



Report on the 2021 consultation on the Required Visit Materials Working Group Report

(September 2021)

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1. Introduction

1.1. Description of the issue requiring consultation

The Required Materials Working Group was convened to identify the needs of a visiting team to determine the depth, breadth, and quality of a program, including the outcomes assessment program (such as, but not limited to, the course materials, curriculum committee minutes, and details of outcomes). The required materials have varied at least since 2014, and the HEIs are looking for consistency. In addition to the lack of consistency, additional challenges to the current scenario were noted:

- Information requests vary between Visiting Team Chairs, making it difficult for the HEI to plan collection before a Visiting Team Chair has been announced.
- Preparation is intensive for HEIs, and uncertainty with respect to material collection adds to the preparation efforts.
- Information review is intensive for the visiting team.
- Disconnections between course content and competencies, particularly with respect to design, lead to a lack of understanding of courses by the visiting team.
- Engineering programs with a heavy science component sometimes lack student samples in senior courses taught outside the Engineering faculty.
- Information from the HEI may not be standardized from course to course and may not be organized in a manner conducive for efficient review by the visiting team.
- Some HEIs have issues with information access and confidentiality guidelines at their institution with respect to student work.

Promulgated detailed and consistent expectations will help both the visiting teams and HEIs manage workloads and expectations. Not all of these other issues can be addressed by standardizing the required materials (and are outside the scope of the Required Materials Working Group's mandate) but focusing on the minimum materials needed to assess the current criteria is a step on the path forward.

1.2. The Required Visit Materials Working Group

At their September 14, 2019 meeting, the Canadian Engineering Accreditation Board (CEAB) struck a working group to examine the on-site material requirements for accreditation visits and to recommend an implementation and consultation approach for any changes. Following its first meeting, the Working Group expanded its scope from on-site materials to all materials required from a program during a CEAB accreditation visit.

The Working Group was composed of the following members:

Members:

Paula R. Klink, P.Eng., Chair

Pemberton Cyrus, P. Eng.

Ray Gosine, P.Eng.

Anne-Marie Laroche, ing.

Julius Pataky, P.Eng.

Ramesh Subramanian, P.Eng.

Advisors:

Carol Jaeger, P.Eng.

Christine Moresoli, P.Eng.

Salvatore Paneduro

Secretariat support:

Aude Adnot-Serra

Elise Guest

Mya Warken

The Required Visit Materials Working Group reviewed the current expectations for materials and, using the principles of minimum path, weakest link, and audit best practices, are recommending a new set of requirements, which have been simplified and which are each explicitly tied to accreditation criteria.

The primary outcome of the Required Visit Materials Working Group's efforts is a list of requirements for documentation from programs undergoing a CEAB accreditation visit; each requirement is tied directly to a criterion and rationale is provided for each request. At their February 2021 meeting, the CEAB directed the Working Group to confer with the various stakeholders that will be affected by the report's recommendations via a national consultation. This process ran from April 6 to June 4, 2021.

2. 2021 Consultation scope and methodology

2.1. Consultation objectives

The objectives of the consultation on the 2021 report of the Required Visit Materials Working Group Report were to:

1. Inform stakeholders that the CEAB is considering making changes to the required materials submitted to the visiting team for accreditation purposes.
2. Investigate stakeholder reaction to the Working Group's recommendations.
3. Identify the impact of the recommendations to the data-collection needs of programs, accreditation visitors and CEAB members.
4. Identify barriers to change if the report recommendations are adopted.
5. Develop a reasonable implementation plan that accommodates the diverse viewpoints of stakeholders.

The consultation process had four guiding principles:

1. Be inclusive of all relevant stakeholder groups.
2. Be transparent.
3. Be procedurally fair.
4. Encourage feedback (both positive and constructive).

2.2. Consultation approach

In at their February 2021 meeting, the CEAB instructed the Required Visit Materials Working Group to consult with stakeholders on the recommendations made in the document, "The Required Materials for a CEAB Visit Working Group Report" (Appendix 1). In keeping with Engineers Canada's consultation process (Appendix 2), the consultation team used a virtual focus group methodology accompanied by a general call for comments. Focus groups allowed the consultation team to focus on the specific questions of interest with targeted stakeholders of accreditation.

To standardize the consultation meetings as much as possible, the planning team developed the following materials:

- An invitation to participate which describes the process by which stakeholder feedback will be collected and how it will be used, and explains that feedback will be summarized and made available to stakeholders (Appendix 3).
- A presentation slide deck which will be used at every consultation (Appendix 4).
- Engineers Canada [web content](#) to inform readers about the consultation process and outcomes.

The "[Required Materials for a CEAB Visit Working Group Report](#)" was also used to provide an overview of the recommendations to those participating in the consultation.

Stakeholders were made aware of the consultation process through the Engineers Canada bi-weekly [newsletter](#) and the weekly update email from Engineers Canada's CEO. Additionally, a web page dedicated to the consultation was hosted on the Engineers Canada [website](#).

The consultation period opened on April 6, 2021. All stakeholders were invited to participate in two introductory webinars in both English and French, which were recorded and shared on the Engineers Canada [website](#). The webinars provided:

- background on the Working Group’s creation and purpose,
- an overview of the recommendations, and
- the ways by which each stakeholder group would be consulted.

The English introductory webinars were held on April 7th and April 12th (with 24 and 19 participants, respectively). The French introductory webinars were held on April 8th and April 13th (with five and 12 participants, respectively).

