# About this presentation

- The visiting team chair presentation template has been designed to either be presented in its entirety or broken out. The visiting team chair will determine how many pre-visit meetings will take place and what content will be covered in each meeting. A suggested breakdown follows:

  - Slides 2-74 during an introductory team web meeting;

  - Slides 75-82 during a second team web meeting;

  - A recap of slides 34-74 plus slides 83-93 and during the final meeting of the visiting team, at the first meeting of the team during the visit itself.

- The intent of this presentation is to deliver consistent training of program visitors by visiting team chairs.

- Programs receiving visits may be interested in reviewing this presentation for their own information or for sharing with their faculty and staff who are involved in the visit.

- This presentation is updated annually to reflect ongoing improvements to the accreditation criteria, policies, and procedures.

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# Accreditation Visit to <name of HEI> <date range>

Name of Presenter

Title

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# Land acknowledgement

I would like to begin by acknowledging the Indigenous Peoples of all the lands that we are on today. While we meet today on a virtual platform, I would like to take a moment to acknowledge the importance of the land, which we each call home. We do this to reaffirm our commitment and responsibility in improving relationships between nations and to improving our own understanding of local Indigenous peoples and their cultures.

From coast to coast to coast, we acknowledge the ancestral and unceded territory of all the Inuit, Métis, and First Nations people that call this nation home.

Please join me in a moment of reflection to acknowledge the harms and mistakes of the past and to consider how we are and can each, in our own way, try to move forward in a spirit of reconciliation and collaboration.

# Outline

| | | | |
|---|---|---|---|
| HEI Background | Accreditation and the CEAB | Roles and responsibilities | Leading up to the visit |
| The criteria | Recent relevant changes | The visit | The report |

# Higher Education Institution (HEI) Background

- History and current situation
  - › <when HEI opened>
  - › <current student complement>
  - › <any major contextual factors>

- Purpose of this visit
  - › <list programs being visited>
  - › <indicate when these programs were most recently visited and what the CEAB decisions was>

# 2025/2026 Visit Cycle

- The following 'on-site' visit materials will now be made available in an electronic format 8 weeks before the visit start date, via Tandem:

  A. Program operational information

  B. GA/CI detailed explanation

  C. Detailed syllabi

  D. Documentation of assigned work and assessment

  E. Evaluated student work

  F. Evidence of a culture of safety

- Planning for logistics

# Accreditation and the CEAB

# The Accreditation Board

### Established in

## 1965

- Accredits undergraduate engineering educational programs

### Volunteer members are

## 21 P.Eng./ing.

- Deans, former deans, senior faculty members, and industry representatives
- Most members from academia have also worked in industry
- Composition aims to include 30% female-identifying members, and at least 30% are bilingual

# Goals of the Accreditation Board

Ensure that engineering programs in Canadian institutions meet minimum educational standards for professional licensure.

Ensure continuous improvement of engineering education.

Provide advice on international engineering education and accreditation.

# What does the Accreditation Board do?

The visiting team

*Visiting team not responsible for accreditation decisions*

Program information gathering and review
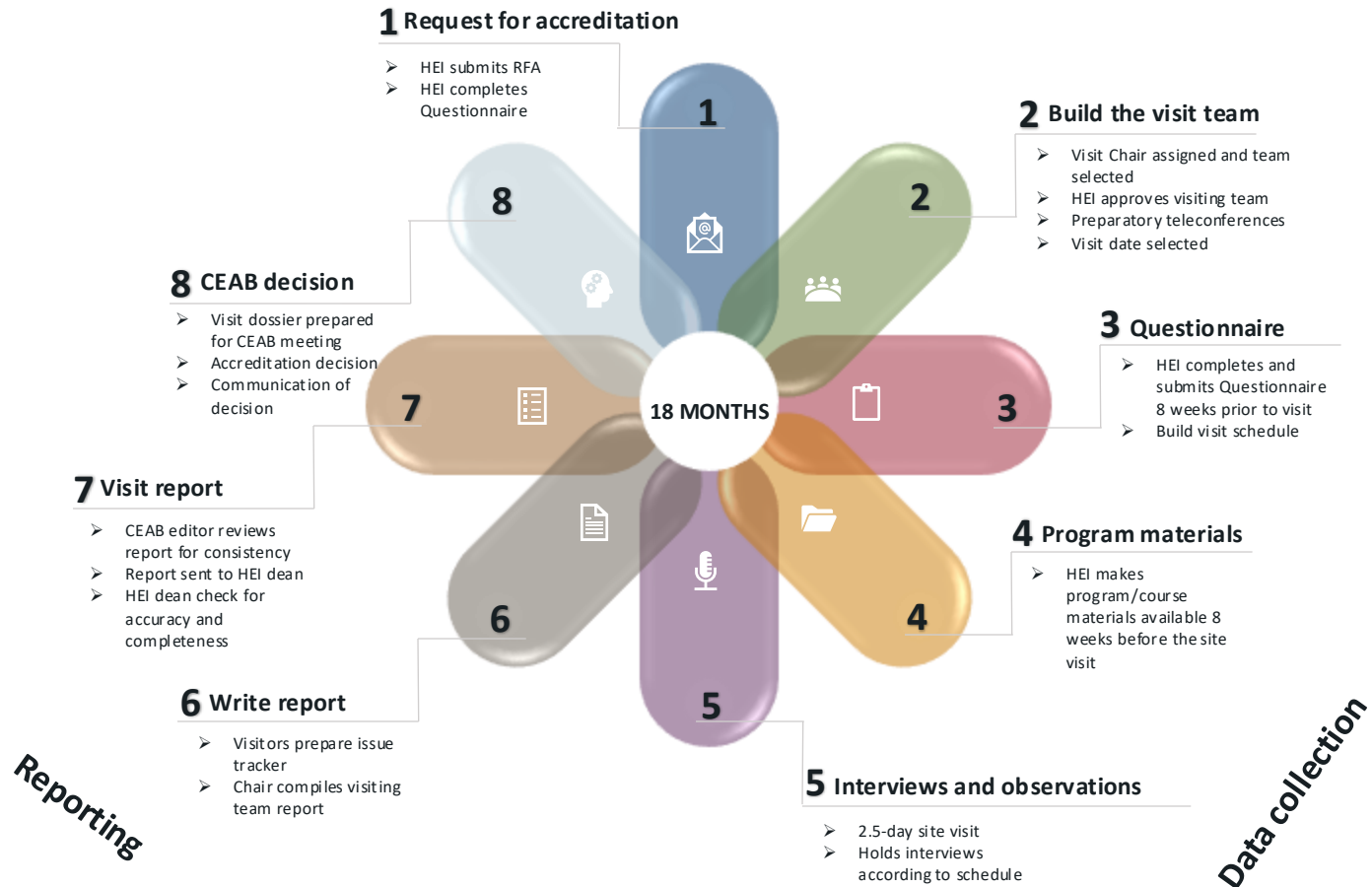
Visit

