



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# ROLE OF EVALUATORS IN OUTCOME BASED ACCREDITATION

Anisul Haque, Board Member, BAETE  
Department of EEE, East West University

# Outline

2

- Introduction
- Tasks of evaluator during accreditation
- Introduction to OBE
- Conflicts-of-interest
- Review of SAR and pre-visit meeting
- Onsite visit
- Evaluation team report
- Confidentiality
- Conduct
- Professionalism
- Case studies



# Who are the evaluators?

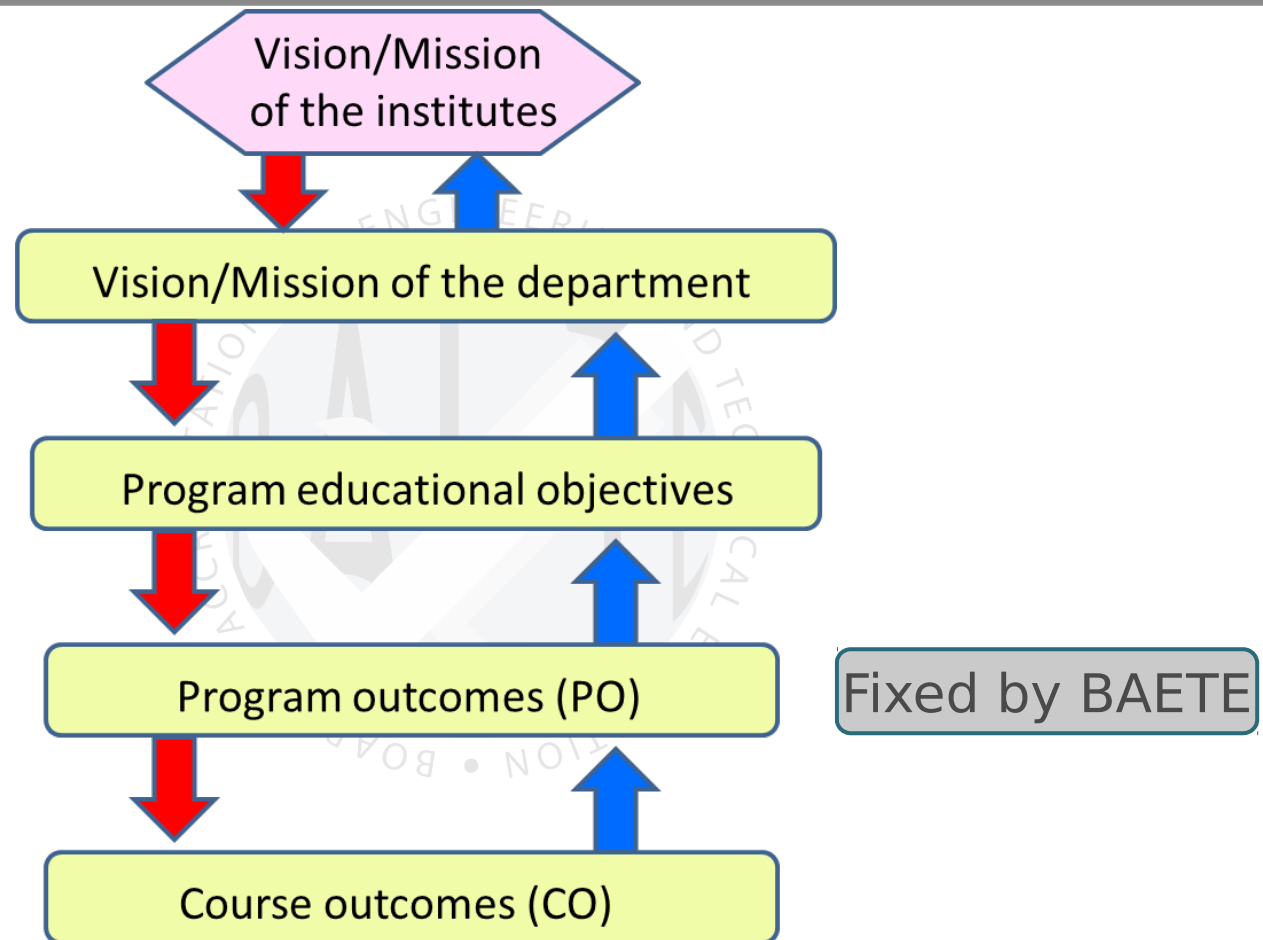
3

- They are experts who understand and know BAETE manual and accreditation guidelines and practices well
- They know Outcome Based Education well
- They are the eyes and ears of BAETE
- They provide BAETE evidence based analysis for accreditation decision
- They ensure that facts are collected and analyzed as per BAETE criteria and requirements



