

# Introduction to Self-Assessment Report Writing (Do and Don't)

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2<sup>nd</sup> November 2024

# Outline

- Writing Effective Self-Assessment Report (SAR)
- Institutional Documents and Additional Documentation List

# Writing Effective Self-Assessment Report (SAR)

## LEARNING OBJECTIVES AND GOALS:

- Develop consistent, yet flexible, definition of SAR;
- Understand multiple uses of and audiences for SAR;
- Understand five central features of all lesson plans (learning objectives, overview of activities, Rationale for sequencing/pacing activities, outcomes assessment, supplementary materials);
- Gain practice in writing SAR specific to each teachers' discipline and/or course content;
- Have opportunity for peer feedback on teacher-generated SAR.

# Unit 1: Programme Educational Objective (PEOs)

*2. Describe the Programme Objectives and state where they are published. The programme educational objectives are published and placed for public display at the following locations:*

- University official website.
- Faculty lobby, lecture halls lobby, teaching laboratories, canteen and library.
- Alumni survey that is also available at the internal database for academic staff.

# Unit 1: Programme Educational Objective (PEOs)

## *3. Description of how the Programme Objectives relate to the Stakeholders' requirements –*

- The following is the list of stakeholders contributing to the programme development:
- Engineering Accreditation Council
- Ministry of Education and other relevant government institutions such as NAQAC
- Employers and industry supervisors
- Industry Advisory Panel
- Academic staff
- External examiner
- Students
- Alumni

# Unit 2: Programme Outcomes (GAs)

*1. List down the GAs and state where they are published.*

- Upon completion of the programme, students will be able to:
- Acquire and apply fundamental knowledge of science, engineering and mathematics
- Apply first principles of mathematics, natural and engineering sciences to identify, study, formulate and evaluate complex engineering problems
- Devise solutions for complex engineering problems and design systems
- Make use of research based knowledge and methodology through critical thinking to interpret, analyse, and study complex engineering problems, designs and operational performances to reach convincing conclusions;
- Apply original engineering techniques and state of the art engineering and IT resources to model,
- Apply appropriate knowledge in the evaluation and assessment of subject matters pertinent to the professional engineering practice with considerations of public health and safety.

# Unit 2: Programme Outcomes (GAs)

- *1. List down the GAs and state where they are published.*
- Recognise the significance of sustainable development when devising professional solutions to engineering problems with a clear understanding and pro-active considerations of environmental concerns as well as needs for eco-friendly continual growth for local and global community;
- Apply professional virtues and principles with strong commitment to moral and ethical responsibilities during the course of engineering practice;
- Demonstrate the ability to convey ideas and information effectively within the engineering profession and the general community when addressing complex engineering issues and activities,
- Display capability to work competently in the context of a diverse team within multidisciplinary environment,
- Recognize the need to take on independent life-long learning and continuous self improvement in the context of scientific and engineering advancement and professional development;
- Show capability to comprehend and apply engineering and management philosophy to manage projects of in cross disciplinary content,

# Unit 2: Programme Outcomes (GAs)

*2. Describe how the GAs relate to the Programme Objectives.*

- (Contribution of the GAs to the Programme Educational Objectives)

Contribution of the Programme Outcomes to the Programme Educational Objectives

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
PEO1	√	√	√	√	√							
AI	Technical competence											
PEO2									√	√		√
AI									Communication skills and leadership			
PEO3						√	√	√			√	
AI						Professional Ethics and lifelong learning						

**\*\* AI = Achievement Indicator**



# Unit 2: Programme Outcomes (GAs)

**3. Describe the data gathered and explain the results of the assessment.**  
(Sample of Mapping of Course Outcomes to the GAs in Unit Attribute Matrix)

### Sample of Mapping of Course Outcomes to the Programme Outcomes in Unit Attribute

Course Outcome (CO)	Programme Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12
a	1	1										
b	1	1										
c	1	1										
d	1	1										
e	1	1			1				1	1		
<b>Total</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
<b>Achievement</b>	81.9%	81.9%	0.0%	0.0%	98.6%	0.0%	0.0%	0.0%	98.6%	98.6%	0.0%	0.0%

# Unit 2: Programme Outcomes (GAs)

*(Mapping of Methods of Assessment to Course Outcomes (First Column) With Assigned Bloom's Taxonomy Level (Second Column) and Generation of Percentage Achievement (Second Last Column))*

Linked to another table (Fig D2) to calculate achievement of POs

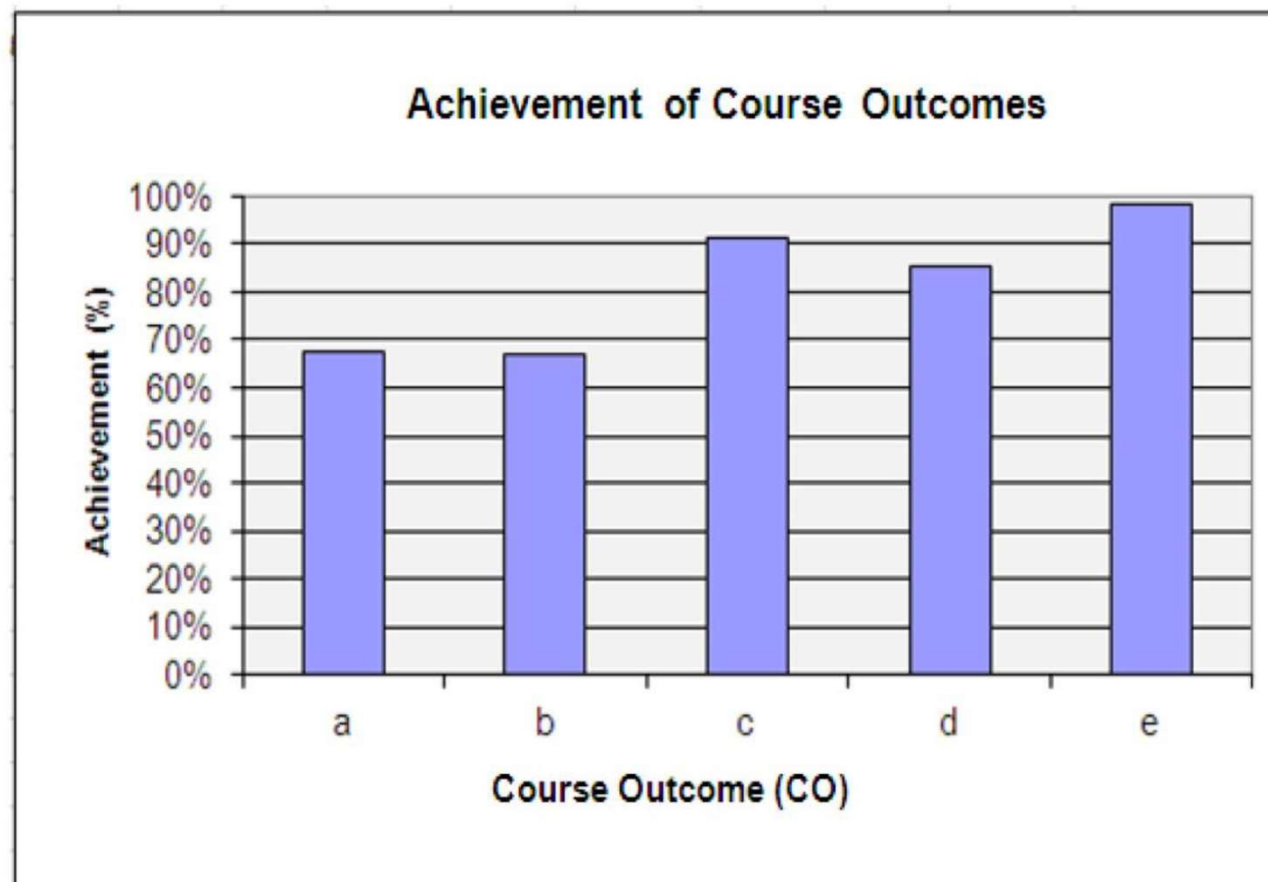
Course Outcome (CO)	Bloom's Taxonomy Level**	Assessment of Course Outcomes										Total Contributions	Achievement (%)	Achievement (Pass/Fail)*
		Final Examination					Others (Legend: A = Assignment; T = Tutorial; P = Practical; Te = Test; Q = Quiz)							
		1	2	3	4	5	Te-Q1	Te-Q2	Te-Q3	A				
a	6	1	1			1	1	1	1	1		7	67.6%	Pass
b	4	1	1			1			1	1		5	67.1%	Pass
c	3				1							1	91.2%	Pass
d	3			1								1	85.3%	Pass
e	6											1	98.6%	Pass
Percentage of passes		46.2%	48.7%	85.3%	91.2%	71.1%	59.3%	78.6%	70.7%	98.6%	--			