Paper review

Report

CEAB accreditation decision

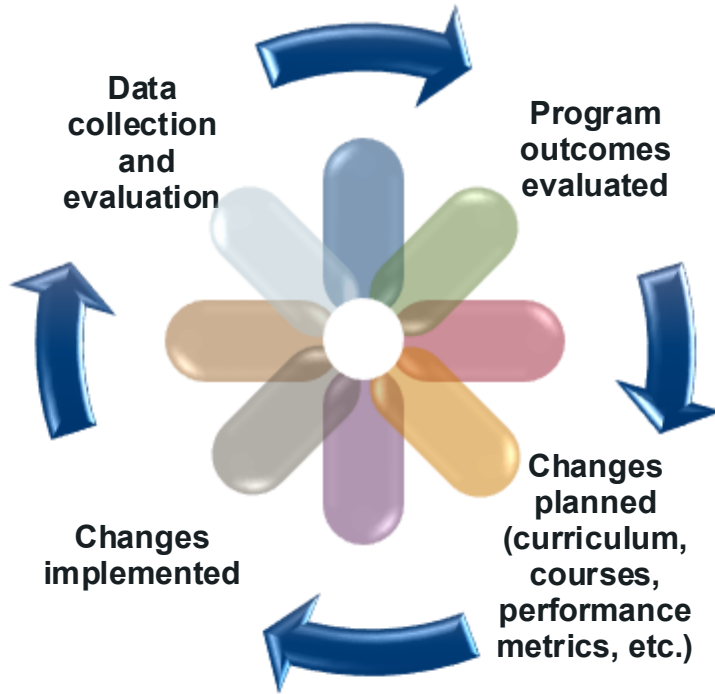# CEAB Accreditation: General notes

Accreditation:

- Applies only to **programs** (not to departments or faculties)

- Is undertaken only at the invitation of the HEI and with the consent of the appropriate regulator

- Constitutes:

  - Quantitative and qualitative evaluation of the curriculum
  - Qualitative evaluation of the program environment

- Is granted for a period up to, but not exceeding, **six years**

# How do we do it?

The accreditation process:



**1 Request for accreditation**
- HEI submits RFA
- HEI completes Questionnaire

**2 Build the visit team**
- Visit Chair assigned and team selected
- HEI approves visiting team
- Preparatory teleconferences
- Visit date selected

**3 Questionnaire**
- HEI completes and submits Questionnaire 8 weeks prior to visit
- Build visit schedule

**4 Program materials**
- HEI makes program/course materials available 8 weeks before the site visit

**5 Interviews and observations**
- 2.5-day site visit
- Holds interviews according to schedule

**6 Write report**
- Visitors prepare issue tracker
- Chair compiles visiting team report

**7 Visit report**
- CEAB editor reviews report for consistency
- Report sent to HEI dean
- HEI dean check for accuracy and completeness

**8 CEAB decision**
- Visit dossier prepared for CEAB meeting
- Accreditation decision
- Communication of decision

18 MONTHS

Reporting

Data collection

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12

# Accreditation and continual improvement



Data collection and evaluation

Program outcomes evaluated

Changes implemented

Changes planned (curriculum, courses, performance metrics, etc.)

*Plan. Do. Check. Act*

- Accreditation is based on a snapshot in time of a given program

- The accreditation process has a definitive start and end

- HEIs must continue to continually improve for the duration of their accreditation period

# Accreditation activities

**307** Accredited programs

**45** HEIs in Canada

*As of June 30, 2025*

# Roles and responsibilities

# Objectives of the visiting team

1. Conduct fact-finding on behalf of the Accreditation Board
    - Review, validate and/or add to the information provided by the HEI
    - Examine submitted materials (the questionnaire and on-site), meet with program officials, the facilities

2. Corroborate program strengths and weaknesses
    - Triangulate evidence

3. Collaborate to prepare a report of the visiting team's findings
    - To bring forward issues to the CEAB

**The visiting team does not make any recommendations.**

**Accreditation decisions are made by the CEAB.**

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# The visiting team: Key roles

Team Chair

Program Visitor(s)

Vice Chair(s)

Observer(s)

CEAB Secretariat

# Team and Vice- Chair
## Key Roles

**Team Chair**

- CEAB member (or past member)
- Has overall responsibility for the visit
- Prepares and submits the Report of the Visiting Team to the CEAB

**Vice-Chair(s)**

- Assists the team chair
- Evaluates program common core
- Evaluates criteria related to graduate attributes and continual improvement

# Program Visitors
## Key Roles

**Program Visitor(s)**

- One per program (two for new programs)
- Assesses course content, materials, facilities and program stability
- Interviews departmental faculty, staff, and students

**Observer(s)**

- Observes the aspects of the visit which are of the most interest
- Washington Accord, Engineers Canada Board, other accrediting agencies in Canada/international, etc.

# CEAB Secretariat
## Key Roles

CEAB Secretariat

- Coordinates the visit from start to end (logistics, support Team Chair, visiting team report, etc.)
- Attends visits as requested
- Identifies potential process improvements

# Volunteer conduct statement

Individuals conducting Engineers Canada business, including volunteers, are expected to uphold the values of respect, integrity, and professionalism in all their interactions and responsibilities. This includes using inclusive and appropriate language toward all individuals, regardless of background, identity, or ability, in a way that fosters a welcoming and supportive environment. Volunteers are also expected to conduct themselves in a manner that reflects Engineers Canada values at all times. Failure to meet these expectations may result in corrective action.

# Time commitments

| ACTIVITY | DUE DATE | TIME COMMITMENT |
|---|---|---|
| • Review of institution questionnaire<br>• Preparation of the issue tracker<br>• Team meetings (called by the chair)<br>• Training (including the online training module,1-3 teleconferences with the visiting team, and Tandem-specific training)<br>• AODA training (for ON visits) | 8-4 weeks before visit | 3-5 days |
| On-site visit | (Saturday evening arrival to Tuesday afternoon departure) | 1 travel day + 3 working days |
| Completion of visiting team report | Submit to team chair within 2 weeks after visit | 1 day |

# Leading up to the visit

# Accreditation criteria and procedures

All visiting team members should:
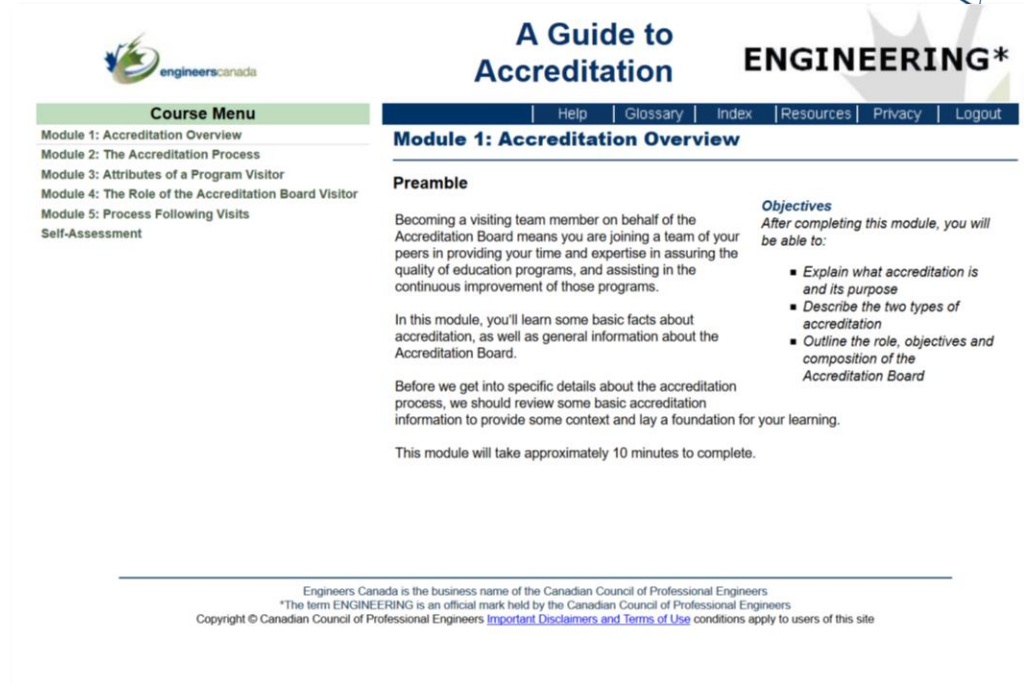
- Become familiar with the criteria

