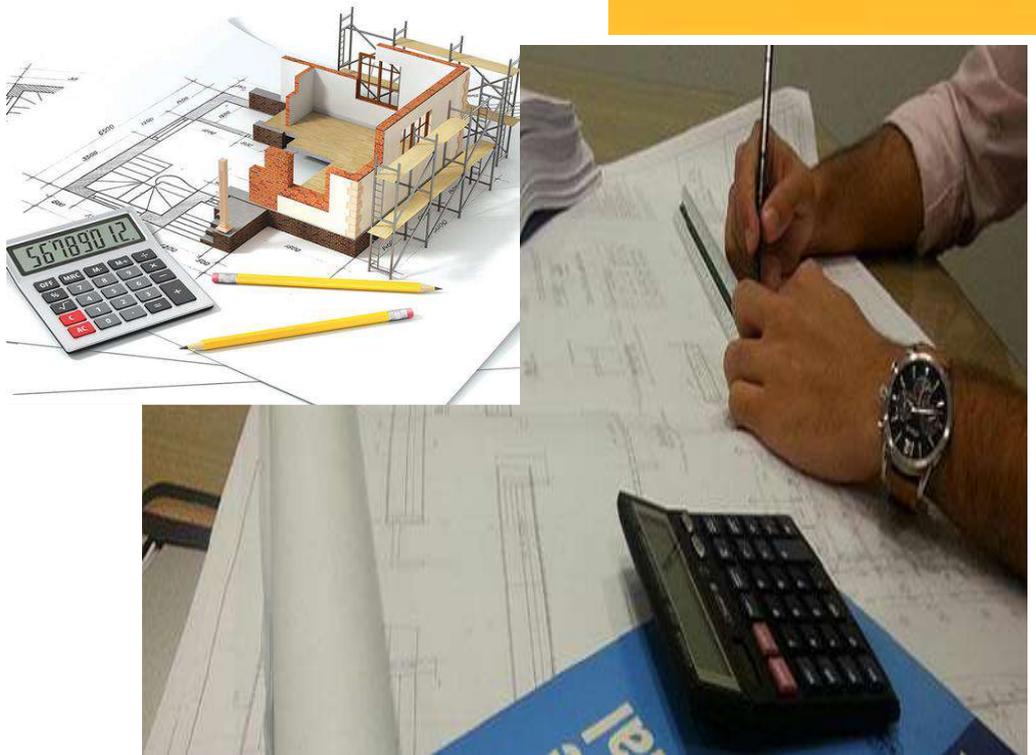


# DIPLOMA IN QUANTITY SURVEYING PROGRAMME HANDBOOK



**DEPARTMENT OF CIVIL ENGINEERING**



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## 1.0 INTRODUCTION

Politeknik Sultan Abdul Halim Mu'adzam Shah (POLIMAS) is a comprehensive, learner centred 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.

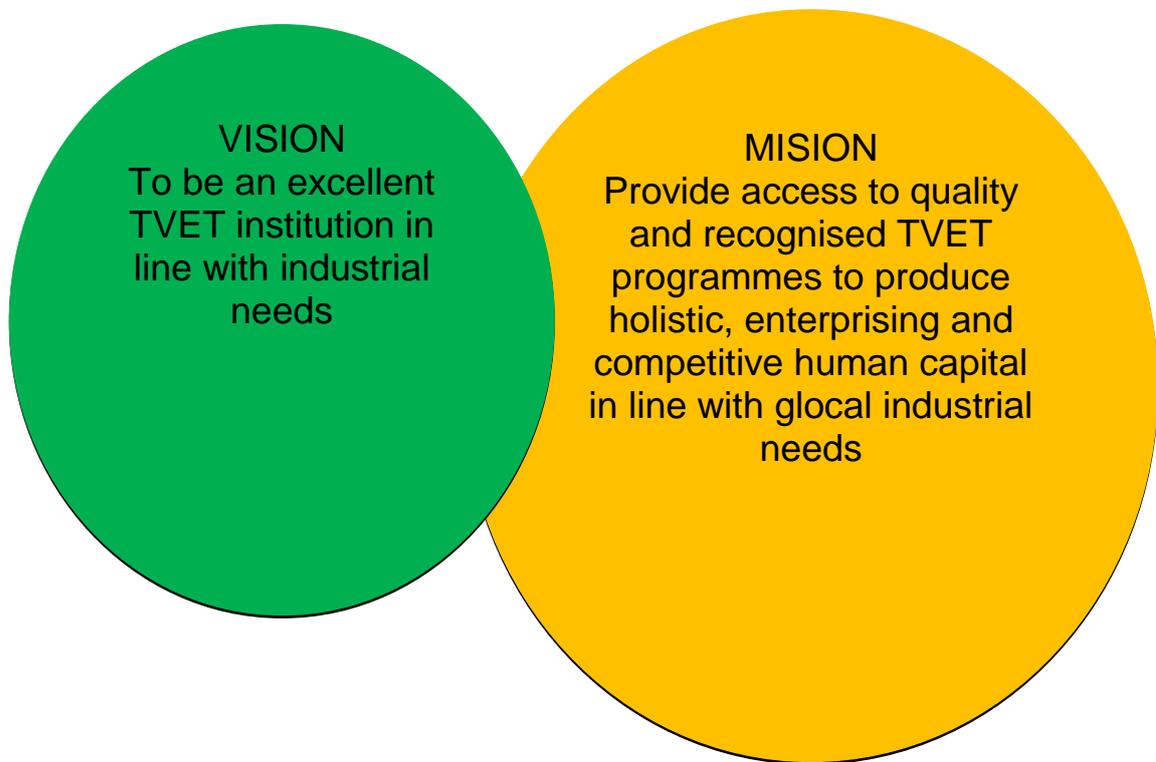
POLIMAS programmes include a variety of Outcome-Based Education teaching approaches, adding value to POLIMAS teaching and learning which cater to students seeking a quality polytechnic education and training.

The DIPLOMA IN QUANTITY SURVEYING PROGRAMME Handbook provides students with information on many facets of college life such as policies, procedures, and services. It is written for every student enrolled on the DIPLOMA IN QUANTITY SURVEYING PROGRAMME at POLIMAS.

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

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

## 2.0 VISION & MISSION OF POLIMAS



### QUALITY OBJECTIVES

#### ACADEMIC EXCELLENCE

- To ensure 90% passing rate and at least 25% at the Programme achieve a GPA grade above 3.00.

