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

9 Oct 2017 – Restructure: ACCREDITATION DEPARTMENT BEM

EAC
DIRECTOR ACCREDITATION
ETAC
ASSOCIATE DIRECTORS EAC (INTERNATIONAL RELATIONS (1) & DISCIPLINES (6))
ASSOCIATE DIRECTORS ETAC (TECHNOLOGIST (2) & TECHNICIAN (2))
MANAGER ACCREDITATION
EAU OFFICER
ETAU OFFICER
FINANCE & ADMIN OFFICER (HQ)
AA
AA
AA
AA
AA
AA
EVALUATOR’S LIFE – MALAYSIAN EXPERIENCE

6-8 weeks
- HOP & 2 members/prog
  - 3 night mtgs, 2 days visit,
    - ½ day consolidating
  - first Thursday
  - monthly

April, August, December

BECOMING A BEM EVALUATOR PANEL (EP)

3 days workshop
- RM1500 (self)
- CPD 18 pts

3 night mtgs, 2 days visit,
- ½ day consolidating (self)
- CPD 22 pts

SOP ~ 4-6 months
- Honorarium
- RM500/day CPD 22 pts

PARTICIPANT

PE

SL

C

FULL VISIT

MAY ASSIST

EP
BEM EVALUATOR PANEL COMPETENCY MODEL
(BEM/GL/ACC/03 rev.4.25/5/2017) (ref : ABET)

- Technically current
- Effective at communicating
- Interpersonally skilled
- Team oriented
- Professional
- Organised

VISITING TEAM

EAC MEMBER
- APPROVAL TO CONDUCT
- PRE ACCREDITATION VISIT (AFTER 1 YEAR)

HOD

NEW PROGRAMME (NP)
EP1 (HOP), EP2, EP3
2 DAYS

NEW CYCLE (NC)
EP1 (HOP), EP2, EP3

CONTINUING (C)
EP1
~1 DAY

INTERIM (I)
EP1
# COMMENTS BY HOD TO EAC EVALUATION PANEL TEAM

<table>
<thead>
<tr>
<th>No.</th>
<th>Particulars</th>
<th>Very Poor (1)</th>
<th>Poor (2)</th>
<th>Satisfactory (3)</th>
<th>Good (4)</th>
<th>Excellent (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Request for information to IHL</td>
<td>(C) NO</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>2.</td>
<td>Introduction by the panel chair</td>
<td>(C) Describe</td>
<td>Carry out</td>
<td>Differentiat</td>
<td>Explain</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Explanation by the panel chair</td>
<td>(C) Describe</td>
<td>Carry out</td>
<td>Differentiat</td>
<td>Explain</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Understanding of the EAC Manual</td>
<td>(C) Describe &amp; Discuss</td>
<td>Explain &amp; Apply</td>
<td>Categorise &amp; Compare</td>
<td>Assess &amp; Conclude</td>
<td>Interpret &amp; Justify</td>
</tr>
<tr>
<td>7.</td>
<td>Time Keeping</td>
<td>absolute &gt;20 minutes off time</td>
<td>&gt;10 minutes off time</td>
<td>10 minutes off time</td>
<td>5 minutes off time</td>
<td>Perfect on time</td>
</tr>
<tr>
<td>8.</td>
<td>Full report submission within stipulated time</td>
<td>absolute NO</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
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<tr>
<td>9.</td>
<td>Attendance to Pre-ADM</td>
<td>absolute NO</td>
<td></td>
<td></td>
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<td>Yes</td>
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# COMMENTS BY HOP TO EAC EVALUATION PANEL(S)

