POLITEKNIK MALAYSIA
TUANKU SYED SIRAJUDDIN

STUDENT HANDBOOK

JABATAN KEJURUTERAAN MEKANIKAL

Second Edition

STUDENT HANDBOOK

MECHANICAL ENGINEERING DEPARTMENT

Second Edition, June 2017
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FROM THE DIRECTOR

On behalf of Politeknik Tuanku Syed Sirajuddin, Perlis, I would like to welcome all new students with the hope that this would be the beginning of a wonderful journey towards fulfilling your dream.

As part of our mission to create a conducive learning environment, we take pride in providing and exposing students to various innovative teaching approaches. Guided by competent educators, you are embracing a cutting edge technology based education which empowers our future graduates with all the right ingredients to become a productive employee to any given organization.

The coming years of study would be crucial for all the students as you will be adapting yourselves to the higher learning education system, as well as new circle of social life. These challenges might be beyond your comfort zone, but eventually would help develop a wholesome being.

I urge all of you to grab the opportunities to develop your mind and self here. Expand your horizon by actively taking parts in various clubs, students' organizations, a wide spectrum of extracurricular activities, and also entrepreneurial opportunities. We would create as many platforms as possible for you to display your talents and creativity as a way to contribute to the polytechnic.

In this comprehensive hand book you will find PTSS policies and regulations regarding all the courses offered, grading system and other services available. Look through it thoroughly so that you will be well prepared to embark into a new chapter of your life. Lastly, I wish you great happiness and success in everything you do.

Thank you.

Sincerely,

DR. HAJI MOHD ZAHARI BIN ISMAIL
Director
Politeknik Tuanku Syed Sirajuddin

1.0 INTRODUCTION

Politeknik Tuanku Syed Sirajuddin is a comprehensive, learner centered higher education institution that serves its local and regional learners and their communities through high-quality and flexible education and training. It is aimed to develop student's employability skills to meet the needs of a more dynamic economy, which values innovation and productivity. Programmes include a global perspective that will enable graduates to make a valuable contribution to the wider society as it changes in response to regional and international competition and demand.

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

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

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

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

2.0 VISION & MISSION

DEPARTMENT OF POLYTECHNIC EDUCATION

VISION

To become the premier TVET institutions by industries lead

MISSION

Providing access to quality of TVET Programme and recognized

TUANKU SYED SIRAJUDDIN POLYTECHNIC

VISION

To become a superior TVET institutions by 2025

MISSION

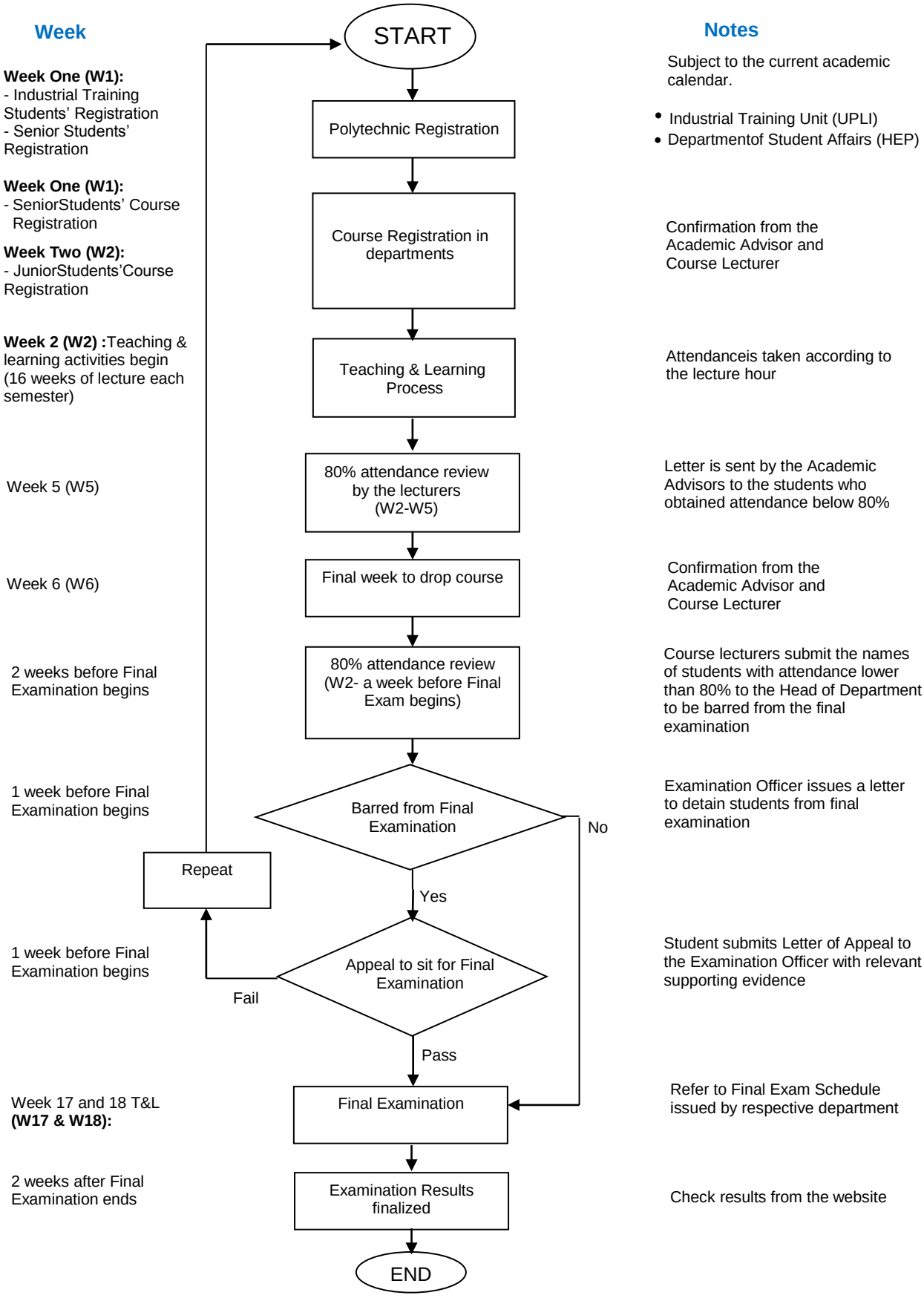
To implement the quality of TVET programme and recognized

Producing well balanced and competitive graduates

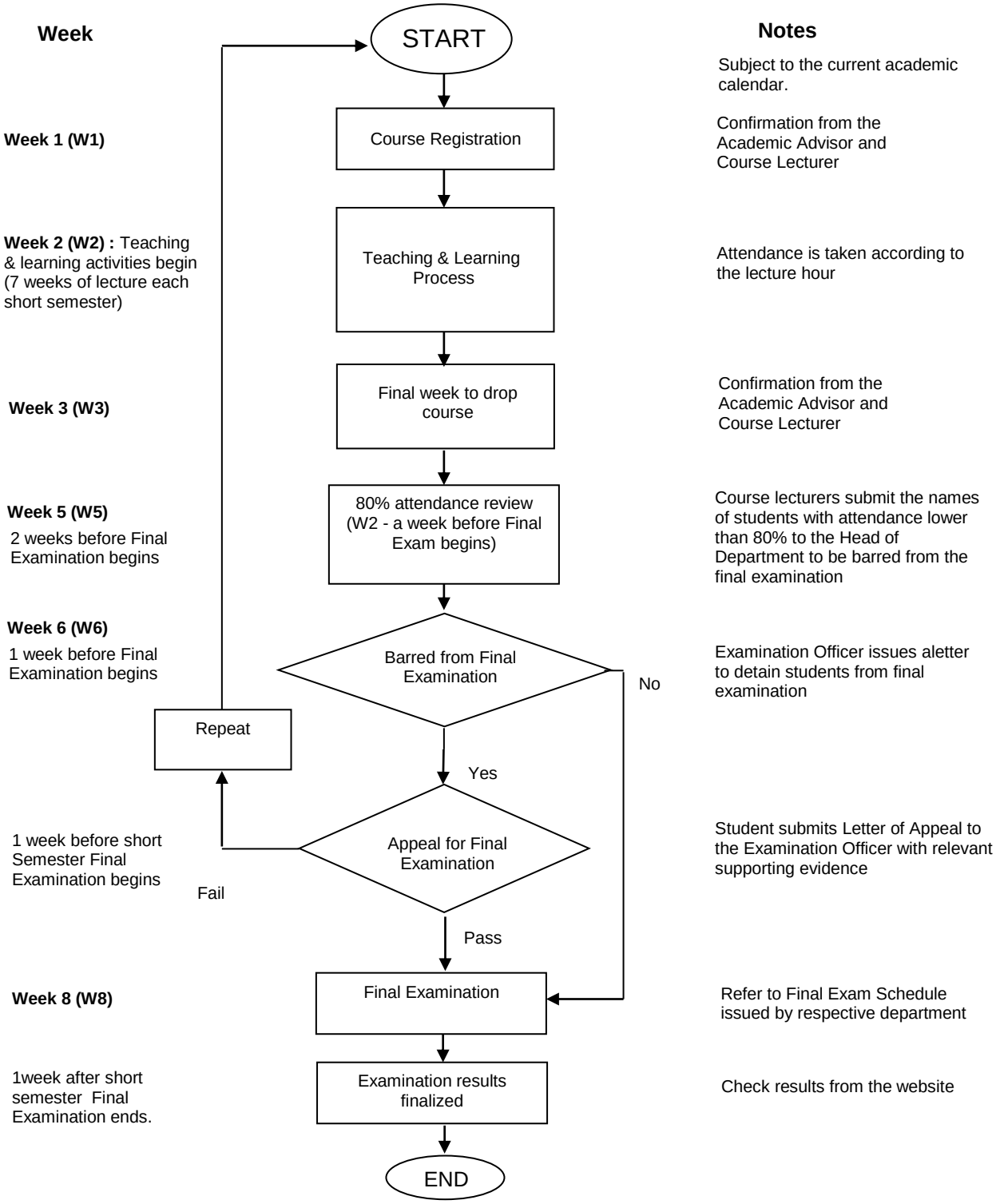
MOTTO

Knowledge drive Development

3.0 ACADEMIC FLOW CHART



3.1 ACADEMIC FLOW CHART FOR SHORT SEMESTER

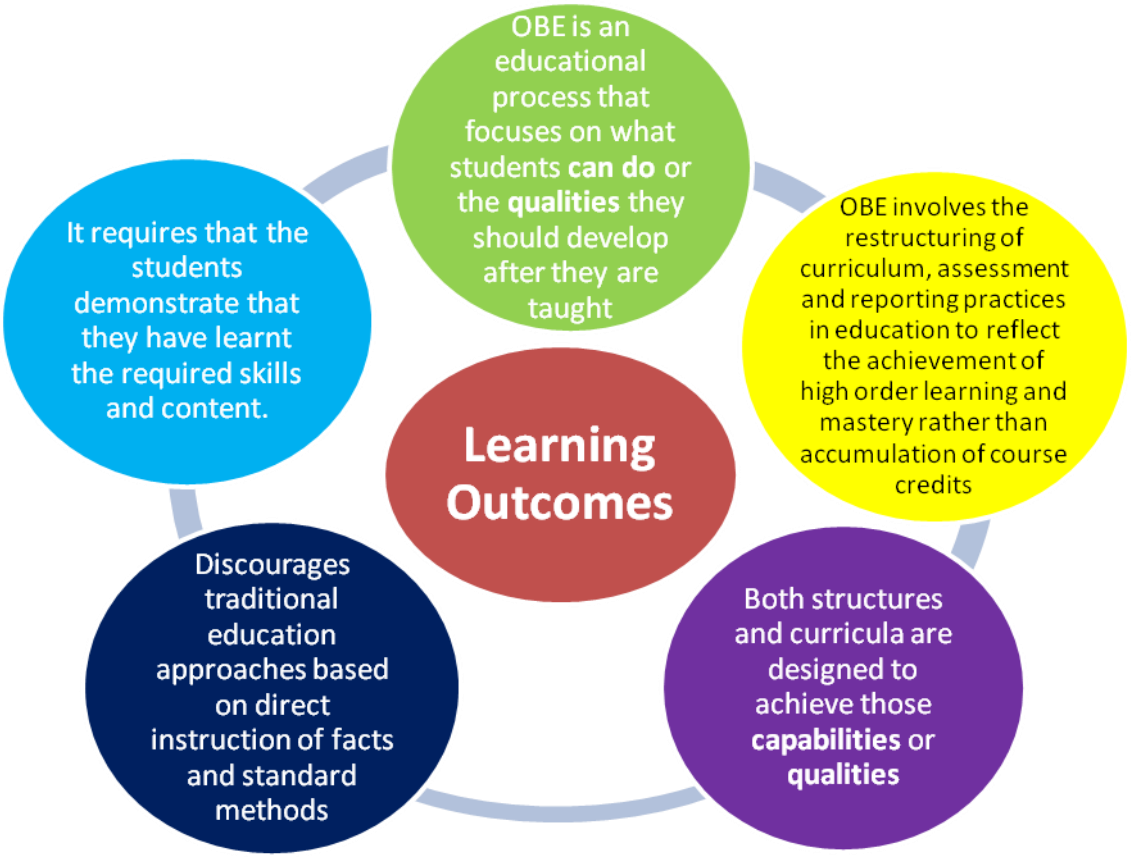


4.0 OUTCOME-BASED EDUCATION [OBE]

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

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

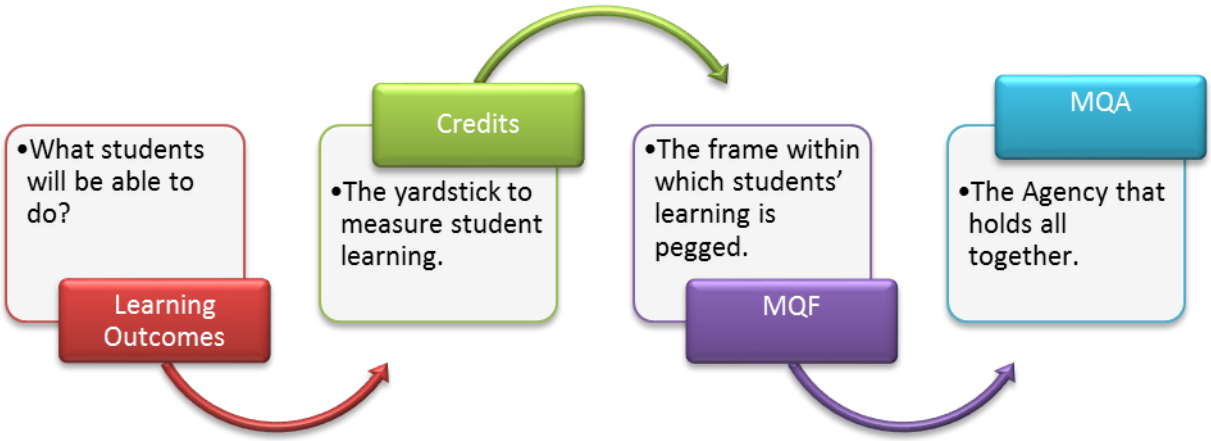
4.1 WHAT IS OUTCOME-BASED EDUCATION [OBE]