#### STAFF EXCELLENCE

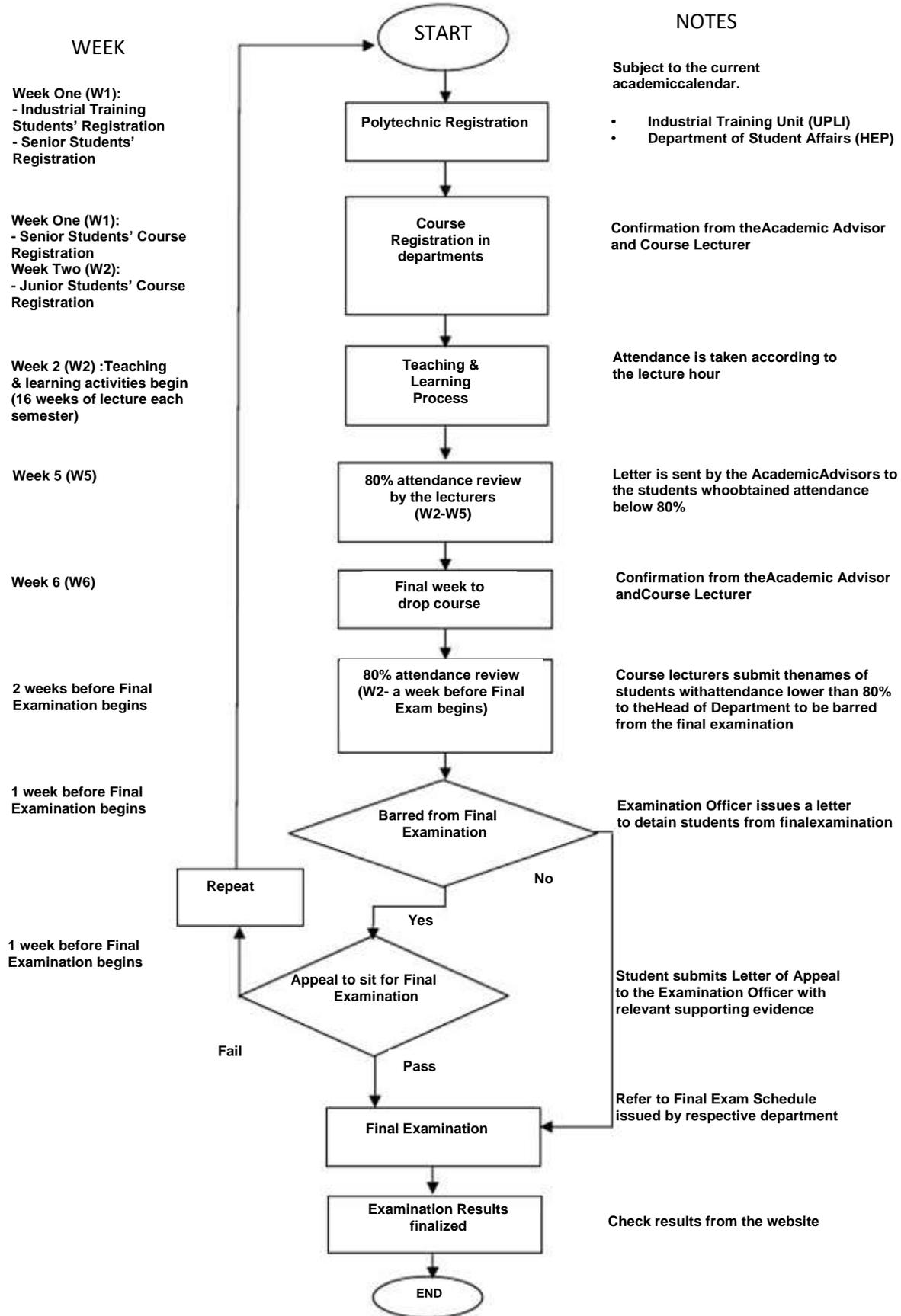
- To ensure members of the staff attend a minimum of 7 days training annually and 85% of the staff training plan is executed.

#### PROCESS EXCELLENCE

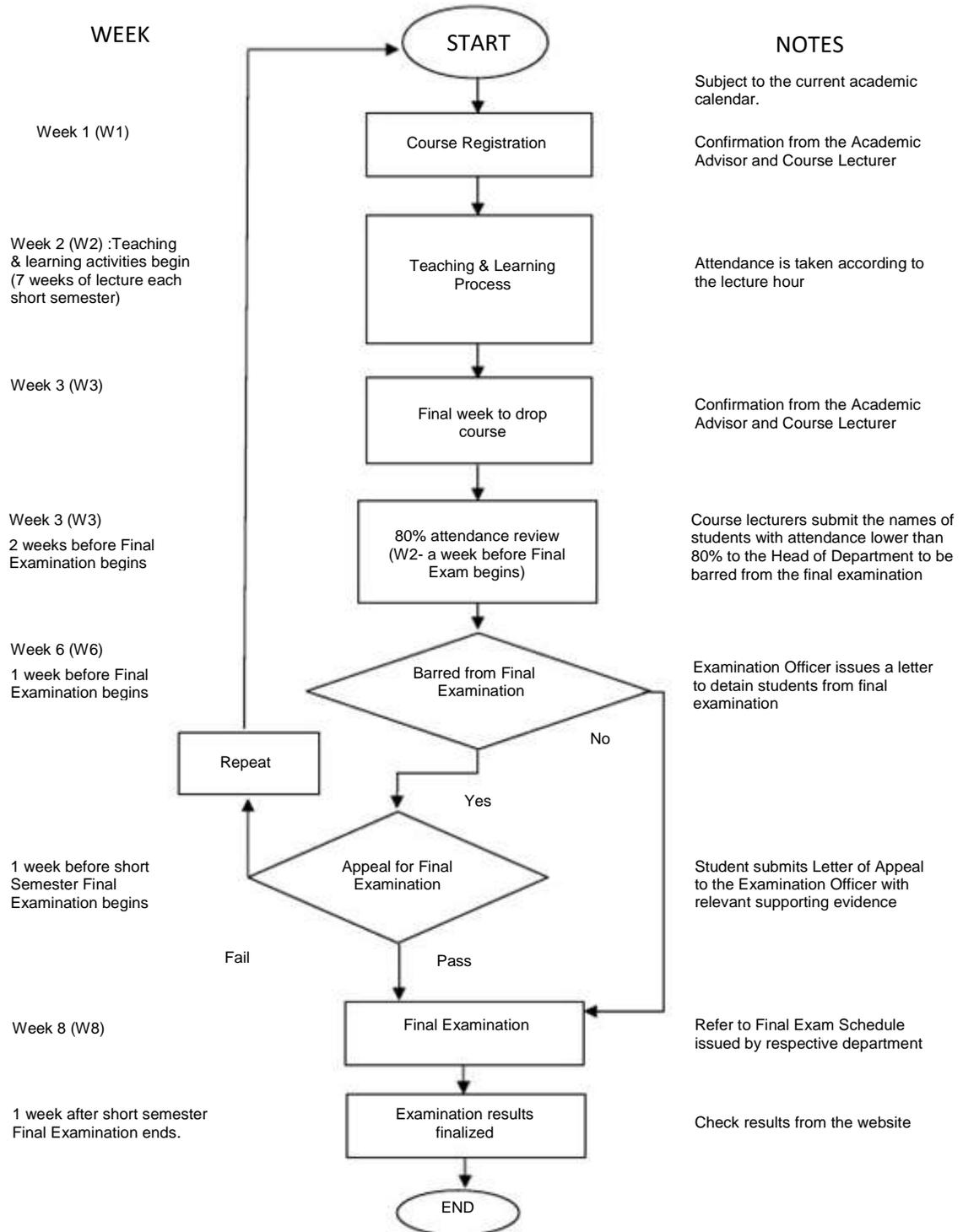
- To ensure all procedures are effectively implemented/ achieved according to key performance indicators (KPIs).

