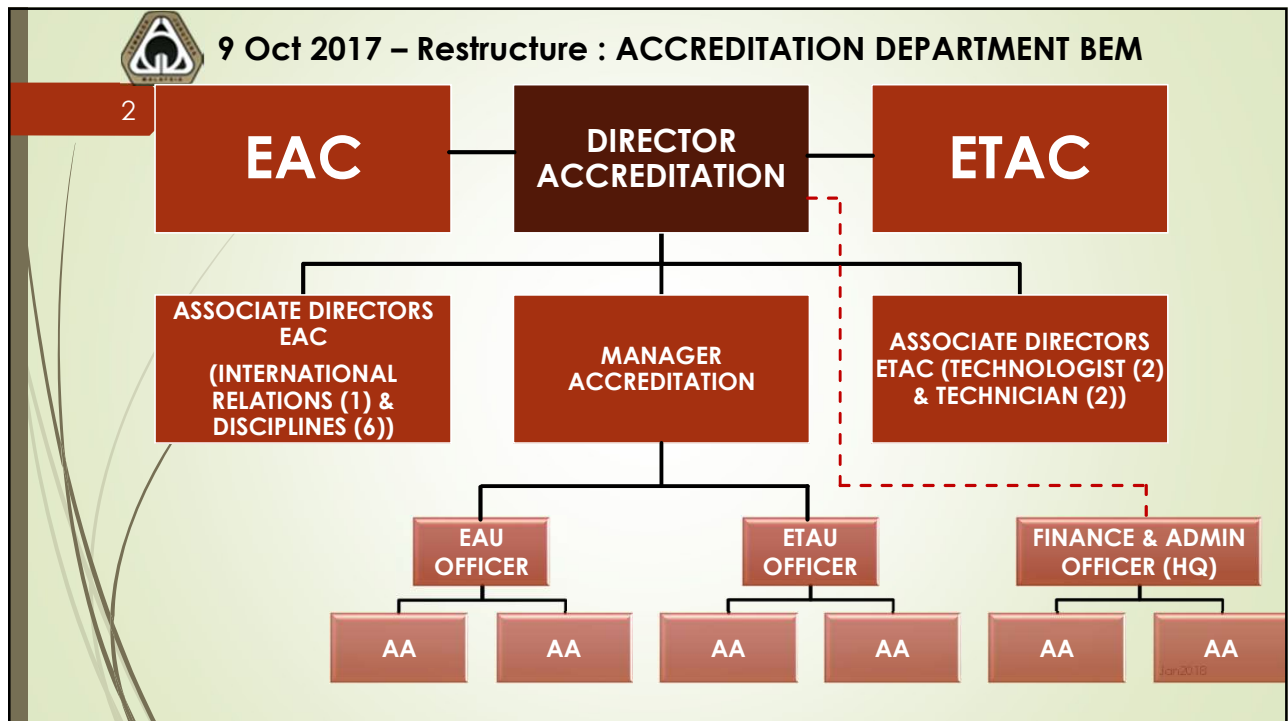
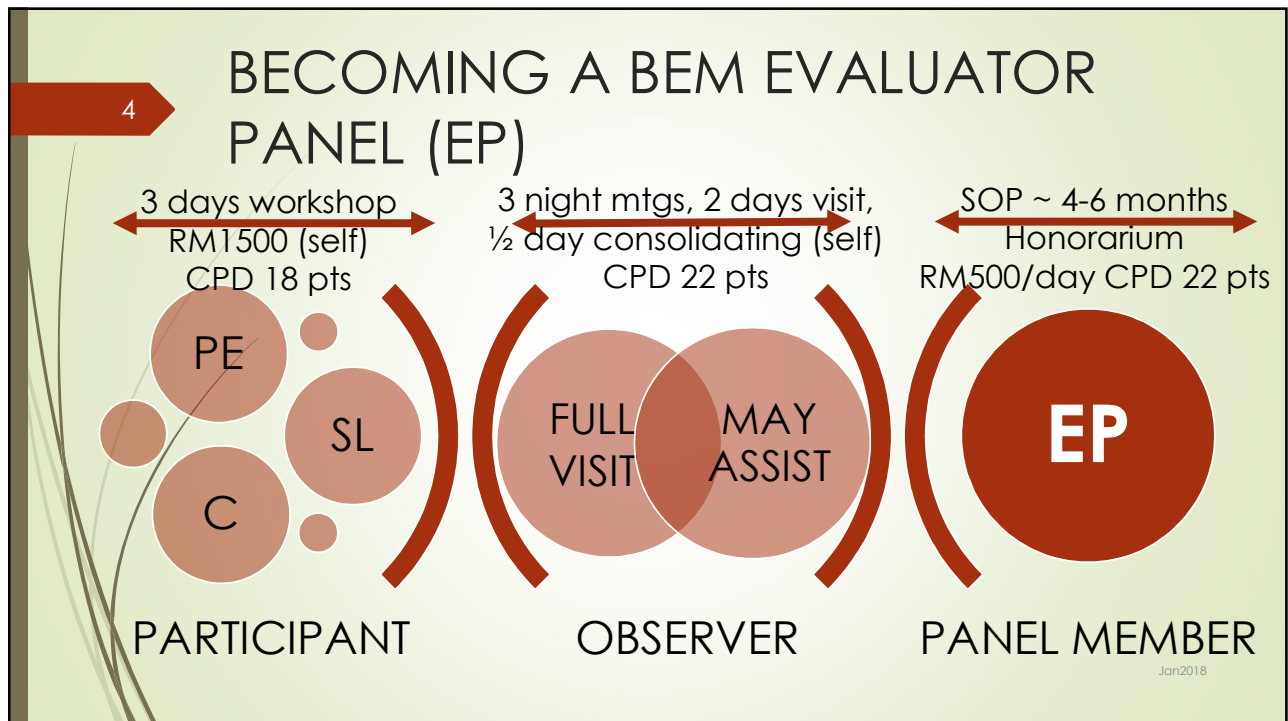