- Note the evolution of criteria and interpretive statements

  - They may have changed since you were last a program visitor!
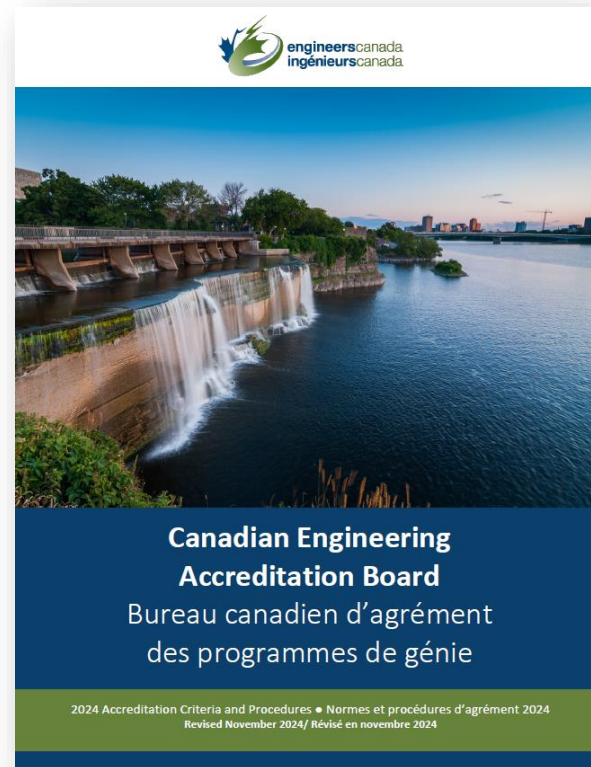
# Training

- Online training to be completed by each member of the team
  - Login details provided by the CEAB Secretariat
  - Overview of the accreditation process, roles and responsibilities, tips and tricks, etc.

- Tandem training on navigating and using the system

# Team resources

Key documentation relative to the accreditation visit preparation is available on Engineers Canada public website:
https://engineerscanada.ca/accreditation/accreditation-resources

**2025-2026 Accreditation cycle**

Resources for higher education institutions and visiting teams participating in the 2025-2026 accreditation cycle.

**Read more**

**2024-2025 Accreditation cycle**

Resources for higher education institutions and visiting teams participating in the 2024-2025 accreditation cycle.

**Read more**

**2023-2024 Accreditation cycle**

Resources for higher education institutions and visiting teams participating in the 2023-2024 accreditation cycle.

**Read more**

**Tandem resources**

These resources are available to all HEIs to support the transition to Tandem.

**Resources for HEIs**
**Resources for visiting team members**

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Accreditation visits scheduled during the 2025-2026 visit cycle are evaluated under the 2024 Accreditation Criteria and Procedures.

## General resources

- 2024 Accreditation Criteria and Procedures
- Manual of Accreditation Procedures

## Resources for higher education institutions

The following documents are for higher education institutions preparing for the 2025-2026 accreditation cycle.

- **Questionnaire** and **Exhibit 1** for 2025-2026 (for reference only; submission will be made through Tandem)
- Sample Visit Schedule
- Request for Accreditation Form
- 

## Resources for visiting team members

The following documents are for members of the visiting team as they prepare for and conduct their site visits. HEIs are welcome to review the resources to get a better picture of the tools the CEAB visiting team uses.

- Visiting Team Report Template
- Graduate Attributes and Continual Improvement rubrics
- Example interview questions for accreditation visits
- Sample team chair presentation (coming summer 2025!)

# Team member activities

1. Comply with Engineers Canada's Board Code of Conduct.

2. Attend web meetings organized by the Team Chair
   - The number and frequency of meetings as needed (usually 3-5)
   - Getting to know the team
   - General overview of process
   - Identification of issues
   - Planning visit schedule
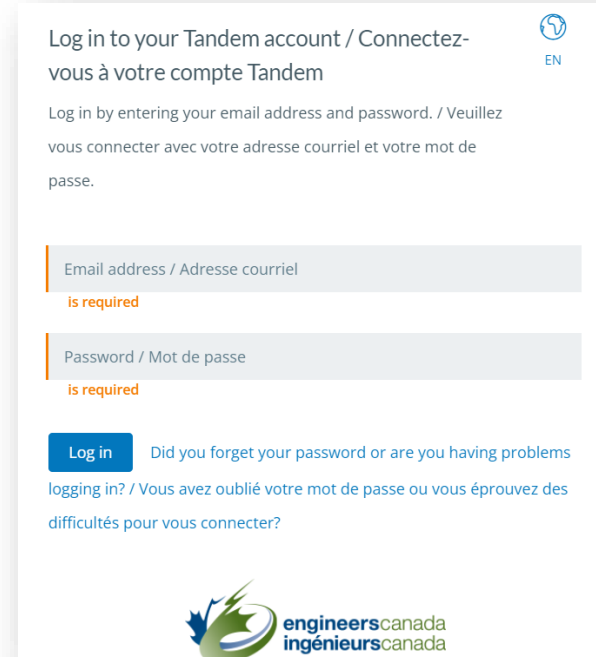
# Team member activities

3. Individually review in Tandem the program's

   – Dashboard

   – Course data and artifacts, which include, but are not limited to:

     • Detailed syllabi

     • Documentation of assigned work and assessment

     • Evaluated student work

     • Program's components' summary views

   – Questionnaire, which now includes

     • GA/CI detailed explanation

     • Former Exhibit 1 document content

4. Complete the issue tracker directly in Tandem

   – Identify issues for investigation during the visit



TANDEM
by Engineers Canada | par Ingénieurs Canada

Name

Questionnaire - CEAB Engineering - C

Program artifacts

Summary graduate attribute map (3.1.1, 3.1.1.a)

Graduate attribute learning-level (3.1.1b/c)

Indicators and learning activities assessed (3.1.2)

Scheduled Items

| Item | | For |
|------|--|-----|
| Issue Tracker - CEAB Engineering - C | | T-Engineers Canada University (T-Engineers Canada University) Questionnaire - CEAB Engineering - C |

# Accessing program materials

- Program materials will be available in Tandem 8 weeks prior to the visit.

- The CEAB Secretariat will send an invitation to each team member to access Tandem.



Log in to your Tandem account / Connectez-vous à votre compte Tandem

EN

Log in by entering your email address and password. / Veuillez vous connecter avec votre adresse courriel et votre mot de passe.

Email address / Adresse courriel
**is required**

Password / Mot de passe
**is required**

Log in   Did you forget your password or are you having problems logging in? / Vous avez oublié votre mot de passe ou vous éprouvez des difficultés pour vous connecter?

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# Accessing program materials, continued

- "Sunday" materials to be made available ahead of visit (**8** weeks before the visit start date):
    A. Program operational information
    B. GA/CI detailed explanation
    C. Detailed syllabi
    D. Documentation of assigned work and assessment
    E. Evaluated student work
    F. Evidence of a culture of safety

# Issue tracker



3.5.1.1 - Visitor response

Expand Criteria | View Standard

3.5.1.1 Quality, morale and commitment of:

✓ - Check mark

* - Asterisk

Clear

PROGRAM VISITOR'S OBSERVATIONS

- Use this tool to record your findings based on your pre-visit review of the institution's questionnaire.

