will get an experience in troubleshooting and configuration by using networking tools.

DFC20123 : DATABASE DESIGN course engages students to analyze business scenarios and create a data model—Students implement their database design by creating a physical database using SQL (Structured Query Language). Basic SQL syntax and the rules for constructing valid SQL statements are reviewed. This course culminates with a case study that challenges students to design, implement and demonstrate a database solution for a business or organization.

DEC20113 : PROGRAMMING FUNDAMENTALS course introduces fundamental concepts of structured programming and provides a comprehensive introduction to programming for Information Technology majors. Topics include data types, control structures, pointer, structure, functions, arrays and the mechanics of running, testing and debugging. Practical lab sessions will help to develop the skills required to identify the best data and program constructs to solve well-defined problems.

DFT20083: SECURITY BASICS AND IT PROFESSIONAL course introduces students the common threats and attacks faced today. This course provides student with foundational theory behind information security, the basic principles and techniques when designing a secure system. Students are exposed to the principles and good practices in environmentally sustainable secured computing and the use of appropriate tools and technology in managing information system environment.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SEMESTER	SINOPSIS
3	DFT30103 : CYBERPRENEURSHIP course provides a broad overview of the role of entrepreneurial thinking and innovation in advancing IT-focused businesses. This student will examine how these skills can be leveraged to create new IT-driven businesses as well as to create competitive advantage for existing businesses via new IT products and services. Students will be introduced to concepts, tools, and principles of business strategy, finance, marketing, human resources, and management including business leadership within the context of IT business models. DFC30153: DATA STRUCTURE course is designed to focus on the basic data structures. Among the specific data structures covered are linked list, stacks, queues, trees, sorting and searching. The emphasis is on choosing appropriate data structures and designing correct and efficient algorithms to operate on these data structures. DFP30033: HUMAN COMPUTER INTERACTION course aims to provide students with fundamental knowledge of HCI, including areas such as user and task analysis, human factors, ergonomics, accessibility standards and universal design. The course focuses on awareness in computer technology and how usability plays a major part in achieving effective implementation of designs and interactivity. This provides a new dimension that will enrich the lives of people who are ICT savvy.
4	DFC40163: SYSTEM ANALYSIS AND DESIGN course is an introduction to the concept and the development of information system. The course is designed to acquire the knowledge of system development life cycle. It covers all activities in planning, analyzing, designing and developing information systems including techniques used in software maintenance. Systems analysis is the process of turning a set of user requirements into a logical system specification. Systems design takes the logical specification and converts it into a set of designs that can then be implemented to create a working application. It includes expanded coverage of data flow diagrams, data dictionary, and process specifications.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SPECIALISATION COURSES OF TRACK NETWORKING SYSTEM

SEMESTER	SINOPSIS
SUBJECT 1	DFN30273: SWITCHING ESSENTIALS course introduces students to the equipment and protocols in a small, switched networks. The course provides knowledge on Inter-VLAN dynamic routing protocols which includes VLSM, VLANs and Dynamic Trunking Protocol (DTP). Students also learn about the Spanning Tree Protocol and link aggregation concepts through the introduction of EtherChannel. Students' skills are developed through hands-on exercises in the laboratory on configuration, installation and troubleshooting a network.
SUBJECT 2	DFN30053: OPEN SOURCE OPERATING SYSTEM course is an introductory course in which, students will learn and familiarize with the open source environment. Installation, configuration and management of Linux operating systems are explored. Focus on filesystem management, user and group accounts management, and common administrative tasks. This course is ideal for beginners to learn the Linux command line but it is also recommended for intermediate and advanced users.
SUBJECT 3	DFN40283: ROUTING ESSENTIALS course introduces students to the architecture, components and operations of routers in larger and more complex networks. Students learn how to configure router for advanced functionality. By the end of this course, students will be able to configure, troubleshoot and demonstrate routers and resolve the common issues with DHCP, FHRP, routing concepts, static route and OSPF in both IPv4 and IPv6 networks.
SUBJECT 4	DFN40183: OPEN SOURCE SERVER ADMINISTRATION course is designed to provide students with skills on managing servers used to administer Campus Area Network (CAN) and network services needed. Students will acquire knowledge and skills in using Linux to configure services for Campus Area Network (CAN) environment.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SPECIALISATION COURSES OF TRACK NETWORKING SYSTEM

SEMESTER	SINOPSIS
SUBJECT 5	DFN40143: NETWORK SECURITY course is designed to focus on the overall security processes based on security policy emphasizing on hands-on skills in the areas of a secure perimeter, secure connectivity, identity services and intrusion detection. The knowledge delivered shall enable students to identify some of the security approaches to design a defensive strategy in a computer network environment. Discussion on the installation, troubleshooting, and confidentiality, and core security concepts and skills needed for the monitoring of network devices to maintain the availability of data and devices.
SUBJECT 6	DFN50173: CONNECTING WAN course introduces students to the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of a network devices and WAN Technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Knowledge and skills are developed to implement virtual private network (VPN) operations in a complex network.
SUBJECT 7	DFN50223: WINDOWS SERVER ADMINISTRATION is a course designed to provide students with valuable skills on configuring and managing Windows Server network. Students will acquire knowledge in Windows Server networking, including DNS configuration, DHCP configuration, remote access and distributed network solutions in Windows Server environment.
SUBJECT 8	DFT50114: INTEGRATED PROJECT course will give students the practical and design experience of carrying out an independent application software or technical project from project requirements, implementation, testing to delivery and presentation of the project. The course requires students to learn new technologies and encourage student to develop their generic skills such as developing teamwork, project management, communication skills, problem solving skills and technical writing skills. This will inculcate independent and life-long learning.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

ELECTIVES COURSES OF TRACK NETWORKING SYSTEM

SEMESTER	SINOPSIS
ELECTIVES	DFN40253: CLOUD COMPUTING is a course designed to provide students with valuable skills on configuring and managing cloud services in AWS environment. Students will acquire knowledge in different AWS services, including Elastic Compute Cloud (EC2), Virtual Private Cloud (VPC), Route 53 and CloudFront.
	DFN40263: PROGRAMMING ESSENTIALS IN PYTHON course introduces students to the essentials skills of Python Programming language. The course provides knowledge on learning to design, write, debug, and run programs encoded in the Python language. Student's skills are developed through programming exercises in the class, from writing simple functions to developing complete application.
	DFN50133 : NETWORK DESIGN course reveals a competence to network professionals, as students will learn about the ability to install, configure, operate, and troubleshoot routed and switched networks. It will train the students to make connections to remote sites using WAN, diminish basic network security threats, and recognize the fundamental networking concepts.
	DFN50153: SOCKET PROGRAMMING course focuses on the concept of sockets as means of using Internet Protocol (IP) to communicate between machines and using Java programming language to establish the network communication. The course introduces elements of network programming and concepts involved in creating applications using sockets. This opens up a whole new class of applications to programmers.
	DFN40242: EMBEDDED INTERNET of THINGS course provides students with a comprehensive understanding of the Internet of Things (IoT). It develops foundational skills using hands-on lab activities that stimulate the students in applying creative problem-solving and rapid prototyping in the interdisciplinary domain of electronics, networking, security, and business. The student-centric approach translates into the student being able to ideate, design, prototype and present an IoT solution for an identified business or society need.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SPECIALISATION COURSES OF TRACK SOFTWARE AND APPLICATION DEVELOPMENT

SEMESTER	SINOPSIS
SUBJECT 1	DFT30043: DIGITAL MULTIMEDIA course covers multimedia concepts and applications utilizing text, graphics, animation, sound, video, and various multimedia applications in the design, development, and creation of multimedia presentations and publications within an interactive environment. Students will explore the use of multimedia tools in designing and authoring of interactive digital media.
SUBJECT 2	DFC30133: OBJECT ORIENTED PROGRAMMING (OOP) course introduces students to the principles and concepts behind the paradigm of OOP. This course introduces students to write, compile and run programs, make effective use of some of the standard packages, write object-oriented code using classes and objects, inheritance and polymorphism.
SUBJECT 3	DFT40043: WEB DESIGN TECHNOLOGIES introduces students to basic web design using HTML (Hypertext Markup Language), CSS (Cascading Style Sheets) and JavaScript. Throughout the course students are introduced to planning and designing effective web pages; implementing web pages by writing HTML, CSS code and JavaScript; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia; and producing a functional, multi-page website.
SUBJECT 4	DFP40023: VISUAL BASIC PROGRAMMING (VB PROGRAMMING) course provides students with the knowledge and skills needed to develop applications in Microsoft Visual Basic .NET for the Microsoft .NET platform. The course focuses on user interfaces programming structure, language syntax, and integration of VB.NET application development. This course introduces computer programming using the VB Programming language with object-oriented programming principles. Emphasis is on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

SPECIALISATION COURSES OF TRACK SOFTWARE AND APPLICATION DEVELOPMENT

SEMESTER	SINOPSIS
SUBJECT 5	DFP40093 : MOBILE APPLICATION DEVELOPMENT introduces mobile application development for the Android platform. Android is a software stack for mobile devices that includes an operating system, middleware and key applications. The Android SDK provides the tools and APIs necessary to begin developing applications on the Android platform using the Java programming language. Students will learn skills for creating and deploying Android applications, with particular emphasis on software engineering topics including software architecture, software process, usability, and deployment. interfaces, audio,
SUBJECT 6	DFP50043: INTEGRATIVE PROGRAMMING AND TECHNOLOGIES course introduces students to the knowledge of GUI programming in Java. This course addresses the creation of interactive GUIs through standalone front-end applications. This course primarily focuses on the Swing library, Abstract Window Toolkit (AWT) and also equips students with knowledge in the development of database applications solutions.
SUBJECT 7	DFP50123: SECURE MOBILE COMPUTING course appraises vulnerabilities and threat vector associated with Mobile Computing devices. This course contains a specifies emphasis on mitigation techniques including security configurations as well as security software.
SUBJECT 8	DFT50114: INTEGRATED PROJECT course will give students the practical and design experience of carrying out an independent application software or technical project from project requirements, implementation, testing to delivery and presentation of the project. The course requires students to learn new technologies and encourage student to develop their generic skills such as developing teamwork, project management, communication skills, problem solving skills and technical writing skills. This will inculcate independent and life-long learning.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

ELECTIVES COURSES OF TRACK SOFTWARE AND APPLICATION DEVELOPMENT

SEMESTER	SINOPSIS
ELECTIVES 1	DFP40182:SOFTWARE REQUIREMENT AND DESIGN introduces the engineering discipline that is concerned with all aspects of software product from the early stages of development, which is system requirement, software development, software design and implementation process.
	DFP40162: BUSINESS INTELLIGENCE course is designed to emphasize the classification of specific technologies for collecting, storing, analyzing and giving the ELECTIVES 1 best option for enterprise users to make better decisions. It consists of the Data Warehousing, Decision Support System, OLAP and OLTP which are useful in helping human being to get the best decision for their business.
ELECTIVES 2	DFP40053 :DATABASE ADMINISTRATION course will help students to develop the database administration capabilities and will discuss how to create and manage database, users, roles and resources. It also gives them in depth knowledge of important features of Oracle database administrator.
	DFP40203: PYTHON PROGRAMMING introduce with the knowledge and skills needed to develop applications using Python. This course introduces computer programming using the Python Programming language with object-oriented programming principles. Upon completion, students should be able to design, code, test and debug at a beginning level.