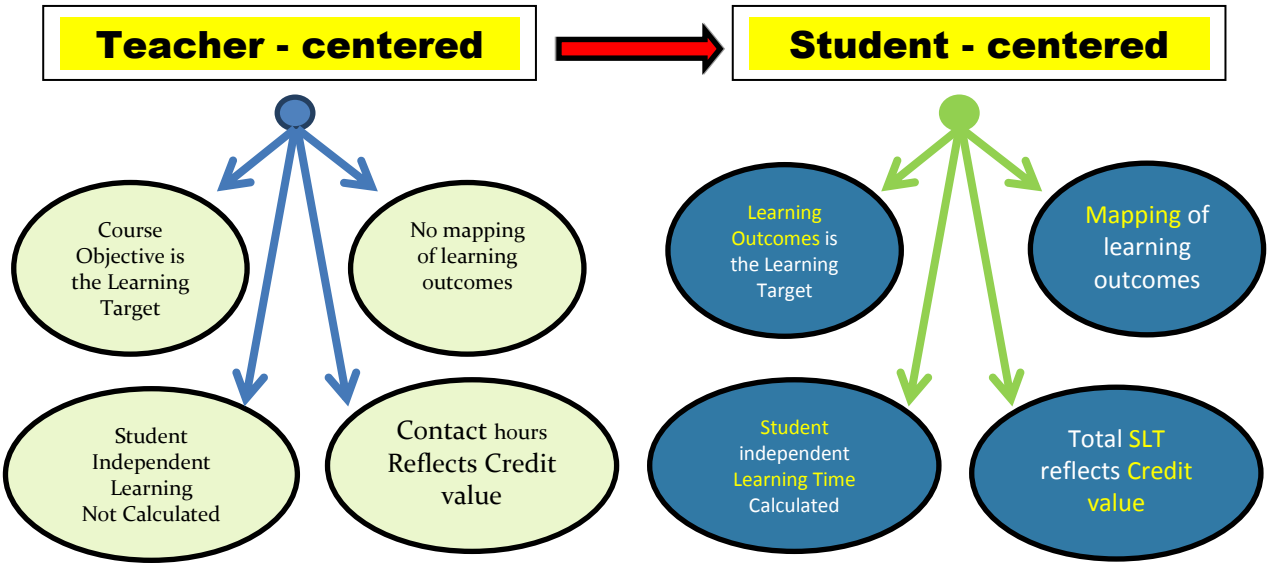
Model of outcome based education

4.2 ACREDITATION PROCESS

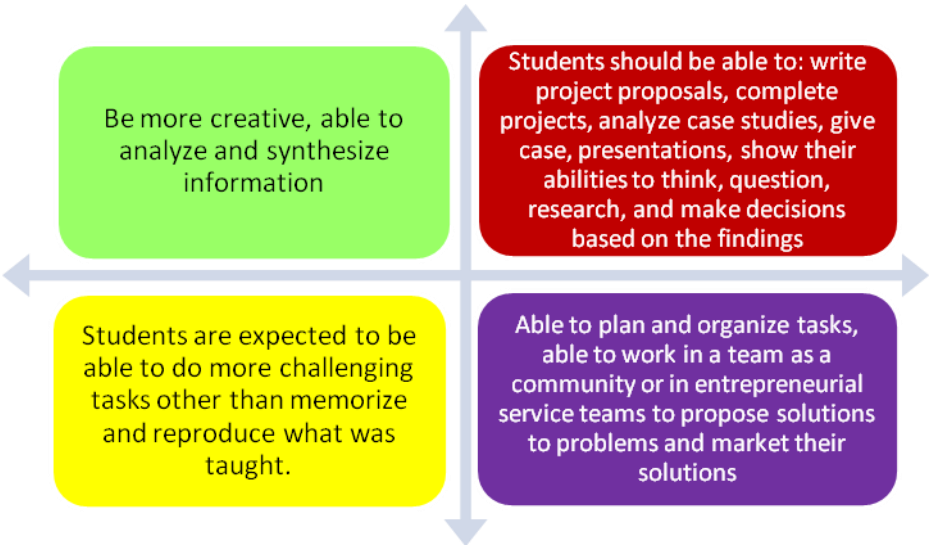
Reference Number : MQA/FA3314
Certificate Number : 09613
Name of Qualification : Diploma in Mechanical Engineering



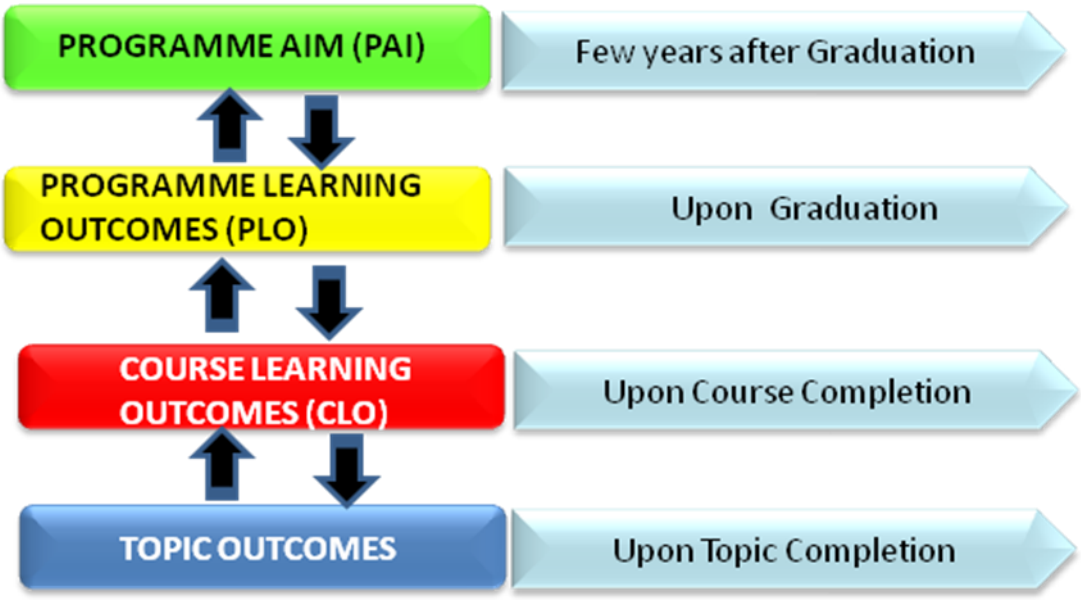
4.3 HOW DOES OBE AFFECT TEACHING-LEARNING?



4.4 EXPECTATION ON STUDENTS



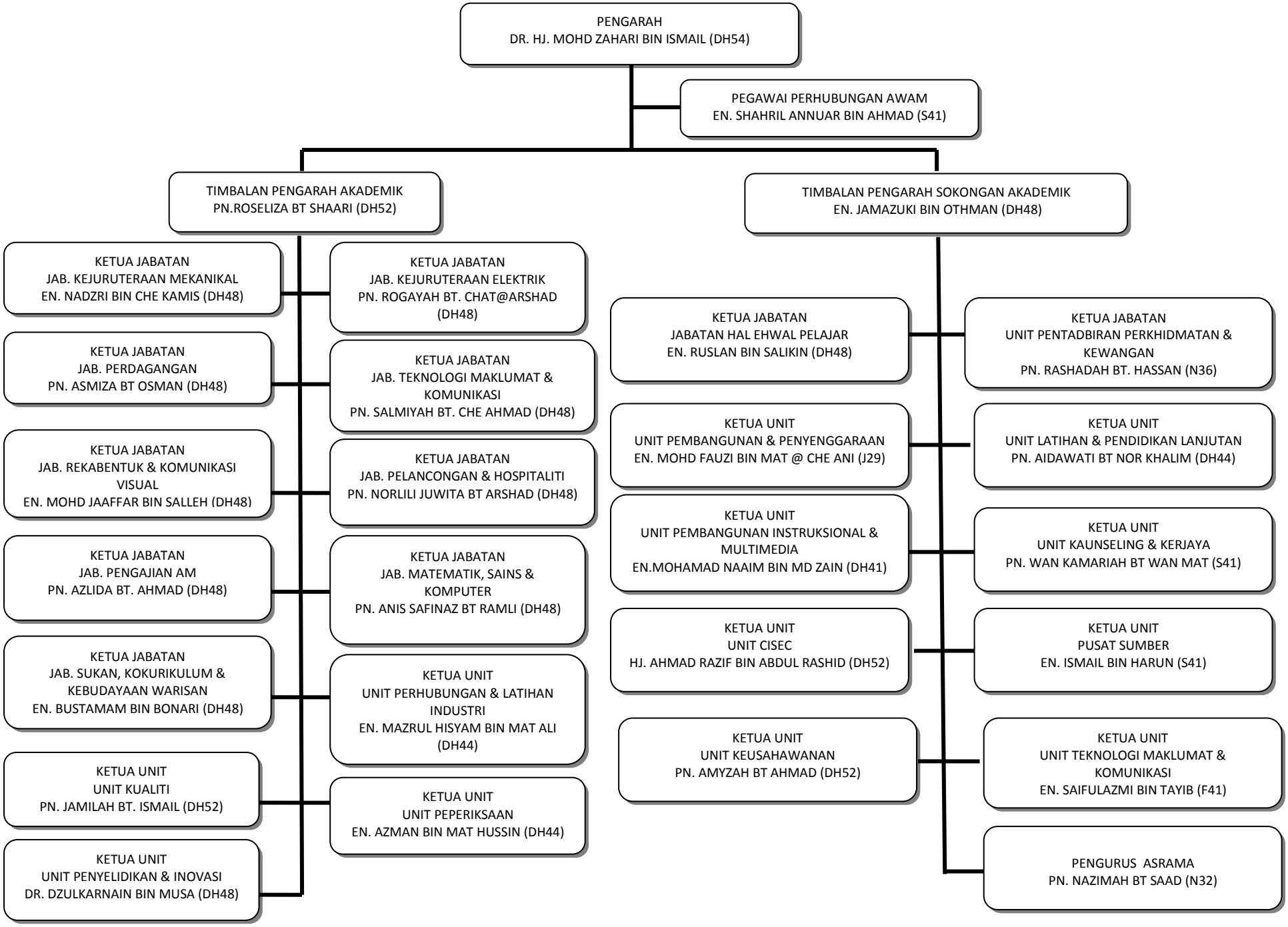
4.5 DIFFERENT LEVELS OF OBE



4.6 EXPECTED LEARNING DOMAIN AND GENERIC STUDENT ATTRIBUTES

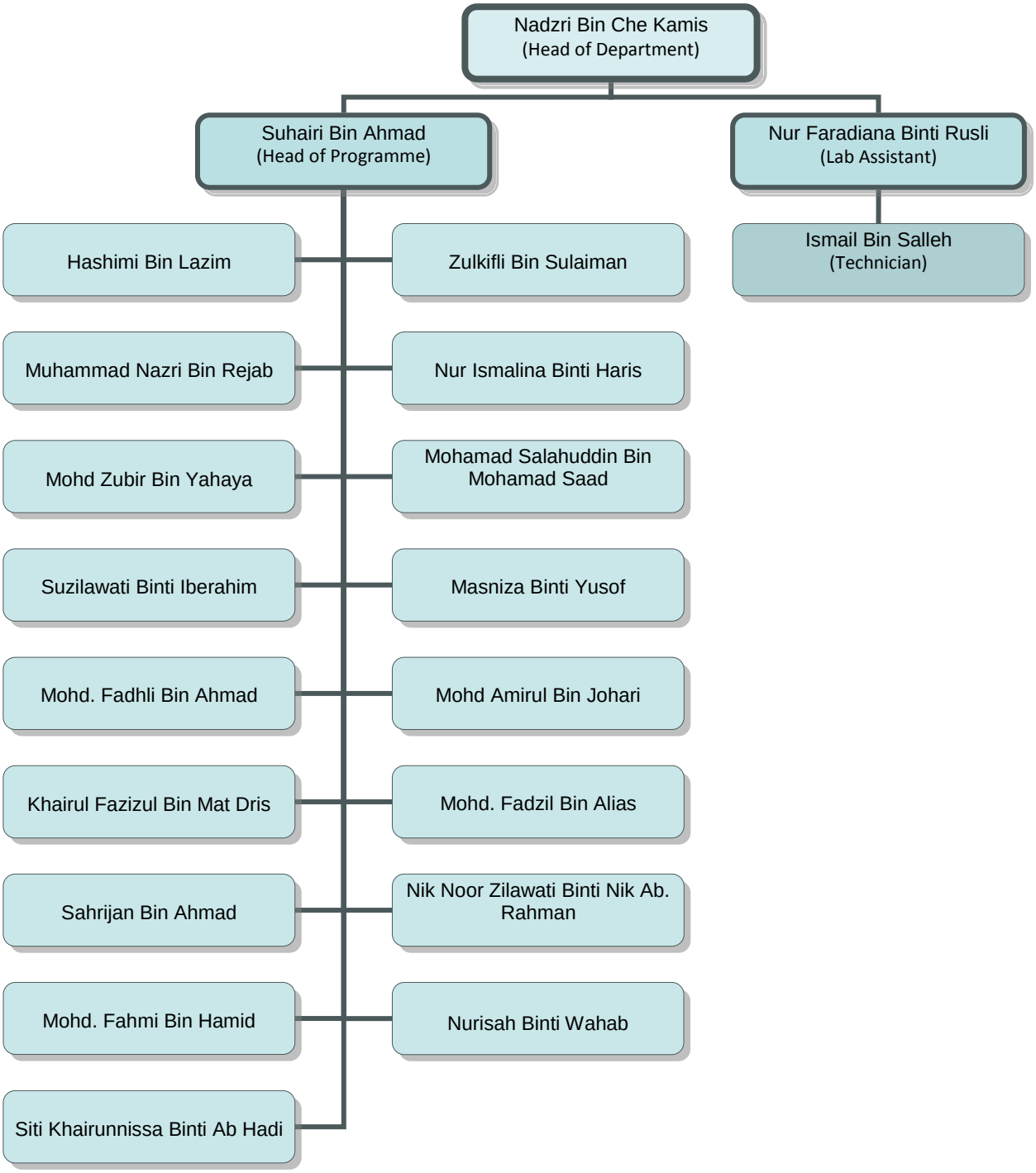
Learning Domain (LD)
LD 1 Knowledge
LD 2 Practical Skills
LD 3 Communication Skills
LD 4 Critical Thinking and Problem Solving Skills
LD 5 Social Skills and Responsibilities
LD 6 Continuous Learning and Information Management Skills
LD 7 Management and Entrepreneurial Skills
LD 8 Professionalism, Ethics and Moral
LD 9 Leadership and Teamwork Skills