From Students Mark Sheet

Multiply contribution of each component by percentages of passes:  
 $(1 \times 46.2\% + 1 \times 48.7\% + 1 \times 71.1\% + 1 \times 70.7\% + 1 \times 98.6\%) / 5 = 67.1\%$

# Unit 2: Programme Outcomes (GAs)

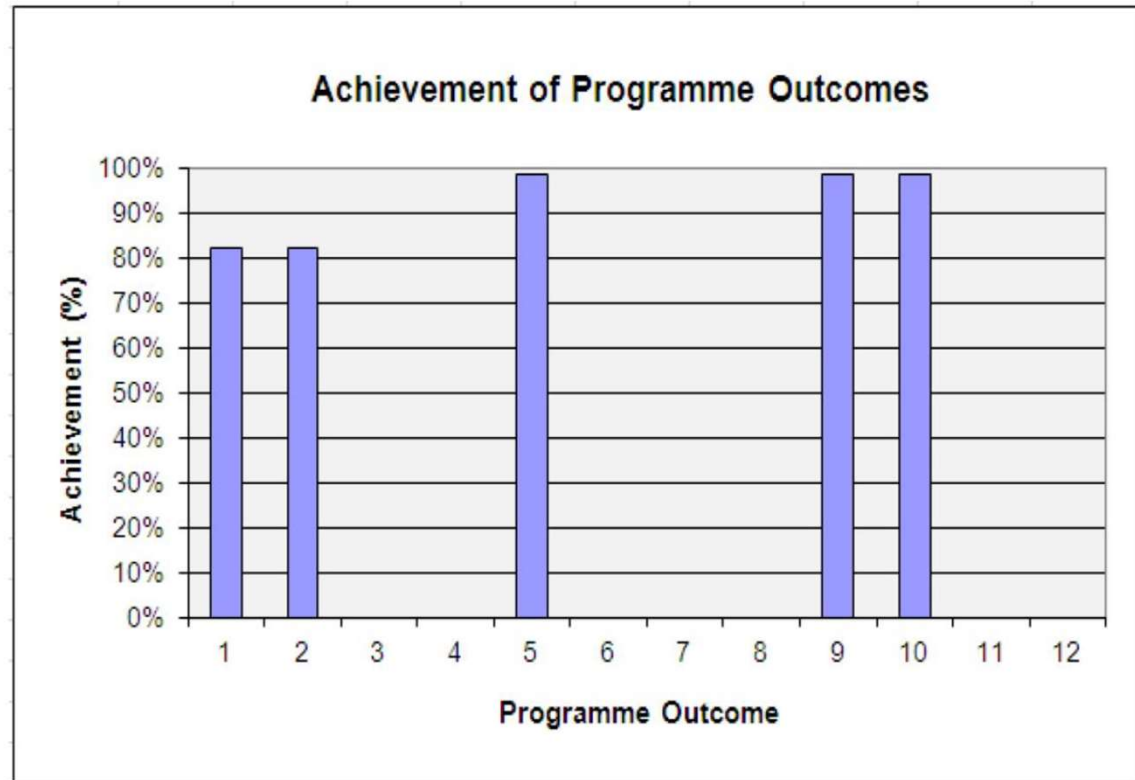
*(Achievement of (a) Course Outcomes and (b) GAs generated in the Unit Attribute Matrix)*



(a)

# Unit 2: Programme Outcomes (GAs)

*(Achievement of (a) Course Outcomes and (b) GAs generated in the Unit Attribute Matrix)*



*(b)*

# Unit 2: Programme Outcomes (GAs)

*4. Describe how the GAs encompass the outcome requirements of Section 8.1 of this Manual EEAC 2018 Manual*

	EAC Programme Outcomes	Engineering Programme Outcomes Corresponding to EAC	Previous Engineering Programme Outcomes Corresponding to EAC
1	Engineering Knowledge	Acquire and apply fundamental knowledge of science, engineering and mathematics, with an engineering focus in solving complex engineering problems;	(i) Ability to acquire and apply knowledge of mathematics, science and engineering fundamentals in civil engineering system;
2	Problem Analysis		
3	Design/Development of Solutions		

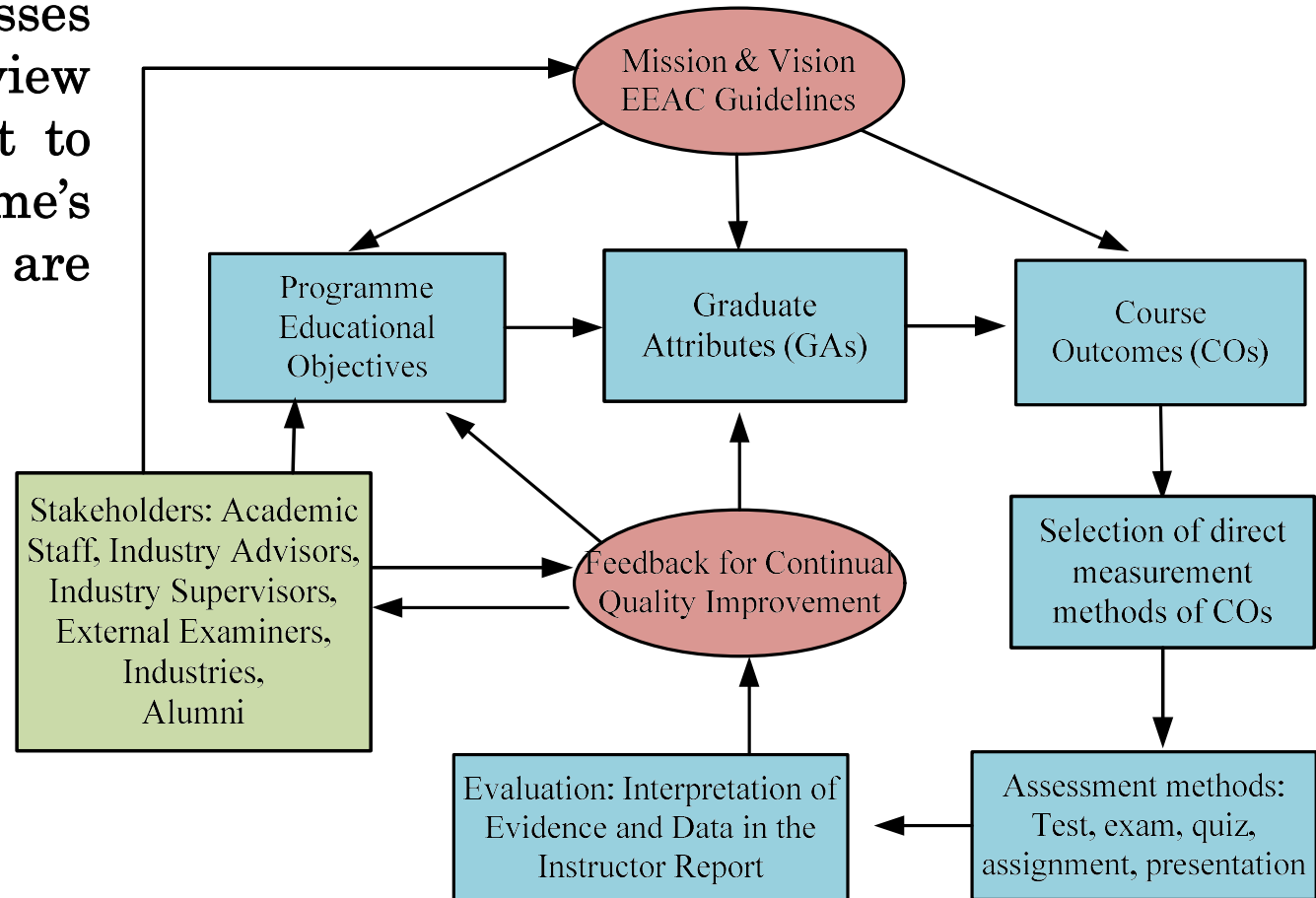
# Unit 2: Programme Outcomes (GAs)