DIPLOMA IN INFORMATION TECHNOLOGY (DIGITAL TECHNOLOGY)

ELECTIVES COURSES OF TRACK SOFTWARE AND APPLICATION DEVELOPMENT

SEMESTER	SINOPSIS
ELECTIVES 3	DFP50173: WEB DEVELOPMENT TECHNOLOGY introduces the techniques in Java technologies for web development. The course focuses on Java EE components, terminologies of web concepts, Servlets and JSP. Database manipulation and web deployment are emphasized. Upon completion students are able to design, code, test, and debug at beginning level.
ELECTIVES 3	DFP50193 : WEB PROGRAMING course will provide a basic understanding of the methods and techniques of developing a simple to moderately complex web site. Using the current standard web page language, students will be instructed on creating and maintaining a simple web site. After the foundation language has been established, the aid of a web editor will be introduced. A second web-based language will be included to further enhance the web sites. Throughout the course, students will learn proper techniques to develop web based applications starting from designing interfaces to publishing application to production server.

MATHEMATICS, SCIENCE & COMPUTER DEPARTMENT

INTRODUCTION

Mathematics, Science & Computer Department (JMSK) operates at Politeknik Mukah since 2005. It is an academic supporting department that supported five main academic departments. It is responsible for three different fields that are Mathematics, Science and Computer. The Head of Department is supported by 3 Head of Courses to monitor the staffs under their supervisions in order to ensure the teaching and learning implementations run effectively. The department is equipped with lecturer's room, classrooms, computer laboratories, science laboratory, meeting room, preparation room, technical room, prayer room and pantry.

COURSE SYNOPSIS

SEMESTER	COURSE SYNOPSIS
1	DBM10252: BASIC MATHEMATICS consists of basic algebra, partial fractions, complex numbers, and trigonometry. In basic algebra exposes students with the variables, constants, and arithmetic operations. In partial fraction, students will be introduced to the concept of linear partial fraction. In complex numbers, it covers some fundamental concepts of imaginary numbers and its representations on the complex plane. This course also covers the concept of trigonometry and the angle for trigonometric functions.
	DBM10163: ENGINEERING MATHEMATICS 1 exposes students to basic algebra including resolving partial fractions. This course also covers the concept of trigonometry and the method to solve trigonometry problems by using basic identities, compound angle and double angle formulae. Students will be introduced to the theory of complex numbers and the concept of vector and scalar. Students will explore advanced matrices involving a 3x3 matrix.

MATHEMATICS, SCIENCE & COMPUTER DEPARTMENT

SEMESTER	COURSE SYNOPSIS
1	DBM10143: CALCULUS AND ALGEBRA course introduces students to computational mathematics. This course focuses on applied number theory in practical computing scenarios. This course also determines solutions of graphical examples using geometry and vector methods and evaluates problems concerning differential and integral calculus.
	DBS10042: ENGINEERING SCIENCE course introduces the physical concepts required in engineering disciplines. Students will learn the knowledge of fundamental physics in order to identify and solve engineering physics problems. Students will be able to perform experiments and activities to mastery physics concepts.
	DBC20022: COMPUTER APPLICATION exposes students to different packages of applications software such as Word processor, Spreadsheet and Presentation. This course mainly emphasizes on the practical aspects of using applications software and awareness in digital world activity. Students will develop teamwork and leadership skills to present ideas and organize project. Students are able to use the information and technology skills attained for future.

MATHEMATICS, SCIENCE & COMPUTER DEPARTMENT

SEMESTER	COURSE SYNOPSIS
1	CBM10013: ENGINEERING MATHEMATICS exposes students to basic algebra including resolving partial fractions. This course also covers the concept of trigonometry and the method to solve trigonometric problems by using basic identities, compound angle and double angle formulae. Students will be introduced to the theory of complex numbers. Students will be introduced to the theory of complex numbers. Students will also explore advanced matrices involving a 2x2 matrix.
2	DBM20173: ENGINEERING MATHEMATICS 2 exposes students to the basic laws of indices and logarithms. This course introduces the basic rules of differentiation concepts to solve problems that relate to maximum, and minimum and calculate the rates of changes. This course discusses integration concepts in order to strengthen students' knowledge for solving area and volume-bounded region problems. In addition, students will learn the application of both techniques of differentiation and integration. DBM20153: DISCRETE MATHEMATICS course introduces students to computational mathematics. This course focuses on examining set theory and functions applicable to software engineering, as well as analyzing mathematical structures of objects using graph theory. This course also investigates solutions to problem situations using the application of Boolean algebra and explores applicable concepts within abstract algebra that are related to the information technology programmed.

MATHEMATICS, SCIENCE & COMPUTER DEPARTMENT

SEMESTER	COURSE SYNOPSIS
2	CBS10022: ENGINEERING SCIENCE is to provide students with the basic knowledge and skills in science and technology and enable them to solve problems and make decisions in their daily lives. Students will cognitively engage areas of physical quantities such as measurements, linear motion, work, energy, power, solids, fluids, heat, and temperature.
	CBC10032: COMPUTER APPLICATION exposes students to computer file systems and office suites that include word processors, spreadsheets, and presentation software. This course focuses primarily on the practical aspects of using application software for managing daily tasks efficiently. By understanding computer directory navigation, students can leverage these capabilities to enhance their efficiency and effectiveness in various computing tasks.
3	DBM30183: ENGINEERING MATHEMATICS 3 exposes students to statistical and probability concepts and their applications in interpreting data. The course also introduces the numerical methods concept to solve simultaneous equations by using the Gaussian Elimination method, LU Decomposition using Doolittle and Crout methods, polynomial problems using Simple Fixed-Point Iteration and Newton-Raphson methods. To strengthen the students in solving engineering problems, Ordinary Differential Equation (ODE) is also included. In addition, the course also discusses optimization problems by using Linear Programming. It is designed to build students' teamwork and problems solving skills.

MATHEMATICS, SCIENCE & COMPUTER DEPARTMENT

SEMESTER	COURSE SYNOPSIS
3	DBM30193: ELECTRICAL ENGINEERING MATHEMATICS exposes students to statistical and probability concepts and their applications in interpreting data. The course also introduces the numerical methods concept to solve simultaneous equations by using the Gaussian Elimination method, LU Decomposition using Dolittle and Crout methods, polynomial problems using Simple Fixed Point Iteration methods and Newton Raphson method. In addition, the course also discusses the Ordinary Differentiation Equation (ODE). To strengthen the students in solving engineering problems, Laplace transform by using the Table of Laplace is also included. It is designed to build students' teamwork and problem-solving skill.
	DBM30263: STATISTICS AND PROBABILITY course introduces students to basic statistical concepts such as organizing data, numerical descriptive measures, probability and its applications, probability distributions, sampling, estimation and hypothesis testing. This course involves techniques to summarize and make sense of data, often using measures like mean, median, and standard deviation. Students will also explore the foundation to utilize appropriate statistical tools and probability models for decision-making.
	DBC20032: INTRODUCTION TO ARTIFICIAL INTELLIGENCE (AI) is a course provides a broad overview of Artificial Intelligence (AI), and fundamental concepts, applications, and implications across various fields. This course designed for students from diverse academic backgrounds, it covers fundamental AI principles, key technologies, and their impact on society and different sectors. Students will explore the basics of AI, including machine learning, neural networks, and ethical considerations, and gain hands-on experience with AI tools and technologies.

GENERAL STUDIES DEPARTMENT

INTRODUCTION

General Studies Department or Jabatan Pengajian Am (JPA) serves as an academic support department among the major academic departments in Politeknik Mukah, Sarawak.

General Studies Department exposes students to the importance and values of spirituality, humanity and social principles as well as emphasizing communication skills and the importance of using the English language. These values are meant to help boost students' marketability in the industry as well as to produce a balanced and holistic human capital. The General Studies Department consists of two units, namely the English Unit and the Islamic and Moral Education Unit, which offers credit courses to support and complement the Main Academic Department. Apart from that, General Studies Department also organizes various activities for all students to take up. Among the activities carried out are Public Speaking and Debate Competition, Process and Procedure Competition, Video Presentation Competition and many other activities under the supervision of the English Unit. Islamic and Moral Education Unit on the other hand organizes activities such as Kembara Falak, Q-STEM Workshop, and Historian Poster Drawing Competition. Apart from that, General Studies Department is also actively involved in Corporate Social Responsibility Program around Mukah community as well as having active collaborations with government and private institutions.

General Studies Department also coordinates MUET courses for the on-campus students as well as private candidates under the lifelong learning component (PSH).