5.0 MANAGEMENT ORGANISATION CHART



6.0 MECHANICAL ENGINEERING DEPARTMENT

6.1 DEPARTMENT ORGANISATION CHART



6.2 MECHANICAL ENGINEERING DEPARTMENT LECTURERS

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19.	Nurisah Binti Wahab	Lecturer	04-9881892	ariesyaz@gmail.com
20.	Nur Faradiana Binti Rusli	Lab Assistant	04-9881908	nurfaradiana.poli@1govuc.gov.my
21.	Ismail Bin Salleh	Technician	04-9881111	ismailsalleh.poli@1govuc.gov.my

6.3 DIPLOMA IN MECHANICAL ENGINEERING

6.3.1 PROGRAMME OVERVIEW

SYNOPSIS

Diploma in Mechanical Engineering at Polytechnic's Ministry of Education Malaysia designed to cover the current wide discipline of mechanical engineering with added specialization subjects in the field of mechanical engineering. Core courses offered include Engineering Mechanics, Electrical Technology, Engineering Drawing, Mechanical Workshop Practice, Workshop Technology, Computer Aided Design, Thermodynamics, Fluid Mechanics, Strength Of Materials, Pneumatic & Hydraulics, Project, Maintenance Engineering & Management, Material Science, Mechanic Of Machines, Engineering Design and Mechanical Components & Maintenance. The elective courses are Computer Aided Design 2, Control System, Instrumentation & Control, Engineering Plant Technology, Quality Control, C programming, Programmable Logic Control, Industrial Management, Diagnose & Troubleshooting for Mechanical Component, Tamadun Islam, Integrasi Malaysia and Computer Application. Common core courses included in the programme are Engineering Mathematics, Engineering Science, Occupational Safety & Health and Entrepreneurship. Compulsory courses offered include Communicative English, Pengajian Malaysia, Komunikasi dan Penyiaran Islam, Nilai Masyarakat Malaysia, Sains Teknologi Dan Kejuruteraan Dalam Islam and Ko-Kurikulum would provide students with interpersonal ability, attitude and professionalism towards their career.

6.3.2 JOB PROSPECTS

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:

- Technical Assistant
- Assistant Service Manager
- Service Advisor
- Supervisor
- Assistant Engineer
- Junior Engineer
- Technical Instructor or Lecturer
- Technical Sales Executive

6.3.3 PROGRAMME AIMS

The Diploma in Mechanical Engineering graduates in Polytechnics, Ministry of Education Malaysia will have the knowledge, technical skills, softskills and attitude to adapt themselves with new technological advancement and challenges in the mechanical engineering field.

6.3.4 PROGRAMME LEARNING OUTCOME

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

1. Apply knowledge of mathematics, science, engineering fundamentals and social sciences to well-defined mechanical engineering procedures and practices.
2. Analyse well-defined mechanical engineering problems with respect to operation and maintenance, including troubleshooting.

3. Conduct investigations and assist in the design of solutions for mechanical engineering systems.
4. Apply appropriate techniques, resources, and engineering tools to well-defined mechanical engineering activities, with an awareness of the limitations.
5. Demonstrate an awareness and consideration for societal, health, safety, legal and cultural issues and their consequent responsibilities.
6. Communicate effectively with the engineering community and society at large.
7. Function effectively as an individual and as a member in diverse technical teams.
8. Demonstrate an understanding of professional ethics, responsibilities and norms of engineering practices.
9. Demonstrate an awareness of management, business practices and entrepreneurship.
10. Demonstrate an understanding of the impact of engineering practices, taking into account the needs for sustainable development.
11. Recognise the needs for professional development and to engage in independent and lifelong learning.

6.3.5 SYNOPSIS AND COURSE LEARNING OUTCOME

SEMESTER	COURSE	SYNOPSIS	COURSE LEARNING OUTCOME (CLO)
1	DJJ1012 ENGINEERING DRAWING	**ENGINEERING DRAWING** course provides the students with the fundamentals of engineering drawings. It emphasizes on the practical knowledge of drawing instruments and drawing techniques that will be applied in workshop practical activities and in Computer Aided Design courses. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Apply the basic fundamentals of engineering drawing in comply to related problems. (C3, PLO1) 2. Construct engineering drawings according to the required standards. (P4, PLO 4) 3. Demonstrate the understanding of engineering norms and practices in engineering drawing. (A3, PLO 8)
1	DJJ1032 MECHANICAL WORKSHOP PRACTICE 1	**MECHANICAL WORKSHOP PRACTICE 1** exposes the students to welding, machining and fitting which involve the use of arc and gas welding machine, lathe machine, drilling machine, grinding, hand tools, marking out tools, measuring and testing tools. Students are also taught to emphasize on safety procedures and cleanliness in the workshop. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Perform fitting, machining and welding works according to Standard Operating Procedure (SOP). (P4, PLO4) 2. Demonstrate the awareness of social responsibility and safety in practical work procedures and practices. (A3, PLO5) 3. Demonstrate an understanding of professional ethics, responsibilities and norms of engineering practices according to the workshop safety regulation. (A3, PLO8)
1	DJJ1043 WORKSHOP TECHNOLOGY	**WORKSHOP TECHNOLOGY** provides exposure and knowledge in using hand tools, machine operation such as drilling, lathe, milling and computer numerical control. It also covers on gear measurement and inspection welding process in oxy acetylene, Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW) and Gas Metal Arc Welding (GMAW). **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Apply the knowledge of basic mechanical components and equipment, hand tools and measuring equipment in workshop technology (C3, PLO1) 2. Analyze the types of the removal and joining process in mechanical engineering. (C4, PLO2) 3. Demonstrate continuous learning and information management skills while engaging in the new knowledge and skills to develop report and presentation. (A3, PLO11)

1	**DUW1012** **OCCUPATIONAL SAFETY AND HEALTH**	**OCCUPATIONAL SAFETY AND HEALTH** course is designed to impart understanding of the self-regulatory concepts and provisions under the Occupational Safety & Health Act (OSHA). This course presents the responsibilities of employers and employees in implementing and complying with the safety procedures at work. This course provide an understanding of the key issues in OSH management, incident prevention, Emergency Preparedness and Response (EPR), fire safety, occupational first aid, Hazard Identification, Risk Assessment and Risk Control (HIRARC) and guide the students gradually into this multi-disciplinary science. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Identify the OSH legislation and its compliance in Malaysia. (C2, LD1) 2. Explain briefly incident hazards, risks and safe work practices in order to maintain health and safe work environment. (C2, LD1) 3. Discuss cooperatively in responding to an accident action at workplace. (C3,LD1; A2,LD4) 4. Adhere to the safety procedures in respective fields. (A3, LD8)
2	**DJJ2022** **ELECTRICAL TECHNOLOGY**	**ELECTRICAL TECHNOLOGY** exposes students to the basic electrical circuit concepts, the application of electromagnetism in electrical machines and transformers. The course focuses on the different types of electrical circuits, the relationship between current and voltage including the resistance. It also provides the skills on the methods of constructing basic circuits and operation of electrical machines and transformers. This course also exposes the students to the demonstration of experiments in Electrical Technology. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Explain the principles of electrical circuits, electromagnetism, transformers and electrical machines to solve related problems. (C4,PLO2) 2. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4,PLO4) 3. Demonstrate continuous learning and information management skills while engaging in independent acquisition of new knowledge and skills in laboratory report. (A3,PLO11)
2	**DJJ2032** **MECHANICAL WORKSHOP PRACTICE 2**	**MECHANICAL WORKSHOP PRACTICE 2** exposes the students to gas and arc welding, machining and foundry works. Safety procedure practice is heavily emphasized in the workshop. **CREDIT(S) : 2** **PREREQUISITE(S):DJJ1032 MECHANICAL WORKSHOP PRACTICE 1**	1. Perform welding, foundry and lathe machining according to Standard Operating Procedure (SOP). (P4, PLO4) 2. Demonstrate the ability to work in team to complete assigned tasks during practical work sessions. (A3, PLO7)

			3. Demonstrate an understanding of professional ethics, responsibilities and norms of engineering practices according to the workshop safety regulation. (A3, PLO8)
2	**DJJ2062 COMPUTER AIDED DESIGN 1**	**COMPUTER AIDED DESIGN 1** provides a comprehensive introduction to Computer-Aided Design software. It is an introductory level where the students will learn to navigate and use the software to create two-dimensional design in engineering. Students shall be able to demonstrate competency in using some standard available features of a CAD application to create and manipulate objects or elements and to modify them. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Apply the fundamental features of CAD software in producing engineering drawing. (C3, PLO 1) 2. Construct 2D drawing using fundamental features of CAD software. (P4, PLO 4) 3. Demonstrate continuous learning and information management skill while engaging in independent acquisition of new knowledge and skill to solve assigned task.(A3, PLO 11)
2	**DJJ2073 THERMODYNAMICS**	**THERMODYNAMICS** provides knowledge of theory, concept and application of principles to solve problems related to thermodynamics. It emphasizes on concept of non-flow process and flow process, properties of steam, Carnot cycle and Rankine cycle. This course also exposes the students of the experiments in Thermodynamics applications. **CREDIT(S) : 3** **PREREQUISITE(S) : NONE**	1. Apply the fundamentals of thermodynamics to solve related problems.(C3,PLO1) 2. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4) 3. Demonstrate the ability to work in team to complete assigned tasks. (A3)
2	**DJJ3093 FLUIDS MECHANICS**	**FLUID MECHANICS** provides the fundamentals of fluid mechanics principles related to the fluid properties and behaviour in static and dynamic situations. This course also exposes the experiments in fluids mechanics applications. **CREDIT(S) : 3** **PREREQUISITE(S) : NONE**	1. Analyze problems related to the fluid mechanics and data from the experiments in relation to the theoretical aspects. (C4, PLO2) 2. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4, PLO4) 3. Demonstrate team work skill in assigned task (A3, PLO7)

3	**DJJ3053** **ENGINEERING MECHANICS**	**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. This course also exposes the students to the demonstration of experiments in Engineering Mechanics. **CREDIT(S) : 3** **PREREQUISITE(S) : NONE**	1. Analyze problems related to statics and dynamics based on the concept and principles of engineering mechanics and data from the experiments in relation to the theoretical aspects. (C4, PLO2) 2. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4, PLO4) 3. Demonstrate ability to work in team to complete assigned tasks during practical work sessions. (A3, PLO7)
3	**DJJ3032** **MECHANICAL WORKSHOP PRACTISE 3**	**MECHANICAL WORKSHOP PRACTICE 3** exposes the students to the use of Tungsten Inert Gas (TIG) and Metal Inert Gas (MIG) welding machines. Students also will perform a task by using lathe and milling machine. In addition students will be exposed in entrepreneurships. Safety procedures practice will be emphasized in workshop. **CREDIT(S) : 2** **PREREQUISITE(S) : DJJ2032 MECHANICAL WORKSHOP PRACTICE 2**	1. perform welding and machining tasks according to workshop Standard Operating Procedure.(P4) 2. demonstrate awareness of entrepreneurship while performing practical tasks.(A2) 3. demonstrate awareness of social responsibility and safety procedures in the workshop according to the workshop safety regulations.(A3)
3	**DJJ3213** **MATERIAL SCIENCE**	**MATERIAL SCIENCE** provides students with an understanding of material science and engineering which emphasizes on atomic and crystal structure, material properties and behaviour including material classification and its application in the engineering field. The topic also covers the processes of metal work used to produce engineering components and apply basic principles of material testing and processing through practical. **CREDIT(S) : 3** **PREREQUISITE(S) : NONE**	1. Explain the fundamental of material science including identification of various types of materials, mechanical behavior, metal production processes, and various principles of material testing. (C3, PLO1) 2. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4, PLO4) 3. Demonstrate ability to work in team to complete assigned tasks during practical work sessions. (A3, PLO7)

3	**DJJ3103** **STRENGTH OF MATERIALS**	**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. **CREDIT(S) : 3** **PREREQUISITE(S) : NONE**	1. Analyze problems related to strength of materials and data from the experiments in relation to the theoretical aspects. (C4, PLO2) 2. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4, PLO4) 3. Demonstrate ability to work in team to complete assigned tasks during practical work sessions. (A3, PLO7)
4	**DUT40110** **INDUSTRIALTRAINING**	INDUSTRIAL TRAINING exposes students to related workplace competencies demanded by industries. This course provides exposure to students in terms of technology literacy, effective communication, practice social skills and teamwork, policies, procedures and regulations, professional ethics and reporting. It also equips students with real work experience, thus helping students to perform as novice workers. **CREDIT(S) : 10** **PREREQUISITE(S) : NONE**	1. apply related knowledge and skills at the workplace. (C3, P2) 2. communicate effectively with others. (A3) 3. practice teamwork. (A5) 4. professionally and ethically comply with policies, procedures and rules of the organization. (A5) 5. explain the tasks assigned (during the industrial training) according to the prescribed format. (P2, A4)
5	**DJJ5113** **MECHANICS OF MACHINES**	**MECHANICS OF MACHINES** exposes the students with knowledge on techniques and concepts of mechanics of machines and analyzing problems related to hoists, friction, simple harmonic motion, velocity and acceleration diagram, friction and belt drives. This course also exposes the students to the demonstration of experiments in Mechanics of Machines by using the real equipment. **CREDIT(S) : 2** **PREREQUISITE(S) : DJJ3053 ENGINEERING MECHANICS**	1. Analyze problems related to the mechanics of machines and data from the experiments in relation to the theoretical aspects. (C4, PLO2) 2. Organize appropriately experiments in groups according to the Standard Operating Procedures. (P4, PLO4) 3. Demonstrate ability to work in team to complete assigned tasks during practical work sessions. (A3, PLO7)