*4. Describe how the GAs encompass the outcome requirements of Section 8.1 of this Manual EEAC 2018 Manual*

	EAC Programme Outcomes	Engineering Programme Outcomes Corresponding to EAC	Previous Engineering Programme Outcomes Corresponding to EAC
4	Investigation		
5	Modern Tool Usage		
6	The Engineer and Society		
7	Environment and Sustainability		
8	Ethics		
9	Individual and Team Work		
10	Communication		
11	Project Management and Finance		
12	Life Long Learning		

# Unit 2: Programme Outcomes (GAs)

5. Describe the processes used to establish and review the GAs, and the extent to which the programme's various stakeholders are involved in the processes.





# Unit 2: Programme Outcomes (GAs)

*6. Describe the materials, including students' work and other tangible materials that demonstrate achievement of the GAs.*

List of materials relevant to the measurement of Programme Outcomes achievement.

Materials	Relevant Programme Outcomes
<p>1. Technical Competence assessment indicator:</p> <ul style="list-style-type: none"><li>○ Examination scripts</li><li>○ Test papers</li><li>○ Technical assignments</li><li>○ Hardware samples</li><li>○ Software developed by the students in their final year project</li></ul>	<ol style="list-style-type: none"><li>1. Acquire and apply fundamental knowledge of science, engineering and mathematics, with an engineering focus in solving complex engineering problems;</li><li>2. Apply first principles of mathematics, natural and engineering sciences to identify, study, formulate and evaluate complex engineering problems based on systematic approach and leading to authenticated conclusions;</li><li>3. Devise solutions for complex engineering problems and design systems, components or processes by taking into consideration cost-effectiveness and specific concerns for public health, safety and environment;</li><li>4. -----</li><li>5. -----</li></ol>



# Unit 3: Academic Curriculum

## *1. Programme Structure and Course Contents: Appropriateness, Consistency, and Supportive of Intellectual Development*

- CO to GA Matrix
- Distribution of Engineering Courses for an Engineering Programme.
- Distribution of General Education Courses for an Engineering Programme
- Courses offered (Programme Structure) according to Semester and Total Credits
- Laboratory Experiments Category
- Talks for Department of ..... Engineering,
- Site Visits Conducted by Department of ..... Engineering

### CO to GA Matrix

[illegible]

# Unit 3: Academic Curriculum

### *Distribution of Engineering Courses for an Engineering Programme*

**TABLE 2**      **Distribution of Engineering Courses for an Engineering Programme**  
**(SAMPLE)**

Groupings	Course Code	Course	Course Type	Student Learning Time							Credits
				Guided Learning					Self-learning	Others Eg: assessment	
				Lecture	Lab/ Workshop	Project	PBL/ Design	Tutorial			
Broad Area 1	XXXX	Subject 1	Core	28	28	-	-	-	xxx		3
	XXXY	Subject 2	Core	28	-	-	-	28			3
	XXXZ	Subject 3	Core	28	-	28	-	-			3
Broad Area 2	YYYY	Subject 4	Core	42							3
	YYYX	Subject 5	Core	14	28	-	28	-			3
	YYYZ	Subject 6	Core								
Broad Area 3	etc.	etc.									
Broad Area 4											
Elective Courses	FGHI	Elective I	Elective								
	HIJK	Elective II	Elective								
	IJKL	Elective III	Elective								
<b>Total Credits</b>											
Industrial Training	ABCD	Industrial Training	Core	10 Weeks					5 credits		
Final Year Project	BCDE	Project I	Core	Thesis							
	DEFG	Project II	Core	Thesis							
<b>TOTAL CREDITS FOR ENGINEERING COURSES</b>											

*Distribution of General Education Courses for an Engineering Programme*

**TABLE 4** Distribution of General Education Courses for an Engineering Programme (SAMPLE)

Areas (EAC)	Code	Course	Course Type	Student Learning Time						Credits
				Guided Learning				Self-learning	Others Eg: assessment	
				Lecture	Lab/Workshop/Project	Tutorial	Others			
Applied Science/ Maths/Computer	XXXX	Subject 1	Core	42		14	xxx			xxx
	XXXV	Subject 2	Core	28	28					xxx
	XXXZ	Subject 3	Core	42		6				xxx
	TOTAL CREDITS									xxx
Management/Law/ Accountancy	XXXX	Subject 1	Core	42						
	XXXV	Subject 2	Core	42						
	TOTAL CREDITS									xxx
Communication Skills/Humanities/ Ethics	XXXV	Subject 1	Core	35		14				
	XXXW	Subject 2	Core	42						
	XXXX	Subject 3	Core	28						
	XXXV	Subject 4	Core	28						
	XXXZ	Subject 5	Core	42						
	TOTAL CREDITS									xxx
Co-Curriculum	H	Co-Curriculum 1	Core	14						
	H	Co-Curriculum 2	Core	14						
	TOTAL CREDITS									xxx
TOTAL CREDITS FOR GENERAL EDUCATION COURSES										xxx

# Unit 3: Academic Curriculum

*Courses offered (Programme Structure) according to Semester and Total Credits*

Semester	Code	Courses	Course Type	Credits	
				Engineering Courses	Non Engineering Courses
I	XXXXA	Subject 1	Core		1
	XXXXB	Subject 2	Core	3	
	XXXXC	Subject 3	Core	3	
	XXXXD	Subject 4	Core		3
	XXXXE	Subject 5	Core		3
II	XXXV	Subject 1	Core	3	
	XXXW	Subject 2	Core		3
	XXXX	Subject 3	Core	3	
	XXXV	Subject 4	Core		3
	XXXZ	Subject 5	Core		3
INTER SESSION	etc.	etc.	Core		
III					
IV					
V					
VI					
INTER SESSION					
VII					
VIII					
TOTAL CREDITS					

# Unit 3: Academic Curriculum

*List of Elective Courses according to Areas of Field of Specialisation (if applicable)*

AREAS	CODE	ELECTIVE COURSES
Broad Area 1		
Broad Area 2		
Broad Area 3		
Broad Area 4		
Broad Area 5		

# Unit 3: Academic Curriculum

## Description of How the Courses Contribute to the POs (Graduate Attributes (GAs) or Program Outcomes (POs))

- **(i) Engineering Knowledge** - Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialisation as specified in WK1 to WK4 respectively to the solution of complex engineering problems;
- **(ii) Problem Analysis** - Identify, formulate, conduct research literature and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4);
- **(iii) Design/Development of Solutions** - Design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations (WK5);
- **(iv) Investigation** - Conduct investigation of complex engineering problems using research-based knowledge (WK8) and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions;
- **(v) Modern Tool Usage** - Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering problems, with an understanding of the limitations (WK6);
- **(vi) The Engineer and Society** - Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems (WK7);
- **(vii) Environment and Sustainability** - Understand and evaluate the sustainability and impact of professional engineering work in the solutions of complex engineering problems in societal and environmental contexts. (WK7);
- **(viii) Ethics** - Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice (WK7);
- **(ix) Individual and Team Work** - Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings;
- **(x) Communication** - Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions;
- **(xi) Project Management and Finance** - Demonstrate knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, to manage projects in multidisciplinary environments;
- **(xii) Life Long Learning** - Recognise the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