# Structure of OBE

4



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

**SMART** PEO/PO/CO

# Sample Vision/Mission/PEO

5

**EWU Vision:** To be a leader in higher education and to exalt excellence, innovation and entrepreneurship to transform the society

**EEE, EWU Vision:** To create excellent engineers instilled with quality education, human values and professional ethics

**EEE, EWU Mission:** The department is dedicated to endow students with knowledge, skills and values that prepare them to **excel as leading engineering professionals** and **responsible citizens committed to life-long learning**



# Sample Vision/Mission/PEO

6

## PEO for the B.Sc. in EEE at EWU

Graduates of the B.Sc. in EEE program are expected to attain the following Program Educational Objectives (PEO) within a few (3 – 5) years of graduation.

- Establish themselves as leading engineering professionals or in advanced study and research
- Contribute to the society through the use of electrical and electronic engineering principles, practices and tools in an ethical and responsible manner
- Continue to learn and address evolving challenges in electrical and electronic engineering



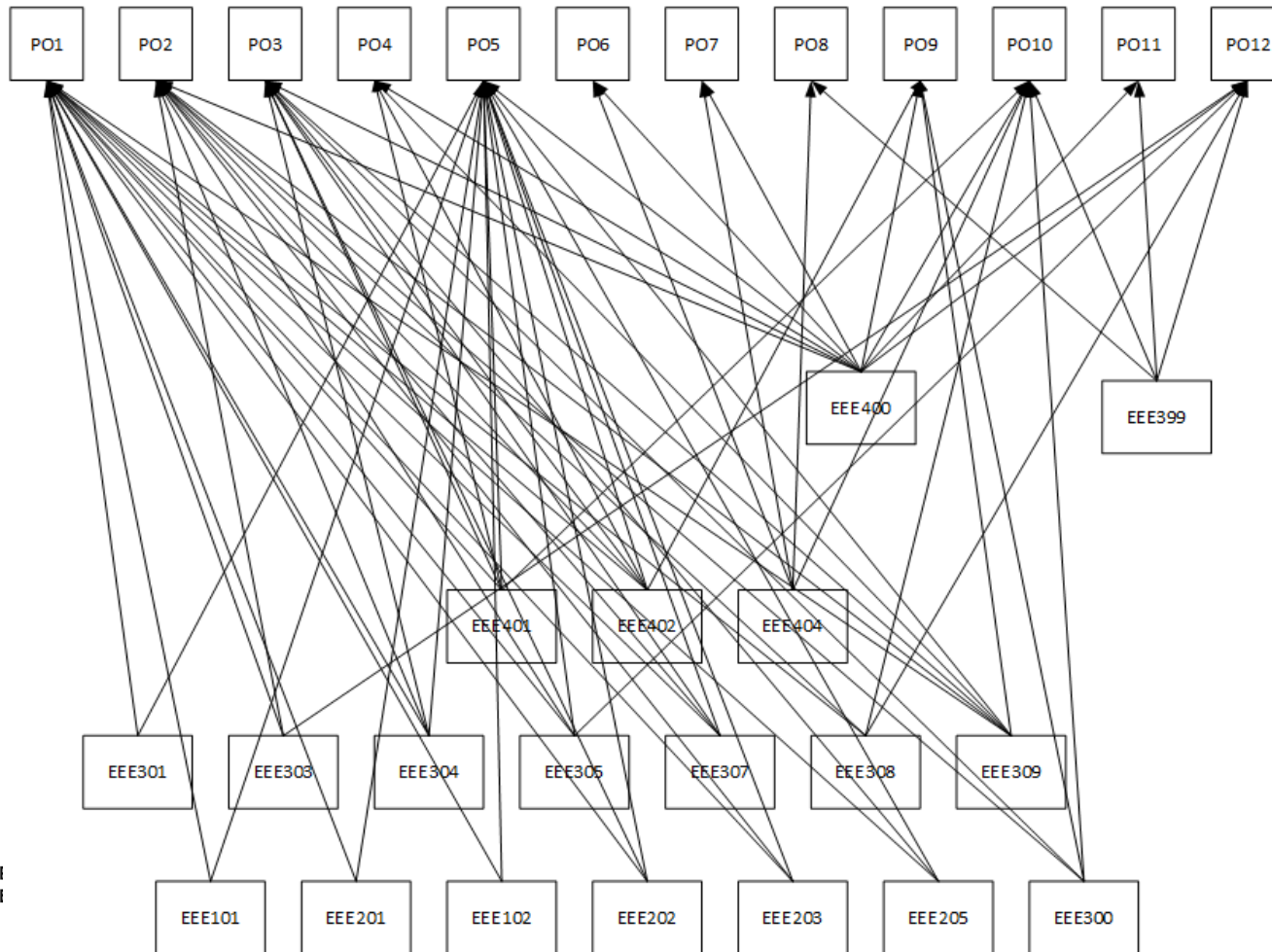
# Sample PO to PEO Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
PEO1	X		X		X					X		
PEO2						X	X	X			X	
PEO3		X		X					X			X



