



# OBE

## NEW PANEL WORKSHOP 2019 BOARD OF ACCREDITATION FOR ENGINEERING AND TECHNICAL EDUCATION, BANGLADESH 9 OCTOBER 2019

SITI HAWA HAMZAH

PhD, P. Eng, FIEM, Hon MAFEO ASEAN Engr, MRM, PSWM  
ASSOCIATE DIRECTOR (CIVIL ENGINEERING) EAC

[sitihawabthamzah@gmail.com](mailto:sitihawabthamzah@gmail.com)



# 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)**

Concentrate more on assessments of outcomes

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

Evaluation Panel (EP) will **concentrate on reviewing the evidences for outcome achievements** through more extensive documents reviews, longer interviews with staff, students and stakeholders.

# 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)





# OBE CURRICULA

Have  
program  
me  
educatio  
nal

## CONSTRUCTIVE ALIGNMENT

objectives,  
program  
me  
outcome  
s, course  
outcome  
s and  
perform  
ance  
indicator

Stated  
objecti  
ves  
and  
outco  
mes  
can be  
assess  
ed and  
evalua  
ted

Centered  
around  
the  
needs of  
the  
students  
and the  
stakehol  
ders

Program  
me  
outcome  
s  
address  
Knowled  
geSkill &  
Attitude  
(C,P,A)  
to be  
attained  
by  
students

## STUDENT CENTRED

## OUTCOMES

Course  
outcom  
es must  
satisfy  
the  
stated  
progra  
mme  
outcom  
es.  
There is  
no need  
for ANY  
(individ  
ual)  
course  
to  
address  
all  
progra  
mme  
outcom

Teachin  
g/  
Learnin  
g  
method

may  
have to  
be  
integrat  
ed to  
include  
differen  
t  
delivery  
method  
s to  
comple  
ment  
the

## ACTIVE LEARNING

COI  
Learn  
g  
outcome  
s are  
intention  
al and  
assesse  
d using  
suitable  
perform  
ance  
indicators

PEO,PO,  
CO,LO  
rubrics



**V & M - IHL**

**PEO**

- Programme Educational Objectives/ Programme Objectives
- TOP DOWN APPROACH
- DESCRIBE PERFORMANCE

**Broad/ Long Term (Few years after graduation - 3 to 5 years)**

**PO**

- Programme Outcomes/ Programme Learning Outcomes

**Upon graduation**

**CO**

- Course Outcomes/ Course Learning outcomes/ Learning Objectives

**Upon course completion**

**LO**

- Weekly/ Topic/ Lesson Outcomes

**Upon weekly/ topic completion**

**LEVEL OF LEARNING OUTCOMES**

**OBE is an education system that emphasize on Learning Outcomes**

# CONSTRUCTIVE ALIGNMENT

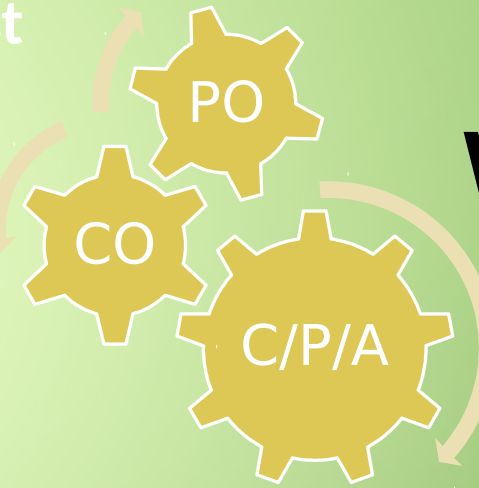


## WP&EA

Intended outcomes must clearly be indicated

**WHAT**

**learning outcomes**



**ELEMENTS OF COURSE DESIGN**

SCL

TCL

PBL

Lecture

POPBL

E-Learning

CBL

Blended Laboratory

**instruction**

**HOW TO HELP**

Activity will match outcomes

**CLOSE LOOP**

**STUDENT**

**assessment**

**HOW TO KNOW**

Formative/Summative

Direct/Indirect

Course/Program Level

**OBE requires T&L activities to be CONSTRUCTIVELY ALIGNED to intended**



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

AFFECTIVE

PSYCHOMOTOR

R

COGNITIVE

E

Individual

Who to Assess?