# Unit 3: Academic Curriculum

*2. Discuss the programme delivery and assessment methods and how these are appropriate to, consistent with, and support the development of the range of intellectual and practical skills and attainment or achievement of the GAs.*

- *Programme Delivery*
  - *Distribution of Engineering Courses According to the Areas*
  - *Distribution of General Education Courses According to the Areas*
  - *Laboratory Experiments Category*
  - *Types of Assignment*
  - *Talks for Department*
  - *Site Visits Conducted by Department*
- *Assessment Methods*
  - *Methods of Assessment and Links to Programme Outcomes (PO)*



## *Programme Delivery*

**TABLE 4** Distribution of General Education Courses for an Engineering Programme (SAMPLE)

Areas (EAC)	Code	Course	Course Type	Student Learning Time						Credits
				Guided Learning				Self-learning	Others Eg: assessment	
				Lecture	Lab/Workshop/Project	Tutorial	Others			
Applied Science/ Maths/Computer	XXXX	Subject 1	Core	42		14	xxx			xxx
	XXXV	Subject 2	Core	28	28					xxx
	XXXZ	Subject 3	Core	42		6				xxx
	TOTAL CREDITS									xxx
Management/Law/ Accountancy	XXXX	Subject 1	Core	42						
	XXXV	Subject 2	Core	42						
	TOTAL CREDITS									xxx
Communication Skills/Humanities/ Ethics	XXXV	Subject 1	Core	35		14				
	XXXW	Subject 2	Core	42						
	XXXX	Subject 3	Core	28						
	XXXV	Subject 4	Core	28						
	XXXZ	Subject 5	Core	42						
	TOTAL CREDITS									xxx
Co-Curriculum	H	Co-Curriculum 1	Core	14						
	H	Co-Curriculum 2	Core	14						
	TOTAL CREDITS									xxx
TOTAL CREDITS FOR GENERAL EDUCATION COURSES										xxx

# Unit 3: Academic Curriculum

## *3. Assessment Methods*

**TABLE E11: Methods of Assessment and Links to Programme Outcomes (PO)**

	<b>PO1</b>	<b>Acquire and apply fundamental knowledge of science, engineering and mathematics, with an engineering focus in solving complex engineering problems.</b>
1.	Performance Criteria	Demonstrate understanding and application of science and mathematics principles.
	Examples of Related Course	UCCM1653 Mathematics for Engineering I, UCCM1663 Mathematics for Engineering II, UECM 2623 Numerical Methods and Statistics, UEME1132 Statics, UEME1143 Dynamics, UEMX2313 Structural Analysis I, UEMX2413 Soil Mechanics, UEMX1133 Introduction to Building Services, UEMX2333 Reinforced Concrete Design I, UEME 2123 Fluid Mechanics I
	Assessment Methods	Written tests, assignments, final examination
	Documents	Test scripts, assignments, final examination scripts
2.	Performance Criteria	Show the capability in solving complex engineering problems by using science, engineering and mathematics principles.
	Examples of Related Course	UEMX4913 Integrated Design Project, UEGE4113 Project, UEGE3114 Industrial Training
	Assessment Methods	Written tests, assignments, final examination, final year project
	Documents	Test scripts, assignments, final examination scripts, final year project reports

# Unit 3: Academic Curriculum

## *3. Assessment Methods*

	<b>P02</b>	<b>Apply first principles of mathematics, natural and engineering sciences to identify, study, formulate and evaluate complex engineering problems based on systematic approach and leading to authenticated conclusions.</b>
1.	Performance Criteria	Demonstrate the ability to evaluate, formulate and analyse complex engineering problems.
	Examples of Related Course	UEME1132 Statics, UEME1143 Dynamics, UEME2123 Fluid Mechanics I, UEMX3813 Highway and Transportation
	Assessment Methods	Written tests, assignments, final examination
	Documents	Test scripts, assignments, final examination scripts
2.	Performance Criteria	Demonstrate ability to apply mathematics, natural and engineering sciences principles to solve complex engineering problems
	Examples of Related Course	UEME1132 Statics, UEME1143 Dynamics, UEME2123 Fluid Mechanics I, UEMX3813 Highway and Transportation, UEGE4113 Project
	Assessment Methods	Written tests, assignments, final examination, final year project
	Documents	Test scripts, assignments, final examination scripts, final year project reports

# Unit 3: Academic Curriculum

## *3. Assessment Methods*

	PO3	Devise solutions for complex engineering problems and design systems, components or processes by taking into consideration cost-effectiveness and specific concerns for public health, safety and environment.
1.	Performance Criteria	Understand the need to account for public health, safety and environment in engineering design and construction.
	Examples of Related Course	UEMX3613 Environmental Engineering and Science, UEME4243 Engineer in Society, UEMX4253 Construction Project Management
	Assessment Methods	Written tests, assignments, final examination
	Documents	Test scripts, assignments, final examination scripts
2.	Performance Criteria	Apply safe engineering design principles for solving complex engineering problems
	Examples of Related Course	UEGE4113 Project, UEMX2423 Geotechnical Engineering, UEMX2333 Reinforced Concrete Design I, UEMX2343 Reinforced Concrete Design II
	Assessment Methods	Written tests, assignments, final examination, final year project
	Documents	Test scripts, assignments, final examination scripts