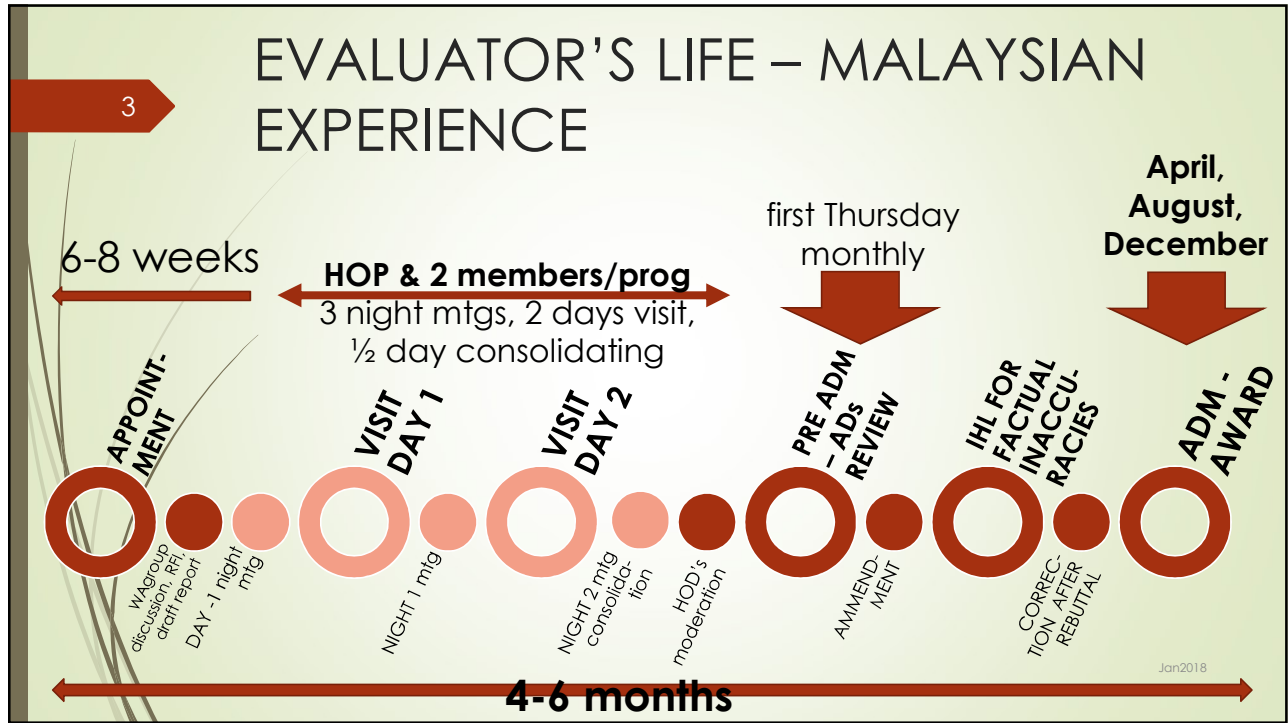


