



# Accountability in Accreditation 2024 Summary Report

December 2024

Questions concerning the content of this report should be directed to:

Roselyne Lampron

Accreditation Program Advisor

Engineers Canada

[roselyne.lampron@engineerscanada.ca](mailto:roselyne.lampron@engineerscanada.ca)

613.232.2474 Ext. 222

## Executive Summary

The Accountability in Accreditation Committee (AinA Committee) was struck by the Canadian Engineering Accreditation Board (CEAB) in February 2019. The Committee was created in response to the Engineers Canada Board's desire to provide interest holders with a robust, evidence-based accreditation system, designed to acknowledge and address weaknesses in a data-driven, fact-based manner. This 2024 report presents data collected from June 2023 to April 2024 and provides an overview of the findings, along with the AinA Committee's observations and recommendations.

The 2024 report represents the AinA program's third full data-collection cycle. As with previous years' findings, readers are reminded that the initial thresholds for concerning/risk ratings were set to be deliberately sensitive and alterations may be required in the future. The AinA Committee recommends revisiting the thresholds, and the committee members will undertake this review in 2024/2025.

Several themes identified in previous reports carried over to this year, and they are consistent with feedback the CEAB previously heard from interest holders in other venues. As such, the recommendations made in this report can often be tied to on-going work and initiatives currently being directed at the CEAB.

With each cycle, a picture emerges of the overall level of confidence in the accreditation system by interest holders. While there are certainly areas for improvement, the AinA Committee believes that the results indicate that interest holders who participated in the surveys have strong confidence in the accreditation system, as illustrated in the section about acknowledged strengths.

In this report, the AinA Committee makes several recommendations to the CEAB, the Policies and Procedures Committee (P&P Committee), the CEAB Executive Committee, the CEAB Secretariate, and the AinA Committee itself regarding interest holders' engagement, communication and training needs, and messaging for accreditation system interest holders to clarify intents and purposes. In addition to these specific issues, the AinA Committee recommends continued monitoring of all measures.

# Table of Contents

Executive Summary.....	i
Table of Contents.....	2
Introduction .....	3
Program Logic Model for Engineers Canada Accreditation System .....	6
Acknowledged Strengths .....	7
Continual Improvement Opportunities .....	8
<i>Training</i> .....	8
<i>Interest holders’ engagement</i> .....	8
<i>Communications</i> .....	8
<i>Understanding interest holders’ perceptions</i> .....	8
<i>Efficiency of the accreditation system</i> .....	9
Conclusions and Recommendations.....	10
Appendix A – Sample Feedback Forms.....	12

Suggested citation (APA 7<sup>th</sup> edition):

Canadian Engineering Accreditation Board Accountability in Accreditation Committee. (2024).

*Accountability in Accreditation 2024 Summary Report*. Engineers Canada, Canadian Engineering Accreditation Board. <https://engineerscanada.ca/accreditation/accountability-in-accreditation/annual-evaluation-results>

## Introduction

### **Background on the Accountability in Accreditation Program**

In recent years, the Engineers Canada Board, regulators, and higher education institutions (HEIs) have called for greater transparency from the Canadian Engineering Accreditation Board (CEAB). Interest holders have sometimes remarked that the work of the CEAB is a complicated, unknowable “black box” process, where surprises happen, and autonomous decisions are a regular occurrence. Given this situation, the Engineers Canada Board called for a robust, evidence-based accreditation system designed to acknowledge and address weaknesses in a data-driven, fact-based manner, going so far as to make accountability in accreditation a strategic priority of the [Engineers Canada’s 2019-2021 Strategic Plan](#). This strategic priority mandated the CEAB to provide a documented, annual performance measurement process, better communication, documented continual improvement processes, and greater transparency to accreditation interest holders.