5	**DJJ5032 MECHANICAL WORKSHOP PRACTICE 4**	**MECHANICAL WORKSHOP PRACTICES 4** course allows the students to operate machine tools, extend their experiences on indexing, precision grinding, CNC machine and able to work in a clean and safe workshop environment. **CREDIT(S) : 2** **PREREQUISITE(S) :** **DJJ3032 MECHANICAL WORKSHOP PRACTICE 3**	1. Construct programs for EDM and CNC machining process using ISO codes and using CADCAM Software. (P4) 2. Perform indexing in milling machine and perform machining processes for the surface grinding machine or cylindrical grinding machines. (P4) 3. Demonstrate safety procedures in the workshop according to the workshop safety regulation correctly to create a secured environment in an organization while doing practical work. (A3) 4. Demonstrate ability to work in team to complete assigned tasks during practical work sessions. (A3)
5	**DJJ512 PNEUMATIC & HYDRAULICS**	**PNEUMATICS & HYDRAULICS** provides knowledge and understanding to the importance of pneumatics and hydraulics circuits, equipment and design along with its usage in the industry. **CREDIT(S) : 3** **PREREQUISITE(S) : NONE**	1. Analyze the basic concept and function of pneumatics and hydraulics system.(C4,PLO2) 2. Construct pneumatic, electro-pneumatic and hydraulic circuit according to assigned tasks.(C5, PLO3 & P4, PLO4) 3. Demonstrate understanding of engineering norm and practices in pneumatics and hydraulics during practical work sessions. (A3, PLO8)

5	**DJJ5133 ENGINEERING DESIGN**	**ENGINEERING DESIGN** provides knowledge on basic engineering design. It emphasizes on mathematical analysis for simple component designs in engineering such as key, rivet and welding joint. It also provides knowledge on gear design and selection of bearing. **CREDIT(S) : 3** **PREREQUISITE(S) : NONE**	1. Organize the design process in mechanical engineering design. (C4, PLO2) 2. Conduct investigations in the design of simple engineering components by using mathematical analysis, taking into consideration the safe load limitation. (C5, PLO3) 3. Demonstrate good written communication skills of case study in group, on assigned topic. (A3,PLO6)
5	**DJJ5141 PROJECT 1**	**PROJECT 1** provides students with solid foundation on knowledge and skills in preparing project proposal, writing and presentation of proposal. **CREDIT(S) : 1** **PREREQUISITE(S) : NONE**	1. Organize research or project systematically. (C5) 2. Demonstrate good communication skill of oral presentation in group. (A3) 3. Demonstrate continuous learning and information management skills while engaging in independent acquisition of new knowledge and skill to develop a project. (A3)
6	**DJJ6143 PROJECT 2**	**PROJECT 2** introduces the students to the concept in conducting a design or case study. The students select a project, list the project needs, the project process involve, cost estimation, project schedule and applied appropriate methodology in the project planning. It also involves project implementation, project report and presentation. **CREDIT(S) : 2** **PREREQUISITE(S) : DJJ5141 PROJECT 1**	1. Apply the concept in conducting a research. (C3) 2. Identify the research to be carried out through discussion with group members and supervisory lecturer (P3) 3. Organize the project based on the planned research. (P5) 4. Prepare a complete project report and presentation in group.(A4) 5. Propose the entrepreneurship concept as a value-added to the research.(A3).

6	**DJJ6162 MAINTENANCE ENGINEERING AND MANAGEMENT**	**MAINTENANCE ENGINEERING AND MANAGEMENT** covers topics such as maintenance organization, maintenance strategies system, system approach to maintenance, maintenance planning and scheduling and computerized maintenance management system (CMMS). This course also provides student with knowledge regarding maintenance of facilities and equipment in good working condition and help them develop good management knowledge. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Analyze the concepts of maintenance organization and strategies to solve related problems. (C4, PLO2) 2. Apply the principles of maintenance strategies and elaborate on the significance of a system approach to maintenance. (C6, PLO3) 3. Demonstrate an awareness of management, business practices and entrepreneurship related to maintenance management. (A3, PLO9) 4. Organize maintenance management plan and schedule that integrates the whole management processes and procedures by group in actual workplace. (A4, PLO11)
6	**DJJ6153 MECHANICAL COMPONENTS & MAINTENANCE**	**MECHANICAL COMPONENTS AND MAINTENANCE** course covers necessary mechanical components needed in Industries. The topics include maintenance principles and procedures, lubrication, power transmission, bearing, clutches and brake, and also pumps, valves and compressor. This course also provides knowledge and skills regarding maintenance of mechanical components as well as assembly and disassembly of compressors. **CREDIT(S) : 3** **PREREQUISITE(S) : NONE**	1. Analyze the concept of mechanical components to solve related problems. (C4, PLO2) 2. Assemble selected mechanical components based on service manual maintenance in groups. (P5, PLO4) 3. Demonstrate understanding of engineering norm and practices in mechanical components and maintenance during practical work sessions. (A3, PLO8)
ELECTIVE			
5	**DJJ5172 INSTRUMENTATION & CONTROL**	**INSTRUMENTATION & CONTROL** exposes the students to the basic principles in control system and its usage in industrial sector is the main focus in this course. Instrumentation and control also provide knowledge to the students in components measurement in control systems that are normally used in industries. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Apply the concepts of instrumentation and measurement systems in engineering. (C4, PLO2) 2. Analyze the concepts of instrumentation and measurement systems in engineering. (C5,PLO3) 3. Organize the experiment of the instruments and control system. (P5,PLO4) 4. Demonstrate good written communication skill in lab report on assigned topics. (A3, PLO6)

5	**DJJ5062 COMPUTER AIDED DESIGN 2**	**COMPUTER AIDED DESIGN 2** exposes the students to learn the fundamental principles of 3D parametric part design and production-ready part drawings using 3D CAD software. Students will know the various method of creating a solid model using extrude, revolve, swept, assembly, simulation and animation. Hands-on exercises representing real-world, industry-specific design of mechanical engineering will also be covered in this course. **CREDIT(S) : 2** **PREREQUISITE(S) :** **DJJ2062 COMPUTER AIDED DESIGN 1**	1. Apply the function of CAD commands in producing engineering drawing. (C3, PLO1) 2. Create drawing of mechanical component in 3D according to drawing standard. (P3, PLO2) 3. Demonstrate good written communication skill in group project report. (A3, PLO6)
6	**DJJ6182 ENGINEERING PLANT TECHNOLOGY**	**ENGINEERING PLANT TECHNOLOGY** provides an introduction to plant technology, such as steam powered plant, steam turbine, gas turbine plant, diesel power plant, compressed air plant and water pump. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Apply the concepts and technology of power plant system to solve related problems. (C3, PLO1) 2. Construct diagrams of different types of power plants and water pumps based on its applications and functions (C5, PLO3) 3. Demonstrate continuous learning and information management skills related to engineering plant technology (A3, PLO11).
6	**DJJ6192 INDUSTRIAL MANAGEMENT**	**INDUSTRIAL MANAGEMENT** provides students with a strong fundamental understanding of industrial management prospect and production system planning such as inventory, scheduling, production system operation, facilities, plan location, layout and line balancing. This course also provides knowledge in quality control and human resource management. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Apply the basic concepts of industrial management system in Industry to solve related problems. (C3, PLO1) 2. Analyze problems related to industrial management. (C4, PLO2) 3. Demonstrate good written communication skills in case study on assigned topics in groups. (A3, PLO6)

6	**DJJ6202** **DIAGNOSIS AND TROUBLESHOOTING FOR MECHANICAL COMPONENTS**	**DIAGNOSIS AND TROUBLESHOOTING FOR MECHANICAL COMPONENTS** are subjected to deterioration once commissioned. This deterioration may be in many forms, for example, vibration and misalignment, friction and wear, under or over lubrication. If this deterioration left uncorrected it will lead to component failure. This course provides knowledge and skills on diagnosis and troubleshooting lubrication, bearing, shaft alignment and pump. **CREDIT(S) : 2** **PREREQUISITE(S) : DJJ6153 MECHANICAL COMPONENTS & MAINTENANCE**	1. Explain the concept of diagnosis and troubleshooting for mechanical components. (C4) 2. Solve problems related to the diagnose and troubleshoot of mechanical components. (P6) 3. Demonstrate understanding of engineering norm and practices in diagnosis and troubleshooting for mechanical components during practical work sessions. (A3)
6	**DJM1022** **C PROGRAMMING**	**C PROGRAMMING** course provides an introduction to programme design and development. Student will learn to design, code, debug, test and document well-structured programs based on technical and engineering problem. Topic covered; software development principle, programming language basic, data types, input and output operation, the use of selection, loops, arrays and function structure. **CREDIT(S) : 2** **PREREQUISITE(S) : NONE**	1. Apply knowledge of basic concepts of C programming to solve given problem using an appropriate data type. (C3) 2. Construct a high level programming language in solving variety engineering and scientific problems. (P4) 3. Demonstrate problem solving skills in assigned project based on programming. (A3)
6	DPB2012 Entrepreneurship	**ENTREPRENEURSHIP** focuses the principles and concept of entrepreneurship. This course concentrates on the systematic methods of getting business ideas. This course also prepares the students on ways to conduct and control the business including fundamental of management, marketing and financing. It also emphasizes on the preparation of business plan, thus developing their entrepreneurial skills. **CREDIT(S): 2** **PREREQUISITE(S): NONE**	1. Explain clearly the concept of entrepreneurship, process and procedures involved in developing effective business plan. (C2, LD1) 2. Work cooperatively in group to complete the assigned project based on entrepreneurial skills. (P3, LD2) (A3, LD7) 3. Present business plan creatively using knowledge gained via group. (A2, LD3)

6.3.6 PROGRAMME STRUCTURE (DKM)

COMPONENTS	COURSE CODE	COURSE	CONTACT HOURS			CREDIT
			L	P	T	
SEMESTER 1						
Compulsory	DUB1012	Pengajian Malaysia	1	0	2	2
	DUE1012	Communicative English 1	1	0	2	2
	DRB1XX0	Asas Unit Beruniform	0	2	0	0
Common Core	DUW1012	Occupational, Safety and Health	2	0	0	2
	DBM1013	Engineering Mathematics 1	2	0	2	3
	DBS1012	Engineering Science	2	1	0	2
Discipline Core	DJJ1012	Engineering Drawing	1	2	0	2
	DJJ1032	Mechanical Workshop Practice 1	0	4	0	2
	DJJ1043	Workshop Technology	3	0	0	3
		TOTAL	27			18
SEMESTER 2						
Compulsory	DUA2012	Sains, Teknologi dan Kejuruteraan Dalam Islam *	1	0	2	2
	DUB2012	Nilai Masyarakat Malaysia **	1	0	2	2
	DRS2XX1	Sukan	0	2	0	1
	DRB2XX1	Unit Beruniform 1	0	2	0	1
Common Core	DBM2013	Engineering Mathematics 2	2	0	2	3
Discipline Core	DJJ2022	Electrical Technology	2	2	0	2
	DJJ2032	Mechanical Workshop Practice 2	0	4	0	2
	DJJ2062	Computer Aided Design 1	1	2	0	2
	DJJ2073	Thermodynamics	2	2	0	3
	DJJ2093	Fluid Mechanics	2	2	0	3
		TOTAL	26			18
SEMESTER 3						
Compulsory	DUE3012	Communicative English 2	1	0	2	2
	DRK3XX2	Kelab/Persatuan	0	4	0	2
	DRB3XX2	Unit Beruniform 2	0	4	0	2
Common Core	DBM3013	Engineering Mathematics 3	2	0	2	3
Discipline Core	DJJ3032	Mechanical Workshop Practice 3	0	4	0	2
	DJJ3053	Engineering Mechanics	2	2	0	3
	DJJ3103	Strength of Materials	2	2	0	3
	DJJ3213	Material Science	2	2	0	3
		TOTAL	23			18
SEMESTER 4						
	DUT40110	Industrial Training	0	0	0	10
			0			10
SEMESTER 5						
Compulsory	DUE5012	Communicative English 3	1	0	2	2
Discipline Core	DJJ5032	Mechanical Workshop Practice 4	0	4	0	2
	DJJ5113	Mechanics of Machines	2	2	0	3
	DJJ5123	Pneumatic and Hydraulic	2	2	0	3
	DJJ5133	Engineering Design	3	0	0	3
	DJJ5141	Project 1	0	2	0	1
Elective		Elective ***	1	2	0	2
	DJJ5062	Computer Aided Design 2	1	2	0	2
	DJJ5172	Instrumentation and Control	1	2	0	2
	DJM5072	Control System	2	1	0	2
		TOTAL	23			16

SEMESTER 6						
Compulsory	DUA6022	Komunikasi dan Penyiaran Islam	1	0	2	2
Common Core	DPB2012	Entrepreneurship	2	1	0	2
Discipline Core	DJJ6143	Project 2	0	4	0	3
	DJJ6153	Mechanical Components and Maintenance	2	2	0	3
	DJJ6162	Maintenance Engineering and Management	2	0	0	2
Elective		Elective***	2	0	0	2
	DJJ6202	Diagnosis and Troubleshooting For Mechanical Component	1	2	0	2
	DJF6102	Quality Control	2	0	0	2
	DJJ6182	Engineering Plant Technology	2	0	0	2
	DJJ6192	Industrial Management	2	0	0	2
	DJM1022	C Programming	1	3	0	2
	DJM3082	Programmable Logic Control	1	2	0	2
	DUA6042	Tamadun Islam	2	0	1	2
	DUA6012	Integrasi Malaysia	1	0	2	2
	DBC2012	Computer Application	1	2	0	2
TOTAL			18			14

	Total Credit	%
i. Compulsory	15	16%
ii. Common Core	15	16%
iii. Discipline Core	50	53%
iv. Elective	4	4%
v. Industrial Training	10	11%
TOTAL CREDIT	94	100%

	Total	%
i. Lecture	49	42
ii. Practical (Practical+Tutorial)	68	58
iii. Contact Hours	117	-

Legend / Notes:

L : Lecture, P : Practical/Lab, T : Tutorial, C : Credit

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

* For Muslim Students

** For Non Muslim Students

*** Students are required to complete a minimum of four credits of elective course

For Co-curriculum,

1. Path 1 : Sport and Club
2. Path 2 : Uniform Unit

6.3.7 PROGRAMME ASSESSMENT (DKM)

The course assessment is carried out in two sections:

No.	Types Of Assessment	Percentage (%)
1.	**Continuous Assessment (CA)***	**50%***
2.	**Final Examination (FE)**	**50%***

* Subject to change

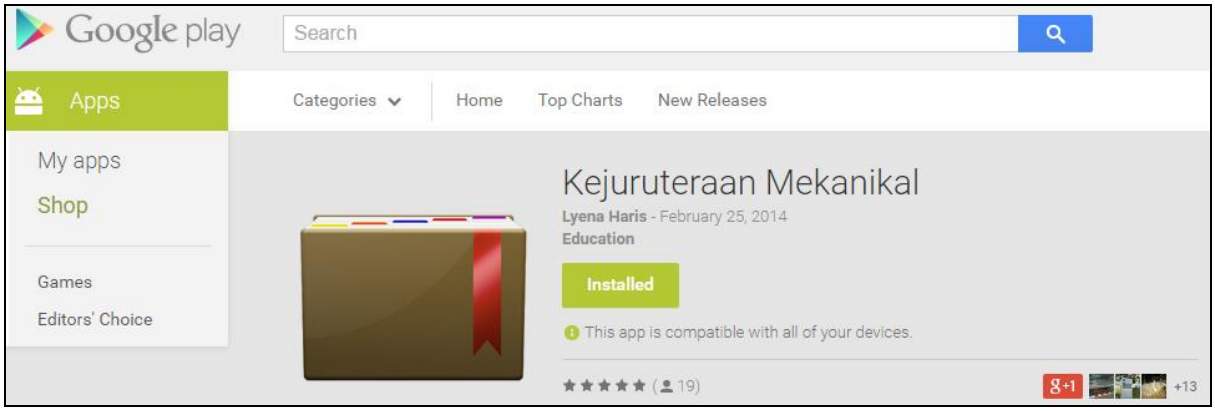
Continuos assesstment is carried out throughout the semester and comprises the following:

i. Quiz
ii. Tutorial exercise
iii. Test
iv. Practical test
v. Practical work
vi. Practical exercise
vii. Other assessment Task :
    - Reflective Journal
    - Peer Assessment
    - End of Chapter
    - Project

6.4 AA-DKM REF BOOK APPLICATION

The application of mechanical engineering is a mechanism to help the students in Diploma Mechanical Engineering generally at Politeknik Tuanku Syed Sirajuddin and specifically to all Polytechnics in Malaysia. It is an application in order to help the students to get the engineering reference books which is related to the mechanical engineering field. Moreover, it is also contains the Project Execution Guidelines for diploma in mechanical engineering and also the calender to update any activities along the semester.

This application can be download at Google Play aka Play Store on your Android phone or tablet.



6.5 LAB FACILITIES IN MECHANICAL DEPARTMENT

Name	Quantity	Lab Supervisor
CAD/CAM Laboratory (*Makmal CAD/CAM*)	1	Masniza Binti Yusof
Mechanics of Machines Laboratory (*Makmal Mekanik Mesin*)	1	Nur Ismalina Binti Haris
Control Laboratory (*Makmal Kawalan*)	1	Muhammad Nazri Bin Rejab
Metallurgy Laboratory (*Makmal Metalurgi*)	1	Mohd. Fadhli Bin Ahmad
Metrology Laboratory (*Makmal Metrologi*)	1	Ahmad Zawawi Bin Zulkifli
Material Testing Laboratory (*Makmal Ujian Bahan*)	1	Zulkifli Bin Sulaiman
Electrical Technology Laboratory (*Makmal Teknologi Elektrik*)	1	Khairul Fazizul Bin Mat Dris
Foundry Workshop (*Bengkel Foundri*)	1	Siti Khairunnissa Binti Ab. Hadi
Machine Workshop (Bengkel Mesin)	1	Mohd. Fadzil Bin Alias
Welding Workshop (*Bengkel Kimpalan*)	1	Amirul Bin Johari
ITL Laboratory (*Makmal ITL*)	1	Muhammad Nazri Bin Rejab

6.6 FURTHER STUDY IN MECHANICAL ENGINEERING (MTUN)

Malaysian Technical University Network (MTUN)

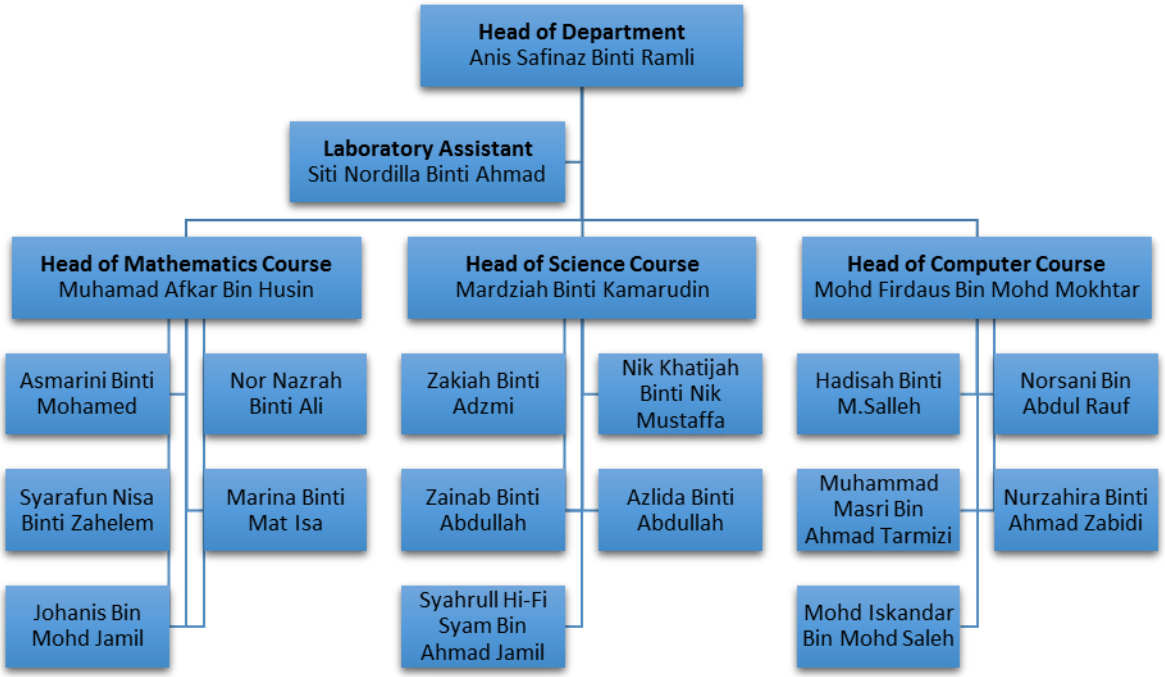
	• Bachelor of Mechanical Engineering with Honours • Bachelor of Aeronautical Engineering Technology (Professional Piloting) with Honours • Bachelor of Aeronautical Engineering Technology (Aircraft Maintenance) with Honours • Bachelor of Aeronautical Engineering Technology (Air Traffic Control) with Honours	Timbalan Pendaftar Kanan Pejabat Pengurusan Akademik Universiti Tun Hussein Onn Malaysia 86400 Parit Raja, Batu Pahat Johor Tel : 07-4537681/ 7655/ 7687/ 7689/ 7694 Faks : 07-4536085 Emel : pa@uthm.edu.my Web : www.uthm.edu.my
UTeM	• Bachelor's Degree in Mechanical Engineering Technology (Automotive Technology) with Honours • Bachelor's Degree in Mechanical Engineering Technology (Refrigeration and Air-Conditioning Systems) with Honours • Bachelor's Degree in Mechanical Engineering Technology (Maintenance Technology) with Honours	Bahagian Pengurusan Akademik Universiti Teknikal Malaysia Melaka Karung Berkunci 1752 Pejabat Pos Durian Tunggal 76109 Durian Tunggal MELAKA Tel : 06-3316086/ 6078/ 6077/ 6073/ 6076 Faks : 06-3316079 Emel : bpa@utem.edu.my Web : www.utem.edu.my
	• Bachelor of Mechanical Engineering with Honours • Bachelor of Mechanical Engineering with Honours (Automotive)	Bahagian Pengurusan Akademik Kompleks Perkhidmatan Siswa Universiti Malaysia Pahang Karung Berkunci 12 25000 Kuantan Pahang Darul Makmur Tel : 09-549 2550/ 2557 Faks : 09-549 2555Emel : - Web : www.ump.edu.my
	• Bachelor of Engineering (Honours) Mechanical Engineering • Bachelor of Engineering (Honours) Manufacturing Engineering • Bachelor of Engineering (Honours) Metallurgical Engineering • Bachelor of Engineering (Honours) Product Design Engineering • Bachelor of Engineering (Honours) Material Engineering • Bachelor of Engineering (Honours) Polymer Engineering	Pendaftar Bahagian Pengurusan Akademik Jabatan Pendaftar Universiti Malaysia PerlisNo. 34 & 35 Bersebelahan Hong Leong Bank, Jalan Bukit Lagi,01000 Kangar Perlis Tel : 04-9798701/ 8702/ 8706 Faks : 04-9798703 Emel :kemasukan@unimap.edu.my Web : www.unimap.edu.my

SUPPORTING DEPARTMENTS & UNITS

7.0 SUPPORTING DEPARTMENTS AND UNITS

7.1. MATHEMATICS, SCIENCE AND COMPUTER DEPARTMENT (JMSK)

7.1.1 ORGANIZATION CHART



7.1.2 MATHEMATICS, SCIENCE AND COMPUTER DEPARTMENT LECTURERS

No.	Name	Designation	Contact No.	E-mail
1	Anis Safinaz Binti Ramli	Head of Department	04-9886399	anissafinaz.poli@1govuc.gov.my
2	Muhamad Afkar Bin Husin	Head of Mathematics Course	04-9881378	muhamadafkar.poli@1govuc.gov.my
3	Mardziah Binti Kamarudin	Head of Science Course	04-9881376	mardziahk.poli@1govuc.gov.my
4	Mohd Firdaus Bin Mohd Mokhtar	Head of Computer Course	04-9881377	firdausmokhtar.poli@1govuc.gov.my
5	Asmarini Binti Mohamed	Lecturer	04-9886398	asmarinimohamed.poli@1govuc.gov.my
6	Azlida Binti Abdullah	Lecturer	04-9886395	azlidaabdullah.poli@1govuc.gov.my
7	Hadisah Binti M Salleh	Lecturer	04-9886395	hadisahmsalleh.poli@1govuc.gov.my
8	Johanis Bin Mohd Jamil	Lecturer	04-9886395	johanis.poli@1govuc.gov.my
9	Marina Binti Mat Isa	Lecturer	04-9886395	marinaisa@ptss.edu.my
10	Mohd Iskandar Bin Mohd Saleh	Lecturer	04-9886395	iskandarsaleh.poli@1govuc.gov.my
11	Muhammad Masri Bin Ahmad Tarmizi	Lecturer	04-9886394	masri@ptss.edu.my
12	Nik Khatijah Binti Nik Mustaffa	Lecturer	04-9886398	nikkhatijah.poli@1govuc.gov.my
13	Nor Nazrah Binti Ali	Lecturer	04-9886398	nornazrahali.poli@1govuc.gov.my
14	Norsani Bin Abdul Rauf	Lecturer	04-9886394	norsani.poli@1govuc.gov.my
15	Nurzahira Binti Ahmad Zabidi	Lecturer	04-9886395	nurzahira@ptss.edu.my
16	Syahrull Hi-Fi Syam Bin Ahmad Jamil	Lecturer	04-9886395	syahrull@ptss.edu.my
17	Syarafun Nisa Binti Zahelem	Lecturer	04-9886395	syarafunnisa.poli@1govuc.gov.my
18	Zainab Binti Abdullah	Lecturer	04-9886398	zainababdullah.poli@1govuc.gov.my
19	Zakiah Binti Adzmi	Lecturer	04-9886398	zakiah.adzmi.poli@1govuc.gov.my
20	Siti Nordilla Binti Ahmad	Laboratory Assistant	04-9886392	sitinordilla.poli@1govuc.gov.my

7.1.3 COURSE LEARNING OUTCOME (JMSK)

SEMESTER	COURSE	SYNOPSIS	COURSE LEARNING OUTCOME (CLO)
1	DBM1013 Engineering Mathematics 1	ENGINEERING MATHEMATICS 1 exposes students to the basic algebra, which includes constructing partial fractions. This course also exposes the concept of trigonometry and the methods of solving trigonometry problems by using basic identities, compound angle and double angle formula. Students will be introduced to the theory of complex numbers and matrices to solve simultaneous equation. This course also introduces students to concept of vector and scalar. **CREDIT (S): 3** **PREREQUISITE (S): NONE**	Upon completion of this course, students should be able to: 1. Identify mathematical methods in solving the mathematical problems. (C2, LD1) 2. Solve the mathematical problems by using appropriate techniques and solutions. (C3, LD1) 3. Practice mathematical knowledge and skills in different mathematics problem. (C3, LD1)
1	DBS1012 Engineering Science	ENGINEERING SCIENCE is an applied science with theoretical concepts and practical learning sessions that can be applied in the engineering fields. This course focuses on the Physical Quantities, Measurement, Linear Motion, Force, Work, Energy, Power, Solid, Fluid, Temperature and Heat. **CREDIT (S): 2** **PREREQUISITE (S): NONE**	Upon completion of this course, students should be able to: 1. Solve the basic engineering science problems by using related concept. (C3, LD1) 2. Organise an appropriate experiments to prove related physic principles. (P3, LD2) 3. Apply related physic principles in various situations to enhance knowledge. (C3, LD1)
2	DBM2013 Engineering Mathematics 2	ENGINEERING MATHEMATICS 2 exposes students to the basic laws of exponents and logarithms. This course also introduces the basic rules of differentiation concept to solve problems that relate maximum, minimum and calculate the rate of changes. This course also discuss the integration concept in order to strengthen student knowledge for solving area and volume bounded region problems. In addition, students also will learn application of both techniques of differentiation and integration. **CREDIT (S): 3** **PREREQUISITE (S): NONE**	Upon completion of this course, students should be able to: 1. Solve the mathematical problems by using appropriate mathematical techniques and solutions. (C3, LD1) 2. Show the solution for differentiation and integration problem by using appropriate method. (C3, LD1) 3. Practice mathematical knowledge and skills in different mathematics problem. (C3, LD1)