### 3.0 AKADEMIC FLOW CHART

#### ACADEMIC FLOW CHART FOR SEMESTER



## ACADEMIC FLOW CHART FOR THE SHORT SEMESTER

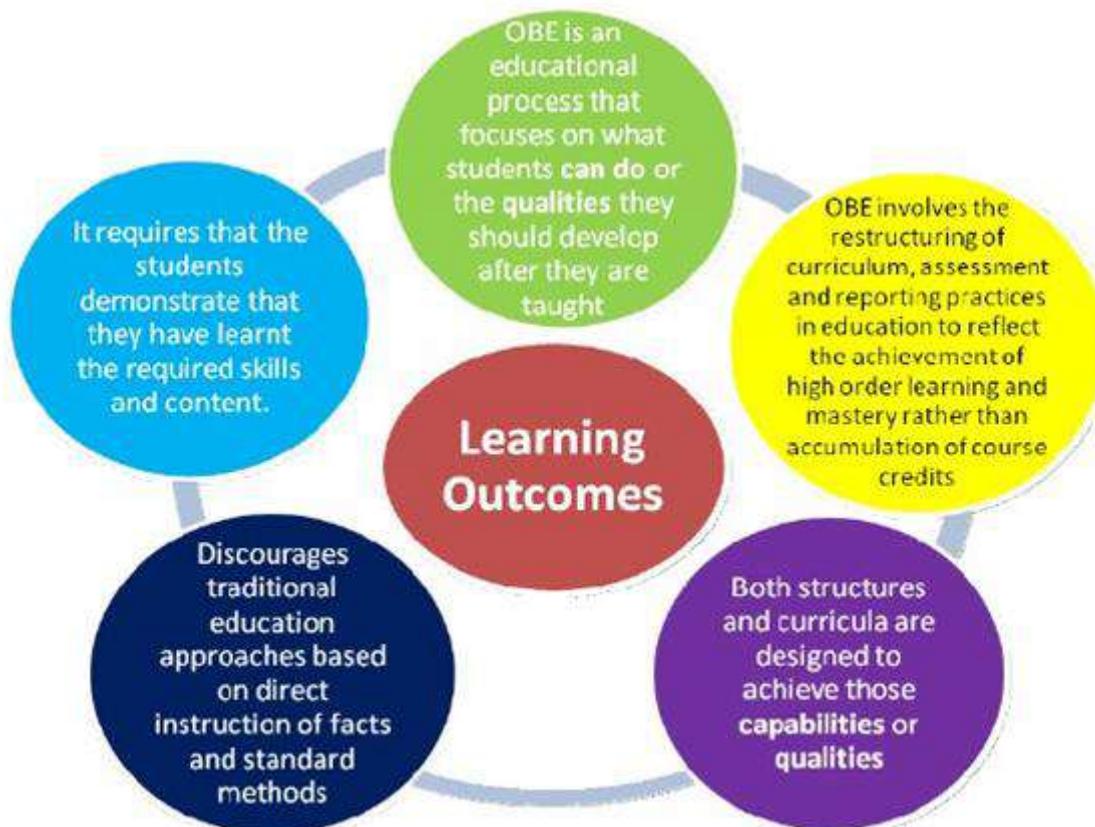


#### 4.0 OUTCOME-BASED EDUCATION [OBE]

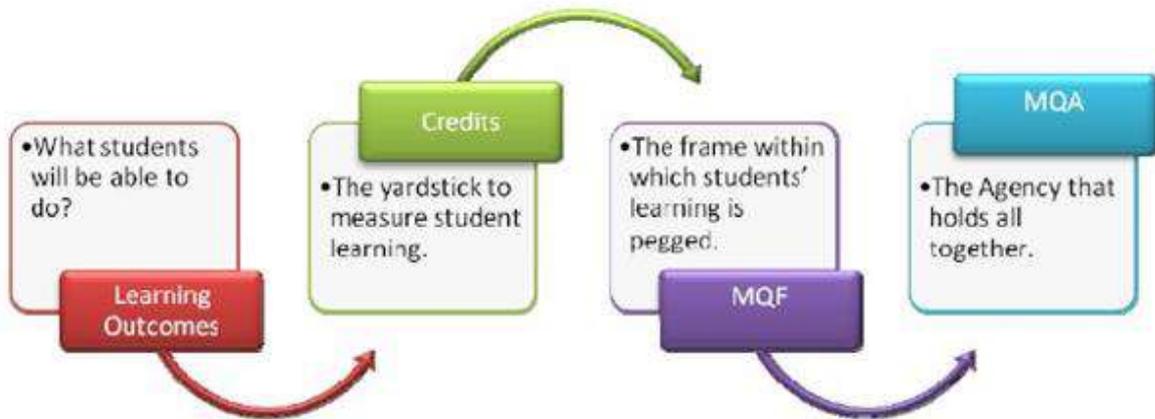
Outcome-based education (OBE) is an educational model for students to demonstrate their knowledge and able to perform according to the required outcomes. It is a student-centered approach that focuses on students' learning. It starts with a clear picture of what students should know, what they should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

OBE helps students to be aware of what they should learn, aware of what they are learning and the control over their 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.

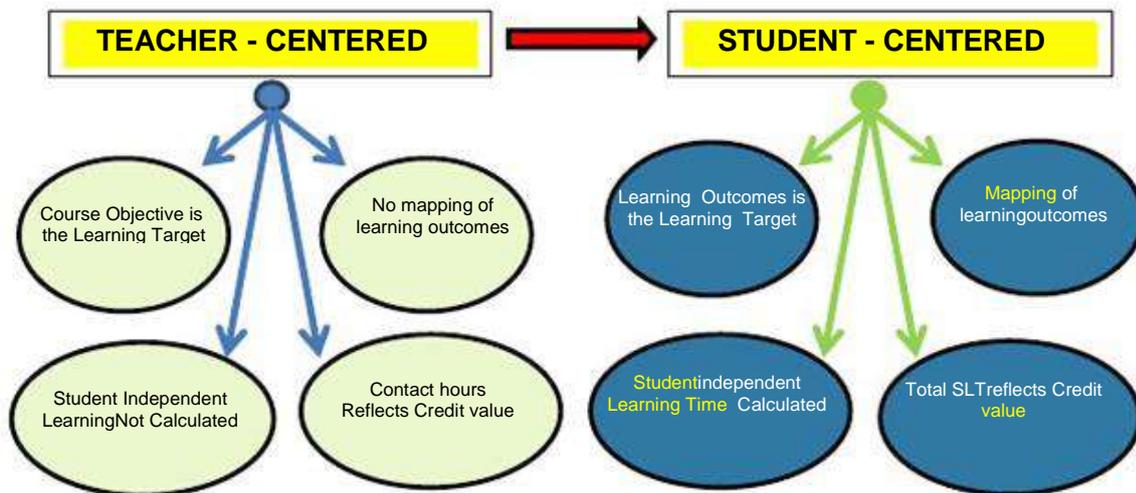
#### 4.1 WHAT IS OUTCOME-BASED EDUCATION [OBE]



