BAETE New Program Accreditation Manual and Self-Assessment Report (SAR) –
An Overview for Program Evaluators

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Session Outcomes (SOs) !!

Upon successful completion of the session, the attendees will be able to

- **SO1**: Explain the policy and procedure for evaluating BAETE program accreditation
- **SO2**: Identify the requirements of general and program-specific criteria
- **SO3**: Verify the contents of different criteria presented in the SAR as per BAETE requirements
Pretext

- Outcome based Education - A Paradigm Shift
- Outcome based Accreditation - Objectives
Outcome Based Education (OBE)

- OBE is an educational process that focused at achieving certain specified outcomes in terms of individual student learning.

- Outcomes (Attributes) - key things students should understand and be able to do or the qualities they should develop.

- Both program structures and curricula are designed to achieve those capabilities or qualities (constructive alignment).

- Program structures & curriculum are regarded as means not ends. If they do not do the job they need to be changed (Continuous Quality Improvement - CQI)
# A Paradigm Shift in Focus

<table>
<thead>
<tr>
<th>Focus - Previous</th>
<th>Focus – Now</th>
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<tbody>
<tr>
<td>▪ “What are we doing”</td>
<td>➢ “What are our students becoming”</td>
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<tr>
<td>▪ Input based</td>
<td>➢ Outcome based</td>
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<td>▪ Educational activities as an end</td>
<td>➢ Educational activities as a means to an end</td>
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<td>▪ Practice determines the outcomes</td>
<td>➢ Outcomes informs practice</td>
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<td>▪ Process for meeting external standards</td>
<td>➢ Process for feedback/improvement</td>
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Shifting Focus – Input-based to Outcome-based

Non OBE

Desired output → Process → Actual Output

Present practice

OBE

Desired output → Comparison → Process

CQI – closing the loop

Measurement

Actual Output
Anticipation of OBE Benefits

- Curriculum - more “directed” and “coherent”
- Graduates - more “well rounded” and “relevant” to industry and other stakeholders
- Continuous Quality Improvement (CQI) is an inevitable consequence
Components of OBE

Program Outcomes (PO)

POs describe what students are expected to know and be able to perform or attain by the time of graduation.

Course Outcomes (CO)

COs address the abilities to be attained by students upon completion of a course.

Program Educational Objectives (PEO)

PEOs address the graduates’ attainment 3-5 years after the graduation.

POs describe what students are expected to know and be able to perform or attain by the time of graduation.

Program Outcomes (PO)

COs address the abilities to be attained by students upon completion of a course.

Program Educational Objectives (PEO)

PEOs address the graduates’ attainment 3-5 years after the graduation.
OBE Hierarchy

- Vision and Mission of the University
- Vision and Mission of the School - SEP
- Vision and Mission of the Department

Program Educational Objective

Program Outcome (PO)

Course Outcome (CO)

ASSESSMENT PROCESS:
- Evaluation
- Data collection
- Analysis
- Recommendation

Input from Constituencies (Student, Alumni, Faculty, Industry)
Continuous Quality Improvement

Input from Constituencies (Student, Alumni, Faculty, Industry)

Assessment

Analysis

PEO

PO

CO
Objectives of Accreditation

- **Accreditation** is a **process** by which educational programs or institutions are reviewed to determine if they meet certain standards of quality.

- **Objectives:**
  
  - To ensure that graduates acquire a required **set of attributes (outcomes)** of national and international standards.
  
  - To assist all stakeholders (Student, Alumni, Parent, Faculty, Industry) in identifying specific engineering programs that meet national and international standards.
  
  - To provide a mechanism for the **continual quality improvement (CQI)** of existing engineering programs through evaluation and feedback.