3	DBM3013 Engineering Mathematics 3	ENGINEERING MATHEMATICS 3 exposes students to the statistical and probability concepts and their applications in interpreting data. The course also introduces numerical methods concept to solve simultaneous equations by using Gaussian Elimination method, LU Decomposition using Doolittle and Crout methods, polynomial problems using Simple Fixed Point Iteration and Newton-Raphson methods. In additional, the course also discusses optimization problems by using Linear Programming. In order to strengthen the students in solving advanced engineering problems, Ordinary Differential Equation (ODE) is also included. **CREDIT (S): 3** **PREREQUISITE (S): DBM2013 ENGINEERING MATHEMATICS 2**	Upon completion of this course, students should be able to: 1. Solve the mathematical problems by using appropriate mathematical technique and solution. (C3, LD1) 2. Show the solution for statistical and probability problems and linear programming by using appropriate mathematical methods. (C3, LD1) 3. Practice mathematical knowledge and skills in different mathematical problem. (C3, LD1)
ELECTIVE COURSE			
5	DBC2012 Computer Application	COMPUTER APPLICATION exposes students to different packages of applications software such as word processor, spreadsheet, database, presentation, project management and diagramming. This course mainly emphasize on the practical aspects of using applications software. As the result, students will have opportunity to manipulate and create a variety of techniques and styles to produce documents. **CREDIT (S): 2** **PREREQUISITE (S): NONE**	Upon completion of this course, students should be able to: 1. Apply computer application knowledge and skills to perform related task. (C3, LD1) 2. Complete appropriate lab work task by using suitable application software to enhance computer knowledge and skills. (P4, LD2) 3. Organise a complete project report by using appropriate application software. (P4, LD2)

PRA-DIPLOMA

SEMESTER	COURSE	SYNOPSIS	COURSE LEARNING OUTCOME (CLO)
1	PBM1014 Basic Mathematics 1	BASIC MATHEMATICS 1 course is a basic mathematical course that will help students in preparing them for their future studies. This course covers topics such as numbering systems, basic algebra, straight line and solving equations. **CREDIT (S): 4** **PREREQUISITE (S): NONE**	Upon completion of this course, students should be able to: 1. Solve the mathematical problems by using appropriate mathematical methods. (C3) 2. Show calculation to solve mathematical problems. (C3, A2) 3. Practice mathematical knowledge and skills in mathematics problem. (C3)
1	PBM1024 Advanced Mathematics 1	ADVANCED MATHEMATICS 1 is a course that will help students in preparing them for their future diploma studies. This course covers topics such as indexes, logarithm, statistics and probability. **CREDIT (S): 4** **PREREQUISITE (S): NONE**	Upon completion of this course, students should be able to: 1. Solve the mathematical problems by using appropriate mathematical methods. (C3) 2. Show calculation to solve mathematical problems. (C3, A2) 3. Practice mathematical knowledge and skills in mathematics problem. (C3)
1	PBS1014 Basic Engineering Science 1	BASIC ENGINEERING SCIENCE 1 is to provide students with the basic knowledge and skills in science and technology and enable them to solve problems and make decisions in everyday life based on scientific attitudes and noble values. Students will cognitively and scientifically engage to areas of measurement, linear motion, dynamics, energy, work and power. The designated lecture session is used to discuss results of investigations leading to its relation with the existing laws, principles or theories. This course helps students to pursue formal and informal further studies. **CREDIT (S): 4** **PREREQUISITE (S): NONE**	Upon completion of this course, students should be able to: 1. Respond to the observation and experiments involving selected areas from the topics in measurement, linear motion and dynamics. (P3) 2. Study the concepts, laws and principles in measurement, linear motion, dynamics, energy, work and power to solve qualitative and quantitative problems. (C3, A3)

2	PBM2014 Basic Mathematics 2	BASIC MATHEMATICS 2 course is a continuation of basic mathematics 1. The mastery of mathematics concept was further strengthened so that the students can understand in depth and widen its usage. The topics of this course comprises solving problems related to trigonometry, circular measure, vector, inequality and matrix. **CREDIT (S): 4** **PREREQUISITE (S): PBM1014 BASIC MATHEMATICS 1**	Upon completion of this course, students should be able to: 1. Solve the mathematical problems by using appropriate mathematical methods. (C3) 2. Show calculation to solve mathematical problems. (C3, A2) 3. Practice mathematical knowledge and skills in mathematics problem. (C3)
2	PBM2024 Advanced Mathematics 2	ADVANCED MATHEMATICS 2 course consist of several topics such as differentiation, application of differentiation, integration and application of integration. These will prepare the students for diploma level programs. **CREDIT (S): 4** **PREREQUISITE (S): PBM1024 ADVANCED MATHEMATICS 1**	Upon completion of this course, students should be able to: 1. Solve the differentiation by using appropriate method. (C3, A2) 2. Relate the rules and mathematical expressions involving integration. (C3) 3. Practice appropriate techniques in solving problems related to differentiation and integration. (C3, A2)
2	PBS2014 Basic Engineering Science 2	BASIC ENGINEERING SCIENCE 2 is a continuation of Basic Engineering Science 1 and will interactively engage students cognitively and scientifically in areas of solid and fluid, temperature and heat, electricity and electromagnetism. The designated lecture session is used to discuss results of investigations leading to its relation with the existing laws, principles or theories. Students will have a foundation in engineering science to help them to pursue formal and informal further studies. **CREDIT (S): 4** **PREREQUISITE (S): PBS1014 BASIC ENGINEERING SCIENCE 1**	Upon completion of this course, students should be able to: 1. Respond to the observation and experiments involving selected areas from the topics in solid, liquid, gas, temperature, heat, and electricity. (P3) 2. Study the concepts, laws and principles in solid, liquid, gas, temperature, heat, electricity and electromagnetism to solve qualitative and quantitative problems. (C3, A3)

7.1.4 MATRIX OF COURSE ASSESSMENT (JMSK)

Code & Course	Quiz		Test		Tutorial Exercise		Assignment		Final Exam
	Qty	%	Qty	%	Qty	%	Qty	%	%
DBM1013 Engineering Mathematics 1	2	10	1	15	4	20	2	15	40
DBM2013 Engineering Mathematics 2	2	10	1	15	3	15	2	20	40
DBM3013 Engineering Mathematics 3	2	10	1	15	4	20	2	15	40

Code & Course	Quiz		Theory Test		Lab Work		Theoretical Exercise		Final Exam
	Qty	%	Qty	%	Qty	%	Qty	%	%
DBS1012 Engineering Science	1	5	1	15	4	30	2	10	40

Code & Course	Practical Test		Lab Work		Project		Final Exam
	Qty	%	Qty	%	Qty	%	%
DBC2012 Computer Application	1	20	6	60	1	20	NONE

Code & Course	Quiz		Test		Tutorial Exercise		End of Chapter /Assignment		Final Exam
	Qty	%	Qty	%	Qty	%	Qty	%	%
PBM1014 Basic Mathematics 1	4	15	2	15	1	5	3	15	50
PBM1024 Advanced Mathematics 1	4	15	2	15	1	5	3	15	50
PBM2014 Basic Mathematics 2	4	15	2	15	1	5	3	15	50
PBM2024 Advanced Mathematics 2	4	10	2	15	1	5	4	20	50

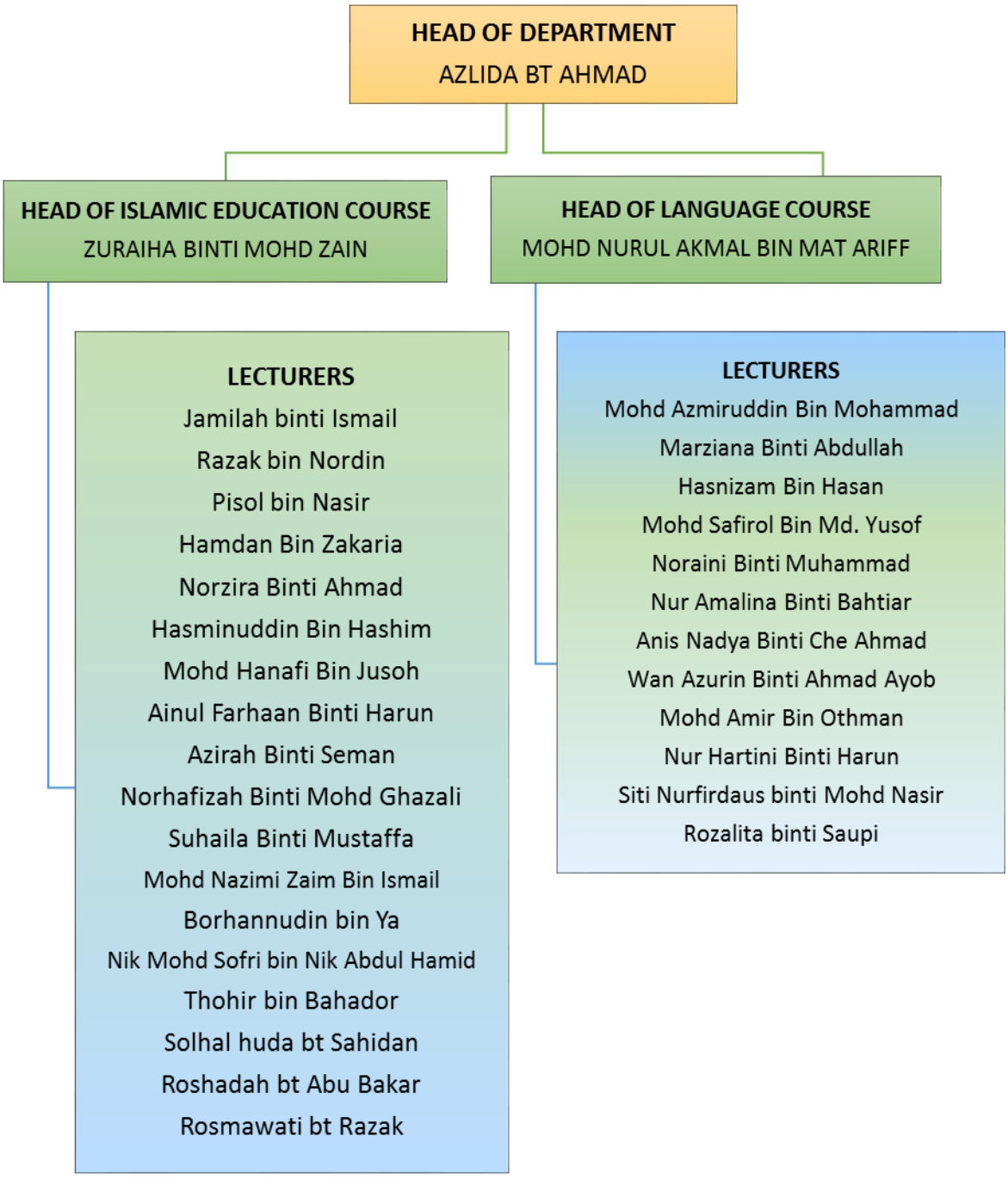
Code & Course	Quiz		Test		Laboratory Work		End of Chapter		Final Exam
	Qty	%	Qty	%	Qty	%	Qty	%	%
PBS1014 Basic Engineering Science 1	4	10	2	15	3	15	1	10	50
PBS2014 Basic Engineering Science 2	4	10	2	15	3	15	1	10	50

7.1.5 LAB FACILITIES (JMSK)

Name	Quantity	Lab Supervisor
Science Laboratory	1	Zakiah Binti Adzmi
CAD Laboratory 1	1	Johanis Bin Jamil
CAD Laboratory 2	1	Norsani Bin Abdul Rauf
CAD Laboratory 3	1	Hadisah Binti M.Salleh
Class Room AK1	1	Muhamad Afkar Bin Husin
Class Room 59 & 60	2	Addzrull Hi-Fi Syam Bin Ahmad Jamil
Class Room 61	1	Zainab Binti Abdullah
Class Room 62	1	Syarafun Nisa Binti Zahelem
Class Room 63	1	Muhammad Reduan Bin Abu Bakar

7.2 GENERAL STUDIES DEPARTMENT (JPA)

7.2.1 ORGANIZATION CHART



7.2.2 GENERAL STUDIES DEPARTMENT LECTURERS

No.	Name	Designation	Contact No.	E-mail
1	Azlida Binti Ahmad	Head of Department	04-9886277	azlidaahmad.poli@1govuc.gov.my
2	Jamilah Binti Ismail	Senior Lecturer	04-9886242	jamilahis.poli@1govuc.gov.my
3	Mohd Azmiruddin Bin Mohammad	Senior Lecturer	04-9886274	mdazmir66@gmail.com
4	Marziana Binti Abdullah	Senior Lecturer	04-9886274	marzianabdullah.poli@1govuc.gov.my
5	Razak Bin Nordin	Senior Lecturer	04-9886276	razaknordin.poli@1govuc.gov.my
6	Pisol Bin Nasir	Senior Lecturer	04-9886274	Ibnunasr_jpa@yahoo.com
7	Mohd Nurul Akmal Bin Mat Ariff	Head of Unit	04-9881652	mohdnurulakmal.poli@1govuc.gov.my
8	Zuraiha Binti Mohd. Zain	Head of Unit	04-9881653	zuraiha.poli@1govuc.gov.my
9	Hamdan Bin Zakaria	Lecturer	04-9886273	hamdanzakaria.poli@1govuc.gov.my
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26	Borhannudin Bin Ya	Lecturer	04-9886273	borhannudinya.poli@1govuc.gov.my

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32	Siti Nurfirdaus Binti Mohd Nasir	Lecturer	04-9881657	sitinurfirdaus.poli@1govuc.gov.my
33	Rozalita Binti Saupi	Lecturer	04-9881657	rozalitasaupi.poli@1govuc.gov.my