## Course/Programme Improvement

To improve the course/programme  
To monitor the progress

## Course/Programme Evaluation

To continue/stop the course/programme

Programme/  
Group

Learning/Teaching  
(Formative)

Why Assess

Accountability  
(Summative)

What to assess





# Assessment – process that determines the level of attainment of the outcomes

WHY

## PURPOSE OF ASSESSMENT

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

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

**ACCREDITATION** – quality assurance, accrediting bodies



## Formative Assessment

The 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*

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

## 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*

**OF learning because educators evaluate academic achievement at the end of an instructional period.**

### Types of Assessment

## Direct 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.*

## Indirect Measures

of student learning ascertain the perceived extent or value of learning experiences

- *From course end survey, exit survey, stake holder survey, interview etc.*

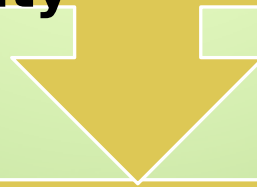
# WHAT TO ASSESS



## COGNITIVE DOMAIN

**Knowledge outcomes - core concepts and material knowledge of a particular discipline; intellectual/mental ability**

**KNOWLEDGE, COMPREHENSION, APPLICATION, ANALYSIS, SYNTHESIS, EVALUATION**



## PSYCHOMOTOR DOMAIN

**Behavioral and Skills outcomes - what a student can do; physical ability; behavior crucial to the curriculum's impact**

**PERCEPTION, SET, GUIDED RESPONSE, MECHANISM, COMPLETE OVERT RESPONSE, ADAPTION, ORGANISATION**



## AFFECTIVE DOMAIN

**Attitudes and values outcomes - those educators believe to be important; habits of mind**

**RECEIVING, RESPONDING, VALUING, ORGANISATION, INTERNALISING**



**FULL  
CYCLE**

***CQI  
heart of  
OBE***

**CQI process  
instituted**

- Describe the process and significance of CQI in the programme planning

**every  
semester  
, year,  
full cycle**

**CQI  
Action  
s**

**Programme  
Educational  
Objective**

**PEO  
Assessment  
Methods**

**PO setting and  
T&L activities**

**CQI  
actions**

**CO setting  
and T&L  
activities**

**PO  
assessment  
t methods**

**CQI  
actions**

**CO  
assessment  
t methods**

**Data  
Analysis**

**Data Analysis**

**Data Analysis**

**every  
semester**



S.M.A.R.T.