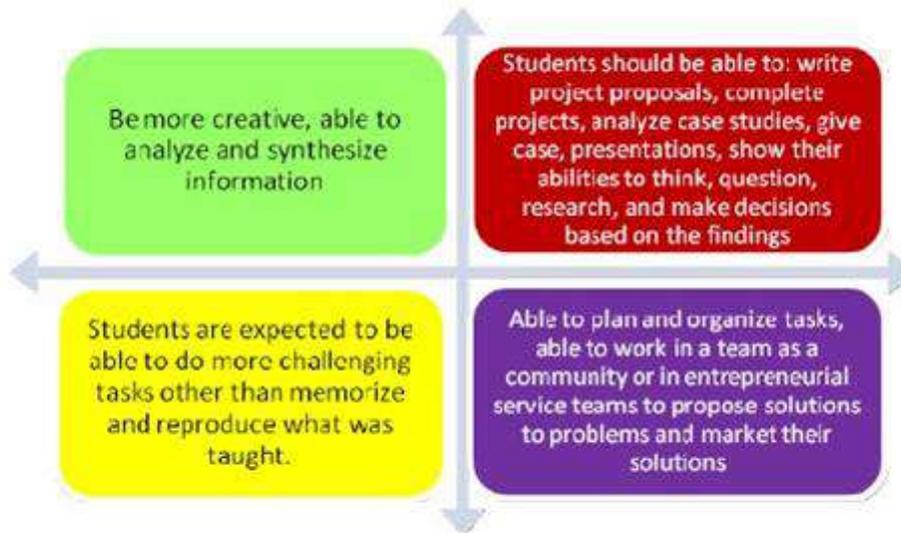
## 4.2 ACCREDITATION PROCESS



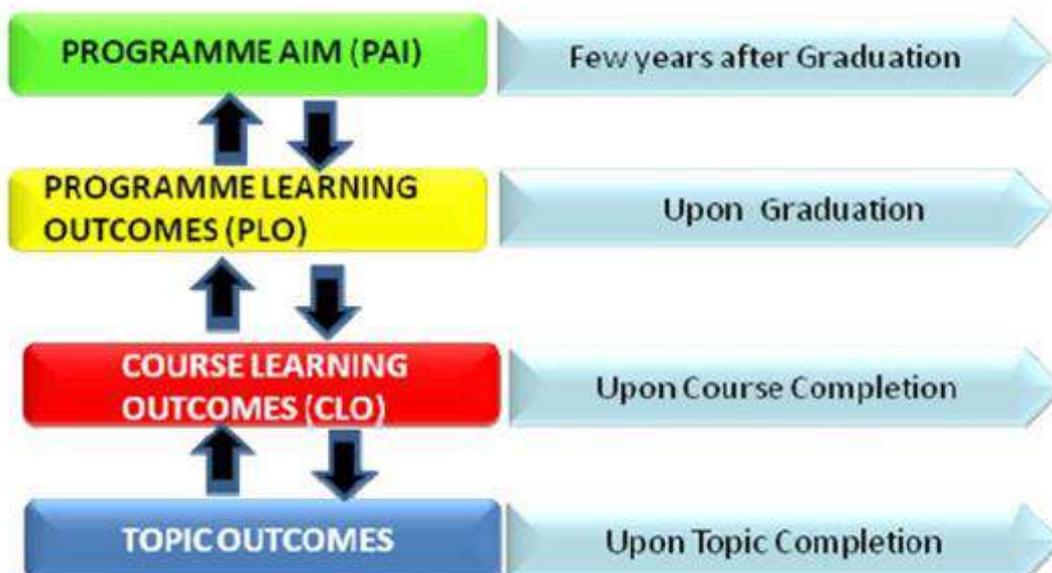
## 4.3 HOW DOES OBE AFFECT TEACHING-LEARNING



#### 4.4 EXPECTATIONS ON STUDENTS



#### 4.5 DIFFERENT LEVELS OF OBE

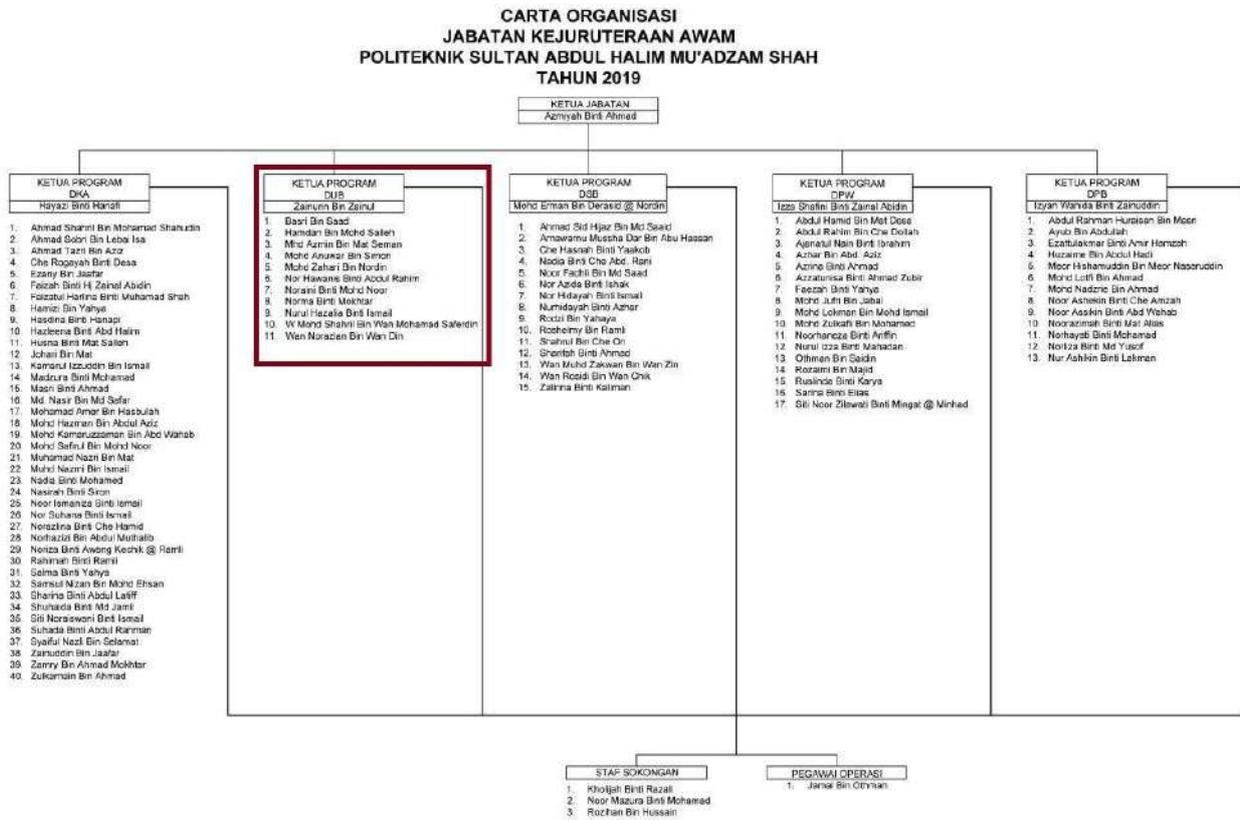


#### 4.6 EXPECTED LEARNING DOMAIN

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 CIVIL ENGINEERING DEPARTMENT

### 5.1 CIVIL ENGINEERING DEPARTMENT ORGANISATION CHART



## 5.2 QUANTITY SURVEYING PROGRAMME LECTURERS



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## **5.3 DIPLOMA IN QUANTITY SURVEYING PROGRAMME**

### **5.3.1 PROGRAMME OVERVIEW**

#### SYNOPSIS

The Diploma in Quantity Surveying course will expose the students to the basic aspects of knowledge in Quantity Surveying theoretically and practically. The programme will be carried out in both theoretically and practically such as lecture, studio work, computer theories and practical training at firms. The scope of the program covers the following areas :

- a. Measurement
- b. Construction economics
- c. Professional practice
- d. Management
- e. Construction legal and law
- f. Procurement and contract
- g. Construction and services

The graduates from this programme will have the potential to work in both private and government sector. In addition, they will also have opportunities to further their studies in other higher learning institutions.

### **5.3.2 JOB PROSPECT**

This programme provides the knowledge and skills in Quantity Surveying and can also be applied to a broad range of careers. The knowledge and skills that the students acquire from the programme will enable him or her to participate in the job market as:

1. Assistant Quantity Surveyor
2. Contractor
3. Lecturer/Teacher/Trainer
4. Taker Off / Measurer
5. Contract Officer

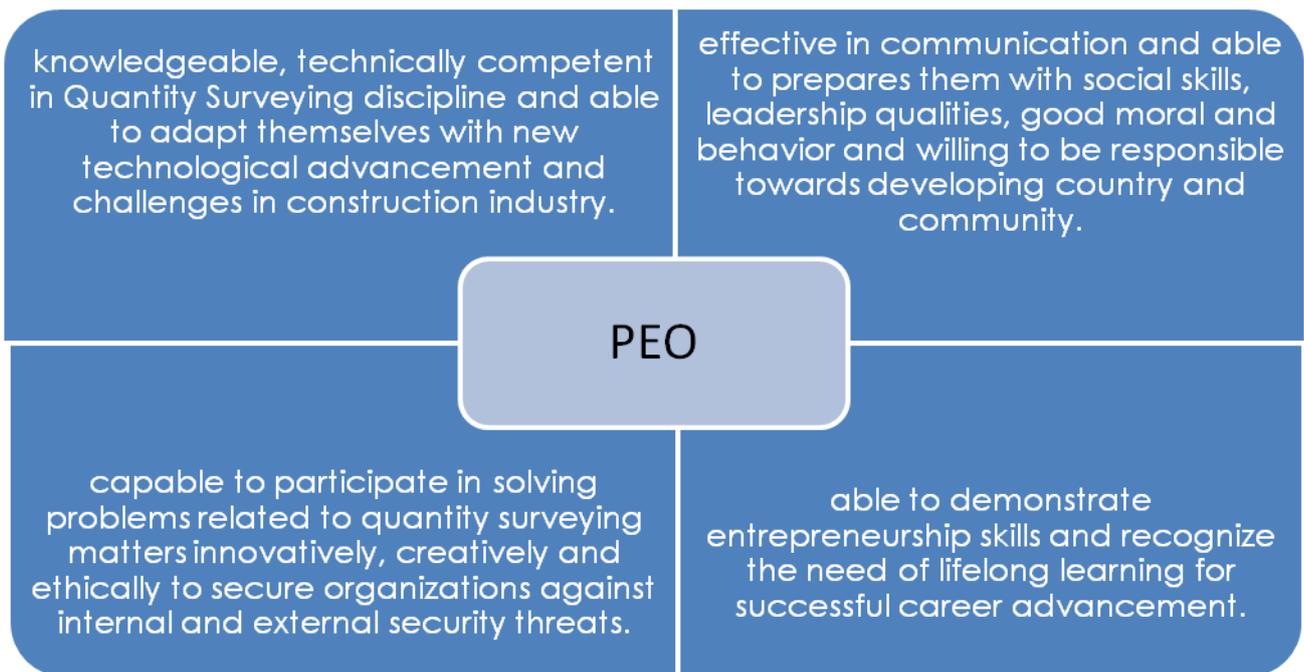
6. Assistant Contract Manager
7. Purchasing Officer
8. Insurance Officer
9. Assistant Project Manager
10. Assistant Project Coordinator
11. Site Supervisor