7.2.3 COURSE LEARNING OUTCOME (CLO)

SEMESTER	COURSE	SYNOPSIS	COURSE LEARNING OUTCOME (CLO)
1	DUB1012 Pengajian Malaysia	PENGAJIAN MALAYSIA memupuk penghayatan ke arah melahirkan generasi yang cintakan negara. Kursus ini juga dapat mendidik kelompok masyarakat yang mempunyai daya juang yang tinggi dan mampu menghadapi cabaran di peringkat antarabangsa. Kursus ini memberi penghayatan tentang sejarah dan politik, perlembagaan Malaysia, kemasyarakatan dan perpaduan, pembangunan negara dan isu-isu keprihatinan negara. Objektif kursus ini adalah untuk melahirkan warganegara yang setia dan cintakan negara, berwawasan serta bangga menjadi rakyat Malaysia. **KREDIT : 2** **PRASYARAT : TIADA**	1. Menerangkan dengan baik sejarah bangsa dan negara. (C2, LD1) 2. Menjelaskan Perlembagaan Malaysia dan sistem pemerintahan negara. (C2, LD1) 3. Melaksanakan aktiviti berkaitan kenegaraan ke arah peningkatan patriotisme pelajar. (C3, LD1 : A3,LD6)
1	DUE1012 Communicative English 1	COMMUNICATIVE ENGLISH 1 focuses on speaking skills for students to develop the ability 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. It is also aimed to equip students with effective presentation skills. **CREDIT(S) : 2** **PRE REQUISITE(S) : NONE**	1. Apply appropriate communication skills in discussions and conversations. 2. (C3) 3. Respond to selected texts using appropriate reading skills.(C2) 4. Respond to current issues / topics of interest in written form. (C2) 5. Apply effective presentation skills.(C3, A3)
2	DUA2012 Sains, Teknologi dan Kejuruteraan Dalam Islam	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. **KREDIT : 2** **PRASYARAT : TIADA**	Di akhir kursus ini, pelajar akan dapat : 1. Menghuraikan konsep Islam sebagai cara hidup. (C2, LD1 : P2, LD2) 2. Menjelaskan konsep sains, teknologi dan kejuruteraan dalam Islam. (C2, LD1) 3. Membincangkan prinsip syariah dan kaedah fiqh dalam sains, teknologi dan kejuruteraan. (C3, LD1 : A3, LD6)

2	DUB2012 Nilai Masyarakat Malaysia	NILAI MASYARAKAT MALAYSIA membincangkan aspek sejarah pembentukan masyarakat Malaysia, nilai-nilai agama serta adat resam dan budaya masyarakat majmuk. Selain itu, pelajar diberi kefahaman mengenai tanggungjawab individu dalam kehidupan dan cabaran-cabaran dalam membangunkan masyarakat Malaysia. **KREDIT : 2** **PRASYARAT : TIADA**	1. Menerangkan sejarah pembentukan masyarakat dan nilai agama di Malaysia. (C2 : LD1) 2. Menghubung kait tanggungjawab individu dalam kehidupan masyarakat dan negara. (C3 : LD1, A2 : LD5) 3. Membincangkan cabaran-cabaran dalam membangunkan masyarakat Malaysia. (C3 : LD1, A3 : LD6)
3	DUE3012 Communicative English 2	COMMUNICATIVE ENGLISH 2 emphasises the skills required at the workplace to describe products or services as well as processes or procedures. It also focuses on the skills to give and respond to instructions. This course will also enable students to make and reply to enquiries and complaints. **CREDIT(S) : 2** **PRE REQUISITE(S) : DUE1012 COMMUNICATIVE ENGLISH 1**	1. Describe products or services related to their field of studies using appropriate language. (C3, A3) 2. Transfer information on processes or procedures using appropriate language from non-linear to linear form. (C3) 3. Listen and respond to enquiries using appropriate language.(C3) 4. Make and respond to complaints using appropriate language.(C3)
5	DUE5012 Communicative English 3	COMMUNICATIVE ENGLISH 3 aims to develop the necessary skills in students to carry out a mini project as well as job hunting. Students will learn to present ideas through the use of graphs and charts. Students will learn the process of job hunting which includes job search strategies and making enquiries. They will also learn to write resumes and cover letters. The students will develop skills to introduce themselves, highlight their strengths and abilities, present ideas, express opinions and respond appropriately during job interviews. **CREDIT(S) : 2** **PREREQUISITE(S) : DUE3012 COMMUNICATIVE ENGLISH 2**	1. Describe information contained in graphs and charts effectively. (C4, A3) 2. Apply job hunting mechanics appropriately. (C3) 3. Respond to interview questions using appropriate language when applying for jobs. (C3)
6	DUA6022 Komunikasi Dan Penyiaran Islam	KOMUNIKASI DAN PENYIARAN ISLAM memfokuskan kepada penguasaan konsep, kemahiran komunikasi dan penyiaran Islam bagi meningkatkan kefahaman pelajar secara holistik terhadap kursus ini. **KREDIT : 2** **PRASYARAT : TIADA**	1. Menjelaskan konsep komunikasi dan penyiaran dalam Islam. (C2 : LD1) 2. Menghubung kait isu-isu semasa dalam komunikasi Islam. (C3, A4 : LD1, LD5) 3. Menunjukkan kemahiran pengurusan dakwah dalam bidang penyiaran Islam. (C3, A3 : LD1, LD6)

6	DUA6032 Tamadun Islam	**TAMADUN ISLAM** diperkenalkan untuk mendedahkan para pelajar terhadap konsep asas dan prinsip Tamadun Islam. Kursus ini juga membincangkan secara terperinci tentang perjalanan sejarah Tamadun Islam yang bermula pada Zaman Rasulullah SAW sehingga kini yang merangkumi pelbagai aspek seperti perkembangan ilmu pengetahuan, politik, ekonomi dan sosial. Di akhir kursus ini pelajar didedahkan dengan perbincangan topik pemikiran Islam dan isu-isu semasa yang berkaitan dengan Tamadun Islam. **KREDIT : 2** **PRASYARAT : TIADA**	Di akhir kursus ini, pelajar akan dapat: 1. Menerangkan konsep tamadun Islam dan perkembangannya (C2, LD1) 2. Menjelaskan konsep kejadian manusia menurut pandangan Islam dan sains. (C2, LD1) 3. Menghuraikan konsep ilmu pengetahuan dalam Islam (C2, LD1) 4. Membincangkan isu-isu kontemporari Tamadun Islam dan kesannya terhadap manusia. (C3, LD1, A2, LD6)
6	DUA6012 Integrasi Malaysia	**INTEGRASI MALAYSIA** memfokuskan perbincangan tentang integrasi dan perpaduan antara kaum di Malaysia merupakan proses hubungan sosial yang dinamik. Tujuan kursus ini untuk meningkatkan pemahaman pelajar-pelajar tentang konsep perpaduan dan integrasi di Malaysia. Ianya menyentuh pembentukan integrasi melalui pembangunan politik, pembangunan ekonomi, dan sosial dalam konteks hubungan kaum di Malaysia. **KREDIT : 2** **PRASYARAT : TIADA**	Di akhir kursus ini, pelajar akan dapat : 1. Menjelaskan konsep asas perpaduan dan integrasi. (C2) 2. Menghubung kait cabaran dalam pembentukan perpaduan dan integrasi melalui sosio budaya, ekonomi dan politik untuk mengekalkan keharmonian antara kaum. (A3, C3) 3. Mempamerkan integrasi melalui penulisan dan lisan secara berkesan di peringkat individu, kumpulan dan masyarakat. (A3, C4)

7.2.4 MATRIX OF COURSE ASSESSMENT (JPA)

SSEMESTER	CODE & COURSE	TYPES OF ASSESSMENT													
1	DUB1012 Pengajian Malaysia	Quiz		Presentation		Group Discussion		E-Folio		Listening Test		Role Play		Final Exam	
		Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%
		2	20	1	20	-	-	1	30	-	-	-	-	1	30
1	DUE1012 Communicative English 1	Quiz		Presentation		Group Discussion		Role Play		Listening Test		Test		Final Exam	
		Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%
		1	10	1	30	1	20	-	-	1	20	1	20		
2	DUA2012 Sains,Teknologi dan Kejuruteraan Dalam Islam	Quiz		Test		Practical		E-Folio		Listening Test		Project		Final Exam	
		Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%
		2	20	-	-	1	20	1	30	-	-	1	30	-	-
2	DUB2012 Nilai Masyarakat Malaysia	Quiz		Test		Practical		E-Folio		Listening Test		Project		Final Exam	
		Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%
		2	20	-	-	-	-	1	30	-	-	2	50	-	-
3	DUE3012 Communicative English 2	Quiz		Test		Presentation		Assignment		Listening Test		Role Play		Final Exam	
		Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%
		-	-	1	20	1	30	1	20	1	10	1	20	-	-
5	DUE5012 Communicative English 3	Quiz		Test		Presentation		Written Task		Listening Test		Mock Interview		Final Exam	
		Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%
		-	-	1	20	1	30	2	20	-	-	1	30	-	-
6	DUA6022 Komunikasi dan Penyiaran Islam	Quiz		Test		Presentation		Written Task		Listening Test		Project		Final Test	
		Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%
		2	20	-	-	1	20	-	-	-	-	1	30	1	30
6	DUA6032 Tamadun Islam	Quiz		Test		Presentation		Written Task		Listening Test		Essay		Final Test	
		Qty	%	Qty	%	Qty	%	Qty	Qty	%	Qty	%	Qty	%	Qty
		2	20	-	-	1	20	-	-	-	-	1	30	1	30

7.2.5 LAB FACILITIES (JPA)

Name	Quantity	Lab Supervisor
Language Laboratory	1	**Language Laboratory 1** Mohd Amir bin Othman Mohd. Azmiruddin Bin Mohammad
	1	**Language Laboratory 2** Mohd Amir bin Othman Mohd Safirol bin Md Yusof
	1	**Language Laboratory 3** Mohd Amir bin Othman Wan Azurin BInti Ahmad Ayob

7.3 CO-CURRICULUM UNIT

Function	Contact Personnel	Contact No
Co-Curriculum Unit is responsible for managing and coordinating all co-curriculum courses in PTSS. It is designed to ensure that all co-curriculum courses to be implemented smoothly and effectively.	**En. Bustamam Bin Bonari** DH48 Head of Department **En. Johanis Bin Mohd Jamil** DH44 Head of Cocurriculum	Ext : 1988 Ext : 1989

7.3.1 DRX 1000 / DRX 2001 / DRX 3002 / DRX 5000 / DRX 6000 – UNIFORMS

The new syllabus for Uniforms unit has came up with new course structures. Students who has the interest in joining the uniforms unit will be required to complete the whole programme which starts from the first semester untill the last semester.

This course emphasizes on the basic skills of team work which includes marching, first aid, fire prevention, protocol and social etiquette, self management and self esteem.

CODE	SEMESTER
DRX 1000 – General Code register in SPMP Specific Code register in i-koko : DRB 1010 – Askar Wataniah DRB 1050 – PISPA DRB 1090 – RELASIS	1
DRX 2001 – General Code register in SPMP Specific Code register in i-koko : DRB 2011 – Askar Wataniah 1 DRB 2051 – PISPA 1 DRB 2091 – RELASIS 1	2
DRX 3002 – General Code register in SPMP Specific Code register in i-koko : DRB 3012 – Askar Wataniah 2 DRB 3052 – PISPA 2 DRB 3092 – RELASIS 2	3

DRX 5000 – General Code register in SPMP Specific Code register in i-koko : DRB 5010 – Askar Wataniah 3 DRB 5050 – PISPA 3 DRB 5090 – RELASIS 3	5
DRX 6000 – General Code register in SPMP Specific Code register in i-koko : DRB 6010 – Askar Wataniah 3 DRB 6050 – PISPA 4 DRB 6090 – RELASIS 3	6

7.3.2 DRX 2001: SPORTS (SEMESTER 2) – GENERAL CODE REGISTER (i-daftar)

DRS 2* :** SPECIFIC CODE REGISTER **(i-koko)**

DRS 2001 are compulsory to be selected by semester 2 students **who did not choose** the uniforms unit in **SEMESTER 1**. General code for this is DRS 2001. There are 17 sports activity offered every semester. The lists are as shown in the table below :

SPORTS	CODE
BADMINTON	DRS2011
BOLA JARING	DRS 2031
BOLA KERANJANG	DRS 2041
BOLA SEPAK	DRS 2051
BOLA TAMPAR	DRS 2061
CATUR	DRS 2071
DART	DRS 2081
HOKI	DRS 2101
PING PONG	DRS 2151
RAGBI	DSR 2161
SEPAK TAKRAW	DRS 2181
SILAT	DRS 2190
SKUASY	DRS 2201
TAE KWON DO	DRS 2221
TENIS	DRS 2231
FUTSAL	DRS 2261
PETANQUE	DRS 2291
RAGBI SENTUH	DRS 2351
PERMAINAN TRADISIONAL	DRS 2361

7.3.3 **DRX 3002 – CLUBS (SEMESTER 3)** – GENERAL CODE REGISTER **(i-daftar)**

DRK 3* ** : SPECIFIC CODE REGISTER **(I-KOKO)**

DRK 3002 are compulsory to be selected by semester 3 students who successfully pass **DRS 2001 - SPORTS** in SEMESTER 2. General code for this is DRK 3002. There are 11 CLUBS AND SOCIETIES activity offered every semester. The lists are as shown in the table below :

CLUBS	CODE
AUDIO VISUAL	DRK 3022
BAHASA INGGERIS	DRK 3032
FOTOGRAFI	DRK 3052
KAUNSELING	DRK 3072
KEMBARA	DRK 3082
KEUSAHAWANAN	DRK 3092
KOMPUTER	DRK 3112
NASYID	DRK 3142
PENGGUNA	DRK 3152
STUDY CIRCLE	DRK 3162
TARIAN TRADISIONAL	DRK 3172
TARANNUM	DRK 3232
BAHASA ARAB	DRK 3252

SUPPORTING SERVICES

8.0 SUPPORTING SERVICES

8.1 STUDENT AFFAIRS DEPARTMENT (HEP)

Our role is to contribute to the mission of Politeknik Tuanku Syed Sirajuddin (PTSS) by partnering with other academic and administrative units to provide professional, creative, accessible, and high-quality services. To fulfill this role, Student Affairs Department seeks to create an environment that is caring and positive for students; practice champion cultural sensitivity and inclusiveness; provide coordinated services to ensurethe student-focused and technologically up to date; and respond positively to change.