- **BAETE** under the new manual in line with *Washington Accord* adopted **Outcome-based Accreditation** that requires strong emphasizes on **Program Outcomes/Graduate Attributes**.
Core knowledge and competencies required of program evaluators include the following:

- Accreditation policy
- Accreditation procedure
- Requirements of general accreditation and program-specific criteria
  - Evaluation and judgment of compliance with benchmark standards of accreditation criteria
  - Outcome-based assessment
  - DOs and DON'Ts during on-site accreditation visit.
Accreditation Policy

- Eligibility for Accreditation
- Evaluation
- Accreditation Decisions
- Deferment of Accreditation
- Confidentiality
- Conflicts of Interest
Eligibility/Consideration for Accreditation

✓ Both Institution and Program are **approved by appropriate authority**
✓ Program duration - **four (4) years**
✓ Admission - **after 12 years of schooling**
✓ Graduation - **at least one cohort has graduated**
✓ Program must follows **outcome-based education (OBE)**
✓ Credit requirement - **Minimum 130 credit hours**
  
  1 credit of lecture $\geq 750$ minutes of formal contact, 1 credit of lab $\geq 1500$ minutes of formal contact

- The VC, Pro-VC and Treasurer are appointed according to the relevant act/statute
- The statutory bodies (e.g., Syndicate, Academic Council, Finance Committee, Disciplinary Committee, etc.) exist and are functional
- The department have adequate number of full-time faculty members, including senior faculty members, with relevant academic specialization
- The institution have adequate laboratory facilities for the program
Evaluation

- Evaluation shall be conducted in accordance with the BAETE Criteria (*General and Program-specific*)

- **Evaluation process includes**
  - Examination of the information provided in the **Self-Assessment Report** (SAR)
  - Findings of the Evaluation Team from an on-site visit.

- Evaluation should be based on a **quality holistic judgment** on accreditation criteria in terms of **compliance, concern, weakness and deficiency**

  • Evaluation will be evidence based
  • Evaluation recommendations must be supported with reasons
Important Terminologies

- **Compliance**
  - Adequately satisfied the benchmark requirements.
  - No corrective measure is required

- **Concern**
  - Broadly in compliance but requires improvement
  - Currently in compliance but there is chance for the situation to change, resulting in noncompliance in future.

- **Weakness**
  - Lacks strength of compliance, leading to compromise the quality of the program.
  - Corrective measures are required

- **Deficiency**
  - Either does not exist or is in the elementary stage. Compliance is required.
Accreditation Decision

- No marking system
- No grades, like ‘A’, ‘B’ or ‘C’
- Either ‘Accredited’ or ‘Not Accredited’
- If Accredited then maximum length is 6 years

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<thead>
<tr>
<th>Deficiency</th>
<th>Weakness</th>
<th>Decision</th>
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<tr>
<td>None</td>
<td>None</td>
<td>Maximum 6 years</td>
</tr>
<tr>
<td>None</td>
<td>Weakness found in not more than three criteria</td>
<td>Shorter than 6 years</td>
</tr>
<tr>
<td>Any deficiency identified in any criterion</td>
<td></td>
<td>Not Accredited</td>
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</table>
Deferment of Accreditation

- In case of deficiency that can be corrected within a short period of time, the Evaluation Team may recommend a deferment decision.
- The deferment is valid for a specified time *not exceeding twelve months.*
- The Evaluation Team will report the deferment decision to the Board through the Sectoral Committee.
Confidentiality

• All information including the SAR and all on-site observations and findings are confidential.

• This information may not be revealed to any unauthorized persons under any circumstances without written permission from the concerned educational institution.

• Similarly, the institution may not reveal any part of the Evaluation Team’s report without explicit written permission from the BAETE.
Conflicts of Interest

- Evaluation Team member should not create situations that may result in conflicts of interest or questions regarding the objectivity and credibility of the accreditation process.

- Team members are required to behave in a professional and ethical manner.

- Each individual is required to disclose real or perceived conflicts of interest.