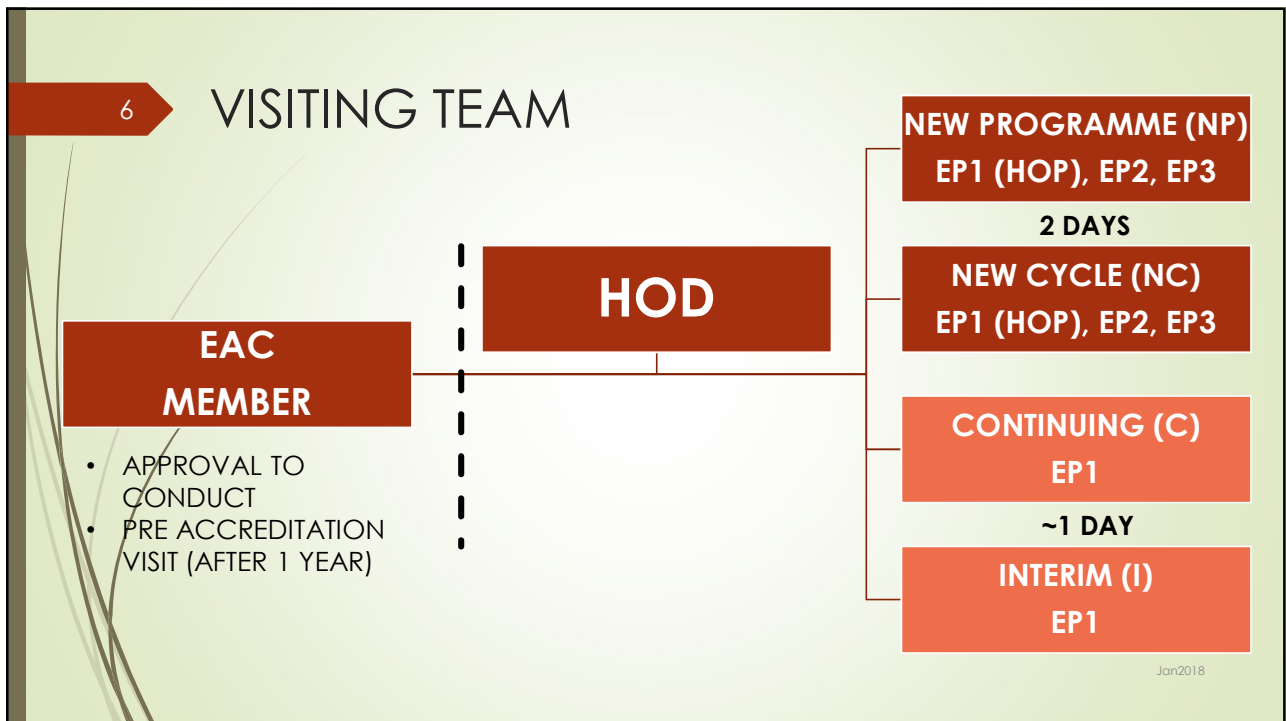
# Workshop/Sharing Session with Program Evaluators