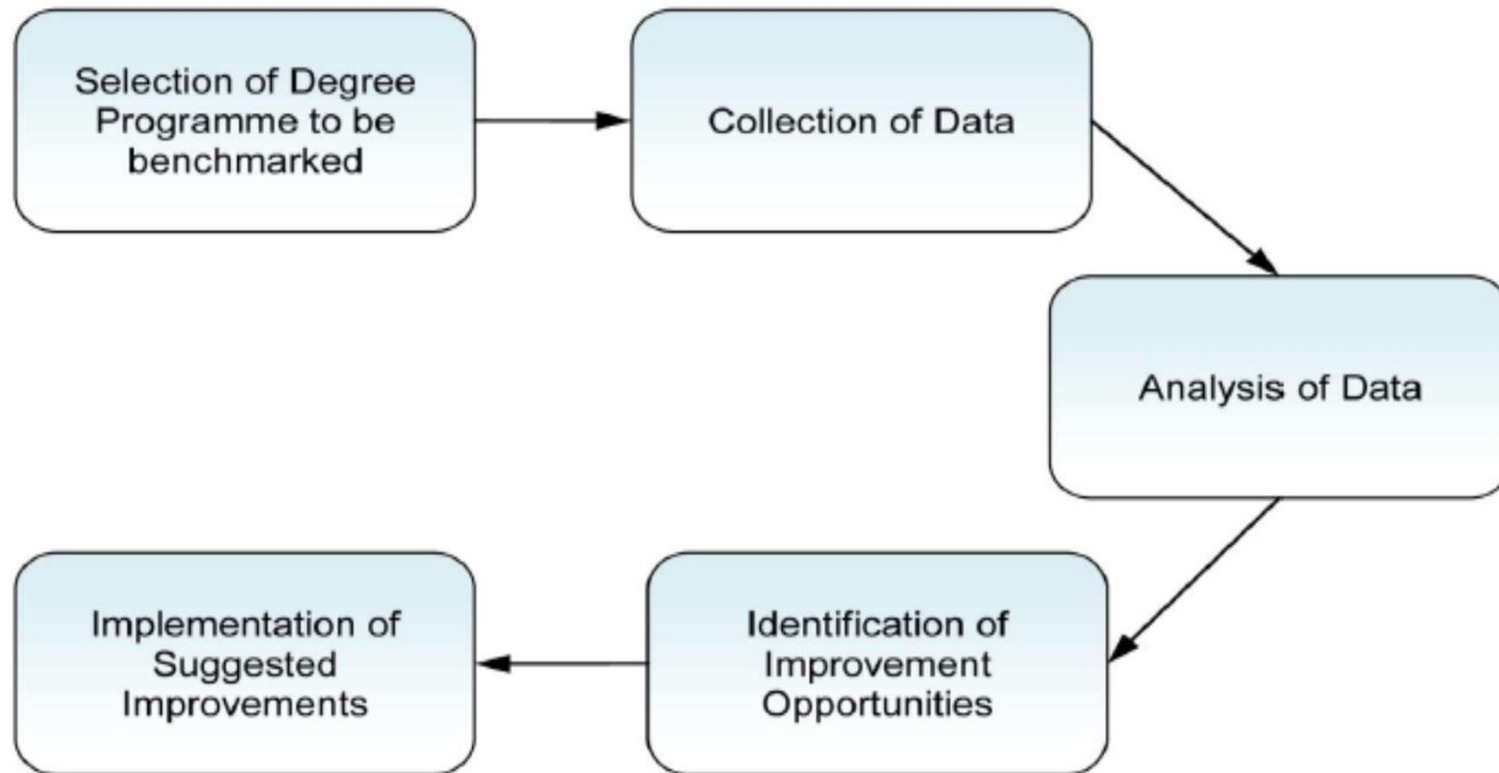
# Unit 3: Academic Curriculum

## *3. Assessment Methods*

	<b>PO4</b>	<b>Make use of research based knowledge and methodology through critical thinking to interpret, analyse, and study complex engineering problems, designs and operational performances to reach convincing conclusions.</b>
1.	Performance Criteria	Demonstrate the ability to interpret, analyse and study complex engineering problems.
	Examples of Related Course	UEGE4113 Project, UEMX2423 Geotechnical Engineering, UEMX2413 Soil Mechanics, UEMX4393 Concrete Technology, Competitions
	Assessment Methods	Written tests, assignments, final examination, final year project, laboratory reports
	Documents	Test scripts, assignments, final examination scripts, final year project, laboratory reports
2.	Performance Criteria	Apply research based knowledge and principles in complex engineering problem solving.
	Examples of Related Course	UEGE4113 Project, UEMX2423 Geotechnical Engineering, UEMX2413 Soil Mechanics, UEMX4393 Concrete Technology, Competitions
	Assessment Methods	Written tests, assignments, final examination, final year project
	Documents	Test scripts, assignments, final examination scripts, final year project reports

# Unit 3: Academic Curriculum

## *Benchmarking Exercise*



**Figure E1: Benchmarking Process**

# Unit 4: Students

*1. Discuss student performance in relation to GAs.*

- Admission
- Student workload
- Student Enrolment
- Description of How to Ensure Balanced Workload for the Students
- Distributions of Students Enrolments for all academic years for the past four years
- Student Learning Time Calculation

# Unit 4: Students

*2. Discuss the requirement and process for admission of students to the programme*

- Student Admissions
- Minimum Entry Requirements for University's Bachelor of Engineering Programme
- Admissions & Credit Transfer Committee
- Department of Admissions and Credit Evaluation (DACE)
- Faculty's Role in Credit Evaluation
- Student enrolment



# Unit 4: Students

*Distribution of Student Enrolment for all Academic Years for the Past Four (4) Years*

YEAR	YEAR					
	Current academic year – 5	Current academic year - 4	Current academic year - 3	Current academic year - 2	Current academic year - 1	Current academic year
1 <sup>st</sup> Year						
2 <sup>nd</sup> Year						
3 <sup>rd</sup> Year						
4 <sup>th</sup> Year						
5 <sup>th</sup> Year						
6 <sup>th</sup> Year						
Total No. of students Per Year						

# Unit 4: Students

*Entry Qualification of Final Year Students of the Current Year*

ENTRY QUALIFICATIONS	NUMBER
STPM	
Matriculation	
Foundation	
A-Level	
Diploma	
Others (Please Specify)	
<b>TOTAL</b>	

# Unit 4: Students

## *3. Discuss the policies and processes for the credit transfer/exemption*

### *Internal Credit Transfer*

- Application to be processed by Faculty
- The students who wish to apply for course transfer are required to get recommendation from the Head of Department subject to the approval from respective Deans.
- The students required to submit their current results when doing course transfer

## *4. Discuss the student workload*

Status	Long Trimester (14-weeks)	Short Trimester (7-weeks)
Normal		
Probation		

# Unit 4: Students

## *Description of How to Ensure Balanced Workload for the Students*

No.	How to ensure balanced workload	Responsibility
1.	Full-time students who are not on probation status	Faculty and Exam Unit
2.	Full-time students who are on probation status	Faculty and Exam Unit
3.	Academic Advisory System	Faculty
4.	Programme for Students to Meet with the Dean, Deputy Deans and Head of Department	Faculty
5.	Student Online Survey System and Student Online Feedback System	Faculty
6.	Feedback from External Examiner/IAP etc.. through the Meeting with Students.	Faculty/External Examiners etc...
7.	Soft skills development certificate	Department of Soft Skills Competency

# Unit 4: Students

*5. Discuss student activities and involvement in student organisations that provide experience in management and governance, representation in education and related matters and social activities.*

- ARTICLE 1: Definition
- ARTICLE 2: Aims and Objectives
- ARTICLE 3: Activities
- ARTICLE 4: Memberships
- ARTICLE 5: Administration
- ARTICLE 6: Duties and Responsibilities of Office Bearers
- ARTICLE 7: Sub-Committees
- ARTICLE 8: Meetings
- ARTICLE 9: Quorum
- ARTICLE 10: Voting
- ARTICLE 11: Finance
- ARTICLE 12: Auditors
- ARTICLE 13: Adviser/Advisers

# Unit 5: Academic and Support Staff

*1. Discuss the strength and competencies of the academic staff in covering all areas of the programme, and in implementing the outcome-based approach to education.*

- Breakdown in Terms of Numbers of Academic Staff (Fulltime) by Year for all Academic Years for the Past Six (6) Years
- Analysis of Academic Staff
- Academic Qualifications of Academic Staff
- Professional Qualifications and Membership in Professional Bodies/Learned Societies of Academic Staff
- Post Held by Academic Staff
- Academic Staff Teaching Workload Summary for the Current Semester
- Staff: Student Ratio

### *Analysis of Academic Staff*

**Table 9**      **Analysis of all Academic Staff**

[illegible]

# Unit 5: Academic and Support Staff

## *Academic Qualifications of Academic Staff*

Academic Qualifications	Number
Doctorate	
Masters	
Bachelor	
TOTAL	



# Unit 5: Academic and Support Staff

*2. Discuss how the overall staff workload enables effective teaching, student – staff interaction, student advising and counseling, IHL service and research activities, professional development and interaction with industries-*

- Training and Workshops on OBE (Outcome-based Education)
- Student–staff Interaction, Student Advising and Counseling
- Staff Workload
- Staff Development and Research Activities
- Interaction with Industries

# Unit 5: Academic and Support Staff

*Training and Workshops on OBE (Outcome-based Education)*

## **OBE Courses/workshops for Engineering**

Outcome-Based Approach to Education  
By Engineering Accreditation Unit  
½ day briefing by

# Unit 5: Academic and Support Staff

## *Staff Workload*

SESSION	Current academic year - 5	Current academic year - 4	Current academic year - 3	Current academic year - 2	Current academic year - 1	Current academic year
RATIO						