- The visiting team can use this document to develop the site visit schedule and guide discussions while on-site.

- When in doubt, consult with the Chair or Vice Chair.

# Identifying issues

The "minimum standard" is established by the criterion

and (if one exists) further explained in the interpretive statement.

Your options:

✓ = **no observed issue** on the criterion.

* = item flagged for CEAB review that, **in the opinion of the visitor,** has the potential to either jeopardize future compliance or currently prevents compliance with the criterion. Justification is required for * observations.

### 3.5.1.1 - Visitor response

Expand Criteria | View Standard

3.5.1.1 Quality, morale and commitment of:

PROGRAM VISITOR'S OBSERVATIONS

✓ - Check mark

* - Asterisk

Clear

# Writing an observation

1. When a * is assigned, a detailed comment is required.

   a. Structure of comments:

      i. Reference the appropriate criterion language.

      ii. State the evidence observed.

      ii. State the way in which the evidence indicates a negative impact on the program.

   b. Comments should be precise and concise.

2. When a ✓ is assigned, do not comment.

# Tips

- Quantitative criteria are binary observations. Either the criteria have been met or not.

- Avoid the terms "concern", "weakness", "deficiency" in your written comments
  - These terms are reserved for CEAB accreditation decisions

- The CEAB will discuss your findings at a decision meeting where a decision will be made as to whether the program's compliance to criteria is acceptable, a concern, a weakness, or a deficiency.

# The criteria

# Accreditation criteria and procedures

The processes of accreditation place emphasis on the quality of the:

- Students
- Curriculum
- Academic staff/support staff
- Facilities and resources

*Reminder: The onus is on the HEI to demonstrate compliance with the criteria.*



**Canadian Engineering Accreditation Board**
Bureau canadien d'agrément des programmes de génie

2024 Accreditation Criteria and Procedures ● Normes et procédures d'agrément 2024
Revised November 2024/ Révisé en novembre 2024
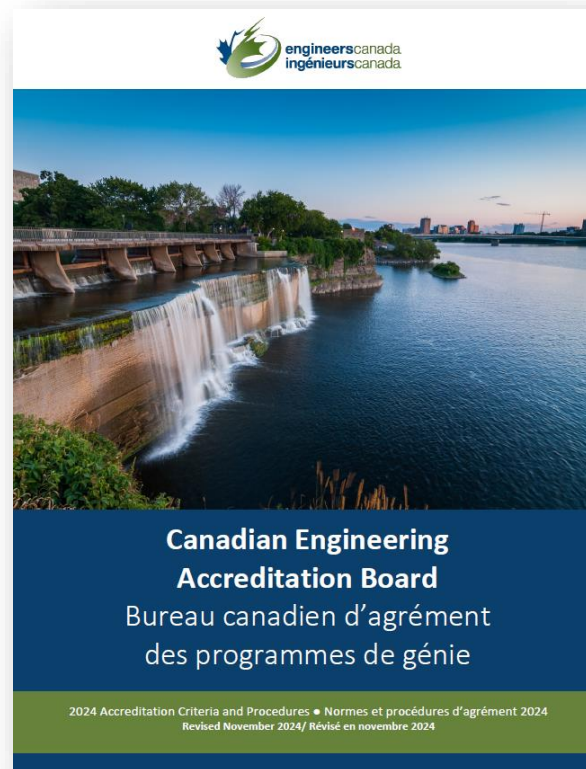
# About criteria and interpretive statements

## Criteria

*Describe the measures used by the Accreditation Board to evaluate Canadian engineering programs for the purpose of accreditation.*

## Interpretive Statements

*Additional guidance on the interpretation and application of specific criteria.*

# Input and outcomes criteria: Why both?

**Input criteria**

$+$

**Outcomes criteria**

- ➢ Prescribed exposure times to essential curriculum elements

- ➢ Enables easy calculation of the minimum path

ACCREDITATION DECISION

- ➢ Defines graduate attributes

- ➢ Regular assessment of graduate attribute attainment drives continuous improvement
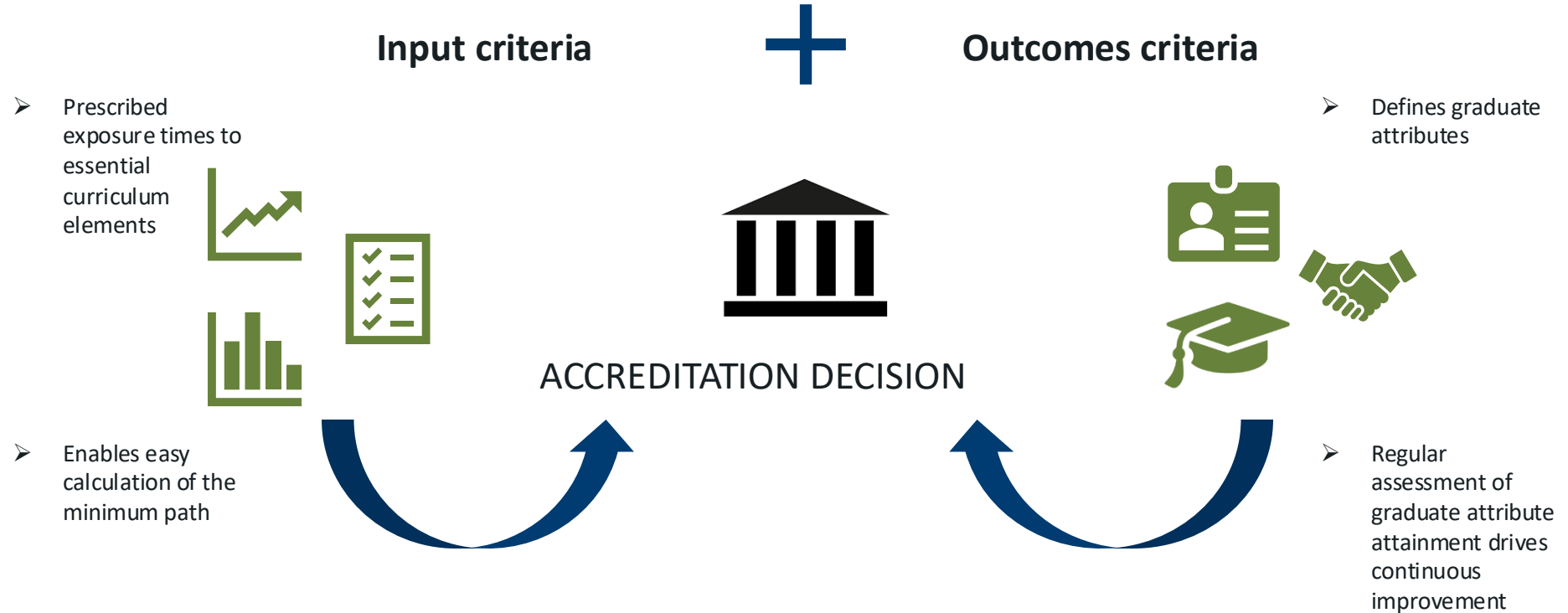
# Common issues identified

**Program environment**

- Inadequate lab facilities and insufficient space (3.5.1.2)

- Inadequate number of full-time faculty (3.5.2.1)
    - Long-term leaves and long sabbaticals
    - Soft-funded faculty
    - Teaching loads ~ critical dependence on a single individual