13 December 2017  
14:00-16:00

SITI HAWA HAMZAH  
PhD, P. Eng, FIEM, Hon MAFEO ASEAN Engr, MRM, PSWM  
ASSOCIATE DIRECTOR (CIVIL ENGINEERING) EAD  
[sitihawabthamzah@gmail.com](mailto:sitihawabthamzah@gmail.com)

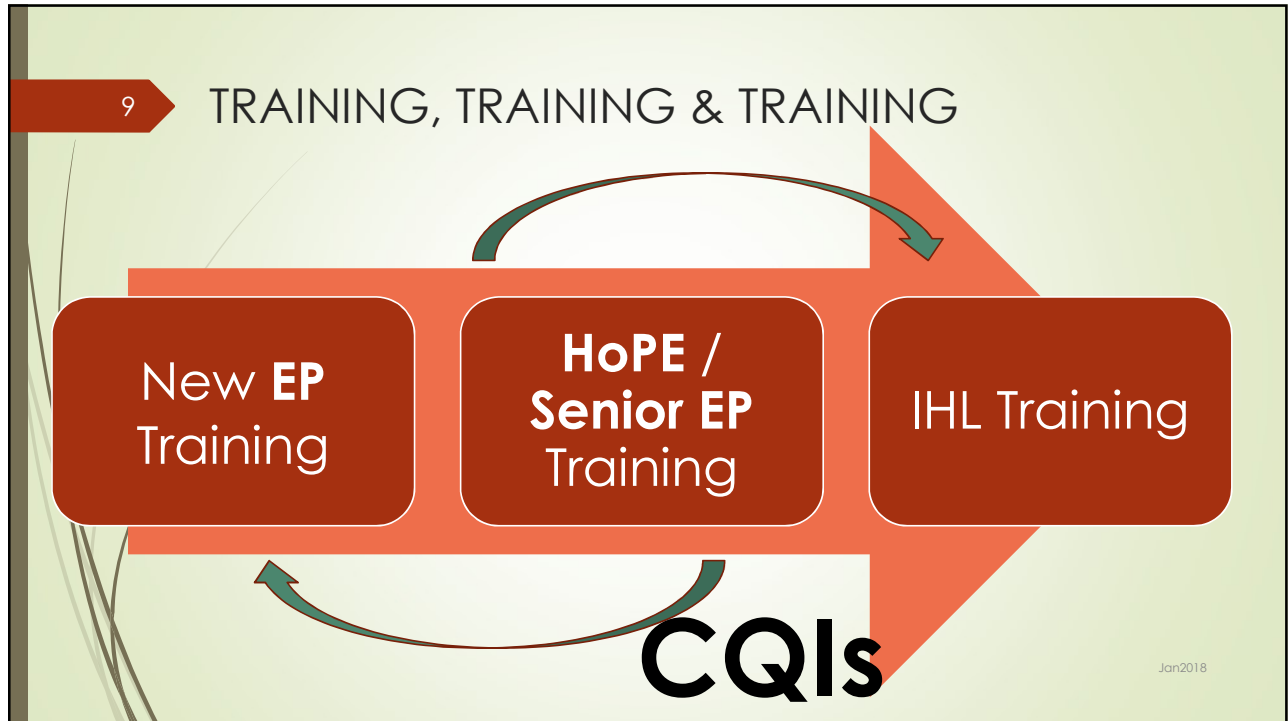






COMMENTS BY HOD 7 TO EAC EVALUATION PANEL TEAM							
No.	Particulars		Very Poor (1)	Poor (2)	Satisfactory (3)	Good (4)	Excellent (5)
Should be able to:							
1.	Request for information to IHL	(C)	NO				YES
2.	Introduction by the panel chair	(C)	Describe	Carry out	Differentiate	Explain	Interpret good knowledge of accreditation purpose Interpret good knowledge of accreditation purpose
3.	Explanation by the panel chair	(C)	Describe	Carry out	Differentiate	Explain	
4.	Preparedness	(A)	Assist & Comply	Responsive & Commit	Cooperate & Contribute	Responsive & Organised	Defend & Support
5.	Understanding of the EAC Manual	(C)	Describe & Discuss	Explain & Apply	Categorise & Compare	Assess & Conclude	Interpret & Justify
6.	Professional Conduct	(A)	Assist & Comply	Responsive & Commit	Cooperate & Contribute	Responsive & Organised	Defend & Support
7.	Time Keeping	absolute	>20 minutes off time	>10 minutes off time	10 minutes off time	5 minutes off time	Perfect on time
8.	Full report submission within stipulated time	absolute	NO				YES
9.	Attendance to Pre-ADM	absolute	NO				YES

COMMENTS BY HOP 8 TO EAC EVALUATION PANEL(S)							
No.	Particulars		Very Poor (1)	Poor (2)	Satisfactory (3)	Good (4)	Excellent (5)
Should be able to:							
1.	Panel asking relevant question according to the EAC criteria	(C)	Select	Select & Conform	Select & Justify	Select & Defend	Select & verify questions