# Sample CO to PO Mapping

Example of CO-PO mapping of all EEE core courses, EEE, EWU





# Outcome Driven Activities & Assessment

9

## Sample Course Profile from EEE, EWU

CO	PO	Taxonomy domain/level	Delivery methods & activities	Assessment tools
Describe the underlying physics and characteristics of different electronic properties of materials	PO1	Cognitive/ Understand	Lecture, Q/A, discussion, video presentation	Class tests, Mid Terms, Final
Calculate responses of materials related to different electronic properties	PO1	Cognitive/ Apply	Lecture, Q/A, discussion, in-class problem solution	Class tests, Mid Terms, Final
Compare different materials and select the most appropriate one for specific electrical engineering application	PO2	Cognitive/ Evaluation	Lecture, Q/A, discussion, video presentation	Assignment report, presentation
Demonstrate the capacity to extend learning beyond classroom lectures and activities	PO12	Affective/ Valuing	Q/A, discussion	Presentation
Prepare formal technical report	PO10	Affective/ Valuing	Lecture, Q/A, discussion	Assignment report



# Outcome Driven Activities & Assessment

10

Exam questions should be targeted towards CO achievement at appropriate domain/level of taxonomy and complexity

Non-exam assessment tools should also be targeted and

should use suitable rubrics

Evidence of assessment of achievement of CO's (course level)

Also need evidence of assessment of achievement of PO's of the graduating cohort (program level)



# Evaluator tasks during accreditation

11

- Ensure that there is no conflict-of-interest
- Review SAR and perform preliminary evaluation
- Participate in pre-visit meeting(s) and share findings
- Conduct 3 day onsite visit
  - Assess factors not resolved from SAR
  - Meet with different stakeholders
  - Examine documents, e.g., course files, files demonstrating outcome achievement
  - Review infrastructure and facilities
  - Analyze findings and reach evidence based conclusions
  - Conduct exit meeting
- Prepare evaluation team report



# Conflicts-of-interest

No member of the evaluation team may have any conflict-of-interest with the program or the institution. Disclosure must be at the first opportunity

- A present or former faculty or staff member
- Had applied for employment in the past
- Present or past member of any committee
- Current or past involvement in any for-profit activity
- Spouse studying or working in in any capacity
- Child present or past student
- Close relative student or employee .....



# Review of SAR & Pre-Visit Meeting

13

- Each evaluator independently reviews SAR and records preliminary findings for each criterion and sub-criterion
- Requests team chair to contact institution if any additional information on any topic is needed
- Findings of each evaluator are shared and preliminary evaluation of each criterion is made
- Team chair distributes criteria among team members who will be responsible for evaluation of those
- The sub-criteria which require further exploration in onsite visit are identified. Strategy for onsite visit decided



# Onsite Visit (within 12 weeks)

14

## Major activities during the onsite visit

- Examine course materials to verify
  - Course contents are up-to-date and consistent with objectives
  - Course pre-requisites are appropriate
  - Delivery methods and learning activities consistent with COs
  - Issues of complex engineering problems and complex engineering activities are addressed .....
- Examine assessment and evaluation materials to verify
  - Assessment tools are appropriate to measure CO achievement
  - CO achievements are assessed and documented
  - PO achievements are assessed and documented .....
- Examine transcripts



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# Onsite Visit (Cont)

15

Non-compliance in 1 or 2 courses should not be taken as evidence for weakness or deficiency. Rather it is more of an indicator of a problem which needs to be established through triangulation, i.e., through corroboration by other evidences.