**Curriculum content and quality**

- Insufficient introduction to a culture of occupational health and safety (3.4.2)

- AU adjustments to:
    - natural sciences (3.4.3.2)
    - engineering science (3.4.4.2)
    - engineering design (3.4.4.5)

# Criteria highlights:
## Curriculum content and quality

Measured by "Accreditation Units" (AU)

- one hour of lecture (corresponding to 50 minutes of activity) = 1 AU
- one hour of laboratory or scheduled tutorial = 0.5 AU

Three ways to measure curriculum:

1. Traditional classroom and lab instruction measured by AUs (3.4.1.1)
2. Non-contact hours, i.e. K-factor (3.4.1.3)
3. Innovative engineering teaching methodologies with compelling rationale (3.4.1.4)

# Minimum curriculum components

| Curriculum component | Minimum AUs | AUs To be taught by licensed faculty |
|---|---:|---:|
| Mathematics | 195 | - |
| Natural sciences | 195 | - |
| **Mathematics and natural sciences combined** | **420** | - |
| Engineering science | 225 | - |
| Engineering design | 225 | 225 |
| **Engineering science and engineering design combined** | **900** | **\*600** |
| Complementary studies | 225 | - |

## The program must have a minimum of **1,850** AUs

\*For engineering science: Licensed faculty members or those within five years of their initial appointment, demonstrating progress towards processional engineering licensure

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# Criteria highlights:
## Minimum curriculum components

- AU allocation is not an exact science
  - When reviewing course information and materials, consider whether AU allocations are *reasonable?*

- All AU re-allocations are discussed with the visiting team
  - An ongoing discussion on Sunday and Monday evening

- You may discuss AU allocations with the responsible faculty member(s), but no need to argue
  - Agree to disagree

# Criteria highlights:
## Professional licensure

- Dean, Department Chairs, and faculty members teaching courses that are primarily **engineering science** or **engineering design** are expected to be licensed to practice engineering in Canada
  - Criterion 3.4.4.4 minimum of 225AU of ED to be instructed by P.Eng./ing.
  - Criterion 3.4.4.1 minimum of 600 AU of ES+ED to be instructed by P.Eng., ing., EIT, ing jr., other

- Curriculum development and control should be in the hands of persons licensed to practice engineering in Canada

# Criteria highlights:
## Qualitative Evaluation – Curriculum Considerations

- Curriculum must include the application of computers and appropriate laboratory experience and safety procedures

- Students must be exposed to material dealing with professionalism, ethics, equity, public and worker safety and health considerations, concepts of sustainable development, environmental stewardship

- The curriculum must prepare students to learn independently and to work as an effective member of a team

# Criteria highlights:
## Qualitative Evaluation – Curriculum Considerations

- Curriculum must include studies in:
  - communication skills
  - engineering economics
  - impact of technology on society
  - subject matter that deals with central issues, methodologies and thought processes of humanities and social sciences, and;

# Criteria highlights:
## Qualitative Evaluation – Curriculum Considerations

- Engineering Design:
  - integration of curriculum elements
  - creative, iterative and open-ended
  - subject to constraints imposed by legislation or standards
  - to satisfy specification using optimization
  - economics should be part of the design experience
  - to be supervised by licensed engineers

*Every program must culminate in a significant design experience*

# Criteria highlights:
## Graduate attributes

Two components

### Attributes (criterion 3.1):

- Interpreted at time of graduation
- Recognized that achievement does not end there
- Program visitors evaluate the evidence and actions used to demonstrate the level of achievement of each graduate attribute

### Continual Improvement (criterion 3.2):

- Ongoing evolution of engineering programs
- Processes needed:
  - Assessment of attribute achievement
  - Results used to improve program
- Program visitors evaluate the evidence and actions used to demonstrate the continual improvement achievement

**Criterion 3.1** - "The institution must demonstrate that the graduates of a program possess the [12] attributes."

**Criteria 3.1.1 - 3.1.5 -** Used to assess the suitability of a program for developing the graduate attributes.

3.1.1 Organization and engagement

3.1.2 Curriculum maps

3.1.3 Indicators

3.1.4 Assessment tools

3.1.5 Assessment results

**Criteria 3.2.1 – 3.2.3 -** Used to assess the institution's continual improvement processes.

3.2.1 Improvement process

3.2.2 Stakeholder engagement

3.2.3 Improvement actions

# Criteria highlights:
## Graduate Attributes

1. A knowledge base for engineering
2. Problem analysis
3. Investigation
4. Design
5. Use of engineering tools
6. Individual and team work
7. Communication skills
8. Professionalism
9. Impact of engineering on society and the environment
10. Ethics and equity
11. Economics and project management
12. Life-long learning

# Graduate Attributes:
## Evaluation by the visiting team

Program Visitors can expect to see:

- Graduate Attributes (Accreditation Criteria)
- Learning outcomes that support Graduate Attributes
- Indicators
- Acceptable level of student (graduate) performance
- Feedback mechanism

A reminder that programs:

- Are assessed, not the *students*
- Are not required to assess every student, in every course, in every year

Use the Graduate Attributes/Continual Improvement rubrics in your evaluation

# Organization and engagement:

## Rubric

**3.1.1**

There must be demonstration that an organizational structure is in place to assure the sustainable development and measurement of graduate attributes.

There must be demonstrated engagement in the process by faculty members and engineering leadership.

✓ Strong organizational structures and processes are in place that demonstrate the sustainable collection and assessment of GA data.
**AND** clear evidence of engagement by most full-time faculty members and engineering leadership.

\* Weak or limited organizational structures and processes are in place.
**AND/OR** no organizational structures and processes are in place.
**AND/OR** limited or absent engagement of full-time faculty members and/or engineering leadership.

# Curriculum maps:
## Rubric

**3.1.2**

There must be documented curriculum maps showing the relationship between learning activities for each of the attributes and the semesters in which these take place.

✓ At least three learning activities for most graduate attributes are mapped.
**AND** distributed across multiple semesters.

\* Less than three learning activities are mapped for many or most graduate attributes.
**AND/OR** many graduate attributes are mapped over a limited number of semesters.
**AND/OR** there are limited processes in place to evaluate the effectiveness of the mapping procedures

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# Indicators:

## Rubric

**3.1.3**

For each attribute, there must be a set of measurable, documented indicators that describe what students must achieve in order to be considered competent in the corresponding attribute.

✓ Measurable indicators describe and span the compliance requirements for each graduate attribute.
**AND** are consistent with expected compliance learning levels for each graduate attribute.
**AND** the number of indicators is consistent with a sustainable data collection program for each graduate attribute.

∗ Measurable indicators do not adequately describe or span the compliance requirements of several or most graduate attributes.
**AND/OR** are not consistent with expected compliance learning levels for several or most graduate attributes.
**AND/OR** the number of indicators is not consistent with a sustainable data collection program for many or most graduate attributes.

# Assessment tools:
## Rubric

**3.1.4**

There must be documented assessment tools that are appropriate to the attribute and used as the basis for obtaining data on student learning with respect to all twelve attributes over a cycle of six years or less.

✓ The nature and number of selected assessment tools for the learning levels for each graduate attribute is reasonable.
**AND** the rationale for their selection is well documented.

\* The nature and number of selected assessment tools for the learning levels for several or most attributes is not reasonable.
**AND/OR** the rationale for the selection of the assessment tools is not well documented.
**AND/OR** the rationale for the selection of the assessment tools is not documented.