To address the Engineers Canada Board’s call for greater accountability in accreditation, the CEAB struck the Accountability in Accreditation (AinA) Committee in February 2019. At the time of this report, the AinA Committee is composed of the following members:

- Pierre Bourque, ing., PhD (Chair)
- Kyle Marcotte, P.Eng.
- Ramesh Subramanian, FEC, P.Eng.
- Tara Zrymiak, FEC, P.Eng.
- Mrinal Mandal, PhD, P.Eng.
- Ann English FCSSE, FEC, FGC (Hon.), P.Eng. (retired)

### **The 2024 data-collection cycle**

The 2024 report represents the Accountability in Accreditation program’s third full data-collection cycle. As with previous years’ findings, readers are reminded that the initial thresholds for concerning/risk ratings were set to be deliberately sensitive and alterations may be required in the future. The AinA Committee recommends revisiting thresholds, and the committee members will undertake a review in 2024/2025. While all interest holder groups are included in this year’s reports, some groups were represented by a small number of respondents and one respondent was sometimes sufficient to move a measure into a concerning/risk category.

Several themes identified last year carried through to this year, and they echo the feedback the CEAB has heard from interest holders in other venues in the past. As such, the recommendations made in this report can often be tied to on-going work and initiatives currently being directed at the CEAB.

Overall, according to the AinA Committee analysis, the results indicate that interest holders who participated in the surveys have strong confidence in the accreditation system. While there are systematic improvements being made to the system regularly, the results of this year’s surveys indicate that training and clarity in interest holder roles are areas that need attention. Moreover, Engineers Canada is currently exploring [the Future of Engineering Accreditation](#) as part of its 2022-2024 strategic plan, and the AinA Committee feels this work could inform some of those discussions, particularly in regard to the strong confidence interest holders have in the accreditation system.

The data collection cycle was launched in June 2023 and concluded in April 2024. The following groups were invited to complete feedback forms (sample forms are included in [Appendix A](#) of this report):

- Twenty-five HEIs, representing 81 programs, that received an accreditation decision in June 2023 (23) and September 2023 (2),
- All provincial/territorial engineering regulators,
- Thirteen HEIs, representing 30 programs that received an accreditation visit in the 2023/2024 cycle,
- 2023/2024 visit cycle visiting team members (visiting team chairs, visiting team vice-chairs, program visitors), and
- Student leadership at institutions that received visits in the 2023/2024 cycle.

It should be noted that questions and measures regarding the General Visitor's role in the accreditation process were removed from the results, as this role was eliminated beginning with the 2023/2024 accreditation visit cycle. The AinA Committee members have revised all surveys to ensure that the tools for the 2024 data collection cycle contain no mention of this role.

### **How to read the Accountability in Accreditation 2024 Summary Report**

The 2024 Report is divided into two parts:

1. The Accountability in Accreditation 2024 Summary Report: This document contains the AinA Committee's summary of interest holders' survey findings and its recommendations for specific measures.
2. The Accountability in Accreditation 2024 Report: This Excel document contains a quantitative analysis of interest holders' survey findings. The brief dashboard is provided (upon request) to all interest holders as an Excel document to be read in conjunction with this report. The full dashboard is available to CEAB members (upon request).

The AinA Committee recommends that readers begin with the Summary Report and use the Excel document to augment their reading of the information provided in the analysis.

The AinA Committee would like the readers to keep in mind the following considerations while reviewing the 2024 findings:

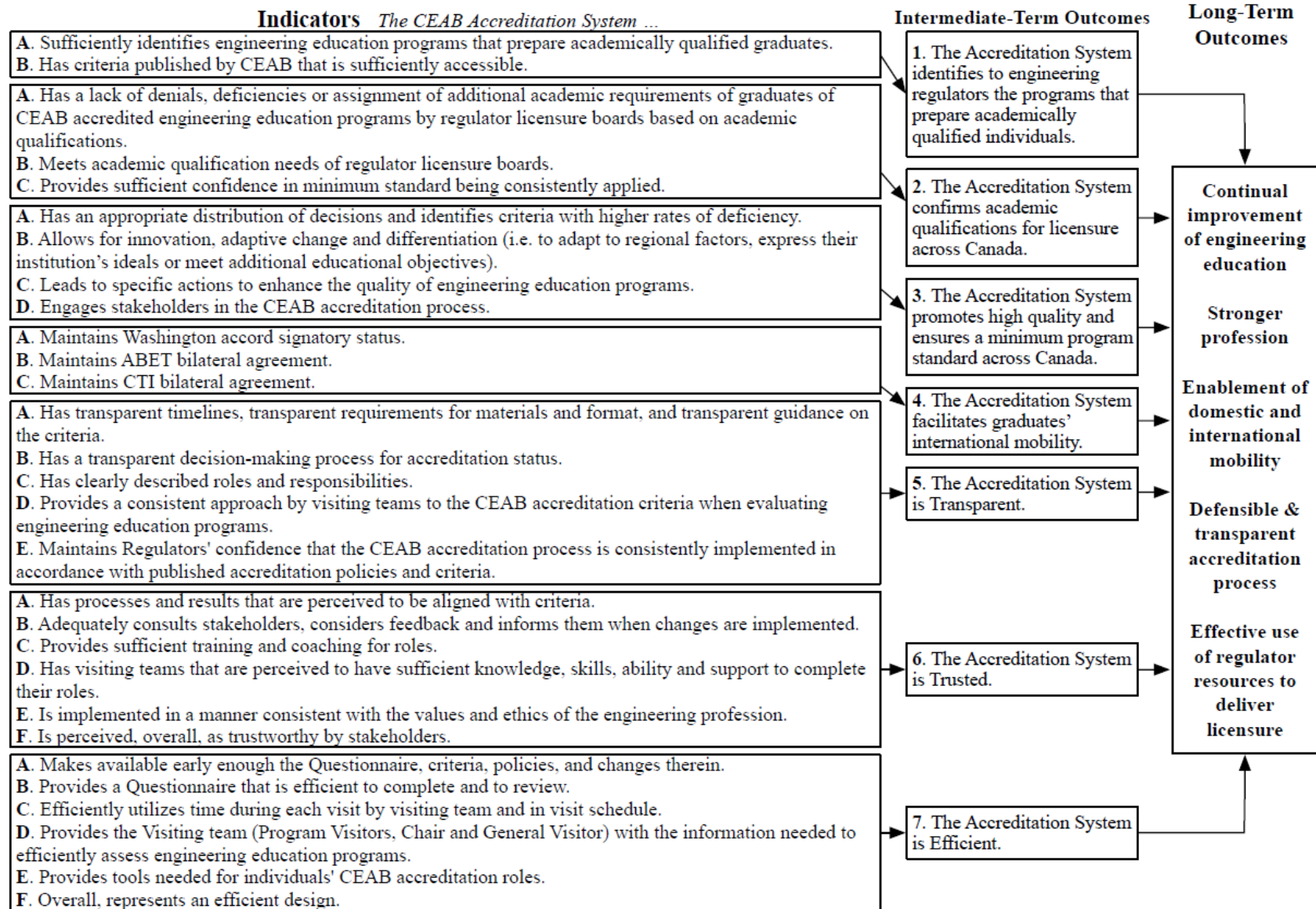
- As interest holders monitor progress via the AinA reports they should be aware of the timescale required for changes within the accreditation system. Changes made to accreditation criteria/policy/procedures will likely not impact interest holders for at least three to five years.
- Initial thresholds for risk/concerning/achieving ratings were set to be deliberately sensitive, and alterations may be required in the future. The AinA Committee recommends revisiting the thresholds, and the committee members will undertake a review in 2024/2025. The following example illustrates the sensitivity of the thresholds and their impact on moving an indicator into a concerning/risk category:
  - One visiting team vice-chair (of 10) indicated that they felt the timelines for the accreditation process provided by the CEAB were not clear. According to the thresholds, this result is considered at risk, even though 9 of the surveyed individuals (or 90%) indicated that they felt the timelines were clear. (Measure 5.A.5.1a)

**Next Steps**

The AinA Committee recommends to the CEAB, the P&P Committee, the CEAB Executive Committee, and the CEAB Secretariate staff where follow-up should be considered to respond to the report's findings. Some recommendations of the report are specifically addressed to the AinA to improve and refine the data collection and analysis process. All four groups and the AinA Committee itself will review the report's findings and incorporate necessary initiatives into their respective workplans for the coming year(s).