### 5.3.3 PROGRAMME AIMS

The Diploma in Quantity Surveying graduates in Polytechnics, Ministry of Education will have knowledge, technical skills and good attitude to adapt themselves to new technological advancement and challenges in construction industry.

### 5.3.4 PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The Diploma in Quantity Surveying programme shall produce semi professionals who are:



### 5.3.5 PROGRAM LEARNING OUTCOMES (PLO)

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

- PLO 1** • possesses and apply quantity surveying knowledge.
- PLO 2** • demonstrate technical skills in quantity surveying practices.
- PLO 3** • contribute and communicate effectively with other professionals and community.
- PLO 4** • identify and solve related problems regarding to quantity surveying.
- PLO 5** • apply the social skill and responsibilities.
- PLO 6** • recognize the contemporary knowledge and technologies in term of lifelong learning.
- PLO 7** • apply basic entrepreneurship skills for future career development.
- PLO 8** • apply the Quantity Surveyor's professional role and ethical responsibilities.
- PLO 9** • contribute effective leadership and teamwork responsibility.

### 5.3.6 PROGRAMME STRUCTURE FOR DIPLOMA IN QUANTITY SURVEYING

No.	Grouped Course	Status (Major, Minor, Elective)	Total Credit	Total Contact Hour	Duration (Semester)
1.	Building Works Measurement	Major (C)	18	26	5
2.	Construction Technology	Major (C)	9	9	3
3.	Professional Practice	Major (NC)	6	7	3
4.	Building Services	Major (NC)	4	4	2
5.	Estimating	Major (C)	4	6	2
6.	Economics	Minor	4	4	2
7.	Principle of Structure	Minor	2	3	1
8.	Drafting Fundamentals	Minor	2	3	1
9.	Principle of Law	Minor	2	2	1
10.	Basic Engineering Surveying	Minor	2	4	1
11.	Civil Engineering Works Measurement 1	Major (NC)	2	3	1
12.	Contract Administration	Major (NC)	2	2	1
13.	Management	Major (NC)	4	5	2
14.	Quantity Surveying Project	Major (NC)	3	5	1
15.	Occupational Safety and Health	Minor	2	2	1
16.	Entrepreneurship	Minor	2	3	1
17.	Statistics	Minor	2	2	1
18.	Pengajian Malaysia	Minor	2	3	1
19.	Communicative English	Minor	6	9	3
20.	Unit Beruniform	Minor	3	8	3
21.	Sukan/ Kelab	Minor	3	6	2
22.	Sains, Teknologi dan Kejuruteraan Dalam Islam	Minor	2	3	1
23.	Nilai Masyarakat Malaysia	Minor	2	3	1
24.	Komunikasi dan Penyiaran Islam	Minor	2	3	1
25.	Land Laws and Regulations	Elective	2	2	1
26.	Value Management	Elective	2	2	1
27.	Civil Engineering Works Measurement 2	Elective	2	3	1
28.	Foreign Language	Elective	2	3	1
29.	Computer Application	Elective	2	3	1
30.	Multimedia Production	Elective	2	3	1
31.	Introduction to Green Construction	Elective	2	2	1

No.	Grouped Course	Status (Major, Minor, Elective)	Total Credit	Total Contact Hour	Duration (Semester)
32	Industrial Training				
Grand Total QS Programme		-	99	143	-

### 5.3.7 SYNOPSIS AND COURSE LEARNING OUTCOMES (CLOs)

Sem	Course	Synopsis	Course Learning Outcome
1	DCQ 1102 PRINCIPLE OF STRUCTURE	Course provides knowledge regarding the ability and moment, ability and balance, shear force and bending moment and characteristics of structural parts  <b>Total Credits / Value : 2</b> <b>Pre-requisite : None.</b>	By the end of the course, students should be able to : 1. Explain the appropriate structures analysis in the application of building construction. 2. Apply the shear force and bending moment for simply supported beam. 3. Demonstrate ability to participate in critical thinking to solve problems of structures within a stipulated time frame.
	DCQ 1112 PROFESSIONAL PRACTICE 1	Course exposes student to the introduction to quantity surveying profession, introduction to pre contract procedure, stages of a project and roles of building team members in construction project. This course also focusing on types and procedure of tender.  <b>Total Credits / Value : 3</b> <b>Pre-requisite : None.</b>	By the end of the course, students should be able to : 1. Explain clearly the background of quantity surveying profession, the role of building team members, stages of a project and the involvement of a quantity surveyor in pre-contract stages. 2. Demonstrate good communication skill in oral presentation assigned topic(s) within a stipulated time frame. 3. Demonstrate ability to lead a team to complete assigned task within a stipulated time frame.
	DCQ 1012 DRAFTING FUNDAMENTALS	Provides students' knowledge regarding the basic principles of architectural and structural drawings. The course emphasizes on basic drawings such as orthographic projection, isometric and section. It also covers construction drawings, structural drawings, diagrammatic plumbing and sanitary and layout.	By the end of the course, students should be able to : 1. Classify clearly the usage of drawing tools and methods of basic drawing. 2. Draw the architectural and structural drawing according to the drafting technique. 3. Demonstrate an understanding of drafting technique during practical work sessions.

		<b>Total Credits / Value : 2</b> <b>Pre-requisite : None.</b>	
	DCQ 1023 CONSTRUCTION TECHNOLOGY 1	Course exposes student to the concept and the basic principles of construction technology in building works. The course emphasizes on piling works, work below lowest floor finish and structural frame. Students are given information on the latest construction technology.  <b>Total Credits / Value : 3</b> <b>Pre-requisite : None.</b>	By the end of the course, students should be able to :  1. Explain correctly the uses of basic construction materials in a building. 2. Explain clearly the construction of temporary structures, substructure works and structural frame. 3. Demonstrate good communication skills in oral presentation on assigned topic(s) within a stipulated time frame.
	DCQ 1053 BUILDING WORKS MEASUREMENT 1	Course provides students knowledge on the development and the importance of quantity surveying profession globally. This content comprises of the basic principles of quantity measurement, method of recording measurement in the dimension paper, procedures related to standard method of measurement, preliminaries and preamble. It also provides students the skills and expertise to practice basic quantity measurement studies.  <b>Total Credits / Value : 3</b> <b>Pre-requisite : None.</b>	By the end of the course, students should be able to :  1. Explain the importance of bill of quantities, standard method of measurement, preliminaries and preamble in quantity surveying profession. 2. Arrange the procedure to produce the bill of quantities for substructure works according to Standard Method of Measurement 2 (SMM2). 3. Measure the quantities for substructure works according to SMM2. 4. Demonstrate an understanding of quantity surveying professional code of conduct in building measurement works based on SMM2.
2	DCQ 2162 PRINCIPLE OF LAW	Course provides student the basic knowledge on the legal system in Malaysia and law concepts. The course emphasizes on the use of Law of Contract, Law of Tort and the Uniform Building by-Laws in the execution of construction project. This course also provides students with a broad range of perspectives and information in real construction task.  <b>Total Credits / Value : 2</b> <b>Pre-requisite : None</b>	By the end of the course, students should be able to :  1. Apply concisely the principles of Malaysian legal system, Law of Contract and Law of Tort in the execution of construction project. 2. Describe correctly the role and function of the Uniform Building by-Laws in the execution of construction project. 3. Demonstrate ability to participate in critical thinking to solve problem related to the principle of law.
	DCQ 2172 BASIC ENGINEERING SURVEY	Course aims to provide students knowledge on matters relating with survey and construction. It assists students understanding in	By the end of the course, students should be able to :  1. Apply the surveying work for compass survey, leveling,