# Assessment tools:
## Examples

- Examinations
  - Final
  - Mid-term
  - Entry and exit
  - Standardized (PPE, FE)
  - Oral
  - Embedded questions

- Portfolios
  - Culminating design experience
  - Projects
  - Laboratories
  - Internship/stage
  - Co-op

- Surveys
  - Exit
  - Alumni
  - Employers
  - Self
  - Course Evaluations
  - Advisory Board

- Student Work
  - Reports
  - Peer Reviews
  - Reviews/critiques
  - Presentations
  - Posters

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# Assessment results:

## Rubric

**3.1.5**

At least one set of assessment results must be obtained for all twelve attributes over a period of six years or less. The results should provide clear evidence that the graduates of a program possess the attributes or that remedial action is in progress.

✓ Assessment results are compiled and documented for all graduate attributes over a period of six years or less.
**AND** At least three learning activities for most graduate attributes are assessed.
**AND** results demonstrate that the graduate cohort has achieved the HEI compliance requirements for most graduate attributes OR that remedial action is in progress.

✳ Assessment results are compiled and documented for most graduate attributes over a period of six years or less.
**AND/OR** assessment results have not been compiled or documented for most attributes over a period of six years or less.
**AND/OR** Less than three learning activities for some graduate attributes are assessed.
**AND/OR** many graduate attributes are assessed over a limited number of semesters.
**AND/OR** results demonstrate that the graduate cohort has not achieved the HEI compliance requirements for most graduate attributes OR no remedial actions are being taken.
**AND/OR** the processes are in place but not consistently applied by all participants in the process.

# Continual improvement:
## The big picture

- At a high-level, programs are expected to continually evaluate and improve where necessary;

- There must be processes in place that demonstrates that program outcomes are being assessed in the context of the graduate attributes

  – Are students meeting expectations?

  – In what areas are students successful?

  – What areas of the program require improvement?

# Continual improvement
## The feedback loop

If observed outcomes are not consistent with expected attributes, then system inputs and/or process must be adjusted.

Data collection and evaluation

Program outcomes evaluated

Changes planned (curriculum, courses, performance metrics, etc.)

Changes implemented

*Plan. Do. Check. Act*

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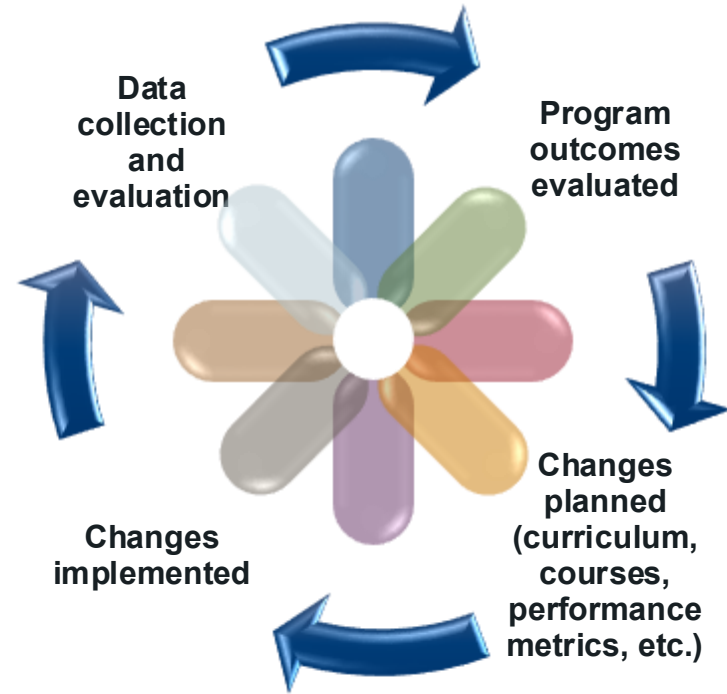
# Improvement process:
## Rubric

**3.2.1**

There must be processes in place that demonstrate that program outcomes are being  assessed in the context of graduate attributes and applied to further development of the program.

✓ Adequate continual improvement processes are in place that demonstrate program outcomes are being assessed and applied to
the further development of the engineering program
**AND** clear evidence of engagement by most full-time faculty members and engineering leadership.

\* Absent or limited continual improvement processes are in place that demonstrates program outcomes are being assessed and
applied to the further development of the engineering program
**AND/OR** process is not adequately documented
**AND/OR** limited or absent engagement of full-time faculty members and/or engineering leadership.

# Stakeholder engagement:
## Rubric

**3.2.2**

There must be a demonstrated engagement of stakeholders both internal and external to the program in the continual improvement process.

✓ Internal and external stakeholders are broadly selected (e.g. internal: students, program faculty, engineering and/or nonengineering faculty; external: alumni, engineering professionals, other professionals, employers, learned societies, etc.) **AND** stakeholder roles in the improvement process are adequately demonstrated.

✱ Internal and external stakeholders are narrowly or insufficiently selected.
**AND/OR** stakeholder roles in the improvement process are inadequately demonstrated or are not specified

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# Improvement actions:
## Rubric

**3.2.3**

There must be a demonstration that the continual improvement process has led to consideration of specific actions corresponding to identifiable improvements in the program and/or its assessment process.
**Note, if the evidence suggests no change is warranted, then no change is necessary. This criterion does not apply to new programs.**

✓ Following decisions for improvement, evidence-based program-level and/or assessment process improvement actions have
been implemented (if change was necessary) **AND** timelines and accountability for implementation have been documented.

\* Despite decisions for change, only a limited number of or no evidence-based program-level and/or assessment process change
actions have been implemented (if change was necessary).
**AND/OR** no timelines or accountability for implementation have been established.

# GA/CI myth busting

| Myth | Truth |
|------|-------|
| Employer surveys cannot be used to assess Graduate Attributes. | Programs can use employer surveys to assess Graduate Attributes. Employer surveys are an acceptable assessment tool. |
| CEAB accreditation criteria does not allow non-engineers to take engineers courses. | The criteria do not define which students are permitted to take which courses. If non-engineering student data is included in GA/CI evaluation processes, the data may be skewed. |

# 3.5.1.2d: Non-academic counselling and guidance other supporting facilities and services

- 3.5.1 is concerned with the "Quality of the educational experience"
  - Major importance is attached to the quality of the educational experience

- Assess existence and knowledge of available resources, NOT the quality of mental health services

- See the *Example interview questions for accreditation visits* document

# Recent relevant changes -

To criteria, procedures, tools

# General Visitors

General Visitor(s)

- Previously:
    - One or two per visit
    - Appointed by the provincial regulator
    - Evaluates occupational health and safety aspects of the curriculum (safety, student projects, support departments and facilities)
    - Reports findings to the regulator

- Beginning with the 23/24 visit cycle:
    - Regulators have decided not to appoint GVs
    - Regular feedback on the system has noted that this role has not been an effective way to use volunteer time
    - Regulators may send observers instead

# Update to required visit materials

The general instructions have been updated to reflect the new list of visit materials that programs are required to prepare for a visit.

- Save time for HEI and Visiting Team

- Provide transparent, consistent messaging

- Move to risk-based assessment
  - Minimum Path
  - Students

# Update to required visit materials

The general instructions have been updated to reflect the new list of visit materials that programs are required to prepare for a visit.