Data collection for the 2025 report began in June 2024 and will continue through April 2025. The AinA Committee will meet later in 2024/2025 to discuss opportunities for improvement in the AinA program activities and revisit the sensitivity of the thresholds. Proposals for improvements will be presented to the CEAB for discussion at the February meeting and for approval at their April meeting. If approved, revised thresholds will be applied to the 2025 AinA results. Other changes will be implemented according to the AinA data collection cycle timeline.

# Program Logic Model for Engineers Canada Accreditation System



A program logic model (PLM), as presented above, is a graphical depiction of the connections between the activities and desired short-term and long-term outcomes of a program or service. PLMs identify plausible “chains” of causes and effects and usually include:

- the inputs required by the program (e.g. staff time)
- the expected immediate outputs arising from the program (e.g. documents produced)
- the desired outcomes (e.g. a trusted accreditation system)
- the related indicators (e.g. meets academic qualification needs of regulator licensure boards).

PLMs are often used in evaluation to demonstrate the underlying logic of a program and what evidence will be used to show the achievement of desired outcomes. A PLM can also be used in a diagnostic capacity to identify where a program or service is not functioning optimally and to suggest options for improvement.

The PLM designed for the Engineers Canada accreditation system shows the connections between the accreditation inputs (resources, activities) and outputs, as well as the indicators associated with the seven key outcomes. ([The full PLM can be viewed on the website here](#); the PLM presented here is a truncated version, showing only the indicators and outcomes related to the findings of this report.) While the dashboard includes colour-coding of the indicators and measures to help the reader identify areas of risk and concern, and areas that are achieving results as expected, the AinA Committee has decided to exclude a colour-coding of the PLM’s indicators in this year’s report. The Committee feels it is too premature in the reporting cycle to include this information, but it will be provided in future iterations of the report.

## Acknowledged Strengths

In this year’s data, the following three intermediate-term outcomes of the PLM above stand out as strengths since all their corresponding measures met the “achieving” threshold, meaning no risks or concerns were identified in the results.

- The Accreditation System identifies to engineering regulators the programs that prepare academically qualified individuals. (*Outcome #1*)
- The Accreditation System confirms academic qualifications for licensure across Canada. (*Outcome #2*)
- The Accreditation System facilitates graduates’ international mobility. (*Outcome #4*)

The first two outcomes directly speak to the purpose of accreditation, which is to: “Identify to the member engineering regulators of Engineers Canada those engineering programs whose graduates are academically qualified to begin the process to be licensed as professional engineers in Canada”<sup>1</sup>.

The following comment, shared by a regulator who responded to the survey, illustrates these strengths and the CEAB accreditation process's positive outcomes on their work: “Very detailed and thorough process. Provides confidence to the Regulators that the standards have been met. Reduces time and effort from a Regulator’s perspective in reviewing the academics of graduates of CEAB-accredited programs.”

---

<sup>1</sup> Engineers Canada. [CEAB 2023 Accreditation Criteria and Procedures](#), p. 6.



The third intermediate-term outcome of the PLM identified as a strength above is in relation to maintained agreements that facilitate the international mobility of Canadian graduates. Engineers Canada is a signatory of the Washington Accord and has bilateral agreements with the Commission des Titres d'Ingénieur (CTI) and the Engineering Accreditation Commission of ABET of the United States of America. Maintaining these international agreements is essential to recognizing Canadian standards of excellence in engineering education and practice and fostering opportunities for graduates to work across different countries.

## Continual Improvement Opportunities

The AinA Committee reviewed all the results, using the established thresholds and data from the previous reports to identify five key trends that, in the committee's view, present opportunities for continual improvement.