# Unit 5: Academic and Support Staff

*3. Discuss the sufficiency and competency of technical and administrative staff in providing adequate support to the educational programme*

Academic Qualifications	Number
Masters	
Bachelor	
Diploma	
Certificate	
SPM	
TOTAL	

Analysis of all Support Staff

Post	Number
TOTAL	

Post Held by Support Staff

# Unit 6: Facilities

*1. Discuss the adequacy of teaching and learning facilities such as classrooms, learning-support facilities, study areas, information resources (library), computing and information-technology systems, laboratories and workshops, and associated equipment to cater for multi-delivery modes.*

- Classrooms and Learning Support Facilities
- Study Areas
- Information Resources (Library)
- Computing and Information Technology Systems
- Laboratories and Workshops
- Listing of Workshops

# Unit 6: Facilities

## *Summary of the Lecture Rooms and Learning Support Facilities*

Category	Number	Capacity per Session (Pax)	Learning Support Facilities
Lecture Halls	2	210	OHP LCD projector Computer White board Audio and Amplifier System
	4	195	OHP LCD projector Computer White board Audio and Amplifier System
Lecture/Tutorial Rooms	3	30	OHP (2 rooms) White board
	1	40	White board
	1	50	OHP White board
	15	60	OHP (5 rooms) LCD projector (6 rooms) Computer (13 rooms) White board (15 rooms) Audio and Amplifier System (1 room)
	3	70	OHP (2 rooms) LCD projector (1 room) Computer (1 room)
	4	90	OHP (2 rooms) LCD projector (4 rooms) Computer (4 rooms) White board (4 rooms) Audio and Amplifier System (4 rooms)
	1	95	LCD projector Computer
<b>TOTAL</b>	<b>34</b>	<b>2945</b>	

# Unit 6: Facilities

## *Information Resources (Library)*

Reference materials supporting the programme

Subject Areas	Number of Books	
	Number of Titles	Number of Copies
<b>Civil Engineering</b>	2,424	3,030
Related reference - Electrical Engineering	3,111	3,888
Related reference - Electronic and Communications Engineering	3,441	4,301
Related reference - Mechanical Engineering	2,678	3,347
Related reference - Biomedical Engineering	841	1,051
Related reference - Mechatronics Engineering	1,939	2,423
Related reference - Materials and Manufacturing Engineering	2,902	3,627
Related reference - Chemical Engineering	1,961	2,451

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# Unit 6: Facilities

## *Information Resources (Library)*

### List of Online Database

Title	Title
AccessMedicine	ACM Digital Library
American Chemical Society (ACS)	Association of Commonwealth Universities (ACU)
Books24x7	ClinikalKey
CNKI	Cochrane Collection Plus
Commerce Clearing House (CCH)	Datastream
EBSCOhost - Business Source Premier	EndNote Web
IEEE Xplore/IEL	ISI Web of Knowledge : Journal Citation Reports
JSTOR	Lexis Malaysia
MD Consult	Morgan & Claypool Synthesis Digital Library
NARIC UK	NSTP e-Media
OECD iLibrary	ProQuest – Dissertations and Theses
ProQuest – Technology, Business and Social Science	SAGE Humanities and Social Science
ScienceDirect	Scopus
World Scientific Mathematics	



# Unit 6: Facilities

## *Computing and Information Technology Systems*

**Table H4: Summary of the ICT/Computer Laboratories**

Room No.	ICT/Computer Lab	Area (sqft)	No. of Personal Computers (PCs)
SA130	Internet Lab III	1,500	20
SB213	Internet Lab I	1,000	40
SB215	Internet Lab II	1,066	32
SB208	Practical Lab I	1,050	42
SB210	Practical Lab II	945	42
SB211	Practical Lab III	1,000	39
SE201	CADD Lab I	1,162	30
SE202	CADD Lab II	1,162	30
SE203	CADD Lab III	1,162	30
Library	Internet/OPAC	-	12
<b>Total</b>			<b>317</b>

# Unit 6: Facilities

## *Laboratories and Workshops*

**Table H5: Summary of the Teaching/Research Laboratories**

Room No.	Lab	Area (sqft)	Capacity per Session (Pax)	Purpose
SD001	Bioprocess and Environmental Engineering Lab	1,860	50	Teaching lab and chemical preparation lab for Civil Students
SD017A	Civil Engineering and Project Research Lab	1,160	30	Final year project and postgraduate lab for Civil Engineering programme
SD023B	Process Control and Soil Lab	700	10	Civil engineering laboratory for soil related projects
SD113B	Civil Engineering Research and Project Lab	1131	30	Final year project and postgraduate for Civil Engineering programme
SF001	Civil Engineering and Construction Lab	2,373	40	Teaching lab and final year project lab for Civil Students
SF001B	Civil Engineering Resource Room	260	5	Preparation room for civil engineering teaching lab

# Unit 6: Facilities

*2. Describe the adequacy of support facilities such as hostels, sport and recreational centres, health centres, and transport in facilitating students' life on campus and enhancing character building.*

**Table H7: List of Course Based Societies**

Built Environment Society	<b>Engineering Society</b> <ul style="list-style-type: none"><li>▪ Institution of Engineering and Technology (IET) Student Chapter</li><li>▪ Institution of Engineers Malaysia (IEM) Student Chapter</li><li>▪ Institution of Mechanical Engineers (IMechE) Student Chapter</li><li>▪ Institute of Materials Malaysia (IMM) Student Chapter</li><li>▪ Institution of Chemical Engineers (ICHEME) Student Chapter</li><li>▪ American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Student Chapter</li><li>▪ Institute of Electrical and Electronics Engineers (IEEE) Student Chapter</li><li>▪ Institution of Civil Engineers (ICE) Student Chapter</li></ul>
Actuarial Science Society	
Mathematics Society	
Architecture Society	

# Unit 6: Facilities

*2. Describe the adequacy of support facilities such as hostels, sport and recreational centres, health centres, and transport in facilitating students' life on campus and enhancing character building.*

**Table H8: List of Non-Course Based Societies**

Asian Cultural Society	Dance Club
Astronomy Club	Music Club
Buddhist Society	Community Service Society
Christian Fellowship	First Aid Society
Robotics Society	Chess Club / Board Games
Information Technology Society	Sports Club
Mind Development Society	Taekwondo Club

# Unit 7: Quality Management Systems (QMS)

*1. Outline the organisational structure of the IHL as well as the structure within the faculty/ department/ programme. Discuss the level and adequacy of institutional support, operating environment, financial resources, constructive leadership, policies and mechanisms for attracting, appointing, retaining and rewarding well-qualified staff and provision of professional development; and provision of infrastructure and support services to achieve Programme Objectives and assure continuity of the programme.*

- Information on Organisation and Administration System
- Organisation Structure of the University
- Committees of university
- Committees of Council
- Senate
- Standing Committees of the Senate
- Other University Committees

# Unit 7: Quality Management Systems (QMS)

## *Organisation Structure of the University*

- *President's Office*
- *Faculties, Institute and Centre*
- *Administrative Offices/Departments*

## *Committees of university*

- *Board of Trustees*
- *University Council*

## *Committees of Council*

- *Finance Committee*
- *Planning and Development Committee*
- *Tenders Board*
- *Staff Disciplinary Authority*
- *Student Disciplinary Authority*

# Unit 7: Quality Management Systems (QMS)

## *Senate*

### *Standing Committees of the Senate*

- *Academic Development and Curriculum Committee*
- *Admissions & Credit Transfer Committee*
- *Library Committee*
- *Quality Assurance and Audit Committee*
- *Postgraduate Studies Committee*

### *Other University Committees*

- *Faculty Board*
- *Faculty Management Committee*
- *Examination Disciplinary Committee*
- *Staff Disciplinary Committee*
- *Student Disciplinary Committee*
- *Appeal Board for Student Examination Discipline*
- *Appeal Board for Staff Discipline*
- *Appeal Board for Student Discipline*