## Required visit materials – Due 8 weeks before the visit

- A. Program Operational Information (information provided in the questionnaire and associated documents before the visit, links to documents are accepted)

- B. Graduate Attributes and Continual Improvement Detailed Explanation (information given at a presentation or during the visit)

- C. Detailed Syllabi (electronic form)

- D. Documentation of Assigned Work and Assessments (electronic form when possible)

- E. Evaluated Student Work (electronic form when possible)

- F. Evidence of a Culture of Safety

# Temporary exemption for students going on international exchange

- A situation-limited policy introduced for 23/24
  - Intended to remove accreditation barriers to students going on international exchange
  - Will be re-evaluated in June 2027
  - Any re-evaluation will take into consideration the outcomes of Engineers Canada's 2022-2024 Strategic Priority 1.1

- Impacted criteria:
  - 3.3.1 Admission
  - 3.3.2 Promotion and graduation
  - 3.4.4.1: 600 AUs of engineering science and engineering design
  - 3.4.4.4: 225AUs of engineering design
  - 3.4.8: Satisfying all requirements for curriculum content
  - 3.5.5: Professional status of faculty members
  - Appendix 1: Regulations for granting of transfer credits

# Expectations for the program: Documented international exchange processes and procedures

- Processes and procedures to assess learning activities taken at a host institution:

  - The Home Institution must verify and provide evidence that the academic level of the Learning Activity for which credit is granted is equal to or above the academic level of the engineering program at the Home Institution.

  - The Home Institution must assess a list of proposed Learning Activities to be taken for each International Exchange Student.

  - The Home Institution must have documented processes and procedures to verify that Host Institution Learning Activities for which transfer credits are granted carry at least the same number of AUs as the Home Institution leaning activities as per CEAB curriculum content categories.

  - The Home Institution's processes and procedures must be made available to the accreditation visiting team.

# Expectations for the program: Addendum to the Questionnaire

- Evidence to be provided if the *Temporary Exemption* is being used:

  - The processes and procedures for students going on international exchange

  - A description of the review process, including information on who signs off on learning activities/program equivalences for granting transfer credits

  - Up to three examples of documentation to demonstrate the review process

  - The responsible individual(s) must be prepared to discuss the processes and procedures with the visiting team

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# 2025/2026 Documentation
## Focus on GA/CI process: Summary of changes

### "Exhibit 1" – now part of the Questionnaire

➢ Select **3 – 5** courses (or learning activities) used to assess achievement of each GA. For each course, discuss curriculum maps, indicators, and assessment tools.

➢ Discuss assessment results for each Graduate Attribute.

### Questionnaire

➢ Reduces the on-site "Graduate Attributes Dossier" by focusing on **three examples where change to a program was considered** rather than **ALL** data for **ALL** changes.

➢ On-site GA/CI presentation: Describe overall GA/CI process; reflection on what's working and what's not working on the GA/CI process.

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# Interpretive statement changes

| 2020 Interpretive statement on licensure expectations and requirements | 2021 Interpretive statement on licensure expectations and requirements |
|---|---|
| **Clause 8**<br>In order to ensure that engineering science, engineering design, natural science, mathematics and complementary studies curriculum contents are readily and easily identifiable, each course in an engineering program should be described using a maximum of three curriculum categories (ES, ED, NS, Math, CS) with no single category constituting less than 8 AU's or 25% of the total AU for a particular course.<br><br>**Clause 9**<br>It is up to the institution offering the program to justify the unique aspects of any course that deviates from clause 8. | **Clause 8**<br>Engineering science, engineering design, natural science, mathematics, and complementary studies curriculum content should be readily and easily identifiable through learning outcomes, learning activities and assessments attributable to each category in each course where they appear.<br><br>**Clause 9**<br>Removed. |

# New Interpretive Statement on Engineering Design

The Accreditation Board develops interpretive statements to clarify the intent underlying certain key expectations which generate inquiries that are not otherwise covered by the Accreditation board criteria. The Interpretive Statement on Engineering Design offers clarity on the definition as it relates to criterion 3.4.4.5 and Graduate Attribute 4.

It defines what Engineering Design is and what it is not and provides concrete examples.

This statement resulted in criteria 3.1 and 3.4.4.5 to be updated as follows.

# Criteria changes – Definition of design

| 2022 Criterion 3.1 | 2023 Criterion 3.1 |
|---|---|
| **Graduate attribute #4: Design**<br>An ability to design solutions for complex, open-ended engineering problems and to design systems, components or processes that meet specified needs with appropriate attention to health and safety risks, applicable standards, and economic, environmental, cultural and societal considerations. | **Graduate attribute #4: Design**<br>The ability to perform engineering design. Engineering design is a process of making informed decisions to creatively devise products, systems, components, or processes to meet specified goals based on engineering analysis and judgement. The process is often characterized as complex, open-ended, iterative, and multidisciplinary. Solutions incorporate natural sciences, mathematics, and engineering science, using systematic and current best practices to satisfy defined objectives within identified requirements, criteria and constraints. Constraints to be considered may include (but are not limited to): health and safety, sustainability, environmental, ethical, security, economic, aesthetics and human factors, feasibility and compliance with regulatory aspects, along with universal design issues such as societal, cultural and diversification facets. |

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# Criteria changes – Definition of design

| 2022 Criterion 3.4.4.5 | 2023 Criterion 3.4.4.5 |
|---|---|
| A minimum of 225 AU in engineering design is required. Engineering design integrates mathematics, natural sciences, engineering sciences, and complementary studies in order to develop elements, systems, and processes to meet specific needs. It is a creative, iterative, and open-ended process, subject to constraints which may be governed by standards or legislation to varying degrees depending upon the discipline. These constraints may also relate to economic, health, safety, environmental, societal or other interdisciplinary factors. | A minimum of 225 AU in engineering design is required. Engineering design is a process of making informed decisions to creatively devise products, systems, components, or processes to meet specified goals based on engineering analysis and judgement. The process is often characterized as complex, open-ended, iterative, and multidisciplinary. Solutions incorporate natural sciences, mathematics, and engineering science, using systematic and current best practices to satisfy defined objectives within identified requirements, criteria and constraints. Constraints to be considered may include (but are not limited to): health and safety, sustainability, environmental, ethical, security, economic, aesthetics and human factors, feasibility and compliance with regulatory aspects, along with universal design issues such as societal, cultural and diversification facets. |

# The visit
A fact-finding exercise

# Overview

- **2.5 - 3 days**
  - Sunday, Monday, Tuesday
  - October-November - existing programs
  - January-February - new programs

- **3 Objectives:**
  - **Validate** and seek **clarification** of program(s) details based on a review of the institution's completed Questionnaire.
  - **Gather information** about the program(s) and assess evidence of compliance with criteria
  - **Evaluate** the measures taken to **resolve** issues raised previously by the Accreditation Board regarding the program(s) (if applicable).