		<p>practicing and demonstrates knowledge and understanding of measuring distances and angles by using levels and theodolite. This course will focus on use of survey instruments; levels and theodolite equipments.</p> <p><b>Total Credits / Value :2</b> <b>Pre-requisite : None</b></p>	<p>theodolite survey and setting out according to surveying technique.</p> <ol style="list-style-type: none"> <li>2. Conduct setting up and used surveying equipment correctly according to manuals.</li> <li>3. Demonstrate ability to work in team to complete assigned tasks during practical work session.</li> </ol>
	<p>DCQ 2033 <b>CONSTRUCTION TECHNOLOGY 2</b></p>	<p>Course gives students the knowledge on the concepts and the basic principle of the construction technology in building works. The course emphasizes on the construction of reinforced concrete upper floor, pre-cast concrete upper floor, timber upper floor, roof and roof finishes, staircases, wall, window, door, finishing works, furniture and fittings works. This course also gives students knowledge on the latest construction technology.</p> <p><b>Total Credits / Value : 3</b> <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Explain clearly the construction of building superstructure.</li> <li>2. Explain correctly the construction of furniture and fittings works</li> <li>3. Demonstrate good communication skill in oral presentation on assigned topic(s) within a stipulated time frame</li> </ol>
	<p>DCQ 2064 <b>BUILDING WORKS MEASUREMENT 2</b></p>	<p>course provides student knowledge on the quantity measurement for buildings and civil engineering works based on Standard Method of Measurement. This content comprises of superstructure works. It covers building frame, upper floor, staircase construction, roof construction, internal and external wall, door and window.</p> <p><b>Total Credits / Value : 4</b> <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Arrange the procedure to produce the bill of quantities for superstructure works according to Standard Method of Measurement 2</li> <li>2. Measure the quantities for superstructure works according to SMM2.</li> <li>3. Demonstrate an understanding of quantity surveying professional code of conduct in building works measurement based on SMM2.</li> </ol>
3	<p>DCQ 3182 <b>ESTIMATING 1</b></p>	<p>gives knowledge on the factors considered in built up rates, preparation of built up rates and tender pricing. All the topics discussed will help the students to carry out an effective built up rate and tender pricing.</p> <p><b>Total Credits / Value : 3</b> <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Compute accurately the built up rates for construction Works.</li> <li>2. Explain the process of tender pricing for construction works Thoroughly.</li> <li>3. Demonstrate ability to participate in critical thinking to solve problems related to estimation</li> </ol>

		works. 4. Demonstrate continuous learning and information management skill while engaging in independent acquisition of new knowledge and skill to develop a project in estimating works.
DCQ 3202 <b>PRINCIPLE OF ECONOMICS</b>	Course provides student knowledge on the concepts and the principles of economy in construction industry. The course covers project development, cash flow, current price and fluctuation cost, cost planning and cost control. This course also exposes student to knowledge on the cost implication on design changes and construction method.  <b>Total Credits / Value : 3</b> <b>Pre-requisite : None.</b>	By the end of the course, students should be able to : 1. 1.Apply the micro economics study in the concept of supply and demand and the market competition to macro economics. 2. Apply the macro economics study on the economic development in relation to the national construction industry. 3. Demonstrate ability to lead a team to complete assigned tasks within stipulated time frame.
DCQ3043 <b>CONSTRUCTION TECHNOLOGY 3</b>	Course exposes students to the technology involved in the construction. The course emphasizes is on the steel structure, long span roof, basement, external works and advance building structure. This course also gives students knowledge on renovation works and site and soil investigation.  <b>Total Credits / Value : 2</b> <b>Pre-requisite : None</b>	By the end of the course, students should be able to : 1. Explain clearly the new concepts of advanced construction technology in building works and the method of construction for civil engineering works.. 2. Demonstrate good communication skill in oral presentation on assigned topic(s) within a stipulated time frame. 3. Demonstrate ability to work in team to complete assignment task within a stipulated time frame.
DCQ 3074 <b>BUILDING WORKS MEASUREMENT 3</b>	Course provides students knowledge on the quantity measurement for building and the civil engineering works. This content comprises of internal and external finishes works, furniture & fittings, earthworks, road works, retaining wall and basement.  <b>Total Credits / Value : 4</b> <b>Pre-requisite : DCQ2064 BUILDING WORKS MEASUREMENT 2</b>	By the end of the course, students should be able to : 1. Arrange the procedure to produce bill of quantities for finishes works, furniture & fittings and civil engineering works according to Standard Method of Measurement 2 (SMM2). 2. Measure the quantities for finishes works, furniture & fittings and civil engineering works according to SMM2. 3. Demonstrate an understanding of quantity

			surveying professional code of conduct in building works and civil engineering works measurement based on SMM2.
	<b>DCQ3122 PROFESSIONAL PRACTICE 2</b>	<p>Course provides student an understanding the pre-contract stage. It covers the work procedures during the pre-contract stage and post contract stage which is the initial stage when tender is prepared up to selection of main contractor, sub contractor and supplier. Hence the course focuses on the tender documents, tender reports, letter of acceptance, the contract, post</p> <p><b>Total Credits / Value : 3</b> <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Explain correctly the involvement of quantity surveyor at pre-contract stage and post contract stage in public and private sector.</li> <li>2. Demonstrate good communication skill in oral presentation on assigned topic(s) within a stipulated time frame.</li> <li>3. Demonstrate ability to lead a team to complete assigned task within stipulated time frame.</li> </ol>
	<b>DCC 3132 STATISTICS</b>	<p>Course provides students knowledge on the fundamental statistical concepts. The course shall expose students on the basic concept of statistics that covers data collection methods and presentation of data, numerical description measures, probability, correlation, regression and application of statistical package for the social science.</p> <p><b>Total Credits / Value : 2</b> <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Use principle and theories to describe the various methods of collecting and processing of data, calculations involved in Measurement of Central Tendencies and Distributions correctly.</li> <li>2. Describe the basic concepts of probability and various methods of sampling in statistics and its relevance in planning correctly.</li> <li>3. Explain and differentiate between regression and correlation, methods applied in obtaining regression lines, Least Square Method, scatter diagram, linear correlation coefficient and determinant correctly.</li> </ol>
	<b>DCQ 5222 CIVIL ENGINEERING WORKS MEASUREMENT 1</b>	<p>Course provides students knowledge and skills in measuring quantities of civil engineering works. The topics covered are the principles of civil engineering works measurement, measuring general items, demolition and site clearance, earthworks and roads and pavings.</p> <p><b>Total Credits / Value :2</b> <b>Pre-requisite : None</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Arrange the procedure to produce bill of quantities for civil engineering works based on Malaysian Civil Engineering Standard Method of Measurement (MyCESMM).</li> <li>2. Measure the quantities for civil engineering works according to MyCESMM.</li> <li>3. Demonstrate an understanding of quantity surveying professional code of conduct in civil engineering works measurement based on MyCESMM.</li> </ol>