FACILITIES

To administer and facilitate teaching and learning process, General Studies Department is equipped with the following amenities:

- Lecture Rooms
- Language Labs
- Smart Classroom,
- Tasmik and Tahfiz Room
- Meeting Room
- Prayer Room

GENERAL STUDIES DEPARTMENT

COURSE SINOPSIS

SEMESTER	SINOPSIS
1	CUE10012 TECHNICAL ENGLISH is designed to equip students with the language skills needed for communication in technical workplaces. It focuses on developing the language skills necessary for effective communication in the context of workplace safety and health issues. Additionally, the course provides guidance on using language to describe, compare, and contrast objects or products relevant to their engineering fields. Students will also learn how to make verbal inquiries about workplace-related objects and products. Overall, this course supports students in reaching at least a high-A2 level, indicating basic language proficiency according to the Common European Framework of Reference (CEFR).

GENERAL STUDIES DEPARTMENT

COURSE SINOPSIS

SEMESTER	SINOPSIS
1	DUE10112 COMMUNICATIVE ENGLISH 1 focuses on developing students' speaking skills to enable them to communicate effectively and confidently in group discussions and in a variety of social interactions. It is designed to provide students with appropriate reading skills to comprehend a variety of texts. The students are equipped with effective presentation skills as a preparation for academic and work purposes. The course is also designed to assist students in achieving at least level B1 of Common European Framework of Reference (CEFR). DUE10062 TECHNICAL ENGLISH 1 is designed to provide technical students the language input and skills required in technical workplace communication. This course aims to prepare students to use language skills to achieve B2 level which is becoming independent language users. Students will be exposed to skills required for effective participation in group discussions contextualized in workplace safety and health issues. The course also includes input and presentation skills on how to use the language appropriately in describing, comparing, and contrasting objects/ products relevant to students' respective engineering disciplines. The course will enable students to make verbal and written enquiries related to objects/products for workplace use. The course is also designed to assist students in achieving at least level B1 of Common European Framework of Reference (CEFR). MPU22153 ENGLISH FOR DIGITAL TECHNOLOGY emphasises the skills required at the workplace to describe products or services as well as processes or procedures related to Digital Technology. This course will also enable students to make and reply to enquiries and complaints related to the field of Digital Technology. The course is also designed to assist students in achieving at least level B1 of Common European Framework of Reference (CEFR).

GENERAL STUDIES DEPARTMENT

COURSE SINOPSIS

SEMESTER	SINOPSIS
3	DUE30122 COMMUNICATIVE ENGLISH 2 emphasises the skills required at the workplace to describe products or services as well as processes or procedures. It also exposes the students to the technique of a simple pitch and enables them to make and respond to enquiries and complaints. The course is also designed to assist students in achieving at least level B1 of Common European Framework of Reference (CEFR).
	DUE30072 TECHNICAL ENGLISH 2 equips technical students with the required language skills to communicate effectively at the workplace mainly in describing process and procedures as well as giving instructions. It is also designed to develop students' skills in conducting and participating in meetings and responding appropriately to complaints related to specific situations. This content structure reflects the stated course learning outcomes to be achieved by the students in order to develop their interpersonal & communication skills. It will enable them to independently participate in technical discussion in work-context. This course also aims to prepare students to use language skills to achieve B2 of CEFR level.

GENERAL STUDIES DEPARTMENT

COURSE SINOPSIS

SEMESTER	SINOPSIS
	DUE50132 COMMUNICATIVE ENGLISH 3 aims to develop the necessary skills in students to apply the job hunting mechanics effectively in their related fields. Students will learn the basics of job hunting mechanics which include using various job search strategies, understanding job requirements, making enquiries, and preparing high impact resumes, visumes and cover letters. The students will develop communication skills to introduce themselves, highlight their strengths and abilities, present ideas, express opinions and respond appropriately during job interviews. The course is also designed to assist students in achieving at B1 (high) of Common European Framework of Reference (CEFR).
4/5	DUE50082 TECHNICAL ENGLISH 3 aims to prepare students to use language skills (listening, reading, speaking and writing) to achieve B2 level in Common European Framework of Reference (CEFR) which is becoming independent language users. It covers skills which are needed by students focusing on self-assessment, job-search strategies, writing and explaining technical text (s) on wide range of technical subjects. Students will be able to select jobs or positions which match their qualifications, retrieve relevant information regarding the positions available and request for a job interview. This course also aims to prepare students with skills to write effective resumes with accompanying cover letters. The second part of this course is divided into three stages which focuses on students' abilities to study different types of technical text (s), plan and prepare clear and detailed technical text (s) and explain the content of technical text (s) using effective presentation skills.

GENERAL STUDIES DEPARTMENT

SEMESTER	SINOPSIS
1,2,3,5	MPU21072: PENGHAYATAN ETIKA DAN PERADABAN ini menjelaskan tentang konsep etika daripada perspektif peradaban yang berbeza. Ia bertujuan bagi mengenal pasti sistem, tahap perkembangan, kemajuan dan kebudayaan merentas bangsa dalam mengukuhkan kesepaduan sosial. Selain itu, perbincangan dan perbahasan berkaitan isu-isu kontemporari dalam aspek ekonomi, politik, sosial, budaya dan alam sekitar daripada perspektif etika dan peradaban dapat melahirkan pelajar yang bermoral dan profesional. Penerapan amalan pendidikan berimpak tinggi (HIEPs) yang bersesuaian digunakan dalam penyampaian kursus ini.
2	MPU22012: ENTREPRENEURSHIP focuses on the fundamentals and concept of entrepreneurship in order to inculcate the value and interest in students to choose entrepreneurship as a career. This course can help students to initiate creative and innovative entrepreneurial ideas. It also emphasizes a preparation of a business plan framework through business model canvas.
2/3/5	MPU23172: NILAI MASYARAKAT MALAYSIA disediakan untuk membincangkan aspek sejarah pembentukan masyarakat, nilai-nilai agama, adat resam dan budaya masyarakat di Malaysia. Selain itu, pelajar dapat mempelajari tentang tanggungjawab sebagai individu dan nilai perpaduan dalam kehidupan di samping cabaran- cabaran dalam membentuk masyarakat Malaysia yang bersatupadu dan penyayang.
3/5	MPU23182: SAINS, TEKNOLOGI DAN KEJURUTERAAN DALAM ISLAM memberi pengetahuan tentang konsep Islam sebagai al-Din dan seterusnya membincangkan konsep sains, teknologi dan kejuruteraan dalam Islam serta impaknya, pencapaiannya dalam tamadun Islam, prinsip serta peranan syariah dan etika Islam, peranan kaedah fiqh serta aplikasinya

GENERAL STUDIES DEPARTMENT

SEMESTER	SINOPSIS
2	MPU23152 PENGAJIAN ISLAM disediakan untuk melahirkan warganegara yang faham tasawwur (konsep) Islam sebagai satu cara hidup yang bersepadu dan seimbang serta berupaya menghadapi pelbagai masalah dan cabaran. Perbincangan berasaskan kepada konsep-konsep asas Islam, Islam sebagai cara hidup, institusi Islam dan cabaran semasa
	MPU23272 PENDIDIKAN MORAL memberi pengetahuan tentang konsep asas moral untuk diamalkan. Selain itu, kursus ini juga menjelaskan etika individu yang bermoral dan bertanggungjawab serta isu-isu moral yang mempengaruhi pembentukan negara dan masyarakat
	MPU22071 KURSUS INTEGRITI DAN ANTI RASUAH (KIAR) merangkumi konsep asas tentang nilai integriti, bentuk perbuatan rasuag dan salah guna kuasa dalam kehidupan seharian dalam organisasi dan langkah-langkah pencegahan rasuah.

SPORT, CO-CURRICULUM AND CULTURAL & HERITAGE DEPARTMENT

INTRODUCTION

The Department of Sports, Co-curriculum, Culture and Heritage (JSKK) of Politeknik Mukah (PMU) is responsible for planning, managing, implementing, and coordinating all sports activities, co-curricular courses, as well as cultural and heritage programmes and development within the institution. The department comprises three main organizations: Sports, Co-curriculum, and Culture & Heritage. All activities planned and implemented each semester are aligned with the Polytechnic Academic Calendar. The Sports organizations is responsible for planning and organizing sports activities for PMU students. It also plays a vital role in preparing athletes to participate in the Polytechnic Sports Council (MSP) competitions, which are held annually, as well as in other local and national sporting events. Co-curriculum Organization involves in learning and teaching activities in PMU. The Co-curriculum Unit coordinates, supervises and monitors the co-curriculum courses. It is designed to ensure that all co-curriculum courses are implemented smoothly and effectively. There are three main pathways for co-curricular courses that serve as a prerequisite for completing a diploma at Polytechnic Malaysia. The first path is Sports, the second path is Clubs, and the third path is the Uniformed Unit. Students are permitted to choose only from the pathways offered and are not allowed to change their selection in subsequent semesters, as each level serves as a mandatory prerequisite for the next. The Culture and Heritage Organizations is responsible for managing and organizing arts, cultural, and heritage programmes at PMU. The organizations also nurtures and prepares talented students to participate in cultural and heritage competitions organized by the Ministry of Higher Education (MOHE), the National Department for Culture and Arts (JKKN), and other relevant organizations.

SPORT, CO-CURRICULUM AND CULTURAL & HERITAGE DEPARTMENT

FACILITIES

To administer and facilitate teaching and learning process, SPORT, CO-CURRICULUM AND CULTURAL & HERITAGE DEPARTMENT is equipped with the following amenities:

	Hockey Field
	Tennis Court
	Ping pong Tables
	Sport Centre
	Recreation Area
	Discussion Room
	Badminton Court
	Squash Hall
	Gymnasium
	Volleyball Court
	Rugby Field
	Football Field

SPORT, CO-CURRICULUM AND CULTURAL & HERITAGE DEPARTMENT

COURSE SINOPSIS

SEMESTER	
1, 2	SINOPSIS MPU24XX1 Sports first (1st) path choice which offered to students during their semester one (1) as prerequisite for their semester two (2). SPORTS are activities that contain recreationally useful skills training and certain rules in the pursuit of excellence for the mastery of specific knowledge and skills holistically to strengthen the formation of positive soft skills of students
1,2	MPU24XX1 Club as part of the second (2nd) path choice, where the students are required to pass their Co-Curriculum course in semester one (1) as the prerequisite condition to take this course in semester two (2). It focuses on the mastery of specific knowledge and skills holistically to strengthen the formation of positive soft skills of students.
1, 2	MPU24XX1 Uniform Unit third (3rd) path choice where it require students to complete the course from semester one (1) until semester two (2). It focuses on Uniform Unit skills during their weekly activities. Uniformed units focus on the holistic mastery of specific knowledge and skills to strengthen the development of students' positive soft skills.