CQI

LO

CQI

CO

CQI

PO

CQI

PE

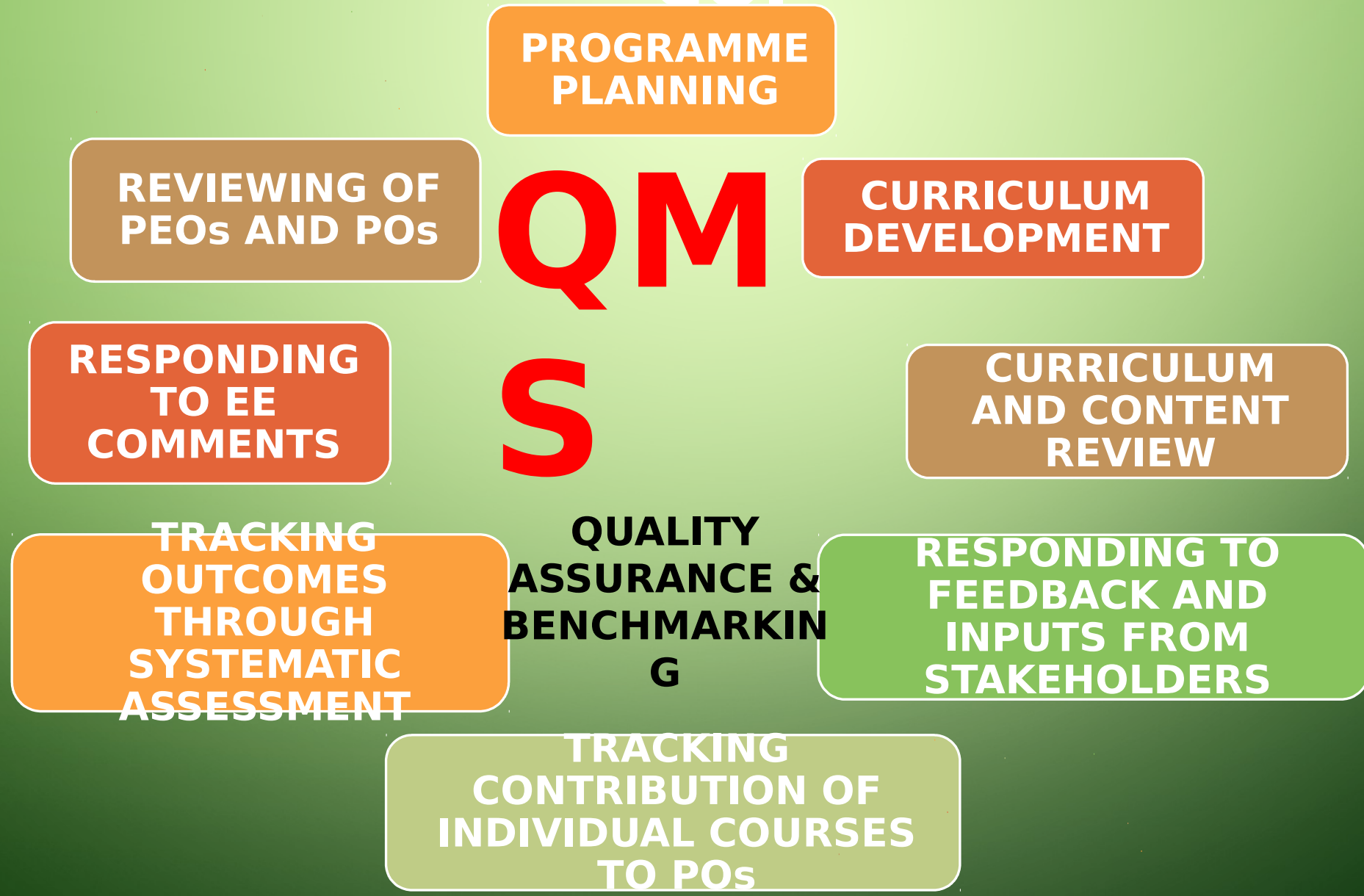
O

***OBE***

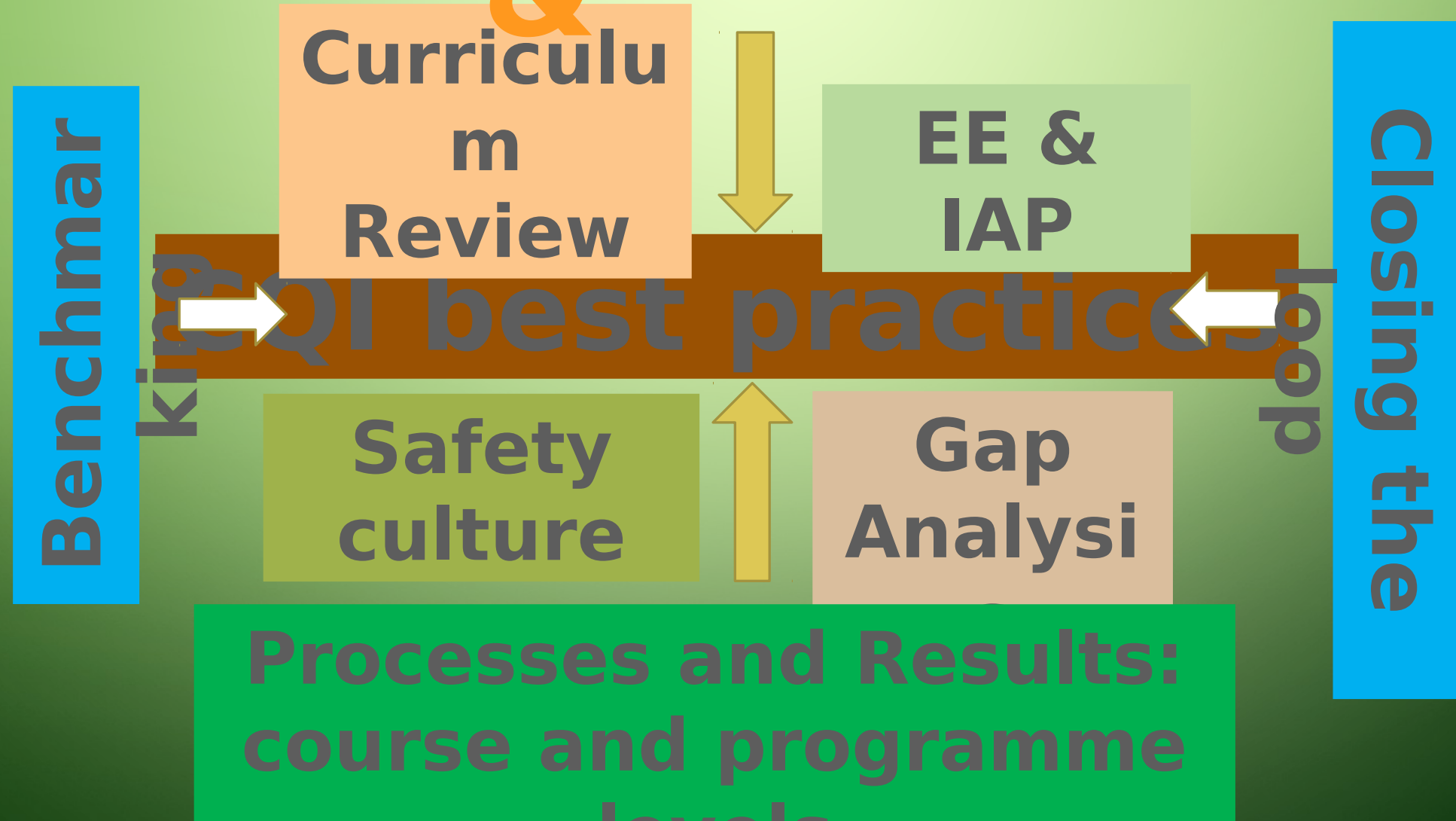
***CURRICULA***



# TRACKING MECHANISMS FOR COI



# CONTINUITY & SUSTAINABILITY





# REFERENCES

- Accreditation Manual 2019, 2nd edition, Board of Accreditation for Engineering and Technical Education, Institution of Engineers Bangladesh
- 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**

sitihawabthamzah@gmail.com



# Thank You



PASSU, PAKISTAN [shh2019]