- Examples of conflicts of interest include, but are not limited to,
  - Being a current or former faculty member or staff of the concerned institution
  - Serving as a member in any of the committees of the concerned institution,
  - Being involved currently or in the past in any for-profit activity with the concerned institution
  - Having a dependent who is a student at the concerned institution
Accreditation Procedure

- Steps in Accreditation Process
- Pre-visit Activities
- Onsite Visit
- Post-visit Activities
Steps of Accreditation Process

**BAETE Received Completed Application Package**
(SAR + Fees)

3 weeks

Formation of the Evaluation Team

1 week

Resolution of Conflict of Interest

(Pre-visit) Review of the SAR

12 weeks

Onsite Visit

3 weeks

Evaluation Team Report

2 weeks

Communication of the decision to the institution

16 weeks

Decision of the Board

2 weeks

Recommendation by Sectoral Committee

1 week

Fact correction by institution

(In case SAR shows significant deficiencies)

Scrutiny by the Sectoral Committee

Tentative Timeline for the whole process is **About 40 Weeks**
Pre-visit Activities

Team reviews the Self-Assessment Report

Found Significant Deficiencies?

YES → Not recommended for Accreditation. No Visit required

NO → Chairperson of the Evaluation Team will contact the institution through the Registrar of BAETE to arrange for the accreditation visit
Some Required Documents to Review at Pre-visit

i. Latest copy of the prospectus of all programs and a copy of the latest academic calendar of the institution.

ii. Copy of the letter of approval for the establishment of the institution from the authority.

iii. Copy of the letter of approval for the establishment of the program.

iv. Copy of statutes/academic ordinances.

v. List of members of the statutory committees in accordance with the acts/statutes.
Accreditation Visit

- **On-site visit allows the Evaluation Team**
  - To assess factors that may not be adequately described in the SAR
  - To obtain further clarifications from the educational institution

- **Some common factors to be assessed during the on-site visit**
  a. Objectives and outcomes of the education provided;
  b. Quality assurance processes, including internal reviews;
  c. Assessment of student learning outcomes;
  d. Activities and work of the students;
  e. Entry standards and selection for admission of students;
  f. Motivation and enthusiasm of faculty members;
  g. Qualifications and activities of faculty members;
  h. Facilities;
  i. Industry participation
Accreditation Visit – Meeting with Constituencies

The Evaluation Team should have meetings with:

i. The Head of the institution, the Dean and Head of the Department, and relevant program and course coordinators;

ii. A member of the senior administration/management, preferably the Head of the Institution, to discuss how the program fits into the overall strategic direction and focus of the university and management support for continued resourcing and development of the program;

iii. Faculty members;

iv. Supporting staff and heads of the support/service departments;

v. Employer representatives

vi. Alumni

vii. Students
Accreditation Visit – Examination of Documents

The Evaluation Team should examine the documents:

i. Curriculum vitae of all faculty members;

ii. Evidence that the results of the assessment of course and program outcomes are being applied to the review and ongoing improvement of the program;

iii. List of publications by all faculty members of the program;

iv. Sample teaching materials, examination papers, quizzes and class tests for all subjects;

v. Sample examination scripts, including at least one excellent, one good and one marginal;

vi. Sample Transcripts of immediate past graduates, which should also include those who were given advanced standing or who were in the part-time program, if applicable;

vii. Sample student project and design reports (excellent, good and marginal pass);

viii. Sample student feedback form;

ix. Results of quality assurance reviews and other internal or external reviews of the program, department and faculty;

x. Records of meetings of committees relevant to the program; meetings with stakeholders;

xi. Records of employment of graduates;

xii. Any other documents that the Evaluation Team may request.
Accreditation Visit – *Physical Resource Verification*

The Evaluation Team should visits to:

i. Faculty office rooms;

ii. Classrooms;

iii. Laboratories, especially those for the teaching of undergraduates;

iv. The library;

v. IT facilities;

vi. Career/placement center, co- and extra-curricular facilities, medical facilities;

vii. Canteen

viii. Washrooms/toilet facilities.
Accreditation Visit – *Exit Meeting*

- At the end of the on-site visit, the Evaluation Team will hold an exit meeting to present its preliminary findings.