Documentation of assessment outcome achievement at course and program levels is important. It is not essential that each outcome must be achieved at each level. However, a process must exist for assessment and documentation. The program is free to choose the appropriate method but should be able to justify its choice.



# Onsite Visit (Cont)

16

- Meeting with faculty members to assess
  - Teaching philosophy of faculty members
  - Initiatives taken to remain up-to-date
  - Professional engagement
  - Level of understanding of OBE
  - Level of understanding of assessment of outcomes
  - View on the strengths and weaknesses of the program .....

Program head, dean, etc should not be present in the meeting. Talking to individual faculty members in private can be an effective way. In that case, the faculty members to be interviewed should be carefully selected.





# Onsite Visit (Cont)

17

- Meeting with students to assess
  - Level of satisfaction
  - Enthusiasm for the program
  - Quality of teaching
  - Adequacy of advising and academic support from faculty/TA
  - Admission process
  - Adequacy of labs
  - Adequacy of facilities (class rooms, library, etc)

No staff should be present. Selection of the pool of students for interview is critical. The pool should be representative of the upper level student body with a balanced mix of academic performance and gender.



# Onsite Visit (Cont)

18

- Visits to labs, class rooms and support facilities
  - Verify the infrastructural quality of lass rooms
  - Verify the adequacy of number of labs, types and quantities of equipment
  - Assess the safety, security and access issues
  - Assess the level of support provided to the program. Support facilities may include the library, office of the registrar/controller, placement center, medical center, sports facilities, etc .....

It may be more time efficient if the members of the evaluation team conducts the visits separately.



# Onsite Visit (Cont)

19

## Other activities during the onsite visit

- Opening meeting with the Head of Institution
- Meeting with the support staff of the program
- Meeting with alumni/employers
- Examine documents demonstrating CQI process
- Examine documents related to governance, finance (if needed)
- Visit to the residential facility (if needed)
- Debriefing the program head before exit meeting to prevent shock and surprise



# Onsite Visit (Cont)

20

Sample assessment form for evaluators



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# Onsite Visit (Cont)

## Analyze findings and reach conclusions

- Holistic approach should be adopted in evaluation (how does the issue address the concerned program?)
- Each observation to be categorized under appropriate criterion and sub-criterion
- Findings should be consolidated to get the big picture
- Nitpicking or bean counting should be avoided
- No criterion or sub-criterion should be analyzed in isolation
- Isolated evidence should not be used to make general conclusions

# Onsite Visit (Cont)

## Analyze findings and reach conclusions

- Absence of evidence should not be treated as non-compliance unless the evidence is specifically asked for
- Trend or pattern is what evaluators should look for
- Use of “compliance,” “concern,” “weakness,” “deficiency” should be as per guideline given in manual and should not be arbitrarily or subjectively interpreted
- Personal bias, perception or practice in evaluator’s own institution should not be basis for any conclusion
- Quantitative or prescriptive evaluation should be avoided

# Onsite Visit (Cont)

23

## Definitions

- **Compliance** – satisfies requirement. No corrective measure needed
- **Concern** – Broadly in compliance but needs improvement to avoid potential non-compliance
- **Weakness** – Lacks strength of compliance. Requires corrective measures
- **Deficiency** – Does not exist or is in an elementary stage. Compliance is required



# Onsite Visit (Cont)

24

## Exit meeting

- Evaluation team chair chairs the meeting
- The institution may not respond to the exit statement except for correction of factual error. This should be communicated at the beginning of the meeting
- Assessment of each criterion in terms of “compliance,” “concern,” “weakness,” or “deficiency” is verbally communicated. Brief justification for each assessment is presented
- Evaluation team may not propose any specific remedial measure to any issue. Recommendations to