Example of visit schedule – Engineers Canada website

# Interviews:
## Tasks and tools

- "Trust then verify"
- Interviews with:
  - Senior administrative officers (i.e. president, dean of engineering, the program chairs, etc.)
  - Faculty
  - Students
  - Support staff

- Areas to explore evidence of:
  - compliance with graduate attribute criteria
  - professional attitudes
  - motivations
  - morale
  - the balance of opinions concerning theoretical and practical elements of the curriculum

# Tours: Tasks and tools

- Evaluate the effectiveness of facilities such as:
  - laboratories
  - libraries
  - computing facilities

- The Accreditation Board does not require Faculty to spend money
  - Visitors investigate whether the equipment, supplies, etc. are adequate

- Program materials to determine whether performance expectations and grading standards are appropriate. For example:
  - examination papers
  - laboratory instruction sheets
  - student transcripts
  - student reports and theses, models or equipment constructed by students
  - other evidence of student performance

# Visit Schedule

- Schedule is built based on the needs of the visiting team and HEI using the CEAB sample

- Specific meetings suggested for each visiting team member (Chair, Vice-Chair, Program Visitor)

- **Day 0 (Saturday)** *optional*
  - Revision of the issue tracker;
  - Tips about how to conduct an interview;
  - Tips about how to write an observation;
  - Building team dynamic;
  - Calibrate on common core and common GA/CI observations across all programs



Example of visit schedule – Engineers Canada website

# Visit Schedule cont'd.

**Day 1 (Sunday)**

- Team pre-visit meeting
- Meet with program officials
- Graduate attribute/continual improvement presentation*
- Tour of engineering facilities, including samples of laboratories, study spaces, club spaces, teaching facilities etc.
- Team meeting to discuss:
  - previous decision issues and areas to be re-examined
  - observations and findings
  - potential issues that warrant further investigation

**Day 2 (Monday)**

- Interviews with dean, upper administrators, faculty, support services, students, etc.
- Additional tours, as needed
- Team evening meeting to build consensus around:
  - areas of strength
  - issues that require further investigation

# **Visit Schedule** cont'd.

**Day 3 (Tuesday)**

- Update with Dean

- Interview with industry/program advisory group

- Wrap-up interviews and tours

- <u>In camera</u> Team Working Lunch:

  - Complete each program's issue tracker

  - Arrive at consensus on final conclusions

- Exit statement (possibly held the following day, depending on scheduling)

  - Attended by dean, program chairs, faculty, students

  - Verbal exit statement delivered by the Team Chair

  - Summary of **all** issues that will be included in the report

# Site visit
# "Do's" and "Don'ts"

## DO

1. Participate in all visiting team meetings

2. Check everything you question with the responsible individual(s)

3. Keep a list of who attended the interviews

4. Maintain confidentiality at all times

5. Ask open ended questions

## DON'T

1. Assume the answer to anything you question

2. Give suggestions to the program – stick to the facts (suggestions for improvement could be included in the visiting team report)

3. Surprise the program with statements in your report that were not communicated during the exit statement

# The Visiting Team Report

# The visiting team report:
## "Do's" and "Don'ts"

### DO

1. Complete your issue tracker (before the exit statement at the latest).

2. Include all issues tied to criteria in your issue tracker.

3. Be available to answer questions about your issue tracker after the visit.

4. Dig for the full picture and describe it accurately in your issue tracker.

### DON'T

1. Use the terms "concern", "weakness" or "deficiency" in your written comments.

2. Make recommendations for improvement in the body of the report. Instead use the section of the issue tracker titled "Conclusions"

3. Use the names of individuals (including students, faculty, etc.)

4. Re-format the template provided.

# Identifying issues

The "minimum standard" is established by the criterion

and (if one exists) further explained in the interpretive statement.

### 3.5.1.1 - Visitor response

Expand Criteria | View Standard

3.5.1.1 Quality, morale and commitment of:

✓ - Check mark

* - Asterisk

Clear

PROGRAM VISITOR'S OBSERVATIONS

Your options:

✓ = **no observed issue** on the criterion.

* = item flagged for CEAB review that, **in the opinion of the visitor,** has the potential to either jeopardize future compliance or currently prevents compliance with the criterion. Justification is required for * observations.

# Writing an observation

1. When a * is assigned, a detailed comment is required.

   a. Structure of comments:

      i. Reference the appropriate criterion language.

      ii. State the evidence observed.

      ii. State the way in which the evidence indicates a negative impact on the program.

   b. Comments should be precise and concise.

2. When a ✓ is assigned, do not comment.

# Written observations - Examples

| Criterion | Observation |
|---|---|
| **3.1.1 Organization and engagement:** There must be demonstration that an organization structure is in place to assure the sustainable development and measurement of graduate attributes. There must be demonstrated engagement in the processes by faculty members and engineering leadership. | Engagement of full-time faculty members in the Graduate Attribute measurement process is limited. The members of the curriculum committee appear to be highly engaged in the collection and assessment of GA data. However, faculty member involvement is limited to assessment data entry and are they not engaged in the refinement of indicators, development of assessment tools, or interpretation of assessment data. As a result, faculty members question the value of the GA assessment process, providing a barrier to implementing lasting improvements to the program. |

# Written observations - Examples

| Criterion | Observation |
|---|---|
| **3.1.3 Indicators:** For each attribute, there must be a set of measurable, documented indicators that describe what students must achieve in order to be considered competent in the corresponding attribute. | Indicators for GA#6 (Individual and team work) and #8 (Professionalism) are not documented. While indicators for ethics were noted, no indicators for equity (GA #10) (Ethics and equity) were found. Therefore, a set of measurable, documented indicators for each attribute is lacking. |

# Written observations - Examples

| Criterion | Observation |
|---|---|
| **3.4.5.1** While considerable latitude is provided in the choice of suitable content for the complementary studies component of the curriculum, some areas of study are essential in the education of an engineer. Accordingly, the curriculum must include studies in the following:<br>a. Subject matter that deals with the humanities and social sciences;<br>b. Oral and written communications;<br>c. Professionalism, ethics, equity and law;<br>d. The impact of technology and/or engineering on society;<br>e. Health and safety;<br>f. Sustainable development and environmental stewardship;<br>g. Engineering economics and project management. | The curriculum includes studies in all areas a through g, as per the criterion. The curriculum committee received feedback that upper-year students have poor written communication skills. This observation confirmed by interviews with service faculty and capstone supervisors. No actions have been taken to address this issue. |

# Written observations - Examples

| Criterion | Observation |
|---|---|
| **3.4.4.1** A minimum of 600 Accreditation Units (AU) of a combination of engineering science and engineering design curriculum content in an engineering program shall be <mark>delivered by faculty members holding, or progressing toward, professional engineering licensure</mark> as specified in the *Interpretive statement on licensure expectations and requirements*. | ES3014 is taught by a faculty member who <mark>does not hold a license to practice engineering in Canada</mark>. They are 8 years from faculty appointment and have not pursued EIT status. 38 AUs have therefore been reallocated resulting in 579 AUs of engineering science and engineering design combined. This results in the 'minimum of 600 AUs of a combination of engineering science and engineering design curriculum delivered by faculty members holding processional licensure' not being achieved. |
| **3.4.4.4** A minimum of 225 of engineering design curriculum content in an engineering program shall be delivered by faculty members holding professional engineering licensure as specified in the *Interpretive statement on licensure expectations and requirements*. | See comment in 3.4.4.1 |

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# Tips

1. Quantitative criteria are binary observations. Either the criteria have been met or not.

2. Avoid the terms "concern", "weakness", "deficiency" in your written comments

   - These terms are reserved for CEAB accreditation decisions

3. The CEAB will discuss your findings at a decision meeting where a decision will be made as to whether the program's compliance to criteria is **acceptable, a concern, a weakness, or a deficiency.**

# After the visit

**+2 weeks**

- Program visitors finalize their issue tracker
- Chair compiles visiting team report

**+4 weeks**

- CEAB editor reviews report for consistency
- Report sent to HEI dean
- HEI dean checks for accuracy and completeness

**June**

- Visit dossier prepared for CEAB meeting
- Accreditation decision
- Communication of decision

# Thank you!

For more information:

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https://engineerscanada.ca/accreditation/about-accreditation

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