SPORT, CO-CURRICULUM AND CULTURAL & HERITAGE DEPARTMENT

COURSE SINOPSIS

OPTION IN TYPE OF PATH



SPORT, CO-CURRICULUM AND CULTURAL & HERITAGE DEPARTMENT

SPORT

MPU24XX1 Sports first (1st) path choice which offered to students during their semester one (1) to take in their semester two (2). SPORTS are activities that contain recreationally useful skills training and certain rules in the pursuit of excellence for the mastery of specific knowledge and skills holistically to strengthen the formation of positive soft skills of students.

List of sport:

BIL	BIDANG TERAS	NAMA KURSUS (SUKAN)	KREDIT
1	MPU24031 (Sukan 1) dan MPU24051 (Sukan 2)	Badminton	1
2		Bola Baling	1
3		Bola Jaring	1
4		Bola Keranjang	1
5		Bola Sepak	1
6		Bola Tampar	1
7		Catur	1
8		Dart	1
9		Golf	1
10		Hoki	1
11		Karate Do	1
12		Karom	1
13		Memamah	1
14		Olahraga	1
15		Ping Pong	1
16		Ragbi	1
17		Scrabble	1

*Sports offered are subject to availability of equipment and instructors.

SPORT, CO-CURRICULUM AND CULTURAL & HERITAGE DEPARTMENT

CLUB

MPU24XX1 Clubas part of the first (1st) path choice, where the students are required to pass their Co-Curriculum course in semester two (1) as the prerequisite condition to take this course in semester three (2). It focuses on the mastery of specific knowledge and skills holistically to strengthen the formation of positive soft skills of students.

List of Club :

No	Code	Sport
1	MPU24021	AMALAN 5S
2		AUDIO VISUAL
3		BAHASA INGGERIS
4		DIKIR BARAT
5		FOROGRAFI
6		INOVASI DAN REKACIPTA
7		KAUNSELING
8		KEMBARA
9		KEUSAHAWANAN
10		KOMPANG
11		KOMPUTER
12		LAYANG-LAYANG
13		MESRA ALAM
14		NASYID
15		PENGGUNA

No	Code	Sport
16	MPU24021	STUDY CIRCLE
17		TARIAN TRADISIONAL
18		KALIGRAFI
19		BAHASA ARAB
20		BAHASA MANDARIN
21		BAHASA SEPANYOL
22		BAHASA JERMAN
23		BAHASA JEPUN
24		BAHASA PERANCIS
25		ILMU WAHYU
26		BORIA
27		TEATER
28		GURINDAM
29		KRAFTANGAN TRADISIONAL

SPORT, CO-CURRICULUM AND CULTURAL & HERITAGE DEPARTMENT

UNIFORM UNIT

MPU24XX1 Uniform Unit second (2nd) path choice where it requires students to complete the course in semester one (1) and semester two (2). It focuses on Uniform Unit skills during their weekly activities. Specific skills like humanity skills and activity management skills are among the skills taught at the same time developing the spirit of patriotism and national integration. This course must be completed during the first two semesters, and an addition of another two semesters as optional.

List of uniform unit:

No	Code	Uniform
1	MPU24611	ASKAR WATANIAH 1
2	MPU24661	PENAKAP KELANA 1
3	MPU24691	RELASIS 1
4	MPU24651	PISPA 1
5	MPU24711	ASKAR WATANIAH 2
6	MPU24761	PENAKAP KELANA 2
7	MPU24791	RELASIS 2
8	MPU24751	PISPA 2
9	MPU24711	ASKAR WATANIAH 3
10	MPU24761	PENAKAP KELANA 3
11	MPU24791	RELASIS 3
12	MPU24751	PISPA 3

*Uniform Unit offered is subject to availability of instructors.

EXAMINATION UNIT

INTRODUCTION

The Examination Unit is responsible for coordinating, supervising, monitoring, assisting and facilitating management related to assessment and examination in academic departments. This unit is also responsible for the coordination of matters related to the end-of-semester examination, examination result and certification related. Politeknik Mukah Examination Unit is led by the Head of Examination Unit.

COURSE REGISTRATION

1. Course registration is required to be done at the beginning of each semester within **SEVEN (7)** days from the date of official semester begin.
2. Students should consult their academic advisor regarding their course registration and approved by the Head of Academic Department before proceeding with course registration in SPMP.
3. Students need to make sure that the minimum total credit requirement total credit are fulfilled by adding the courses offered in the current semester.
4. In a case involving a student transferred from other polytechnic, the student registrations are required to be done based on Students Recruitment and Management Polytechnic Guideline at Department of Student Affairs and Development (JHEPP) before the students are able to register their course in SPMP.

COURSE CREDIT

1. Credit for each course is as stated in the document of Curriculum and Program structure as approved by the Board of Polytechnic Studies Curriculum and Training Program. The total
2. credits to be taken by the student for each semester are between **TWELVE (12)** to **TWENTY (20)** or as specified in the document Curriculum and Program Structure
3. The minimum credit amount to be collected by the student before being eligible to be considered for the award of the Certificate is as prescribed in the curriculum document and program structure

EXAMINATION UNIT

ADDING COURSES

1. Students may register additional courses provided that they do not exceed the maximum allowed credit for a semester.
2. Adding courses can be done from week THREE (3) until week SIX (6) within study session.
3. Students should first seek an advice and support from their academic advisor and the approval of the Head of the Academic Department.
4. After the specified period, the student is not allowed to make any additional courses

DROPPING COURSES

1. Students may drop any courses provided that the total of credit taken in current semester are not less than TWELVE (12) credits.
2. Dropping courses can be done from week THREE (3) until week SIX (6) within study sessions.
3. Students should first seek the advice and support of the academic adviser and / or the program and have the approval of the Head of the Academic Department
4. After the specified period, the student is not allowed to make any dropping courses. For students who fail a compulsory course, core courses and specialization courses

COURSES REPEATING

For students who fail a compulsory course, core courses and specialization courses should

1. Retake failed courses
2. In the case of final year student who fail TWO (2) or more courses from the previous semester is required to repeat failed courses in the current semester;
3. For student failed an elective courses should retake the same failed elective course or any others.

EXAMINATION UNIT

IMPROVING COURSES GRADE

For students who have passes with a grade C- , D + and D for any course;

- (a) Students are allowed to improve the grade of the course only once throughout their study.
- (b) Students must retake all of the learning activities and assessments for the course applicable in any subsequent semester including short semester.
- (c) Results for students for the course will be taken from the best grades . The number of total
- (d) credits to be taken by students who retake a course to improve their course grade should not exceed TWENTY (20) credits except in circumstances which do not allowed the students to do so and has been approved by the Head of Academic Department.
- (e) The maximum duration of study are still applied to the student that retake the courses to improve their grade.

REQUIREMENTS TO SIT FINAL EXAMINATION

Students must meet the following requirements before being eligible to sit for the final examination:

- a) Has done the registration
- b) Has attended 80 % or more lecture / tutorial / practical for the prescribed period ; and
- c) The percentage of student attendance are calculated as follows;

$$\text{attendance (\%)} = \frac{\text{total of student actual attendance}}{\text{total of required attendance}} \times 100\%$$

If the students does not achieve the total of 80% attendance of lecture/tutorial/practical classes without any reasonable excuse , the students will be given grade F for the course.

EXAMINATION UNIT

CREDIT TRANSFER AND COURSE EXEMPTION

- a) Students must submit the credit transfer and course exemption application to the Committee of CTCE through the Academic Advisor. Transfer credit can only be done once throughout their study at the polytechnic.
- b) Students who apply for course exemption must prove the level of knowledge reached at least 80% of the course requirements. CTCE Committee reserves the right to conduct tests or interviews to determine whether students are eligible for course exemption.

Applications must be made within the first three weeks of lectures. Decisions made by the
- c) Committee are final CTCE.

Results for credit transfer and course exemption will be notified to students no later than
- d) week SIX (6) of the course of study sessions.

GRADING SYSTEM

PERCENTAGE	GRADE	GRADE POINT	REMARK
90-100	A+	4.00	VERY EXCELLENT
80-89	A	4.00	EXCELLENT
75-79	A-	3.67	HONORS
70-74	B+	3.33	
65-69	B	3.00	
60-64	B-	2.67	
55-59	C+	2.33	PASS
50-54	C	2.00	
47-49	C-	1.67	
44-46	D+	1.33	
40-43	D	1.00	FAIL
30-39	E	0.67	
20-29	E-	0.33	
0-19	F	0.00	

EXAMINATION UNIT

CATEGORIES OF FINAL EXAMINATION RESULT

Final Examinations Result of each semester will be categorized into:

LULUS PENUH (LP)



Given to the Final year students who obtained CGPA equal to or greater than 2.00 and eligible to be awarded the Certificate.

KEDUDUKAN LULUS

Given to the Final year students who obtained CGPA equal to or greater than 2.00 and eligible to be awarded the Certificate.

Penuh (LP)

Kedudukan Baik (KB)

Students that gain CGPA equal to or greater than 2.00.

Kedudukan Bersyarat (KS)

Students that gain CGPA equal to or greater than 1.60 and less than 2.00

Gagal dan Diberhentikan (GB)

Fail and dismissed status will be given to students or:

- (a) obtaining CGPA less than 1.60 ;
- (b) obtaining CPA less than 1.00
- (c) Failed of a course THREE (3) times, including a special final exam or a special assessment or semester short ; or
- (d) Obtaining KS THREE (3) times in a row excluding short semester
- (e) failed Industry Training TWO (2) times ; or
- (f) Has exceeded the maximum duration of any program

EXAMINATION UNIT

CATEGORIES OF FINAL EXAMINATION RESULT

Final Examinations Result of each semester will be categorized into:

LULUS PENUH (LP)

Given to the Final year students who obtained CGPA equal to or greater than 2.00 and eligible to be awarded the Certificate.