- Exit Meeting should address to the key personnel including the Head of the institution and the Head of Department/Chair of School in which the program is being evaluated.
Post-visit Activities

- The Evaluation Team will submit its evaluation report to the Registrar of BAETE within three (3) weeks of the visit.

- The Evaluation Team may consider additional submissions requested from the institution during the on-site visit while finalizing its report with findings and recommendations,

- The Evaluation Team will make a holistic quality judgment on each criterion against the benchmark requirements in terms of compliance, concern, weakness and deficiency

- The findings and recommendations of the Evaluation Team must be supported with reasons.

- The Evaluation Team should not prescribe details of corrective measures.

- Only broad-level recommendations and suggestions are required.

- The evaluation report may briefly highlight the strengths of the program and the institution
Accreditation Criteria

A. General Criteria

1. Organization and Governance
2. Financial and Physical Resources
3. Faculty
4. Students
5. Academic Facilities and Technical Support
6. Curriculum and Teaching-Learning Processes
7. Program Educational Objectives (PEO)
8. Program Outcomes and Assessment
9. Continuous Quality Improvement (CQI)
10. Interactions with the Industry

B. Program-Specific Criteria
Criteria 1: Organization and Governance

- Compliance with relevant acts and statutes
  - Process for appointing Vice Chancellor, Pro-Vice Chancellor and Treasurer

- Statutory bodies of the institution
  - Formation of the bodies
    - Syndicate, Academic Council
    - Finance Committee, Faculty Selection Committee
    - Admission Committee, Curriculum Committee
  - Function of the bodies - Meeting minutes, dates etc.

- Existence of and adherence to policies
  - Service rules, Academic rules, Code of conduct, Disciplinary codes
  - Recruitment and promotion policies, Salary structure, Leave rules
  - Scholarship and financial aid policies

- Grievance redress system: Existence of a grievance redress mechanism

- Alumni association: existence, formation, membership and operating process

- Convocation: dates of convocations and number of students received a degree
Criteria 2: Financial and Physical Resources

- **Finance and budget**
  - Assets calculation and revenue
  - Adequacy of budget
  - Appropriateness of budgetary allocation

- **Scholarships and financial aid for students**
  - *Total amount of scholarships and financial aid*

- **Accommodations for male and female students**

- **Safety measures: infrastructure, practices, training and compliance**
  - Firefighting policy, facility and rehearsal;
  - Emergency evacuation and assembly plan and rehearsal;
  - Campus safety and security measures in place

- **Sports and recreational facilities**: *Outdoor games and sports facilities*

- **Placement center**:
  - Activities and functions of the placement center, name and designation and qualifications of each staff member
Criteria 3: Faculty

- **Faculty Attributes:**
  - Number of full-time faculty members
  - Part-time faculty members
  - Academic qualifications with specialization in areas related to the program
  - Proportion of senior and junior faculty members
  - Opportunity to have adequate interactions between students and faculty both within and outside the classes

- **Class size:** minimum/maximum/average class size of all courses/sections in last three years

- **Student-teacher ratio:**
  - For each semester during last three years
  - No specific method has been proposed
Criteria 3: Faculty (contd.)

- Role of faculty members in directing the course and the improvements of the program
  - Faculty involvements in course outcomes
  - Selecting appropriate pedagogical and assessment tools
  - Updating course content
  - Making decisions regarding quality improvements to the program.

- Check the copies of the minutes of relevant faculty meetings

- Training event of faculty members on outcome-based education in
  - Establishing appropriate course outcomes
  - Conducting effective teaching-learning activities
  - Conducting suitable assessments
  - Measuring outcome achievement

- Involvement of faculty members in research, development and professional activities
Criteria 4: Students

- Admission Policy
  - Existence of well-formulated Policy
  - Adherence of the Policy
  - Admission criteria

- Transfer students Policy
  - Policy for accepting transfer students into the program
  - Number of student transferred and number of credit transfer (last three years)

- Continuous monitoring of student performance
  - Process for continuously monitoring of students’ academic performance
  - Process of providing continuous feedback to students regarding their academic performance and outcome achievement.
  - Corrective measures to help students who fall behind
Criteria 4: Students – contd.