	<p>DCQ 5232 <b>CONTRACT ADMINISTRATION</b></p>	<p>Course gives knowledge and understanding on contract administration based on the PWD 203, PWD 203A and PAM Standard Form of Contract. The topics covered in the course are contract documentation, jurisdiction, roles and responsibilities of parties involved, work execution, workmen's welfare, delay and extension of time, completion of works and arbitration. This course also provides students knowledge regarding the importance of performance bond and insurance in construction projects.</p> <p><b>Total Credits / Value : 3</b> <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Explain clearly the relation of issues under post contract administration with related clauses in PWD203/203A and PAM</li> <li>2. Standard Form of Contract.</li> <li>3. Demonstrate good communication skill in oral presentation on assigned topics within a stipulated time frame.</li> <li>4. Demonstrate ability to participate to solve problems related to post contract administration.</li> </ol>
	<p>DCQ 5242 <b>PRINCIPLE OF MANAGEMENT</b></p>	<p>Course provides students knowledge regarding the concept and fundamental principles of project management in the construction industry. The topics covered in the course are basic concepts of management knowledge, planning methods, construction project management and factors in increasing the effectiveness of the management system</p> <p><b>Total Credits / Value :2</b> <b>Pre-requisite : None</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Explain clearly the implementation of the principles of management in an organization.</li> <li>2. Demonstrate awareness of social safety/healthy/needs in assigned topic(s) for assignments.</li> <li>3. Demonstrate ability to work in team to complete assigned tasks during assigned project.</li> </ol>
	<p>DCQ5083 <b>BUILDING WORKS MEASUREMENT 4</b></p>	<p>course provides students knowledge on the quantity measurement for building services works and builder's work in connection with services (BWICS). This content comprises of cold water or hot water supply services, soil, waste &amp; vent pipe system, sanitary fittings and domestic electrical supply services.</p> <p><b>Total Credits / Value : 3</b> <b>Pre-requisite : DCQ3074 BUILDING WORKS MEASUREMENT 2</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Arrange the procedure to produce bill of quantities for building services works and BWICS according to Standard Method of Measurement 2 (SMM2).</li> <li>2. Measure the quantities for building services and BWICS works according to SMM2.</li> <li>3. Demonstrate an understanding of quantity surveying professional code of conduct in building works and civil engineering works measurement based on SMM2.</li> </ol>
	<p>DCQ5192</p>	<p>Gives students knowledge on the</p>	<p>By the end of the course, students</p>

	<b>ESTIMATING 2</b>	<p>definition, purposes, and methods of preliminary cost estimate. All the topics discussed will help the students to carry out an effective preliminary cost estimate. This course also covers knowledge on the cost data, cost index and cost analysis.</p> <p><b>Total Credits / Value : 2</b>  <b>Pre-requisite : DCQ5192 ESTIMATING 1</b></p>	<p>should be able to :</p> <ol style="list-style-type: none"> <li>1. Compute accurately the built up rates and preliminary cost estimate for the construction projects.</li> <li>2. Explain the preparation of cost estimation for construction projects.</li> <li>3. Demonstrate ability to participate in critical thinking to solve problems related to estimation works.</li> <li>4. Demonstrate continuous learning and information management skill while engaging in independent acquisition of new knowledge and skill to develop a project in estimating works.</li> </ol>
	<b>DCQ5212 CONSTRUCTION ECONOMICS</b>	<p>Course provides student knowledge on the concepts and the principles of economy in construction industry. The course covers project development, cash flow, current price and fluctuation cost, cost planning and cost control. This course also exposes student to knowledge on the cost implication on design changes and construction method.</p> <p><b>Total Credits / Value : 2</b>  <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Illustrate clearly the housing development process, costing, cost management and implication for building construction.</li> <li>2. Demonstrate good communication skill in oral presentation on assigned topic(s) within a stipulated time frame.</li> <li>3. Demonstrate ability to lead a team to complete assigned task within a stipulated time frame.</li> </ol>
	<b>DCQ6262 CONSTRUCTION MANAGEMENT</b>	<p>Course exposes students to the construction project management techniques practiced in this country. The course emphasis is on the planning of construction future control and construction site management. This course also gives students knowledge in the implementation of leadership and management tasks.</p> <p><b>Total Credits / Value : 2</b>  <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Explain clearly the planning techniques and site management which are practiced in the construction project.</li> <li>2. Demonstrate good communication skill in oral presentation on assigned topics within a stipulated time frame.</li> <li>3. Demonstrate ability to work in team to complete assigned tasks within a stipulated time frame.</li> </ol>
	<b>DCQ6094 BUILDING WORKS MEASUREMENT 5</b>	<p>Course provides students knowledge on the quantity measurement for steelwork, external work, demolition and renovation works. This content comprises of steel work and external work such as fencing &amp; gate, landscape, drainage &amp;</p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Arrange the procedure to produce bill of quantities for civil engineering works according to Standard Method of Measurement 2 (SMM2).</li> <li>2. Measure the quantities for civil</li> </ol>

		<p>sewerage and water reticulation system. It also covers demolition and renovation works.</p> <p><b>Total Credits / Value : 2</b>  <b>Pre-requisite : DCQ5083</b>  BUILDING WORKS  MEASUREMENT 4</p>	<p>engineering works according to SMM2</p> <p>3. Demonstrate an understanding of quantity surveying professional code of conduct in building works and civil engineering works measurement based on SMM2.</p>
	DCQ6132 <b>PROFESSIONAL PRACTICE 3</b>	<p>Course gives student knowledge on the task of a quantity surveyor in a project. The course emphasize on the definition, purpose and task of quantity surveyor in the preparation of prime cost sum and provisional sum, preliminaries works, preparation of interim payment, variation order and final account.</p> <p><b>Total Credits / Value : 2</b>  <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Apply the procedure for preparation of prime cost sum, provisional sum and payment to a project according to PWD and PAM standard form of contract.</li> <li>2. Demonstrate good communication skill in oral presentation on assigned topic(s) within a stipulated time frame</li> <li>3. Demonstrate ability to work in team to complete assignment tasks within a stipulated time frame.</li> </ol>
	DCQ6253 <b>QUANTITY SURVEYING PROJECT</b>	<p>Course enables students to apply knowledge and technical expertise gained throughout the semester. It requires the students to prepare Bills of Quantities by using computer. This course also offers experience in communication skills, group work, work planning, decision making and also critical and creative thinking.</p> <p><b>Total Credits / Value : 3</b>  <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Organize a work programme to prepare bills of quantities accurately.</li> <li>2. Measure the quantities for construction works according to Standard Method of Measurement.</li> <li>3. Demonstrate continuous learning and information management skill while engaging in independent acquisition of new knowledge and skill to develop a project.</li> <li>4. Demonstrate ability to lead a team to complete assigned project within a stipulated time frame.</li> </ol>
	DCQ6272 <b>VALUE MANAGEMENT</b>	<p>Exposes students to value management concepts and its background. The course emphasizes on the method of implementing value management studies in the construction industry. The course also covers the concept, the elements and the implementation of the life cycle costing.</p> <p><b>Total Credits / Value : 2</b>  <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Explain clearly the procedure of implementation value management and the life cycle costing in construction industry.</li> <li>2. Demonstrate good communication skill in oral presentation on assigned topic (s) within a stipulated time frame.</li> <li>3. Demonstrate continuous learning and information management skill while engaging in independent acquisition of new knowledge and skill to develop a project.</li> </ol>

	<p>DCQ6282 <b>CIVIL ENGINEERING WORKS MEASUREMENT 2</b></p>	<p>Course provides students knowledge and skills in measuring quantities for civil engineering works. The emphasis of the course is on the principles of measurement for concrete works, piling works, metal works and method related charges.</p> <p><b>Total Credits / Value : 2</b> <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Arrange the procedure to produce bill of quantities for civil engineering works based on Malaysian Civil Engineering Standard Method of Measurement (MyCESMM).</li> <li>2. Measure the quantities for civil engineering works according to MyCESMM.</li> <li>3. Demonstrate an understanding of quantity surveying professional code of conduct in civil engineering works measurement based on MyCESMM.</li> </ol>
	<p>DUW1012 <b>OCCUPATIONAL SAFETY &amp; HEALTH</b></p>	<p>OCCUPATIONAL SAFETY ANcourse is designed to impart understanding of the self-regulatory concepts and provisions under the Occupational Safety &amp; 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.</p> <p><b>Total Credits / Value : 2</b> <b>Pre-requisite : None.</b></p>	<p>By the end of the course, students should be able to :</p> <ol style="list-style-type: none"> <li>1. Identify the OSH legislation and its compliance in Malaysia.</li> <li>2. Explain briefly incident hazards, risks and safe work practices in order to maintain health and safe work environment.</li> <li>3. Discuss cooperatively in responding to an accident action at workplace.</li> <li>4. Adhere to the safety procedures in respective fields.</li> </ol>