KEDUDUKAN BAIK (KB)

Students that gain CGPA equal to or greater than 2.00.

KEDUDUKAN BERSYARAT (KS)

Students that gain CGPA equal to or greater than 1.60 and less than 2.00

GAGAL & DIBERHENTIKAN (GB)

- (a) obtaining CGPA less than 1.60 ; obtaining CPA less
- (b) than 1.00 Failed of a course THREE (3) times,
- (c) including a special final exam or a special assessment or semester short ; or Obtaining KS THREE (3) times
- (d) in a row excluding short semester
- (e) failed Industry Training TWO (2) times ; or
- (f) Has exceeded the maximum duration of any program

EXAMINATION UNIT

CERTIFICATE AWARD

A Students are considered completed their studies and eligible be awarded the Certificate for the program if the following requirement are fulfilled:

- a) pass all courses required for the program;
- b) obtained CGPA equal to or more than 2.00;
- c) obtain the full amount of credit set for a particular program ; and
- d) has been certified by the Board of Examination and Certificate / Diploma Polytechnic

FINAL YEAR STUDENTS

- a) Final year students should complete and send the application form for the award of a certificate / diploma to Examination Unit before end of semester.
- b) Certification and Verification of Graduation letter will be sent to graduates after the meeting of the Board of Examination Polytechnic , Higher Education Ministry
- c) Application for Academic Transcript can be submitted to Examination Unit after the meeting of the Board of Examination Polytechnic, Higher Education Ministry.



INDUSTRIAL LIAISON & TRAINING UNIT

The Industrial Liaison and Training Unit (ILTU) are in charge of coordinating all matters concerning student's industrial training. The industrial training exposes students to real workplace experiences and ensures that they are well-prepared to enter the job market once they have completed their studies in the polytechnic. The main roles of this unit are to:

- coordinate suitable training placements
- provide the students with relevant information prior to industrial training
- provide students with guidelines on industrial training and report writing
- equip basic skills related to the course of study
- monitor and evaluate student' training progress
- coordinate the student's evaluation

The result classification is based on the Table below:

Marks	Result	Status
80-100	Excellent	PASS
65-79	Credit	
40-64	Pass	
0-39	Fail	FAIL

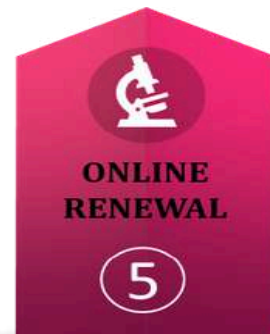
All the student is required **(COMPULSORY)** to undergo industrial training at the end of the semester. Students need to passes all the courses before industrial training.

POLITEKNIK
MALAYSIA
MUKAH
LIBRARY

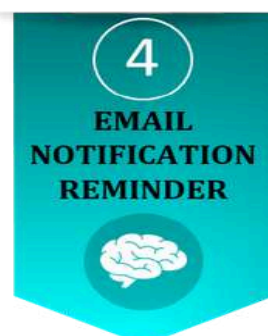
The Library plays a vital role as an information center for the students and staffs to enhance the teaching and learning process, as well as being a center for research and accessing information. Services and facilities provided by the PMU library are :



POLITEKNIK
 MALAYSIA
 MUKAH
LIBRARY



Online services at
<http://pmu-lib.mypolycc.edu.my> **such as**



Reference & reading materials at the PMU library encompasses a wide variety of books arranged using the Dewey Decimal Classification (DDC) system. The DDC scheme organizes library materials by discipline or field of study that ensures books on the same subject are near each other on the shelves. This scheme is used at the PMU library to help user locate the item needed.

LIBRARY SERVICE HOURS	
Day	Time
Monday – Thursday	7:45 am – 4:45 pm
Friday	7.45 am – 11:45 am 2:15 pm – 4:45 pm
Exam week (Night opening hours) Monday - Thursday	4.45 pm—5.45 pm
Saturday, Sunday and Public Holiday – CLOSED	

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

INTRODUCTION

Student Affairs and Development Department (JHEPP) is a non-academic supporting department responsible in the intake, records and data management, welfare, disciplines enforcement and act as a supporting body in students' development programmes/activities.

JHEPP consists of two (2) main units:



INTAKE AND DATA UNIT

Intake and Data unit is led by Student Affairs Officer (PD) responsible for managing the intake and students' record and data. The unit's main functions are as follow:

- Managing students intake and registration
- Managing all students' application for polytechnic and programme transitions, deferment and discontinuation of study
- Student card issuance
- Managing data and statistics
- Issuance of students' declaration letter

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

WELFARE AND DISCIPLINE UNIT

Welfare and Discipline (KD) unit is in charge of handling students' welfare and well-being and also serve as a regulatory unit in ensuring all students are following all the rules and regulations set. Led by Student Affairs Officer (KD), the unit main roles include:

- Facilitating financial support (loan and scholarship)
- Providing temporary financial support
- Monitoring the establishment and management of registered clubs and committees
- Monitoring and planning of students' activities.
- Establishing Student Representative Council (MPP) through campus election
- Supervising Student Representative Council activities
- Issuing students' vehicles passes
- Enforcing rules and regulations
- Supervising and monitoring New Students Orientation Programme
- Facilitating the application and renewal of immigration pass for Sabah and Peninsular students
- Covering all students under Batch Insurance scheme.

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

NEW STUDENTS REGISTRATION

JHEPP plays an important role in the management of new students' registration at Politeknik Mukah. The registration process normally takes place on pre-determined New Students' Registration Day. The registration process includes:

- Checking of New Student's Registration slip (Online)
- Checking of student's document/ BHEP1-6 form
- Checking of slips of payment (fees & miscellaneous)
- Photo-taking session for issuance of Student's Card
- Briefing for Parents/ Guardians

REGISTRATION PROCESS FOR SENIORS

All senior students in their second semester and above (qualified to continue their studies) are required to perform Self-Report online through *Sistem Pengurusan Maklumat Politeknik (SPMP)*.

Senior students' self-report process can only be done 24 hours after payment for study fees and miscellaneous fees are made. Self-report process:

- Log in to SPMP (<http://spmp.pmu.edu.my>)
- Click on iHelp module
- Click "*Lapor Diri Pelajar Senior*" (Senior-student Self-Report)
- Update student's information
- Continue Self-Report process and print Self-Report slip

JHEPP Seniors are required to bring the Self-Report slip during registration day (for seniors) to be submitted to their respective Academic Advisor with a copy of their Examination Result Slip.

Students are reminded to be present at Politeknik Mukah within 14 days from the official Registration Day. If the students failed to do so after the set period, it will be presumed that they have no interest to further their studies and could be entitled for discontinuation of study.

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

FINANCIAL POLICY/STUDENT FEES

All students of Politeknik Mukah are required to make payment to the following fees for each semester of studies:

SEMESTER 1

Type of fees	Amount (RM)	Payment Method
Study Fee	200.00	Made through Cash Deposit Machine (CDM), Automated teller machine (ATM) or online banking of Islamic Bank (Bank Islam)(Yuran IPT – Politeknik KPT)
Residential College Fee **Only for students staying at KAMSIS	60.00	Made through Cash Deposit Machine (CDM), Automated teller machine (ATM) or online banking of Islamic Bank (Bank Islam)(Yuran IPT – Politeknik KPT)
Miscellaneous Fee	300.00	Paid during the day of student registration

SEMESTER 2 AND ABOVE

Type of Fees	Amount (RM)	Payment Method
Study Fee	200.00	Made through Cash Deposit Machine (CDM), Automated teller machine (ATM) or online banking of Islamic Bank (Bank Islam)(Yuran IPT – Politeknik KPT)
Residential College Fee **Only for students staying at KAMSIS	60.00	Made through Cash Deposit Machine (CDM), Automated teller machine (ATM) or online banking of Islamic Bank (Bank Islam)(Yuran IPT – Politeknik KPT)
Miscellaneous Fee **Only for semesters 3,5 & 7	35.00	Made through online banking to KOPERASI POLITEKNIK MUKAH BERHAD (Public Bank)

All payments must be made prior to the online self-report process through SPMP (which can only be done after 24 hours the payment is cleared by the respective bank).

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

SCHOLARSHIP/FINANCIAL ASSISTANCES/EDUCATION LOAN

Students that need assistance to apply for scholarship, financial aids and education loan can directly contact JHEPP for application process. Currently, JHEPP is assisting students in the management of application for the following sponsorship/ scholarship/ financial aid:

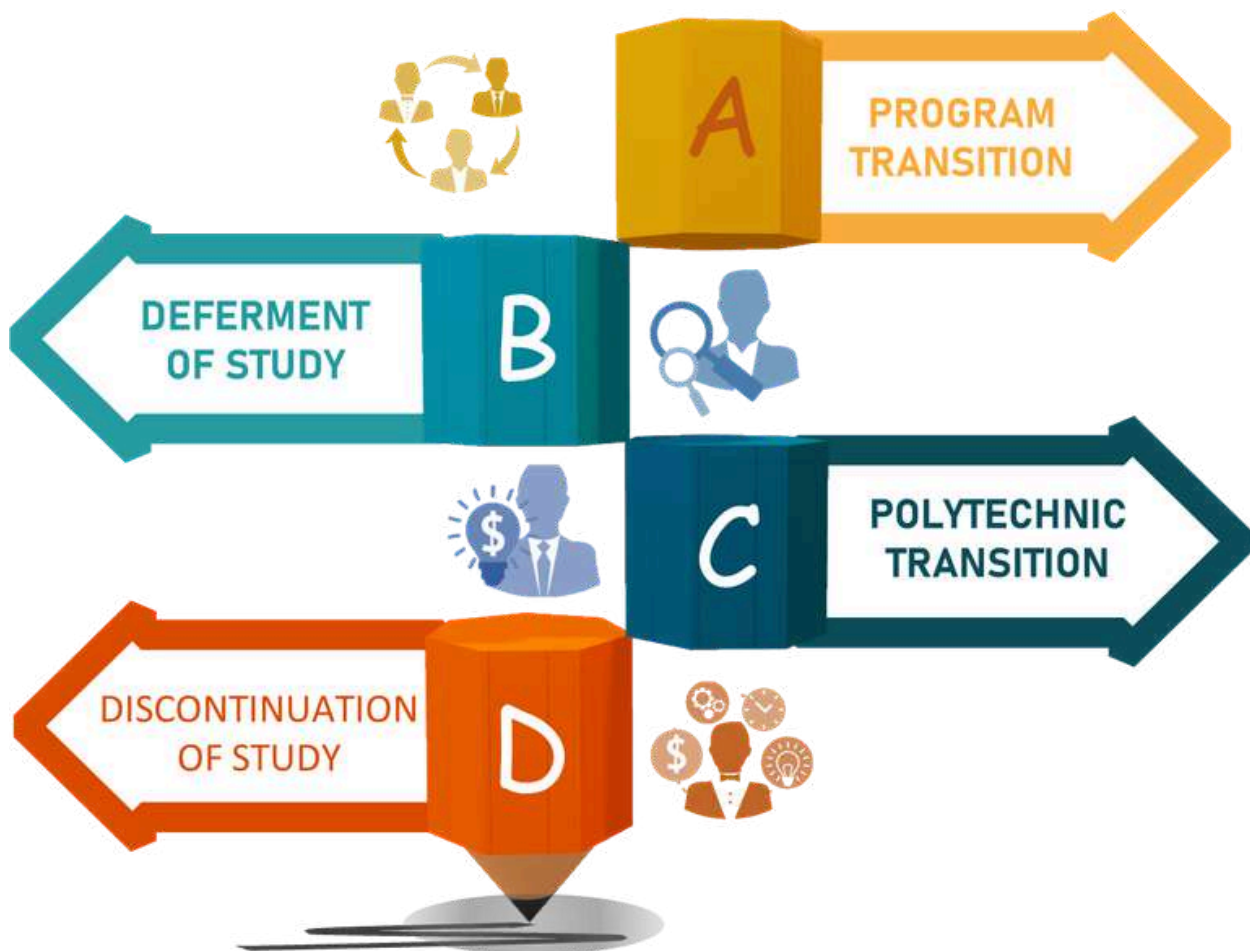
- PTPTN Loan
- JPA Loan/ Scholarship
- Yayasan Sarawak Loan/ Scholarship
- Suruhanjaya Perkhidmatan Awam Negeri Sarawak (SPANS) Loan/ Scholarship
- Kuok Foundation Scholarship
- Tabung Amanah Bakun (Bakun Trust Fund) Financial Aid
- KWSP (Employees Provident Fund) Contribution Withdrawal
- PERKESO (Social Security Organisation - SOCSO) Contribution Withdrawal
- Baitulmal Financial Aid
- Other sponsors
- Politeknik Mukah's Subsistence/ Welfare Support

For assistance in this matter, students can approach JHEPP directly or contact Scholarship Moderator (Penyelaras Biasiswa) for their respective department.

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

STUDENT AFFAIRS MANAGEMENT

JHEPP is also responsible in handling other applications of students' affairs during their course of studies in Politeknik Mukah, such as:



PROGRAM TRANSITION

Program transition can be made within a month after the official date for new students' registration day, while fulfilling the following requirements:

- Student fulfils the entry requirement for the applied program, and
- There is an empty slot for the student in the applied program.

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

Students who are approved for program transition are required to continue on their studies in new program in the effective semester. Any application for program transition made after a month of the set date will only be considered for approval in the following semester. Until then, students are required to stay and continue their studies in the current program, as well as pass all the courses offered in that particular program before pursuing a new program in their next semester

of studies. Students that are granted approval for program transition in their next semester of studies will be reverted to semester one (1) in the new program, and any application for credit transfer for any similar courses taken (and passed) in the previous semester (semester one, old program) should be made through the Head of Department for the new program.

POLYTECHNIC TRANSITION

As stated in *Surat Tawaran Politeknik KPT* (Polytechnic KPT Offer Letter), transition of polytechnics is fundamentally is not allowed whereby the study offer is final. Nonetheless, application for polytechnic transition can be considered in the following cases:

- Students' serious health condition (that needs medical attention near to their place of residence), and
- Life-threatening condition of the student in the current polytechnic.

All matters in regards to polytechnic transition will be forwarded to Bahagian Pengambilan Pelajar – BAP (Students Admission Division) of Jabatan Pengajian Politeknik - JPP (Department of Polytechnic Education). The result of the application will be notified to the students through their respective Head of Department.

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

DEFERMENT OF STUDY

Throughout their study years, students are only eligible to make deferment of study twice (2 times) due to health problems/ involved in any accidents that inhibit them to resume studies for a long period of time in that particular semester. Application for deferment of study is only entitled for a duration of one (1) semester (6 months) each. Deferment of study will not be taken into calculation of students' maximum duration of their studies in polytechnic.

DISCONTINUATION OF STUDY

Students that no longer have interest to pursue their studies or decided to quit due any reason(s) can apply for discontinuation. Students are advised to make application for discontinuation of study before leaving the campus to enable the student's registry be officially removed from Polytechnic's system. Students applying for discontinuation of study will not be black-listed and can still re-apply for admission in polytechnic or other higher learning institutions.

STUDENT DECLARATION LETTER

JHEPP also assists in issuance of student declaration letter/ student verification to those studying in Politeknik Mukah for the following purposes:

- Application for loan/ scholarship/ Baitulmal
- Withdrawal of KWSP (EPF)/ PERKESO (SOCSO)
- Application for Student Pass (Immigration)
- Medical treatment at government hospitals/ clinics
- Other official affairs (students)

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

APPLICATION FOR STUDENT PASS FOR SABAH AND PENINSULAR MALAYSIA STUDENTS

For those coming from outside of Sarawak (Sabah and other Peninsular states), it is compulsory for the students to apply for Student Pass for the duration of their studies in Politeknik Mukah. The application is usually made within the first month each semester commences, and application form can be obtained from JHEPP office.

DISCIPLINE MANAGEMENT

Apart from managing students' affair, JHEPP is also responsible in enforcement of Polytechnic's rules and regulations. All students registered under Polytechnic system are bound to the following rules and regulations:

**Akta Institusi-Institusi Pelajaran (Tatatertib)
Pindaan 2012 (Akta 174)**

Politeknik Mukah's Students' Regulations

Politeknik Mukah's Residential College

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

Students failing to adhere to the rules and regulations or convicted to any disciplinary offences can be imposed to any of the following penalties:

- Fines/ Levies
- Suspension
- Discontinuation of study
- Denied of Polytechnic amenities (which includes retracting the residential status of the student in residential college)
- Other penalties decided by the Polytechnic's Disciplinary Board.

STUDENT CARD

All students are required to display their Student Card at all time in Politeknik Mukah campus. For those staying in Residential College, Student Card should be scanned through at guard post to record students' movement in and out of campus.

STUDENT 'S DRESS CODE & ETIQUETTE

Student's dress code and etiquette established in Politeknik Mukah aims to ensure students are always in their best of appearance that represents the polytechnic's identity when outside of campus.



STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT



FINES/LEVIES

If students are fined for any disciplinary offences, they are responsible to clear off the fines at JHEPP counter within 14 days each fine is issued. Students can appeal for deduction of amount of payment for the fines by writing in appeal letter stating reasonable reasons for the deduction through:

- **Head of Department** : For fines/ levies issued by Department's Discipline Officer.
- **Head of Felo** : For fines/ levies issued by Felo/ Residential College Supervisor.
- **Head of Students' Affair & Development Department** : For fines/ levies issued by JHEPP.

All payment for the fines/ levies made through JHEPP counter will be issued official receipt (*Hasil Kerajaan*). It is to be reminded that students with a record of more than two (2) fines/ levies issuance will not be deliberated for their application for occupying the Residential College in the next semester of their studies.

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

STUDENT'S ACTIVITIES

Students are encouraged to participate in all activities organised by the Polytechnic throughout their study years. For those who are interested to organise any activities internal / external of Polytechnic, prior authorization from the Polytechnic's Director must be obtained before the activity is to be carried out (through writing of proposal – Kertas Kerja Aktiviti). Organising of activities can be made by:

Registered Club/ Committee in Polytechnic

Class (for academic purposes/ course requirement)

Extra-Curricular Courses supervised by Sports, Co-Curriculum & Culture Unit (USKK)

Students Representative Council (MPP)

Academic Departments/ Academic Support Units

STUDENTS ACTIVITIES PROPOSALS/PAPERWORKS

All students' activities must be approved by the Polytechnic's Director prior to their commencement. It can be attained through writing of paperwork/ proposal based on the format and procedures specified. The guidelines can be from students' respective department or JHEPP.

STUDENTS VEHICLE PASS

If students feel the need to bring their own vehicle to the campus, they are required to apply for the Student's Vehicle Pass and display it on the vehicle. Only vehicles with the pass (sticker) are allowed to be parked inside the campus compound.

The procedures in applying for the Student's Vehicle Pass are as follow:

- Apply online through SPMP (i-Help Module – Application for vehicle pass/ sticker)
- Print out completed application form from SPMP
- Prepare the following supporting documents with the application form:
 - Copy of valid driving license

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

STUDENTS VEHICLE PASS

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The procedures in applying for the Student's Vehicle Pass are as follow:

- Apply online through SPMP (i-Help Module – Application for vehicle pass/ sticker)
- Print out completed application form from SPMP
- Prepare the following supporting documents with the application form:
 - a) Copy of valid driving license
 - b) Copy of vehicle grant
 - c) Copy of vehicle's valid Insurance Cover Note
 - d) Copy/ photo of valid road tax
 - e) Consent letter from parents/ guardians/ vehicle's owner

The validity of the vehicle pass lasts for the period of six (6) months and new application should be made after its expiry date.