<table>
<thead>
<tr>
<th>No.</th>
<th>Particulars</th>
<th>Very Poor (1)</th>
<th>Poor (2)</th>
<th>Satisfactory (3)</th>
<th>Good (4)</th>
<th>Excellent (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Panel asking relevant question according to the EAC criteria</td>
<td>(C) Select</td>
<td>Select &amp; Conform</td>
<td>Select &amp; Justify</td>
<td>Select &amp; Defend</td>
<td>Select &amp; verify questions</td>
</tr>
<tr>
<td>2.</td>
<td>Interview Session with the academic / supporting staffs</td>
<td>(A) Acknowledge</td>
<td>Participate &amp; Discuss</td>
<td>Follow questions as per EAC Criteria</td>
<td>Organize Question &amp; keep to time</td>
<td>Listen, Discriminate &amp; Keep to time</td>
</tr>
<tr>
<td>3.</td>
<td>Interview Session with the students</td>
<td>(A) Acknowledge</td>
<td>Participate &amp; Discuss</td>
<td>Follow questions as per EAC Criteria</td>
<td>Organize Question &amp; keep to time</td>
<td>Listen, Discriminate &amp; Keep to time</td>
</tr>
<tr>
<td>4.</td>
<td>Interview Session with the Industry Advisory Panel / Stakeholders</td>
<td>(A) Acknowledge</td>
<td>Participate &amp; Discuss</td>
<td>Follow questions as per EAC Criteria</td>
<td>Organize Question &amp; keep to time</td>
<td>Listen, Discriminate &amp; Keep to time</td>
</tr>
<tr>
<td>5.</td>
<td>Time Keeping</td>
<td>absolute &gt;20 minutes off time</td>
<td>&gt;10 minutes off time</td>
<td>10 minutes off time</td>
<td>5 minutes off time</td>
<td>Perfect on time</td>
</tr>
<tr>
<td>6.</td>
<td>Checking on the records and facilities</td>
<td>(P) Recognise</td>
<td>Distinguish &amp; detect</td>
<td>Display issues &amp; react objectively</td>
<td>Organize issues &amp; assemble evidence</td>
<td>Triangulate issues &amp; confirm evidence</td>
</tr>
<tr>
<td>7.</td>
<td>Commitment and Cooperation during the visit</td>
<td>absolute NO</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
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<td>8.</td>
<td>Contribution to Report Writing</td>
<td>absolute NO</td>
<td></td>
<td></td>
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<td>Yes</td>
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</table>
EAC MANUAL 2017
APPROVED AT 328TH BEM BOARD MEETING, 21 AUGUST 2017

MAIN CHANGES

Knowledge Sharing on Accreditation Tips: Malaysian Experience

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LIEW CHIA PAO
P. Eng, MIEM
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OBE

1999

2003

2006
(Rev. 2007)

2012

Direct monitoring of outcomes
(cohort & individual)

Fully prescriptive with
qualitative assessment

2017

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
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)

QUALIFYING REQUIREMENT

EAC Manual 2012
1. Min 120 cr hrs (80 engr subjects)
2. FYP
3. IT
4. Min 8 FT academic staff
5. Staff:Student 1:20 or better
6. EE Report
7. PEO
8. PO

EAC Manual 2017
1. OBE
2. Min 135 cr (90 engr subjects)
3. IDP
4. FYP (min 6 cr)
5. IT (min 8 wks)
6. Min 8 FT academic staff with 3 PE
7. Teaching Staff:Student 1:20 or better
8. EE Report
OUTCOME BASED EDUCATION

EAC Manual 2012
- PEO
  - PEO statements
  - Processes and Results
  - Stakeholder Involvement
- PO
  - PO statements
  - Processes and Results
  - Stakeholder Involvement

EAC Manual 2017
- PEO
  - PEO statements
- PO
  - Observation on PO – WA/WK/WP/EA
  - Observation on Processes and Results
  - Observation on Stakeholder Involvement

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
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

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
**FACILITIES**

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

**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.
**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**
### DECISION RUBRICS *** (Not Cast in STONE) – new programme & new cycle

<table>
<thead>
<tr>
<th>Major concerns</th>
<th>6 years</th>
<th>6 years + interim report within 3 years</th>
<th>4 years</th>
<th>3 years</th>
<th>2 years</th>
<th>Deferred</th>
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<tbody>
<tr>
<td></td>
<td>x</td>
<td>x</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minor concerns</th>
<th></th>
<th>≤ 2</th>
<th>3-4</th>
<th>1-2</th>
<th>x</th>
<th>5-6</th>
<th>3-4</th>
<th>1-2</th>
<th>x</th>
<th>5-6</th>
<th>3-4</th>
<th>1-2</th>
<th>x</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Remaining accreditation years</th>
<th>Remaining accreditation years - 1 year</th>
<th>Remaining accreditation years - 2 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>All concerns CLOSED</td>
<td>≤ 2 concerns not CLOSED</td>
<td>&gt; 2 concerns not CLOSED</td>
</tr>
</tbody>
</table>
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
- liewcp@tarc.edu.my