# Evaluation Team Report

25

- To be submitted within 3 weeks of visit
- Report to be as per BAETE criteria and requirements
- Report should be evidence based and specific
- Justification for each assessment should be adequate
- May include a statement of compliance
- May not include any subjective narration
- May contain general recommendation
- May not contain any prescriptive recommendation on how to address an issue



# Confidentiality

- All information provided by the institution are confidential. All findings of the evaluation team during onsite visit are confidential
- Information may not be used for any purpose other than accreditation evaluation
- Information may not be shared with a third party for any purpose



# Conduct

27

- Composure
  - Communicate effectively under all situations
  - Remain focused to the topic at hand during meetings with stakeholders. Let not allow the discussion to wander
  - Do not lose temper in any circumstance
- Collegiality
  - Accreditation evaluation is a peer level task
  - Evaluator should not feel/express any superiority
  - Evaluator should not be intimidating or abusive
  - Evaluator should be polite and patient
  - Cynical, demeaning or sarcastic language to be avoided



# Conduct (Cont)

28

- Diligence
  - Prior preparation of evaluator is essential
  - SAR should be reviewed in detail and issues which need further exploration should be identified
  - Findings should be exchanged in pre-visit meeting and onsite visit plan should be decided
  - During meetings with stakeholders, evaluators should know what they are looking for and they should guide discussions accordingly



# Conduct (Cont)

29

- Gifts, favors and meals
  - The institution should be notified in advance that the practice of giving evaluators any gift is unacceptable
  - Evaluators should not accept any gift of value
  - Evaluators should not ask anyone from the institution for any favor or anything of personal nature
  - All meals should be simple working meals
  - No meal should become a formal or a social event
  - No one from the institution should join the evaluation team during any meal



# Professionalism

30

- Team work
  - Evaluators should be cooperative and collaborative with one another
  - Evaluators should behave cordially with one another
  - Negative personal feeling, if any, should be set aside for the common goal of fair and evidence based evaluation
- Formality
  - Accreditation is a formal, professional activity
  - Evaluator's behavior with anyone from the institution should not be overt friendly or overt personal. Such behavior by anyone from the institution should not be entertained



# Professionalism (Cont)

31

- Decorum
  - Evaluators are expected to attend all activities during the onsite visit
  - Evaluators are not expected to use mobile phone during onsite visit. This is particularly important during meetings with stakeholders
- Punctuality
  - All meetings, visits and activities during the onsite visit should start and end on time
  - The institution should be notified about the importance of punctuality in advance



# Case Study

32

Example 1



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION



# Case Study

33

Example 2



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# Case Study

34

Example 3



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# Case Study

35

## Example 4



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# Case Study

36

## Example 5



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# Case Study

37

## Example 6



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# Case Study

38

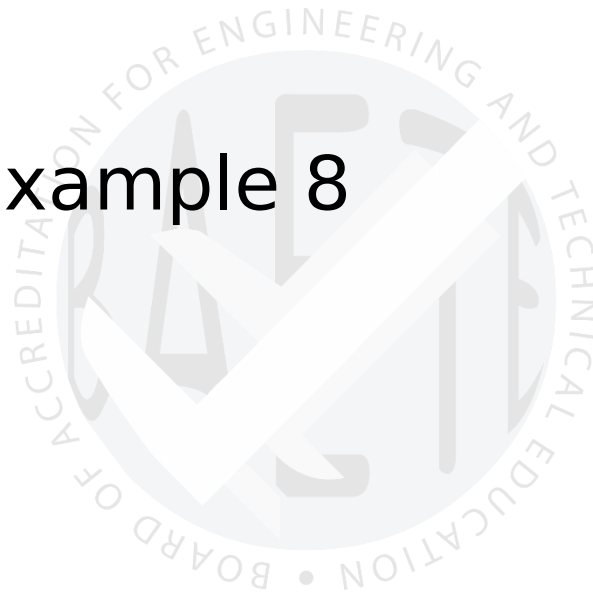
## Example 7



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION

# Case Study

## Example 8



# Case Study

40

## Example 9



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION



# Case Study

41

Example 10



BOARD OF ACCREDITATION FOR  
ENGINEERING AND TECHNICAL EDUCATION