Our vision is to eliminate barriers and create opportunities that enable all students to experience success. Our actions are guided by these values:

- the well-being of all students
- innovation in problem solving
- the positive affirmation of student achievement
- professionalism and ethical behavior
- cooperative and collaborative efforts that include enthusiasm, respect, and humor

To accomplish our mission, Student Affairs Department has established the following goals:

- increase retention and completion rates of students
- develop capacity to deliver services to all campus sites
- institute data-driven analysis for planning and decision-making
- improve attitudes toward and participation in student activities and services
- increase new student enrollment at class, overall and in specified programs

Function	Contact Personnel	Contact No
The Student Affairs Department is responsible for managing : a. student admission and registration b. scholarships c. residential College d. discipline and student behaviour e. registration of students' vehicle f. students activities through club / soceity g. alumni h. Student Representatives Committee (MPP) i. student insurance	**Mohd Ruslan Bin Salikin** (Head of Department) DH48	Ext : 6202
	Rosnizam Bin Kamis (Welfare & Discipline Officer) DH44	Ext : 6203
	Mohd Awaluddin Bin Mohamed Bashir (Recruitment and Data Officer) DH41	Ext :1040
	Zulina Binti Yusoff (Walfare Officer) DH41	Ext : 6204
	Nurul Hayati Binti Muda (Administration Assistant Clark) N17	Ext : 6206
	Norfahani Binti Abd Rahim (Administration Assistant Clark) N17	Ext : 6207
	Firdaus Bin Iderus (General Administration Assistant Officer) N1	Ext: 1049

8.2 EXAMINATION UNIT

Function	Contact Personnel	Contact No
Every Polytechnic under the Ministry of Educationis responsible for providing guidance on learning, assessment, control and conduct of the examination. Conferment of Certificate and Diploma to each student is subject to approval and confirmation of Board of Examination and Certificate / Diploma Polytechnic after students have passed all examinations and meet all the requirements of the course. Polytechnic Examination Unit is the unit where responsible for planning, managing and implementing all activities related to student assessment based on the guidelines and evaluationset.	**Azman Bin Mat Hussin** DH44 (Head Of Unit) Examinations Officer	Ext : 6388
	Izan Shuhada Binti Idris DH41 Examinations Officer (Records &Certification)	Ext : 1030
	Mohd Khairudin Bin Saidina Omar DH42 Examinations Officer (Management & Assessment)	Ext : 1037
	Norman Bin Ahmad N11 Assistant Operation	Ext : 6386
	Nafisah Binti Abdullah DH44 Head Coordinator JKE	Ext : 1031
	Hashimi Bin Lazim DH44 Head Coordinator JKM	Ext : 1036
	Nur Hidayah Binti Hassan DH44 Head Coordinator JPH	Ext : 1034
	Nurul Izzati Binti Mohd Noh DH44 Head Coordinator JP	Ext : 1035
	Norul Huda Binti Abdul Razak DH44 Head Coordinator JTMK	Ext : 1011
	Ahmad Fakhruddin Bin Kamaruddin DH41 Head Coordinator JRKV	Ext : 1031
	Nazera Binti Dan DH44 Head Coordinator JMSK	Ext : 1032
	Siti Nurfirdaus Bt Mohd Nasir DH41 Head Coordinator JPA	Ext : 1657

8.3 SPORTS UNIT

Function	Contact Personnel	Contact No
The involvement in co-curriculum creates opportunities for students to develop their talents and interests. To achieve these require commitment, innovation and creativity from both educators and students. It also includes outdoor activities such as sports, uniform units, clubs and societies. The activities should consist of elements that support the physical, emotional, spiritual and intellectual aspects in line with the National Philosophy of Education. The Sports Unit is responsible for: a. managing sports activities inside and outside PTSS compound b. planning and ensuring sports activities are carried out accordingly c. monitoring and keeping record of PTSS athletes d. managing and maintaining the sports facilities e. developing individuality in spiritual, physical and intellectual	**En. Bustamam Bin Bonari** DH48 Head of Department	Ext : 1988
	En. Johanis Bin Mohd Jamil DH44 Head of Cocurriculum	Ext : 1989
	Tn. Syed Azmir Bin Syed Ahmad DH44 Head of Sports Unit	Ext : 6272
	En. Ahmad Zamri Bin Abdul Wahid DH44 Officer of Cultural and Heritage Unit	Ext : 6275 / 1988
	En. Nik Mohd Sofri Bin Nik Abdul Hamid DH41 Cocurriculum - Clubs and Societies	Ext : 6340
	En. Shamsul Anuar Bin Abd Aziz DH44 Cocurriculum – Sports	Ext : 6344
	En. Mohd Zubir Bin Yahaya DH44 Cocurriculum – Uniforms	Ext : 6344
	En. Amirul Affendi Bin Adnan S41 Youths and Sports Officer	
	Pn. Nurul Asmad Bt. Che Harun S41 Youths and Sports Officer	
	En. Saiful Bin Ishak N11 General Office Assistant	

8.4 LIBRARY UNIT

Function	Contact Personnel	Contact No
The library provides quality and up-to-date information to everyone in terms of managing and providing access to information resources. Taking the role as a centre of knowledge, the library acts as a catalyst and assists in the teaching and learning and research in the process of producing creative and innovative semi professional. The Library Unit is also an instrument in inculcating the reading culture among PTSS and the local communities through an ongoing reading campaign. Among the many objectives of the library unit are: a. to acquire relevant and current information for reference b. to manage a collection of information using a standard system for easy access. c. to provide quality information service and cultivate interest in reading d. to support the organization's objectives in teaching, learning and research.	**Ismail Bin Harun** S44 Librarian **Shahrifatulzzainiyah Bt AbdRahman** S32 Assistant Librarian **Nur Salizah Ng Abdullah** S19 Library Assistant **Nur Dalila Bt Azahari** S19 Library Assistant **Nor Hafiza Bt Zakaria** S19 Library Assistant **Zafilah Bt Ismail** S19 Library Assistant **Mohd. Rizal Bin Md. Zahid** C19 Library Assistant **Circulation Counter**	Ext : 6377 Ext : 6378 Ext : 1672 Ext : 1672 Ext : 1672 Ext : 1672 Ext : 1672 Ext : 1673

8.5 LIAISON & INDUSTRIAL TRAINING UNIT

Function	Contact Personnel	Contact No
The Liaison & Industrial Training Unit (UPLI) is responsible for managing students' industrial training affairs. Students will be assigned to a particular organization during their training period based on their respective fields of study. The placement process is finalised before training commences. Students are constantly advised to maintain a high level of discipline. They should abide by the rules and regulations of both the polytechnic and organization. Organizations are advised to consult the polytechnic immediately if there are any disciplinary problems. The objectives of this programme can be summarized as follows: a. to foster a positive character and traits among students b. to develop better communication skills c. to practise good work ethics and conform to rules and regulations d. to expose students to the working environment e. to produce daily report on the training	**Mazrul Hisyam Bin Mat Ali** DH44 (Head of Unit) Liaison & Industrial Training Officer **Mohd Zulfabli Bin Hasan** DH41 Liaison & Industrial Training Officer (Training) **Noor Farhani Binti Mohd Alui** DH41 Liaison & Industrial Training Officer (Liaison) **Marsyita Binti Kassim** N19 Assistant Administrator **Norazlina Binti Abd. Muttoleb** DH44 Head Coordinator JKE **Mohd Fadhli Bin Ahmad** DH44 Head Coordinator JKM **Saiful Bin Mohamed Shuib** DH41 Head Coordinator JPH **Mohd Fardelie Bin Ramli** DH29 Head Coordinator KHK **Mohd Shamsul Bin Ismail** DH44 Head Coordinator JP **Siti Nurdiana Binti Abu Bakar** DH41 Head Coordinator JTMK **Juniza Binti Zamri** DH44 Head Coordinator JRKV	Ext : 6244 Ext :1021 Ext :1020 Ext : 6243 Ext : 1808 Ext : 6284 Ext : 6261 Ext : 6264 Ext : 6521 Ext : 6295 Ext : 6365

8.6 RESIDENTIAL COLLEGE

The uniquely modern PTSS hostel can easily accommodate a total of 3600 students. Students in semester one have the opportunity to enjoy the facilities provided on campus in addition to a comfortable and conducive living environment. Students are placed in the hostel to instill good learning habit, moral values, integration and friendship among students of different race, religion and culture.

<table>
<tr><th colspan="2">Contact Personnel</th></tr>
<tr><td>Principle of Residential College
Pn Nazimah Binti Saad
Tel : 04-9886200, Ext :6355</td><td>Supervisor of Residential College
Pn Saodah Binti Abdullah
Tel : 04-9886200, Ext : 6354</td></tr>
<tr><th colspan="2">Medical Assistant</th></tr>
<tr><td colspan="2">Muhammad Fauzee Bin Asuar</td></tr>
<tr><th colspan="2">Wardens</th></tr>
<tr><td colspan="2">Mohd Zubir Bin Yahaya — Chief Warden
Johanis Bin Mohd Jamil — Deputy Chief Warden
Nur Adlina Binti Hj. Mohd — Deputy Chief Warden</td></tr>
<tr><td>En. Abu Hanifah Bin Mohd Said
En Azran Bin Abdul Razak
En Borhannudin Bin Ya
En Fazly Shahril Bin Norizan
En King Diaw a/l Eh Sut
En Mohd Awaludin Bin Mohamed Bashir
En Mohd Fadzil Bin Allias
En Mohd Fardelie Bin Ramli
En Mohd Firdaus Bin Che Radzi
En Mohd Nurul Akmal Bin Mat Ariff
En Mohd Safirol Bin Md Yusof
En Mohd Shabri Bin Hassan
En Norazrizal Bin Norazmi
En Shamsul Anuar Bin Abd. Aziz
En. Mohd Azha Bin Ismail
En. Mohd Kamarul Ariffin Bin Mohamad Azmi
En. Mohd Ridzuan Bin Abdul Rahman
En. Mohd Rizal Bin Hussain
En. Saiful Bin Mohamed Shuib
En. Zulkifli Bin Sulaiman</td><td>Cik Mime Azrina Binti Jaafar
Cik Zainab Binti Abdullah
Pn. Balqis Binti Ahmad Shahar
Pn. Ku Shazwani Binti Ku Azizan
Pn. Mahirah Binti Rafie
Pn. Nor Arinah Binti Mohamed Zemudin
Pn. Nurishah Binti Wahab@Abdul Wahab
Pn. Rafidah Binti Jaafar
Pn. Rosmini Binti Abdul Rahman
Pn. Rozalita Binti Saupi
Pn. Salasiah Binti Noordin
Pn. Siti Aishah Binti Kadir</td></tr>
</table>

8.7 PSYCHOLOGY AND CAREER UNIT

Function	Contact Personnel	Contact No
The Psychology and Career Unit works on implementing the Human Capital Development program based on psychological approaches which include aspects of development, prevention, rehabilitation and intervention. In addition, this unit also provides counseling and professional guidance to ensure semi professional work force is well balanced mentally and physically. The Psychology and Career unit is responsible for: a. raising self awareness and surroundings b. highlighting ones' potential c. developing multi skills d. promoting studies opportunities e. promoting career opportunities	**Wan Kamariah Binti Wan Mat** S41 (Head of Unit) Psychology and Career Officer **Norzila Binti Mhd Noor** S41 Psychology and Career Officer **Raja Rabiatum Adawiyah Bt Raja Mamat** S41 Psychology and Career Officer	Ext : 6208 Ext : 6205 Ext : 1100

8.8 UNIT FOR INSTRUCTIONAL DEVELOPMENT AND MULTIMEDIA

Function	Contact Personnel	Contact No
The Unit for Instructional Development and Multimedia (UIDM) is one of the support unit for Academic and Administration in PTSS. The main functions are: a. Advising and guiding in Instructional Development for the purpose of Learning and Teaching. b. Provide sufficient skill and Audio Visual equipment for any activities (on campus/outside of campus) based on frequent application. c. Supervise in-term of skill and facilities/equipment for any activities by students/lecturers. d. UIDM as Audio Visual Committee for any major events on campus such as Convocation, Students Registration Day, major celebrations and assembly. e. Documentation Record any events on/off campus through video and photo for the purpose of archives. f. As committee for Design & Printing for most of the major events on campus.	**Mohamad Naaim Bin Md Zain** DH41 (Head of Unit) Multimedia & Resource Officer **Mohammad Shahiran Bin Salim** DH41 Multimedia & Resource Officer **Ahmad Norhaizam Bin Ahmad Rosli** B19 Photographer **Muhamad Fadzwan Bin Amir Roslan** B19 Designer **Syed Shafirul Bin Wan Idrus** B19 Designer **Shukri Bin Abdullah** JA29 Assistant Engineer **Oszamry Bin Othman@Ismail** N11 Assistant Operation	Ext : 6380 Ext : 6380 Ext : 1693 Ext : 1690 Ext : 1690 Ext : 1693 Ext : 1693

8.9 INFORMATION TECHNOLOGY & COMMUNICATION UNIT

The Information & Communication Technology Unit (UTMK) is one of the support unit for Academic and Administration in PTSS. The main function of UTMK is: a. Monitor and maintain ICT equipment and campus local network. b. Coordinate the acquisition of hardware, software and computer networks to meet the set standards and avoid duplication in procurement. c. Supervise the movement of ICT equipment. d. Acting as the system administrator for application system such as SPMP, HRMIS and etc.	**Saifulazmi Bin Tayib** F44 (Head of Unit) Information Technology Officer	Ext: 6345
	Nor Hafizah Binti Khadzir F41 Information Technology Officer	Ext: 6346
	Suria Binti Shaari F41 Information Technology Officer	Ext: 6349
	Safariza Binti Md Fazil F29 Assistant Information Technology Officer	Ext: 6347
	Marina Binti Meor Lizi F29 Assistant Information Technology Officer	Ext: 1502
	Sasnidar Binti Yusri F29 Assistant Information Technology Officer	Ext: 1501
	Mohamad Razali Bin Mohamad Ismail FT22 Assistant Information Technology Officer	Ext: 1504
	Muhamad Kamalhamdy Bin Kamaludin FT29 Assistant Information Technology Officer	Ext: 1507
	Mohamad Khairul Fazmi Bin Jamaludin FT19 Assistant Information Technology Officer	Ext: 1503
	Nurul Fara Binti Noor Azman Raman FT19 Assistant Information Technology Officer	Ext: 1508

Function	Contact Personnel	Contact No
	Ridzuan Bin Yaakob FT29 Assistant Information Technology Officer	Ext: 1508
	Zuraidah Binti Ghazali FT29 Assistant Information Technology Officer	Ext: 6348
	Mohd Rifaiz bin Mohd Razali FT19 Computer Technician	Ext: 6348

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