### *Training*

The results of several measures indicate the need for improved elements in the CEAB's training program, specifically the need for improved training activities and materials which speak to the transparency of the criteria, the importance of interest holders engagement in the accreditation processes, the role(s) of interest holders in the accreditation system (especially the regulators and the Engineers Canada Board members roles), and the required documentation for an accreditation visit (especially the list of Required Visit Materials). The CEAB Training Documentation and Resources Working Group was struck in 2021 to address some of these issues, among others, and the results of that work are beginning to be implemented. The AinA Committee recommends that the P&P Committee ensures continuity of the work initiated by the Working Group.

### *Interest holders' engagement*

Respondents expressed differing views regarding the levels of interest holders' engagement in the accreditation process. All interest holders in the accreditation system need to better understand the roles and responsibilities of the various participants in the accreditation process. In particular, those of the Engineers Canada Board and the regulators are not well understood. There is also a need to define the students' role in the accreditation process to clarify and better communicate engagement expectations.

### *Communications*

The data identified several areas where stronger communication materials are required on the following:

- Access to accreditation criteria,
- The roles and responsibilities of interest holders in the accreditation system,
- The CEAB decision-making process, and
- The list of Required Visit Materials.

### *Understanding interest holders' perceptions*

According to the data, there is a need to better understand interest holders' perceptions about different aspects of the accreditation process, including the scope and benefits of accreditation (e.g. specific curriculum improvements resulting from accreditation activities, graduates from CEAB accredited programs not needing to take technical exams to become licensed), the accreditation process timelines, the visiting team's approach to consistently applying CEAB accreditation criteria, and the information

needed to assess an engineering education program efficiently. These elements should be explored to identify what actions can be taken to address concerns, clarify expectations, and ensure that the process is more aligned with interest holders' perceptions and needs.

*Efficiency of the accreditation system*

The feedback provided by representatives from the Engineers Canada Board, HEIs and members of visiting teams supports what the members of the Committee have heard in other venues which is that there are issues of efficiency with the current system. The members of the AinA Committee note that the CEAB has several on-going initiatives that are intended to improve the efficiency of the accreditation system (including the implementation of Tandem, a web-based accreditation data management system), and the Engineers Canada Board has an ongoing initiative under Strategic Priority 1 (to investigate and validate the purpose and scope of accreditation) that may provide further insight and actions with respect to this issue.

## Conclusions and Recommendations

The AinA Committee believes that the results detailed in this report are accurate and reliable given that the qualitative and quantitative data is reflective of messaging that interest holders have shared with the CEAB in the past. Notwithstanding the need to collect additional information and because of the consistent messaging received from interest holders to date, the AinA Committee feels several actions would be appropriate at this time. The recommendations are organized according to the specific groups they are addressed.

### **Recommendations addressed to the CEAB**

- It is recommended that the CEAB identify the accessibility of the accreditation criteria as an issue with the Canadian Federation of Engineering Students (CFES) and explore with them how to improve the result of this measure. **(Measure 1.B.1.4)**
- It is also recommended that the CEAB collaborate with the CFES regarding the students' roles and responsibilities in the CEAB accreditation process. **(Measure 5.C.5.5c)**

### **Recommendations addressed to the P&P Committee**

- It is recommended that the P&P Committee explore strategies to better understand the HEIs' perspective on how the CEAB accreditation process can lead to specific actions enhancing the quality of the engineering education programs. **(Measure 3.C.3.5)**
- It is recommended that the P&P Committee explore different strategies with HEIs to increase the engagement of external interest holders of HEI in the CEAB accreditation process. **(Measures 3.D.3.7a and 3.D.3.7b)**
- It is recommended that the P&P Committee develop and provide further training activities and materials regarding the list of Required Visit Materials. Questions regularly submitted to Engineers Canada staff should be considered as input to the development of this work. **(Measures 5.A.5.2a and 5.A.5.2b and 5.A.5.3b)**
- It is recommended that the P&P Committee continue monitoring the transparency of the criteria to the CEAB board members and assess the impact of the upcoming revised training in this regard. **(Measure 5.A.5.3a)**
- It is recommended that the P&P Committee develop training that clearly delineates the roles and responsibilities of the accreditation system interest holders, especially those of the regulators and Engineers Canada Board members. **(Measures 5.C.5.5a, 5.C.5.5b and 6.C.6.4)**
- It is recommended that the P&P Committee describe the role of the students in the CEAB accreditation process. The AinA Committee members consider that without such a description, the relevance of this measure remains debatable. **(Measure 5.C.5.5c)**
- It is recommended that the P&P Committee further explore the responses and underlying issues regarding the visiting team's approach to consistently applying CEAB accreditation criteria across engineering programs during the same visit and with previous visits. **(Measure 5.D.5.6)**
- It is recommended that the P&P Committee explore appropriate ways to describe and communicate the post-visit processes leading up to the accreditation decision, specifically to the audience receiving the decision. **(Measure 6.A.6.2)**
- It is recommended that the P&P Committee explore appropriate ways to include additional details in the decision letters informing the deans that their response has been fully considered. **(Measure 6.A.6.2)**