**(YEAR ONE (SEMESTER 01))**

No.	Code	Course	Status	Credits	Contact Hour		Academic Staff
					Lecture	Tutorial/ Practical	
1.	DUB1012	Pengajian Malaysia	Minor	2	1	2	
2.	DUE1012	Communicative English 1	Minor	2	1	2	
3.	DRB1XX0	Asas Unit Beruniform	Minor	0	0	2	
4.	DUW1012	Occupational Safety And Health	Minor	2	2	0	
5.	DCQ1012	Drafting Fundamentals	Major	2	1	2	
6.	DCQ1023	Construction Technology 1	Major	3	3	0	

7.	DCQ1053	Building Works Measurement 1	Major	3	2	2	
8.	DCQ1102	Principle of Structure	Major	2	2	1	
9.	DCQ1112	Professional Practice 1	Major	2	2	0	
		Sub-Total		18			
<b>YEAR ONE (SEMESTER 02)</b>							
1.	DUA2012	Sains, Teknologi Dan Kejuruteraan Dalam Islam*	Minor	2	1	2	
2.	DUB2012	Nilai Masyarakat Malaysia**	Minor	2	1	2	
3.	DRS2XX1	Sukan	Minor	1	0	2	
4.	DRB2XX1	Unit Beruniform 1	Minor	1	0	2	
5.	DPB2012	Entrepreneurship	Minor	2	2	1	
6.	DCQ2033	Construction Technology 2	Major	3	3	0	
7.	DCQ2064	Building Works Measurement 2	Major	4	2	4	
8.	DCQ2142	Building Services 1	Major	2	2	0	
9.	DCQ2162	Principle Of Law	Major	2	2	0	
10.	DCQ2172	Basic Engineering Survey	Major	2	1	3	
		Sub-Total		18			
<b>YEAR TWO (SEMESTER 03)</b>							
1.	DUE3012	Communicative English 2	Minor	2	1	2	
2.	DRK3XX2	Kelab /Persatuan	Minor	2	0	4	
3.	DRB3XX2	Unit Beruniform 2	Minor	2	0	4	
4.	DCQ3043	Construction Technology 3	Major	3	3	0	
5.	DCQ3074	Building Works Measurement 3	Major	4	2	4	
6.	DCQ3122	Professional Practice 2	Major	2	2	0	
7.	DCQ3152	Building Services 2	Major	2	2	0	
8.	DCQ3182	Estimating 1	Major	2	2	1	
9.	DCQ3202	Principle Of Economics	Major	2	2	0	
		Sub-Total		19			
<b>YEAR TWO (SEMESTER 04)</b>							
1.	DUE5012	Communicative English 3	Minor	2	1	2	
2.	DCC3132	Statistics	Minor	2	2	0	
3.	DCQ5083	Building Works Measurement 4	Major	3	2	2	
4.	DCQ5192	Estimating 2	Major	2	2	1	
5.	DCQ5212	Construction Economics	Major	2	2	0	
6.	DCQ5222	Civil Engineering Works Measurement 1	Major	2	1	2	

7.	DCQ5232	Contract Administration	Major	2	2	0	
8.	DCQ5242	Principle Of Management	Major	2	2	0	
		Sub-Total		17			
<b>YEAR THREE (SEMESTER 05)</b>							
1.	DUA6022	Komunikasi Dan Penyiaran Islam	Minor	2	1	2	
2.	DCQ6094	Building Works Measurement 5	Major	4	2	4	
3.	DCQ6132	Professional Practice 3	Major	2	2	1	
4.	DCQ6253	Quantity Surveying Project	Major	3	1	4	
5.	DCQ6262	Construction Management	Major	2	2	1	
6.	DBC2012	Computer Application	Elective	2	1	2	
7.	DCA6272	Multimedia Production	Elective	2	1	2	
8.	DCC6252	Introduction To Green Construction	Elective	2	2	0	
9.	DCG2052	Land Laws & Regulations	Elective	2	2	0	
10.	DCQ6272	Value Management	Elective	2	2	0	
11.	DCQ6282	Civil Engineering Works Measurement 2	Elective	2	1	2	
12.	DUF1XX2	Foreign Language	Elective	2	1	2	
		Sub-Total		17			
<b>YEAR THREE (SEMESTER 06)</b>							
1.	DUT40110	Industrial Training	Major	10	0	0	
		Sub-Total		10			

*Note:*

\*For Muslim students

\*\*For Non Muslim students

## 6.0 SPORTS & CO-CURRICULUM UNIT

The unit is responsible to oversee the implementation the sport and co-curriculum activities to fulfil their requirement for them to score a pass in co-curriculum activities before they are eligible to be awarded Polytechnic diploma.

Various co-curriculum units were set up to undertake the planning and implementation of activities for the students. The following are uniformed bodies, clubs and sports offered at the POLIMAS:

CATEGORY	UNIT	OFFERED	
		SEM 1	SEM 2
Uniformed Bodies	POLIMAS Malaysia Red Crescent Society	√	√
	Scouts	√	√
	Civil Defence (JPA-3) POLIMAS Unit	√	√
	POLIMAS Territorial Reserve Army Reg. 513	√	√
	Fire Fighting Brigade	√	√
	Puteri Islam	√	√
	S. Johns Ambulance	√	√
Clubs	Computer	-	√
	English Language	-	√
	Consumers	-	√
	Kelab Mesra Alam	-	√
	Kelab Seni Suara (Nasyid)	-	√
Sports	Taekwondo-Do	-	√
	Badminton	-	√
	Netball	-	√
	Basketball	-	√
	Football	-	√
	Volleyball	-	√
	Hockey	-	√
	Adventure	-	√
	Athletics	-	√
	Table Tennis	-	√
	Rugby	-	√
	Sepak Takraw	-	√
Squash	-	√	

	Tennis	-	√
	Softball	-	√
	Seni Silat Gayong Pesaka Malaysia	-	√
	Seni Silat Cekak Ustaz Hanafi	-	√
	Archery	-	√

## 7.0 SUPPORT SERVICES

### 7.1 STUDENT AFFAIRS DEPARTMENT (HEP)

The Student Affairs Department basically has two main wings namely:

a) Admission and Data

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

b) Welfare and Discipline

The responsibilities of the Welfare and Discipline include the following:

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

### 7.2 EXAMINATION UNIT

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

responsible for planning, managing and implementing all activities related to student assessment based on the guidelines and evaluation set.

### **7.3 LIAISON & INDUSTRIAL TRAINING UNIT**

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

The placement process is 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.

### **7.4 LIBRARY UNIT**

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

### **7.5 PSYCHOLOGY, COUNSELING AND CAREER UNIT**

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

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

- Achieve understanding of oneself
- Developing awareness of self-potential
- Make wise decisions
- Actively participate in academic and co-curriculum activities

## **7.6 HALLS OF RESIDENCE UNIT**

The management and administration consist of two parts:

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

Staff/warden

Total manpower for hostel management is 23 persons, comprising 16 male staff and 7 female. The total number of residents is 1481. About 1100 new students have been offered places in the halls of residence with a ratio of 550 boys to 550 girls.

## **8.0 EDITORIAL COMMITTEE**

Chairman and Adviser	:	Puan Azmiyah Binti Ahmad
Editor	:	En. Zainurin Bin Zainul
Assistant Editor	:	PN. Nurhawanis Binti Abdul Rahim