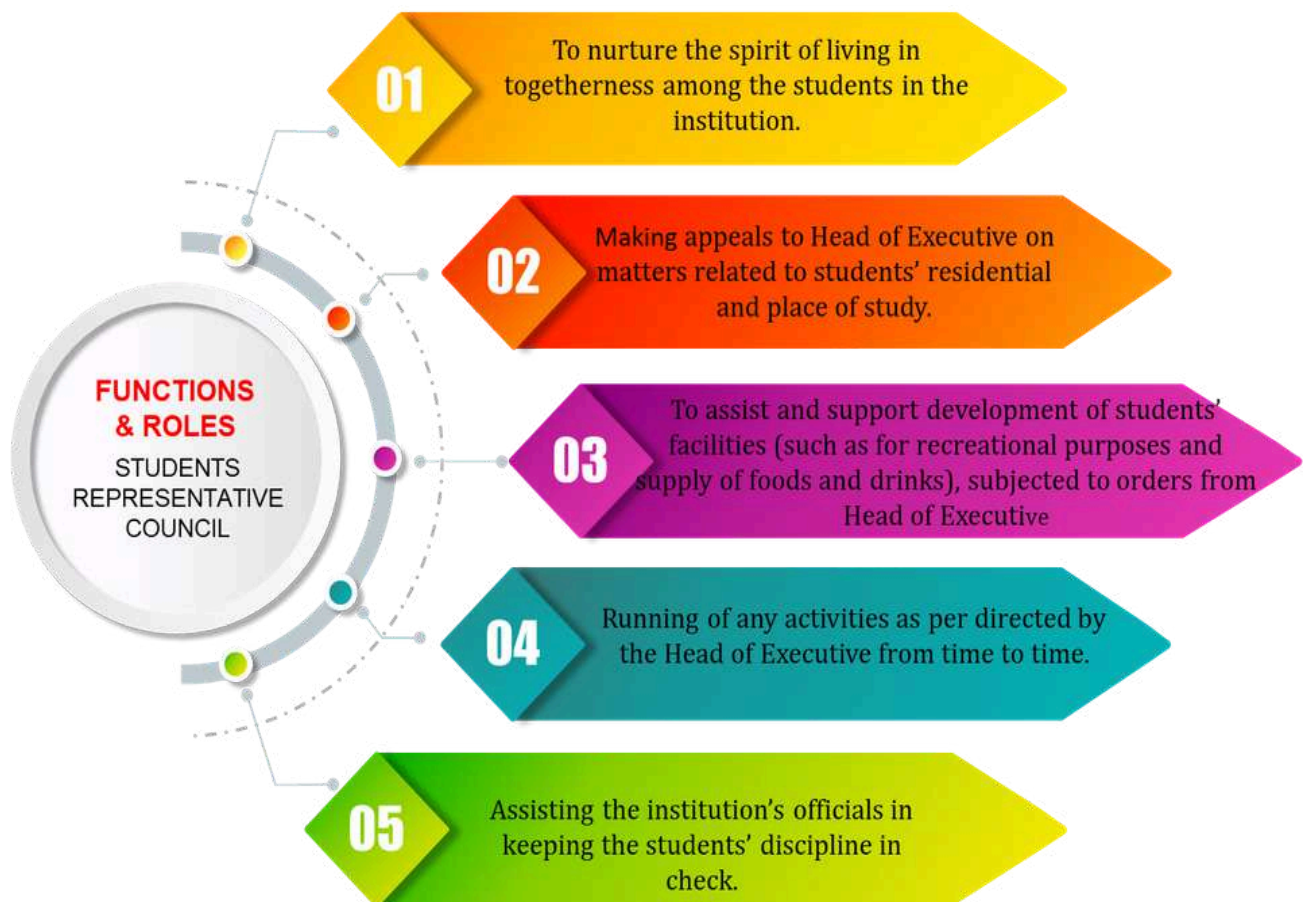
Students are reminded that any vehicles issued with the pass can only be driven by the registering student. If the vehicle is discovered to be driven by other individual(s), Security Guards have the rights to deny their access into the campus.

Students possessing the vehicle pass are also prohibited from renting/ lending out their vehicle to other students/ individuals. The vehicle pass is void shall the students commit these offences.

STUDENT'S AFFAIR AND DEVELOPMENT DEPARTMENT

STUDENTS REPRESENTATIVE COUNCIL

Akta Institusi-Institusi Pelajaran (Tatatertib) Pindaan 2012 (Akta 174), also known as Act 174, has allocated that a committee of Students Representative Council (MPP) is to be established in the effort to care for students' welfare and development throughout their study years. Selection of MPP members are done through campus election organised by the JHEPP.



CAMPUS ELECTION

Students in their second semester and above are eligible to run for the positions in the council (MPP) by submitting a nominator and seconder on nomination day. Students are required to fulfill their responsibility as voters during election day.

PSYCHOLOGY MANAGEMENT UNIT

INTRODUCTION

Psychology Management Unit (UPPsi) is one of the academic support units within the Politeknik Mukah (PMU) since August 2004. Our unit is committed to provide comprehensive guidance and counselling services as a remedial to facilitate problem-resolution, improve relationships, enhance growth and empowered development to the fullest potential by promoting positive mental health for our students and staffs.

SERVICES

UPPsi always ensure that our services are relevant with the current issues by providing support services to students of polytechnics in terms of academic support, mental health, personality, social, career planning and all related aspects. In short, our services is to assist students to overcome the challenges of campus life and learned more perfect and successful career future undertakings. The following are the services provided by UPPsi:



UPPsi is equipped with facilities such as:

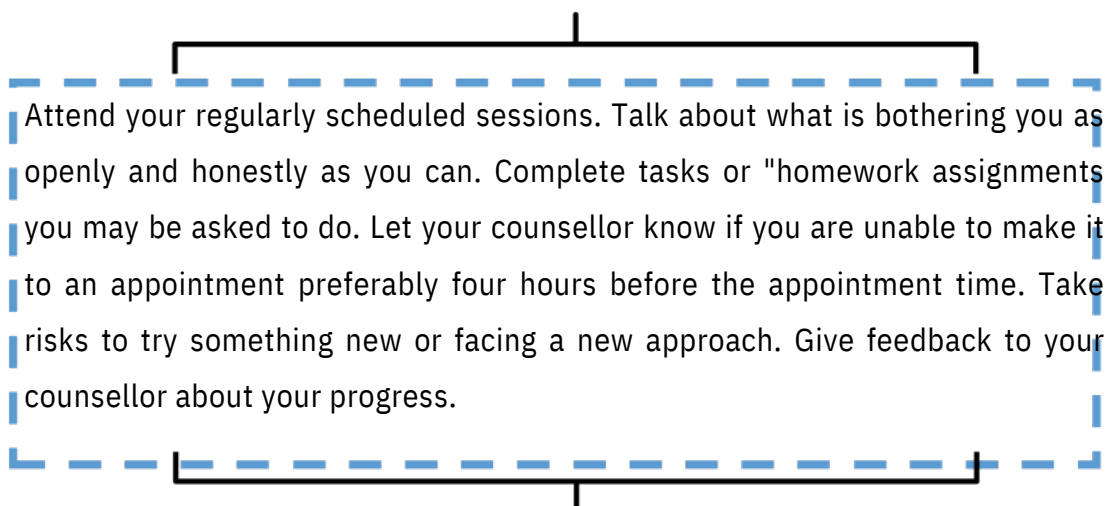
- Discussion/meeting room
- Counseling/guidance room

Student Peer Counselor Operations Room

GUIDELINES

What you can expect from your counsellor? You can expect someone who is interested in listening to your concerns and in helping you to develop a better understanding so that you can deal with it more easily and effectively. Your counsellor will take you seriously and be willing to openly discuss anything you wish. Your counsellor will want to work with you, but won't do for you things you are capable of doing for yourself. Confidentiality is a vital part of counselling so you need not worry about your information being disclosed to other parties. Counsellor will only disclose information with or without client's consent under special circumstances.

Your main responsibilities in counselling are to:





For further information, please do not hesitate to contact us:

PSYCHOLOGY MANAGEMENT UNIT

Tang See Lik (K.B.;P.A)

Head of Unit / Psychology Officer Tel: 084-874001 (8139)| Fax: 084-874006 | E-mail:
tangseelik@ pmu.edu.my

Maw Anak Suai

Psychology Officer Tel: 084-874001 (8028)| Fax: 084-874006 | E-mail:
maw@pmu.edu.my

POLITEKNIK
MALAYSIA
MUKAH
RESIDENTIAL COLLEGE

**RESIDENTIAL COLLEGE RULES
& REGULATION**

- Students' Placement in Residential College Polytechnic offers limited place in residential college for students studying in Politeknik Mukah. Students receiving this offer to stay in residential college will be placed accordingly as determined by the Director or his representatives in charge. The decision for selection of
- students staying in residential college is final and students MUST abide by the decision.
- The Director has ultimate authority to choose any students or individuals or group of people to stay in polytechnic's residential college.

The selections for placement in the student residence are stated as following:

NEW STUDENTS

Residential hostels are offered to all new students of the first semester.