2.	Interview Session with the academic / supporting staffs	(A)	Acknowledge	Participate & Discuss	Follow questions as per EAC Criteria	Organize Question & keep to time	Listen, Discriminate & Keep to time
3.	Interview Session with the students	(A)	Acknowledge	Participate & Discuss	Follow questions as per EAC Criteria	Organize Question & keep to time	Listen, Discriminate & Keep to time
4.	Interview Session with the Industry Advisory Panel / Stakeholders	(A)	Acknowledge	Participate & Discuss	Follow questions as per EAC Criteria	Organize Question & keep to time	Listen, Discriminate & Keep to time
5.	Time Keeping	absolute	>20 minutes off time	>10 minutes off time	10 minutes off time	5 minutes off time	Perfect on time
6.	Checking on the records and facilities	(P)	Recognise	Distinguish & detect	Display issues & react objectively	Organize issues & assemble evidence	Triangulate issues & confirm evidence
7.	Commitment and Cooperation during the visit	absolute	NO				YES
8.	Contribution to Report Writing	absolute	NO				YES



# EAC MANUAL 2017

APPROVED AT 328<sup>TH</sup> BEM BOARD MEETING, 21 AUGUST 2017

## MAIN CHANGES

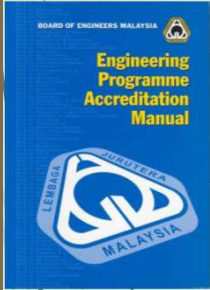
**Knowledge Sharing on Accreditation Tips : Malaysian Experience**

**SITI HAWA HAMZAH**  
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**LIEW CHIA PAO**  
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# OBE

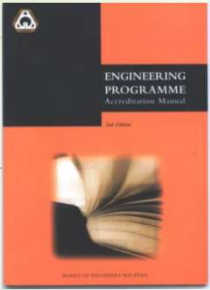
11



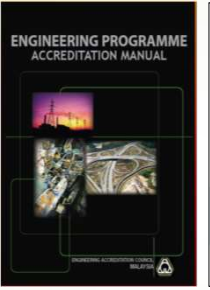
**1999**

Fully prescriptive with  
qualitative assessment

Series One




**2003**




**2006  
(Rev. 2007)**


Direct monitoring of outcomes  
(cohort & individual)