- It is recommended that the P&P Committee share with the DLC both successful and difficult examples of information and documentation provided by HEIs and explore best practices to improve the timeliness, and the completeness of the materials submitted. Both perspectives, from the CEAB and the HEI, need to be considered. **(Measure 7.D.7.8)**

#### **Recommendations addressed to the CEAB Executive Committee**

- It is recommended that the CEAB Executive Committee explore with CEAB board members and Secretariate staff what is unclear in terms of the accreditation process timelines and how to improve the perceptions. **(Measures 5.A.5.1a and 5.A.5.1b)**

#### **Recommendations addressed to the CEAB Secretariate staff**

- It is recommended to pursue the ongoing 2023 recommendation, that the CEAB Secretariate review the materials available to accreditation system interest holders to clearly describe the decision-making process. **(Measures 5.B.5.4a and 5.B.5.4b)**
- It is recommended that the CEAB Secretariate write an article in the *Accreditation Matters* newsletter regarding the roles and responsibilities of the accreditation system interest holders, especially those of the regulators and Engineers Canada Board members. **(Measures 5.C.5.5a, 5.C.5.5b and 6.C.6.4)**

#### **Recommendations addressed to the AinA Committee**

- It is recommended that the AinA Committee revisit for the next review cycle (2024/2025) the merging of the results from the different types of interest holders. **(Measures 3.D.3.7a, 3.D.3.7b, 5.C.5.5a, 5.C.5.5b and 6.C.6.4)**
- It is recommended that the AinA Committee revisit for the next review cycle (2024/2025) the question: “Was the visiting team’s approach to applying CEAB accreditation criteria (a) Consistent across engineering programs on this visit, (b) Consistent with previous visits you have experienced?” It is suggested that the question be split into two different sentences to be analyzed separately and that both questions be more explicit about what “the visiting team’s approach” refers to. **(Measure 5.D.5.6)**
- It is recommended that the AinA Committee Chair discuss with the P&P Committee regarding the lack of efficiency of the accreditation system design as reported by certain interest holders (especially HEIs but also some CEAB members). **(Measure 7.F.7.11)**

Members of the AinA Committee would like to thank the interest holders who participated in this round of data collection. The Committee looks forward to working together to continually improve the CEAB accreditation system design and operations.

## Appendix A – Sample Feedback Forms

Feedback forms are distributed to interest holders at specific times during the accreditation cycle. For a sample of the feedback forms, please visit the Engineers Canada website here:

- Regulators ([Sample survey](#))
- Visiting team members (each visitor receives a role-specific set of questions) ([Sample survey-team chair](#) [Sample survey-team vice-chair](#) [Sample survey-program visitor](#))
- CEAB Members ([Sample survey](#))
- Engineers Canada Board members ([Sample survey](#))
- Engineers Canada staff ([Sample survey](#))
- Institutions' deans or other officials (both after a visit and after a decision) ([Sample survey-post visit](#) [Sample survey-post decision](#))
- Student leadership at visited institutions ([Sample survey](#))

The data collected from these surveys is non-identifiable, except by the respondent's role, and provides valuable insight into the working of the accreditation system and how it may be improved.