# Unit 7: Quality Management Systems (QMS)

## *Other University Committees*

- *Faculty Management Committee*

## *The Committee shall:*

- *Ensure smooth operation and administration of the Faculty/Department*
- *Coordinate all activities of Faculty*
- *Recommend budget and funding for learning, teaching and research activities*
- *Carry out any duties as directed by President*



# Unit 7: Quality Management Systems (QMS)

*2. Evidence of the IHL's long-term commitment to Engineering as a discipline, for example through corporate Mission statements and strategic plans, or otherwise*

*3. Evidence of the IHL's Engagement in Long Term Planning Processes*  
*This Strategic Plan defines the strategic directions that are essential to propel the university to greater heights. Four strategic directions have been identified, as follows:*

- Promote holistic development and sustainable growth
- Generate academic programmes with socio-economic and transformative impact
- Foster ubiquitous learning and lifelong education
- Enhance diversification and internationalisation

# Unit 7: Quality Management Systems (QMS)

## *3. Evidence of the IHL's Engagement in Long Term Planning Processes*

*To ensure that the development embraces the whole spectrum of university functions essential for the attainment of the vision and mission of the university to be a global university of educational excellence with transformative societal impact, efforts shall be placed on the following eight focused areas:*

- Governance
- Academic Programmes
- Research and Development
- Collaborations and Internationalisation
- Staff Development
- Student Development
- Facilities and Services
- Community

# Unit 7: Quality Management Systems (QMS)

## *3. Evidence of the IHL's Engagement in Long Term Planning Processes*

*For maintenance and improvement of academic standards, the following processes are followed:*

- Programme Planning, Curriculum Development, Curriculum and Content Review
- Feedback and inputs from stakeholders, industry advisors, students and alumni
- Tracking the contributions of individual courses to the Programme Outcomes
- Tracking performance through assessment
- External Examiners comments
- Reviewing of Programme Objectives and Programme Outcomes
- Continual quality improvement

*Evidence of these outcomes will be made available during EAC's accreditation visit.*

# Unit 7: Quality Management Systems (QMS)

*4. Evidence of All Policies in Relation to Staff Appointment, Promotion, Professional Development, Training and Industrial Exposure, Research and Development etc.*

- *Recruitment*
- *Academic Staff Development*
  - *Training/ Courses*
    - *Orientation Programme*
    - *On-the-job Training at Faculty Level*
    - *Sustained Academic Staff Development Programme*
    - *Research Facilities*
  - *Sponsorship for Training and Conferences*
  - *Sponsorship for Further Studies*
  - *Research Fund*
  - *Research Assistantships and Postgraduate Research*
  - *External Research Funding*
  - *Sabbatical and Research Leave*
  - *Academic Staff Involvement in Consultancy and Professional Bodies*
  - *Academic Staff Performance Appraisal*

# Unit 7: Quality Management Systems (QMS)

## *Recruitment*

*The university has established policies on staff recruitment. The minimum qualifications for recruitment of academic staff shall be in line with the guidelines set by Myanmar Engineering Council (MEngC) . The minimum qualifications are as shown below:*

Level of Study	Qualification of academic staff (For teaching)
Doctoral	Relevant PhD / Doctoral degree
Master	Relevant PhD / Doctoral Degree; or Master's Degree with at least 5 years of relevant working experience
Bachelor	i. Master's Degree ii. Bachelor's degree with professional qualification iii. Professional qualification with relevant working experience
Foundation	Bachelor's Degree in the relevant field

# Unit 7: Quality Management Systems (QMS)

*5. Administrative and Supporting (Non-academic) Staff Development.*

*6. Description of IHL's arrangements for funding the IHL and / or Engineering programmes. Indicate the factors used in determining the allocation, and how they are weighted*

- Financial Resources
  - Fees payable by students;
  - Consultancy services and training;
  - Interest on fixed deposits and money market placement;
  - Sponsorships, donations and endowment;
  - Retained profit;
  - Rental of facilities;
  - Grants
- Administration of Financial Resources
- Budgetary Planning and Control
  - Annual budgets
  - Supplementary budgets
- Indication of How Resources are allocated to programmes within the IHL

# Unit 7: Quality Management Systems (QMS)

*7. Discuss the mechanism for programme planning; curriculum development; curriculum and content review; responding to feedback and inputs from stakeholders including industry advisors, students and alumni; tracking the contributions of individual courses to the GAs; tracking performance through assessment; responding to External Examiners comments; reviewing of Programme Educational Objectives (PEOs) and GAs ; and continual quality improvement (CQI). Where these are discussed elsewhere in the report, specify their locations. For a new programme, IHL also need to discuss the processes surrounding the decision to introduce the programme-*

- Mechanism for Programme Planning, Curriculum Development, Curriculum and Content Review.
- Mechanism for responding to feedback and inputs from stakeholders including industry advisors, students and alumni.
- Mechanism for tracking the contributions of individual courses to the Programme Outcomes.
- Mechanism for tracking performance through assessment.
- Mechanism for responding to External Examiners comments.
- Mechanism for continual quality improvement (CQI)
- Description of the processes surrounding the decision to introduce the programme

# Unit 7: Quality Management Systems (QMS)

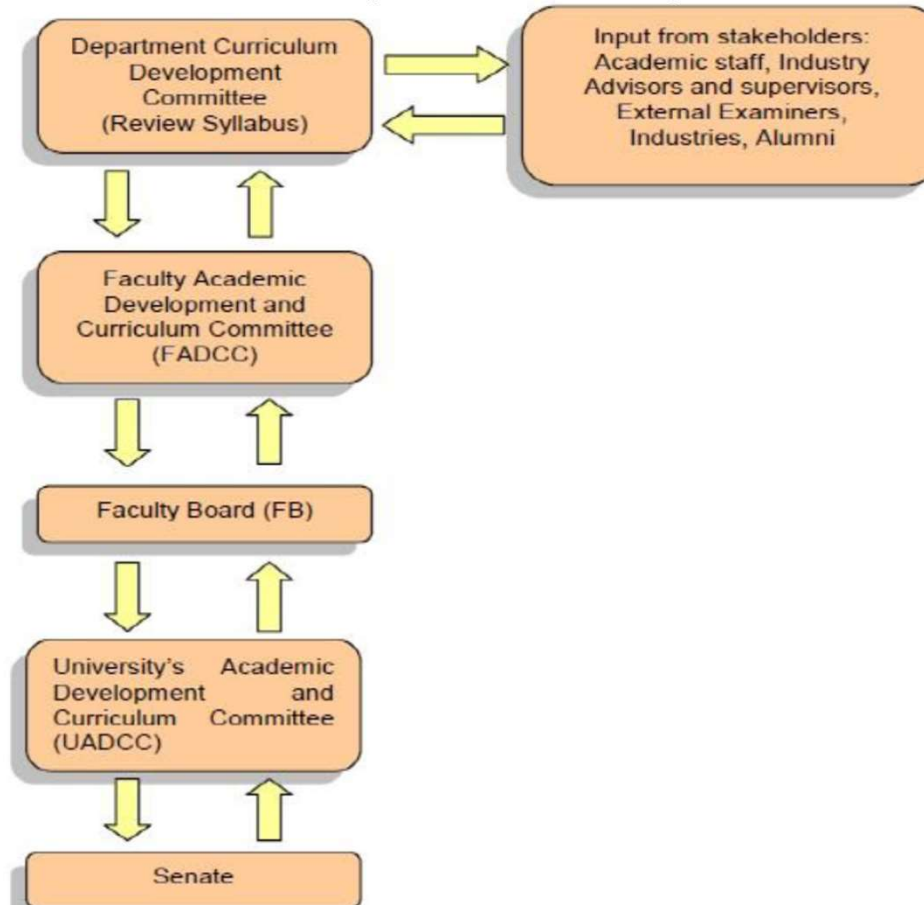
*Mechanism for Programme Planning, Curriculum Development, Curriculum and Content Review*

