OBE

NEW PANEL WORKSHOP 2019
BOARD OF ACCREDITATION FOR ENGINEERING AND TECHNICAL EDUCATION, BANGLADESH
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LEARNING OUTCOMES

At the end of the presentation, participants are able to:
• explain the definition and purpose of OBE
• adopt the concept of constructive alignment in OBE
• ascertain the needed evidences towards an effective accreditation
The focus & approach in EAC accreditation:

**Outcome-Based Education (OBE)**
- Programme
  - Engineering Education content and level (breadth & depth) are maintained

**Programme Continual Quality Improvement (CQI)**
- Systematic (QMS)
  - Evaluation Panel (EP) will concentrate on reviewing the evidences for outcome achievements through more extensive documents reviews, longer interviews with staff, students and stakeholders.

**IHL Self-Assessment Report (SAR)**
- Should focus more on whether they have achieved the 12 Programme Outcomes and how do they assess them.
EAC 8 QUALIFYING REQUIREMENTS

1. OBE Implementation
2. Minimum 135 SLT credits of which 90 credits must be engineering courses
3. IDP
4. FYP (min 6 credits)
5. IT (min 8 weeks)
6. Full-time Teaching Staff (minimum of 8 with at least 3 as PEng or equivalent)
7. Teaching Staff: Student ratio 1:20 or better
8. External examiner’s report (minimum of one report in two years)
Have programme educational objectives, programme outcomes, course outcomes and performance indicators/rubrics.

Stated objectives and outcomes can be assessed and evaluated.

Centered around the needs of the students and the stakeholders.

Programme outcomes address Knowledge & Attitude (C,P,A) to be attained by students.

Course outcomes must satisfy the stated programme outcomes. There is no need for ANY (individual) course to address all programme outcomes.

Teaching/Learning method may have to be integrated to include different delivery methods to complement the traditional LECTURING method.

Learning outcomes are intentional and assessed using suitable performance indicators.

STUDENT CENTRED

CONSTRUCTIVE ALIGNMENT

OUTCOMES

C/P/A

ACTIVE LEARNING
OE is an education system that emphasize on Learning Outcomes.
The programme aspiration is in compliance to the need of the stakeholders in the field of......

justification to offer the programme

PO’s
- Engineering Knowledge
- Problem Analysis
- Design/Development of Solutions
- Investigation
- Modern Tool Usage
- The Engineer & Society
- Environment & Sustainability
- Ethics
- Communication
- Individual & Team Work
- Project Management & Finances
- Life Long Learning

PEO’s

PEO1
- *professionalism*

PEO2
- CPD

PEO3
- *societal engagement*

PEO's Expectation of Industry & Stakeholders
OBE requires T&L activities to be **CONSTRUCTIVELY ALIGNED** to intended learning outcomes.
When and How to Assess?

**Individual Improvement**
- To help them to improve
- To give feedback to them
- To place/class them

**Gatekeeping**
- To grade/class them
- To pass/fail them

**Course/Programme Improvement**
- To improve the course/programme
- To monitor the progress

**Course/Programme Evaluation**
- To continue/stop the course/programme

**Learning/Teaching (Formative)**

**Accountability (Summative)**

**Why Assess**
Assessment – process that determines the level of attainment of the outcomes.

**PURPOSE OF ASSESSMENT**

**IMPROVEMENT** – curriculum, instructional practice, student services

**ACCOUNTABILITY** – institution, public, resource provider

**ACCREDITATION** – quality assurance, accrediting bodies
**Formative Assessment**

Collection of data and the feedback of the results on an ongoing basis (G. Rogers & J. Sando, 1996)

*For Continuous Improvement to students learning and T&L activities*

**Summative Assessment**

Designed to produce information that can be used to make decisions about the overall success of the project or process. (G. Rogers & J. Sando, 1996)

*For grading purposes*

**Indirect Measures**

Provide for the direct examination or observation of student knowledge or skills against measurable learning outcomes from Assignments, tests, final exam, reports, presentation, etc., where the COs and POs can be measured directly.

**Direct Measures**

OF learning because educators use the results to modify and improve teaching techniques during an instructional period.

**Types of Assessment**

OF learning because educators use the results to modify and improve teaching techniques during an instructional period.
**WHAT TO ASSESS**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Outcomes</th>
<th>Activities</th>
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</thead>
<tbody>
<tr>
<td><strong>COGNITIVE DOMAIN</strong></td>
<td>Knowledge outcomes - core concepts and material knowledge of a particular discipline; intellectual/mental ability</td>
<td>KNOWLEDGE, COMPREHENSION, APPLICATION, ANALYSIS, SYNTHESIS, EVALUATION</td>
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<tr>
<td><strong>PSYCHOMOTOR DOMAIN</strong></td>
<td>Behavioral and Skills outcomes - what a student can do; physical ability; behavior crucial to the curriculum’s impact</td>
<td>PERCEPTION, SET, GUIDED RESPONSE, MECHANISM, COMPLETE OVERT RESPONSE, ADAPTATION, ORGANISATION</td>
</tr>
<tr>
<td><strong>AFFECTIVE DOMAIN</strong></td>
<td>Attitudes and values outcomes - those educators believe to be important; habits of mind</td>
<td>RECEIVING, RESPONDING, VALUING, ORGANISING, INTERNALISING</td>
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</table>
Describe the process and significance of CQI in the programme planning.

CQI process

every semester, year, full cycle

every semester
TRACKING MECHANISMS FOR CQI

- PROGRAMME PLANNING
  - REVIEWING OF PEOs AND POs
  - CURRICULUM DEVELOPMENT
  - CURRICULUM AND CONTENT REVIEW
  - RESPONDING TO EE COMMENTS
  - TRACKING OUTCOMES THROUGH SYSTEMATIC ASSESSMENT
  - RESPONDING TO FEEDBACK AND INPUTS FROM STAKEHOLDERS
  - TRACKING CONTRIBUTION OF INDIVIDUAL COURSES TO POs

QMS
QUALITY ASSURANCE & BENCHMARKING
CONTINUITY & SUSTAINABILITY

Curriculum Review

EE & IAP

CQI best practices

Safety culture

Gap Analysis

Processes and Results: course and programme levels

Benchmarking

Closing the loop
REFERENCES

- EAC Manual 2017, Board of Engineers Malaysia
- IEA Graduate Attributes and Professional Competency Profiles, Version 3: 21 June 2013
- Siti Hawa Hamzah, Liew Chia Pao and Che Maznah Mat Isa, Knowledge Sharing on Accreditation Tips: Malaysian Experience, You Tube Publications, 2018
- Siti Hawa Hamzah and Che Maznah Mat Isa, Knowledge Sharing on Accreditation Tips: Malaysian Experience, You Tube Publications, 2016

POINTS FOR CLARIFICATIONS

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Thank You