- **Advising and counseling**
  - Process of providing academic advising to the students.
  - Information about designated faculty advisor (if any) for each semester of the last three calendar years
  - Process for professional counseling support to students in need.

- **Extra- and co-curricular activities**
  - Policy (if any exists) regarding students’ co-curricular activities
  - How extra- and co-curricular activities are encouraged/supported institutionally.
  - List students who participated in student activities
  - Any notable achievements

- **Professional society activities**
  - Professional societies that have a student branch/chapter
  - Related support/facilities/activities within the institution.
  - List of the names of the student members of each branch/chapter for last 3 calendar years.
Criterion 5: Academic Facilities and Technical Support

- **Library**
  - Space and hours of operation
  - Library resources (books, journals, proceedings, etc.)
  - Modernization of the library – IT and other modern technologies have influenced the use, operation and record-keeping of the library for both users and library officials.

- **Classrooms:** Adequacy of the number of appropriately equipped classrooms for the program

- **Laboratories and equipment**
  - Laboratories for all relevant courses of the curriculum
  - Availability of equipment
  - Full-time technical support staff for laboratories (technician/instructor and assistant)

- **Internet and computing facilities**
  - Internet facilities available for the students.
  - Total bandwidth, number of PCs with Internet connections, daily hours, areas covered by Wi-Fi
  - Number of laboratories, number of PCs accessible to students outside of class/laboratory times.
  - Types of uses available to students.
Criterion 6: Curriculum and Teaching-Learning Processes

The curriculum should satisfy the **program-specific criteria**

The **breadth and depth** of the curriculum and the **teaching-learning activities** should be appropriate for the solution of **complex engineering problems**

- **Minimum credit hours** of the program expressed in contact hours with formula used
  - BAETE required minimum credit hours is 130
    
    \[ 1 \text{ credit of lecture} \geq 750 \text{ minutes of formal contact} , 1 \text{ credit of lab} \geq 1500 \text{ minutes of formal contact} \]

- **Course content** (for each course):
  - Credit hours, contact hours, Prerequisites
  - Category (mathematics/ science/ language/ humanities/ non-engineering/core engineering, Required/ Elective)
  - Catalog description, list of the textbooks and reference books

- **Flow chart**
  - semester-by-semester flow chart of the program

- **List of offered courses and lecture plans**
  - Course offering list for each semesters of the last three calendar years
  - Lecture plan for each course offered for each semester of the last three calendar years

- **Course files:**
  - Lecture plan detailing **course outcomes**, course contents, **assessment tools for each course outcome**, and grading policy
  - Questions and three representative examples responses (one excellent, one average, one marginal pass) for each exam, class test and quiz
  - Laboratory sheet and three representative examples of laboratory reports
  - Assessment criteria or rubrics for assignment/project reports. Three representative examples for each assignment and project report
  - Final grade assigned to each student
- **Assessment and analysis of outcome achievement**
- **The course instructor’s recommendations for continuous quality improvement**

- **Laboratory activities**
  - Hands-on laboratory activities
  - Measures in place to emphasize laboratory activities.
  - List of experiments, projects/assignments conducted in each laboratory course.

- **Final-year Design or Capstone Project**
  - Extending over a period of one year
  - Represents a culminating demonstration of the program outcomes at the level of solving complex engineering problems.
  - List of the final-year design projects completed in the last three calendar years
  - Sample of original final reports

- **Teaching-learning activities**
  - The teaching-learning processes and activities selected for each course should be effective and appropriate for achieving the outcomes.
  - Process used to select appropriate teaching-learning activities for different courses
  - Interactive/non-traditional activities adopted for different courses

- **Academic calendar**
  - Published academic calendar for each semester of the last three calendar years.
  - Check whether semester actually progressed according to the calendar
Program Educational Objectives:

- Broad statements describing the career and professional accomplishments of graduates (usually 3 to 5 years after graduation)
- Consistent with the Vision and Mission of the institution/department
- Clear, concise, assessable and realistic within the context of the available resources
- Supported by a curriculum and teaching-learning processes that lead to the attainment of these objectives.
- Objectives are based on needs of constituencies and need to be evaluated periodically
- Evaluation process to demonstrate achievement of the PEOs and to improve the effectiveness of the program
Criterion 7: Program Educational Objectives (PEOs)

- **Mission and Vision**
  - Vision and mission of the Institution
  - Vision and mission of the program offering department/faculty/school

- **PEO Statements and mapping with the institutional vision and mission**

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<thead>
<tr>
<th>No.</th>
<th>PEO statement</th>
<th>Institutional missions</th>
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<tr>
<td></td>
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<td>Mission statement 1</td>
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<td>Mission statement 2</td>
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Criterion 7: Program Educational Objectives – contd.

- **Relationship/Mapping between the POs and PEOs**

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<thead>
<tr>
<th>No.</th>
<th>PO statement</th>
<th>PEO 1</th>
<th>PEO 2</th>
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<th>PEO n</th>
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- **Process for PEO measurement**
  - Process used to measure the achievement of each PEO.
  - Documents (meeting minutes, survey results, etc.) that support the assertion.
  - How different stakeholders are involved
  - How the PEO measurement results are used to redefine and improve the PEOs.
Criterion 8: Program Outcomes (POs) and Assessment

Program Outcomes (POs)

- Narrower statements describing what students are expected to know and be able to do by the time of graduation
- Relate to the knowledge, skills and attitudes that students acquire throughout the program
- The program must demonstrate the attainment POs to some acceptable level by the time of students’ graduation
- BAETE has adopted 12 Graduate Attributes/POs (a-l) from Washington Accord. Generic for any Engineering program

<table>
<thead>
<tr>
<th>BAETE Graduate Attributes / POs</th>
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<tbody>
<tr>
<td>(a) Engineering knowledge</td>
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<tr>
<td>(b) Problem analysis</td>
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<tr>
<td>(c) Design/development of solutions</td>
</tr>
<tr>
<td>(d) Investigation</td>
</tr>
<tr>
<td>(e) Modern tool usage</td>
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<tr>
<td>(f) Engineer and society</td>
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<tr>
<td>(g) Environment &amp; sustainability</td>
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<tr>
<td>(h) Ethics</td>
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<tr>
<td>(i) Individual and team work</td>
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<tr>
<td>(j) Communication</td>
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<tr>
<td>(k) Project management &amp; finance</td>
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<tr>
<td>(l) Life-long learning</td>
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**Criterion 8: Program Outcomes (POs) and Assessment**

- **Course outcomes (COs):** Course Outcomes (CO) address the abilities to be attained by students upon the completion of a course
  - **Statements of COs**
    - **Sl. No.** | **COs** | **Corresponding POs** | **Bloom’s taxonomy domain/level** | **Delivery methods and activities** | **Assessment tools**
    - **Assessment of COs:**
      - The processes and attainment criteria of CO assessment
      - Evidence of CO assessment in each semester of the last three calendar years

- **Relationship between COs and POs**
  - **Course no.** | **COs** | **POs-1** | **POs-2** | **.** | **.** | **POs-n**
  - **.**
  - **.**
  - **.**
Criterion 8: Program Outcomes (POs) and Assessment – contd.

- **Achievement of POs required by the BAETE**
  - Evidence that each PO has been achieved by the time of graduation.
  - Justification of the assessment tools and assessment criteria

- **Achievement of additional POs**
  - Required by the department/school/faculty/institution
  - Evidence that each additional PO has been achieved by the time of graduation
  - Justification of the assessment tools and assessment criteria
Criterion 9: Continuous Quality Improvement (CQI)

The program should have a continuous quality improvement mechanism.