- Level of academic content
- Vocational relevancy in accordance with the objectives of the course
- Learning outcomes and objectives of the course is in accordance to the goals and objectives of the faculty and university
- Learning and teaching modes
- Progression of graduates to advanced courses/ continuing education
- Relevance and appropriateness of course content in relation to national and industry development
- Resource implications both academic and non-academic, e.g. staff, equipment and physical resources like buildings, workshops and laboratories.
- Employment opportunities of graduates
- Comments and critical views from the faculty, external examiners and panel of advisors
- Adherence to guidelines/requirements for quality assurance in education systems, especially those set by the Ministry of Education (MOE), Myanmar Engineering Council (MEngC) and the relevant professional bodies
- Accreditation by Myanmar Engineering Council (MEngC) and professional bodies and recognition by Public Service Department



# Unit 7: Quality Management Systems (QMS)

*The summary of the process flow for programme planning, curriculum deployment and review*



# Unit 7: Quality Management Systems (QMS)

- *Bodies that Approve the Curriculum:*
  - *Faculty Academic Development Curriculum Committee*
  - *Faculty Board*
  - *University Academic Development and Curriculum Committee*
  - *Senate*
- *Methods of Obtaining Feedback on the Effectiveness of Implementation of Curriculum*
  - *Comments and recommendations from external examiners*
  - *Feedback from examiners*
  - *Surveys from employers*
  - *Feedback from professional bodies*
  - *Surveys from students and alumni*
  - *Internal review by the Faculty or Department*

# Unit 7: Quality Management Systems (QMS)

*8. Summarize responses to the external examiner report*

*9. Discuss how the IHLs quality management system provides quality assurance and benchmarking.*

- Description of Established Quality Assurance Standard for the Programme.
- Management and Administrative Quality Assurance Processes
- Internal Academic Quality Assurance Process
- External Academic Quality Assurance Process
- Description of Examination Regulations
- Attendance Records and Eligibility for Examination
- Student's Appeal

# Unit 7: Quality Management Systems (QMS)

## *Description of System of Assessment and Grading*

- *Grading System*
- *Assessment Procedure*
- *Student Status*
- *The Academic Standing of a Student is based on the Following Assessment:*
  - *Probation: A Bachelor's degree student shall be placed on probation if his GPA for a structured semester examination is less than 2.0000.*
  - *Withdrawn: The student has chosen to cease studying a particular course of study*
  - *Deferment: The student has chosen to delay his studies for one or more semesters in a particular course of study*
  - *Termination of study: The student's course of study shall be terminated if his GPA in three consecutive structured semesters is less than 2.0000 and CGPA for the current semester is less than 2.0000.*
- *Updating of Assessment Materials*
- *Grade and Mark Record*

# Unit 7: Quality Management Systems (QMS)

## *Description of Preparation Procedures for Examination Papers*

*In developing the examination questions, the examiner must ensure that:*

- The question paper follow the prescribed format
- The marking scheme is enclosed
- There is sufficient time for candidates to answer the questions within the examination time
- The questions are within the boundary of the syllabus and have a balanced coverage of the syllabus
- The questions are fair, completely unambiguous and contain no obvious or latent traps
- The questions are original in content and special care should be taken to ensure that the wording of questions are changed beyond recognition if similar/relevant material is used in previous/other examinations
- The marking scheme is fair and reflects the equitable distribution of marks according to the demand and level of studies
- The grammar of the language used is correct
- The unit objectives and the learning outcomes are accomplished

# Unit 7: Quality Management Systems (QMS)

## *Description of Assessment Procedures for Final Year Project / Thesis*

- *Appointments*
- *Allocation of Marks*
  - *The marks for the Final Year project assessment shall be divided into the following 3 components:*
    - *General Effort (15%)*
    - *Oral Presentation (25%)*
    - *Written Report Mark (60%)*
  - *Quality Monitoring Mechanism*

# Unit 7: Quality Management Systems (QMS)

The summary of mark distributions is shown in the following table:

Assessments	Supervisor		Moderator		TOTAL MARK	
	Mark	Contribution	Mark	Contribution		
Progress Report	15	100%			15%	FYP Part I 25%
Oral Presentation	2.5	50%	2.5	50%	5%	
General Effort	5	100%			5%	
Final Report	27	60%	18	40%	45%	FYP Part II 75%
Oral or Poster Presentation / Demonstration	10	50%	10	50%	20%	
General Effort	10	100%			10%	
% Contribution	69.5%		30.5%		100%	

# Unit 7: Quality Management Systems (QMS)

## *Description of Assessment Procedures for Industrial Training*

Assessment Components	Percentage (%)
Industrial Site Supervisor Evaluation	30
Weekly Progress Reports (Log Books) (Marked by Academic Supervisors)	10
Written Report (Marked by Academic Supervisors)	50
Oral Presentation (Marked by Academic Supervisors)	10



# Unit 7: Quality Management Systems (QMS)

- *Academic Advisory System*
  - *Academic Performance*
  - *Involvement in co-curricular activities*
  - *Attendance in lecture/tutorial/lab*
  - *Seminar and workshop attended*
  - *Problems encountered*
  - *Proposed action to guide the student*
- *Postgraduate Studies Unit*

Degree Programme	Minimum Period	Maximum Period
Master's programme	Full-time: 1 year Part-time: 2 years	Full-time: 4 years Part-time: 6 years
PhD programme	Full-time: 2 years Part-time: 4 years	Full-time: 6 years Part-time: 8 years

# Institutional Documents and Additional Documentation List

The following documents and additional documentation are to be made available during the visit.:

- Handbook, Calendar Supplement, or other Official Publication Relating to the Faculty of Engineering and Science, and Containing the Statement of Programme Details
- IHL Prospectus
- Additional Information on the IHL, Faculty of Engineering and Science, and Programme not provided in Hard Copy Document or CD
- Any other Official Documents that Relate to the Faculty of Engineering and Science in other forms
- Course files – detailed description of the content (syllabus), targeted learning outcomes, course information distributed to students, learning activities, assessment methods, learning modes, text used, prerequisites, graded examination papers with low, medium and high grades, tutorial assignments, class projects, a copy of the text book, and any other materials used for the course. For laboratory courses, provide a copy of the syllabus, experiment instruction sheets, graded student laboratory work with low, medium and high grades, as well as supporting information

# Institutional Documents and Additional Documentation List

- Copy of the final year project report, instruction sheets, and grade sheets or other evaluations for the project for sample students for the past five years
- Evidence of the use of tutorials and non-conventional delivery methods such as Problem Based Learning (PBL) techniques alongside traditional lectures
- Copy of the industrial training report, guidelines for the training, reviews by the industry sponsors as well as the faculty mentors for sample students for the past year
- List of activities and evidence relevant to industry exposure
- Any supporting documentation for objectives and outcomes assessment including sample questionnaires, portfolios, survey forms, video recordings, etc

# Institutional Documents and Additional Documentation List

- All evidences related to CQI of the programme
- Describe the procedures used for credit transfer/credit exemption and provide evidence of implementation of such procedures
- Acceptance of transfer students and provide evidence that the processes and procedures are working
- Relevant policies on Institutional Support, Operating Environment and Financial Resources
- Student online evaluation database
- Any other relevant documents

# Conclusion

- Shall prepare the Outcome-based Education (OBE) manual for the whole university as well as each programme
- Shall prepare the SAR
- Shall prepare the Complete Course Files
- Shall prepare the Effective Syllabus
- Shall prepare the Calculation sheets for PEOs from Marks Obtained
- Shall prepare the Effective Curriculum with reasonable SLT Credit Points
- Don't copy from anyone

Thank You Very  
Much!