**2012**



**2015**



**2016**



**2017**

Jan 2018

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## BEM POLICY ON NAMING OF ENGINEERING PROGRAMMES AT BACHELOR LEVEL (27/6/2016)

- BACHELOR OF CIVIL ENGINEERING WITH HONOURS
- BACHELOR OF MECHATRONICS ENGINEERING WITH HONOURS
- BACHELOR OF CIVIL ENGINEERING (BUILDING) WITH HONOURS
- BACHELOR OF ENGINEERING (MANUFACTURING) WITH HONOURS
- BACHELOR OF ENGINEERING WITH HONOURS
- BACHELOR OF CIVIL ENGINEERING AND LAW WITH HONOURS

NOT ALLOWED

- BACHELOR OF STRUCTURAL ENGINEERING (BUILDING) WITH HONOURS
- BACHELOR OF ENGINEERING (MECHANICAL) WITH HONOURS

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**13** BEM CIRCULAR ON MINIMUM NUMBER OF PROFESSIONAL ENGINEER REQUIREMENTS PER PROGRAMME (9/10/2017)

- PROFESSIONAL QUALIFICATIONS FROM SIGNATORIES OF **IPEA** AND **APEC** WILL BE ACCEPTED AS EQUIVALENT
- PROFESSIONAL QUALIFICATIONS FROM COUNTRIES (ESP. WA SIGNATORIES) WHEN PROVEN AWARDED ON **SIMILAR CRITERIA AND STANDARDS** TO BEM PAE
- BEGINNING **1 JANUARY 2018**, EVERY ENGINEERING PROGRAMME SHALL DEMONSTRATE A WORKING PLAN TO A STATED TARGET OF **30%** ACADEMIC STAFF HAVING PE (OR EQUIVALENT) BY **31 DECEMBER 2020**.
- 30% MINIMUM SHALL BE :
  - 3 PE's FOR STUDENT **ENROLMENT < 160** (MIN. OF ACADEMIC STAFF IS **8**), OR
  - 30% PE's FOR STUDENT **ENROLMENT > 160** & STAFF-STUDENT RATIO **1:20**
- LECTURERS WITH FOREIGN PROFESSIONAL QUALIFICATIONS TO REGISTER WITH BEM PE USING **ROUTE 3**. (*demonstrate effort*)
- **OVER & ABOVE** REQUIREMENTS IN EAC MANUAL 2017

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**14** QUALIFYING REQUIREMENT

EAC Manual 2012	EAC Manual 2017
1. Min 120 cr hrs (80 engr subjects)	<b>1. OBE</b>
2. FYP	<b>2. Min 135 cr (90 engr subjects)</b>
3. IT	<b>3. IDP</b>
4. Min 8 FT academic staff	<b>4. FYP (min 6 cr)</b>
5. Staff:Student 1:20 or better	<b>5. IT (min 8 wks)</b>
6. EE Report	<b>6. Min 8 FT academic staff with 3 PE</b>
7. PEO	<b>7. Teaching Staff:Student 1:20 or better</b>
8. PO	<b>8. EE Report</b>

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## OUTCOME BASED EDUCATION

### EAC Manual 2012

- ▶ PEO
  - PEO statements
  - Processes and Results
  - Stakeholder Involvement
- ▶ PO
  - PO statements
  - Processes and Results
  - Stakeholder Involvement

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### EAC Manual 2017

- ▶ PEO
  - **PEO statements**
- ▶ PO
  - **Observation on PO – WA/WK/WP/EA**
  - **Observation on Processes and Results**
  - **Observation on Stakeholder Involvement**

Jan 2018

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## ACADEMIC CURRICULUM

- ▶ Curriculum shall encompass the **WK/WP/EA** as per IEA 2013
- ▶ IDP shall involve **WP** and **EA** which include design systems, components or processes integrating (culminating) core areas; and meeting specific needs with appropriate consideration for public health and safety, cultural, societal, project management, economy, and environmental considerations
- ▶ **Conditions for passing courses** – demonstrate the depth of knowledge according to **WK**