- **Feedback from students**
  - Student evaluation of courses
  - Student survey

- **Feedback from course instructors**

- **Feedback from external stakeholders**
  - Feedback from alumni
  - Feedback from employers

- **CQI loops**
  - CQI loops for COs, POs and PEOs.
  - How achievements of outcomes and objectives are assessed, analyses are conducted and improvements are made

- Addressing deficiencies, weaknesses and concerns identified during the previous accreditation evaluation(s) (not applicable for new accreditation applications)

✓ Process of receiving feedback from different stakeholders

✓ Process for utilizing the feedback to update PEOs/POs/COs/ curriculum/delivery/assessment methods.

✓ Copies of supporting documents (meeting minutes, analysis reports, etc.)
Criterion 9: Continuous Quality Improvement (CQI)

Addressing deficiencies, weaknesses and concerns identified during the previous accreditation evaluation(s)

(not applicable for new accreditation applications)

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<th></th>
<th>Statement</th>
<th>Remedial actions taken</th>
<th>Improvements made</th>
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<tr>
<td>Deficiencies</td>
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<td>Weaknesses</td>
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<td>Concerns</td>
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Criterion 10: Interactions with the industry

- **Industrial advisory panel (IAP)**
  - Formation *(names, designations and professional qualifications of the members)* of IAP
  - Copies of notices for the IAP meetings
  - Attendee lists of IAP meetings
  - Minutes of the IAP meetings

- **Participation of the industry in academic process**
  - How industry participate to update and improvement of the objectives, outcomes and curriculum to ensure the relevancy to the industry.
  - Provide copies of documents
Criterion 10: Interactions with the industry - contd

- Students’ opportunities to gain industrial experience
  - **Internship**
    - Requirements, nature and the duration of the internship
    - Assessment of performance and outcome achievements during the internship
    - Copies of supporting documents
  - **Final-year design project**
    - Any industry collaboration to conduct final-year design projects
    - How industry’s involvement in selecting the project topic, supervising project activities and providing assessment.
    - Copies of supporting documents
  - **Industry visits**
    - Requirement, nature and duration of industrial visit
    - Assessment of student learning and outcome achievement of such visits
    - Copies of supporting documents
Program-specific Criteria

• Chapter 6 of BAETE Accreditation Manual describe program specific criteria for the following programs:
  o Aerospace Engineering or Similar Program
  o Biomedical Engineering or Similar Program
  o Chemical Engineering or Similar Program
  o Civil Engineering, Civil and Environmental Engineering or Similar Program
  o Computer Science and Engineering or Similar Program.
  o Electrical Engineering, Electrical and Electronic
  o Electronic and Telecommunication Engineering or Similar Program
  o Environmental Engineering or Similar Program
  o Industrial and Production Engineering or Similar
  o Metallurgical and Materials Engineering or Similar
  o Mechanical Engineering or Similar Program
  o Naval Architecture and Marine Engineering or Similar Program
Example: Criteria for Biomedical Engineering or Similar Program

The curriculum must prepare graduates with experience in the following:

a. Applying principles of engineering, biology, human physiology, chemistry, calculus-based physics, mathematics (through differential equations) and statistics;

b. Solving bio/biomedical engineering problems, including those associated with the interaction between living and non-living systems;

c. Analyzing, modeling, designing, and realizing bio/biomedical engineering devices, systems, components, or processes; and

d. Making measurements of and interpreting data from living systems.
Example: Criteria for Civil Engineering, Civil and Environmental Engineering or Similar Program

The curriculum must prepare graduates to:

- Apply Knowledge of mathematics through differential equations, calculus-based physics, chemistry, and at least one additional area of basic science;
- Apply probability and statistics to address uncertainty; analyze and solve problems in at least four technical areas appropriate to civil engineering;
- Conduct experiments in at least two technical areas of civil engineering
- Analyze and interpret the resulting data; design a system, component, or process in at least two civil engineering contexts; include principles of sustainability in design
- Explain basic concepts in project management, business, public policy, and leadership; analyze issues in professional ethics; and explain the importance of professional licensure.
References

• http://www.baetebangladesh.org/index.php
Thank you very much!