SENIOR STUDENTS

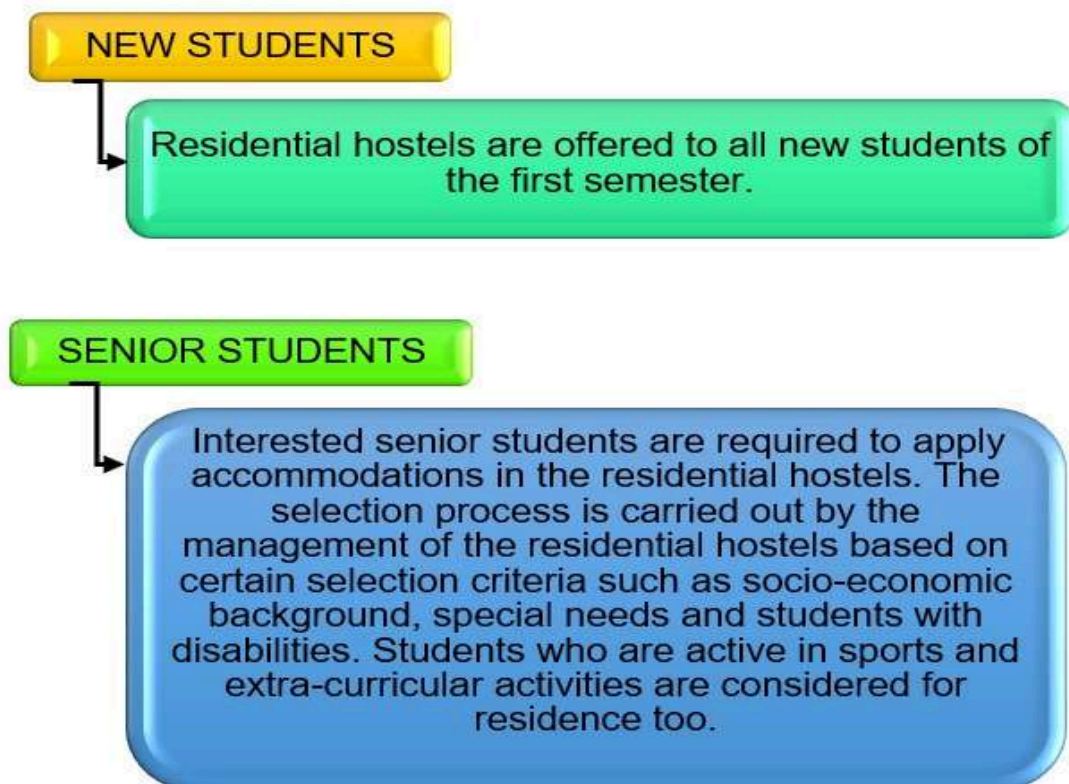
Interested senior students are required to apply accommodations in the residential hostels. The selection process is carried out by the management of the residential hostels based on certain selection criteria such as socio-economic background, special needs and students with disabilities. Students who are active in sports and extra-curricular activities are considered for residence too.

POLITEKNIK
MALAYSIA
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- students staying in residential college is final and students MUST abide by the decision.
- The Director has ultimate authority to choose any students or individuals or group of people to stay in polytechnic's residential college.

The selections for placement in the student residence are stated as following:



- The Director or his representatives in charge can retract the offer for residential college placement from students at any time which deemed applicable to polytechnic's interest.



POLITEKNIK
MALAYSIA
MUKAH

RESIDENTIAL COLLEGE

PAYMENT

- Residential college fee must be paid in full for each effective semester throughout students' study years in polytechnic. Residents that wish to move out from the college in the middle of the semester will not receive any refund for their payment of the fee.
- Payment for residential college fee should be made in the name of the Director on registration day or the day students start staying at residential college.
- Residential college's facilities and amenities damaged by the resident/ group of residents must be replaced by them immediately as directed by the Director or his representatives in charge.
- Rate of compensation that residents should pay for the damage done is subjected to Director's decision.

RESIDENTIAL COLLEGE GENERAL RULES

- Residents must make sure that all equipment and furniture in the room are complete and in good condition upon moving in. Any missing or damage to the furniture
- All equipment inside the room **MUST NOT BE CHANGED** its location or modified without permission from the Director or his representatives in charge.
- Room cleanliness is fully under the resident's responsibility. The use of bed sheets and pillows cases is mandatory.
- Residents are responsible for the safety of their personal belongings. Rooms must be locked to warrant this.
- Switching of rooms between the residents without the Director's or his representatives in charge permission is strictly prohibited.
- All residents are collectively responsible for their rooms, level (floor) and block.
- Residents are **NOT ALLOWED** to bring in any form of weaponry into residential college.
- Any form of ragging is not allowed.



POLITEKNIK
MALAYSIA
MUKAH

RESIDENTIAL COLLEGE

- Male residents are PROHIBITED from entering females' residential area, and vice versa.
- A resident CANNOT obstruct or block the access of any officer, worker or polytechnic representatives from entering their room to perform their duty and responsibility.
- The Director or his representatives in charge can instruct a resident to vacate their room or relocate to another room at any time.
Residents are NOT ALLOWED to attend or organise any meeting or assembly in residential area without written authorization from Head of Warden or his representatives.
Residents must always carry or readily make available in their possession Residential College Card when in residential area.
- The use of electrical appliances without permission is PROHIBITED. Only radio, CD or cassette players powered by batteries are allowed in the room.
Head of Warden or his representatives can, from time to time, give out any verbal or written instructions deemed necessary and applicable to maintain order and peacefulness in residential college.
- Any forms of electrical wiring/ connection in residential college are banned.
- Residents are prohibited from entering staffs' residence without authorization by the Director or his representatives in charge.
Residents are NOT allowed to keep in their possession and use DRUGS, ALCOHOLIC DRINKS or any kind of consumption that may lead to intoxication inside their rooms.
- Residents are NOT allowed to smoke or keep in their possession any form of cigarettes inside their room.
- Residents must participate in all programs organised by residential college administration.
- All Muslim residents are required to be presence at Pusat Islam to perform solat in communion.
-

RESIDENTIAL COLLEGE

PROHIBITED ITEMS AT RESIDENTIAL COLLEGE

RESIDENTIAL COLLEGE MANAGEMENT UNIT

POLITEKNIK MUKAH

				
BAHAN PRONOGRAFI	ALAT MUZIK	ARAK	DADAH	
				
DAPUR ELEKTRIK	EXTENSION WIRE MELEBIHI DUA(2) SOKET MULTIPLE SOKET	PENGERING RAMBUT	MESIN GUNTING RAMBUT	
				
PELURUS RAMBUT	PEMANAS AIR	PEMBESAR SUARA	PENAPIS AIR ELEKTRIK	PERIUK SERBAGUNA
				
SENJATA TAJAM	ROKOK	MAKANAN TIDAK HALAL	MERCUN	PERIUK NASI ELEKTRIK



INTRODUCTION

1L5G (1 Lecturer 5 Students) is a programme established to monitor or keep track of the graduates for the first 6 months after they have completed their final semester of study in polytechnic. The purpose of this programme is to monitor the employability rate and the market ability of our students in the industry. During their final semester, five (5) students will be placed under one (1) lecturer that will act as a liaison officer/ supervisor and be responsible to collect the needed information for this programme. Students are required to update their current status to their respective lecturer/liaison officer for the first six (6) months after graduating.

The six (6) categories in 1L5G consist of :

- **Working in the field of studies** : Students that are grouped in this category are those who work within their respective field of studies.
- **Not working in the field of Studies** : Students that are grouped in this category are those who got attached to a job which is not in their field of studies.
- **Waiting for job placement** : Students that are grouped in this category are those who are waiting to be stationed in a particular department or waiting for posting to any vacancy/ post.
- **Entrepreneurship** : Students that are grouped in this category are those who decided to start their own business ventures, regardless its business nature (on/offline businesses).
- **Further Studies** : Students that fall into this category are those who continue their studies to a higher level.
- **Unemployed** : Students that fall in this category are those who are still searching for job opening.

STUDENTS' ACADEMIC ADVISING SYSTEM

INTRODUCTION

Academic Advisory System (SPA) was introduced in Polytechnic system since 2004. The purpose its existence is to ensure that students achieve not only excellence in their academic pursuit but also to shape and develop their personality and soft skills. During their course of studies in polytechnic, the students will be supervised by their respective Academic Advisor (PA), which are also their lecturers. PA role is to help students develop their skills and strategies towards achieving the following objectives:



STUDENTS' ACADEMIC ADVISING SYSTEM

ROLES AND RESPONSIBLE OF PA

Updating documents/ records related to Academic Advisory in print or online.

1. Student's Academic Achievement

- Provide guidance in students' planning of their studies as a whole or by semester, in accordance to their individual ability to achieve the pre-determined learning outcomes.
- To monitor students' achievement of the learning outcomes and help develop appropriate learning skills and strategies to accomplish them.
- Guide students in their time management during their studies at polytechnic to support towards achievement of learning outcomes.
- Identify students that require special guidance and counseling by referring them to the appropriate personnel.
- Making sure that the students comply with and stay attentive to all applicable rules and regulations in polytechnic.
- Monitor / administer / manage students' registration period.

2. Student's Self Development

- Inform and explain to the students about the results of Sidek Personality Inventory (IPS) analysis received from Psychology and Career Management Unit (UPPSI).
- Help students to set their goal(s).
- Help students to maintain their motivation through continuous motivational activities/ programmes.
- Constantly reviewing students' progress through Self-Inspiring & Transforming Manual (*Manual Inspirasi & Transformasi Diri*) book and take appropriate subsequent actions.
- Make record and reflection of each meeting with the students.
- Help establish students' effective communication skills and assertiveness.
-

STUDENTS' ACADEMIC ADVISING SYSTEM

3. Career Path

- Ensure that the students gain enough exposure to opportunities and methods to furthering their studies, becoming entrepreneurs or pursuing other relevant career paths through activities and programmes organized by the polytechnic before graduation.



INTRODUCTION

The Politeknik Mukah Alumni Association was established on March 25, 2008, by former students of the institution. As of 2020, Politeknik Mukah has produced nearly 9,224 graduates. Membership is open to all alumni of Politeknik Mukah who hold Malaysian nationality.

The primary goal of the association is to foster stronger collaboration between the alumni network and external organizations, particularly within related industries. This initiative is designed to support students in securing internships, industrial training opportunities, and future career placement. Furthermore, the Politeknik Mukah Alumni Association serves as a reputable platform for graduates to share knowledge, skills, and competencies in their respective fields. Through this network, alumni can also provide valuable feedback to the institution regarding the relevance of the current syllabus and courses. This aligns closely with Politeknik Mukah's vision and mission to become a centre of excellence in engineering, commerce, and hospitality.

OBJECTIVES OF THE ASSOCIATION

The objectives of the Politeknik Mukah Alumni Association are as follows:

- To enhance networking and collaboration among all association members.
- To establish an effective channel for members to provide feedback on the relevance and quality of academic programmes offered by the institution.
- To cultivate strong relationships and broader collaborations between Politeknik Mukah and other institutions to enhance the future career prospects of its graduates.

**STUDENT
HANDBOOK**
POLITEKNIK MUKAH
3RD EDITION

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