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## STUDENT

- Maximum Credit or Course Exemption of **30%** of the total programme credits is allowed for accredited/recognized **Diploma to Bachelor degree**
- Maximum Credit Transfer of **50%** of the total programme credits is allowed between accredited/recognised from **Bachelor to Bachelor degree**

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## ACADEMIC & SUPPORTING STAFF

- **TEACHING STAFF**
- Number and Competency of Teaching Staff
- 3 PE is a qualifying requirements
- Min of 8 FT whose first degree in engineering and relevant to the discipline
- ALL eligible staff MUST register with BEM as Graduate Engineer
- IMPLEMENTATION of OBE

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## FACILITIES

- **SAFETY CULTURE**
- Safety, health and environment CULTURE must be apparent among staff and students.

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## QUALITY MANAGEMENT SYSTEM

- **EXTERNAL EXAMINER REPORT**
  - Evaluation made at least once in **every TWO years**
  - Report in compliance to Appendix E
- **INDUSTRY ADVISORY PANEL**
  - Official appointment with specific TOR, period of appointment
  - IAP meeting shall be conducted at least **once a year** and properly **documented. (appended)**
- **SAFETY, HEALTH AND ENVIRONMENT**
  - Demonstrate in place - a policy, system and resources for managing and implementation of safety, health and environment.
  - Safety, health and environment **CULTURE** must be apparent among staff and students.

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## OTHER MAJOR CHANGES

- ▶ **SELF-ASSESSMENT REPORT**
  - Address the key questions in **Section 7**
  - Resubmission is required if it is of unacceptable quality
- ▶ **REVISIONS TO AN ACCREDITED PROGRAMME**
  - Update EAC and MQA on major changes
  - ≥ 30% of change in academic curriculum, change of location, pathways, programme name, programme duration and others
- ▶ **BENCHMARKING**
  - Carried out with similar accredited/recognised programme(s)

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## OTHER MAJOR CHANGES

- ▶ **CONTINUING & INTERIM PROGRAMMES ACCREDITATION**
  - Report actions on **CONCERNS** listed under accreditation conditions
  - Submit addendum - address updates as listed in **Section 7.2**
- ▶ **APPENDIX B**
  - CHEMICAL ENGINEERING DISCIPLINE
    - Plant & Equipment Design **extended to include Economics**
    - Viability – Legal Framework, Economics, Operability and Reliability. **NOW REMOVED**
  - ELECTRONIC ENGINEERING DISCIPLINE
    - Multimedia Technology and Applications. **NOW REMOVED**
    - Digital Signal Processing and Application. **NOW INCLUDED**

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23 DECISION RUBRICS \*\*\* (Not Cast in STONE) – new programme & new cycle

	6 years	6 years + interim report within 3 years	4 years			3 years			2 years			Deferred		
Major concerns	x	x	x	1	2	x	1	2	3	1	2	3	4	<b>&gt; 4 major concerns or any weakness</b>
Minor concerns	x	≤ 2	3-4	1-2	x	5-6	3-4	1-2	x	5-6	3-4	1-2	x	

24 DECISION RUBRICS – continuing accreditation \*\*\* (approved on 29 Nov 2017 at ADM 3/2017)

Remaining accreditation years	Remaining accreditation years -1 year	Remaining accreditation years - 2 years
All concerns CLOSED	≤ 2 concerns not CLOSED	> 2 concerns not CLOSED

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## REFERENCES

- EAC Manual 2012, Board of Engineers Malaysia
- EAC Manual 2017, Board of Engineers Malaysia
- IEA Graduate Attributes and Professional Competency Profiles, Version 3: 21 June 2013

## POINTS FOR CLARIFICATIONS

- [sitihawabthamzah@gmail.com](mailto:sitihawabthamzah@gmail.com)
- [liewcp@tarc.edu.my](mailto:liewcp@tarc.edu.my)

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