All stakeholders were then invited to:

1. Request a 1-hour webinar or in-person meeting to provide feedback on the recommendations.
2. Submit written feedback.

2.3. Website statistics

| Page/Item | Unique page views | Average time spent | Number of downloads |
|--|-------------------|--------------------|---------------------|
| Canadian Engineering Accreditation Board’s 2021 Required Visit Materials Working Group Report webpage | 298 | 3:25 | N/A |
| Rapport 2021 du Groupe de travail sur la documentation requise du Bureau canadien d’agrément des programmes de génie webpage | 75 | 3:44 | N/A |
| The Required Materials for a CEAB Visit Working Group Report | N/A | N/A | 47 |
| Documents requis dans le cadre des visites du BCAPG - Rapport du Groupe de travail | N/A | N/A | 30 |

2.4. Stakeholders

The following stakeholders were invited to participate in the consultation:

- Canadian Federation of Engineering Students (CFES)
- CEAB members
- Engineering Deans Canada (via the DLC), with a request for Deans members to share with faculty
- Engineering regulators’ councils/Boards of examiners/Academic review committees (via the CEO Group)
- Higher Education Institutions (HEIs)
- National Admissions Officials Group (NAOG)
- Program visitors from the last three years
- The Graduate Attribute & Continual Improvement Process Network (GAPNet)
- Visit chairs from the last three years, in addition to the CEAB members

Given the diverse structure of each stakeholder group, the primary contact within each organization was invited to request a meeting with members of the Working Group for a tailored consultation focus group.

2.5. Key questions asked of each stakeholder

Each stakeholder was asked to respond to the following questions:

1. Does the description of required materials provide responsible individuals (including, but not limited to, designated officials, relevant faculty and administrative staff) with enough guidance on what materials to collect to demonstrate compliance with the CEAB Accreditation Criteria related to:
 - a. Graduate attributes
 - b. Continual improvement
 - c. Students
 - d. Curriculum content
 - e. Program environment
 - f. Additional criteria
2. Is the description of required materials sufficient to allow the CEAB to identify those engineering programs whose graduates are academically qualified to begin the process to be licensed as professional engineers in Canada?
3. Does the description of required materials represent an actual reduction in the number of materials that programs will have to produce?
4. Do you have any other comments regarding the required materials that the CEAB ought to consider at this time?

3. Findings

3.1 List of stakeholders that provided feedback

Table 1 lists the stakeholders that provided feedback, the method by which feedback was provided, and the date it was received.

Table 1: List of stakeholders that provided feedback

| Stakeholder | Feedback method | Date received |
|---|------------------------|----------------------|
| Dan Candido <i>Program Visitor/Past CEAB member</i> | Email | April 7, 2021 |
| Hani Henein <i>Program Visitor</i> | Email | April 14, 2021 |
| Jen Pelletier <i>University of British Columbia</i> | Email | April 15, 2021 |
| Jason Grove <i>University of Waterloo</i> | Email | April 26, 2021 |
| Jay Nagendran <i>(On behalf of the Association of Professional Engineers and Geoscientists of Alberta)</i> | Email | May 31, 2021 |
| Carol Jaeger <i>(On behalf of the Engineering faculty at the University of British Columbia)</i> | Email | June 2, 2021 |
| Marie-José Nollet <i>(On behalf of the Engineering faculty at École de technologie supérieure)</i> | Email | June 3, 2021 |
| Christine Moresoli <i>(On behalf of the Engineering faculty at the University of Waterloo)</i> | Email | June 4, 2021 |
| Chris Donaldson <i>(On behalf of the Engineering faculty at York University)</i> | Email | June 4, 2021 |
| Manu Gill <i>(On behalf of the Engineering faculty at British Columbia Institute of Technology)</i> | Email | June 4, 2021 |
| Roni Khazaka <i>(On behalf of the Engineering faculty at McGill University)</i> | Email | June 4, 2021 |
| Bruce Sparling <i>(On behalf of the Engineering faculty at the University of Saskatchewan)</i> | Email | June 4, 2021 |

Input was received from 12 sources, representing individuals, HEIs, and regulatory bodies. In total, approximately 14 pages of materials were generated via the consultation process.

3.2 Feedback themes

The feedback received from the consultation process reflected the following:

- There is general support of the initiative.
- The importance of this initiative was recognized, particularly around improving clarity of current instructions and expectations.
- Some stakeholders expressed a concern that the proposed requirements may not reduce the work required to prepare visit materials (as intended).
- Participants identified areas that remain unclear and required further details.

4. Recommendations to CEAB

In light of the feedback received through the 2021 consultation, the Required Visit Materials Working Group recommends to the CEAB that:

- the existing list of materials programs are required to prepare for an accreditation visit be withdrawn,
- the following instructions be provided instead, in the Questionnaire for Evaluation of an Engineering Program,
- the new instructions be implemented for the 2023/2024 visit cycle (therefore, applied to the Questionnaire that will be published in Fall, 2022), and
- no changes be made to the list of materials programs are required to prepare for an accreditation visit for a 6-year period from implementation.

The following are the instructions that the Required Visit Materials Working Group is recommending to the CEAB be adopted:

Required Materials to Support a CEAB Visit

Definitions

Learning Activities: typically consist of courses, but may include non-coursework requirements such as seminars, training sessions, or work terms as defined by the Program.

Core Learning Activities: Learning Activities that all students must successfully complete to graduate from the Program.

Elective Learning Activities: Learning Activities that supplement the Core Learning Activities. Typically, students must successfully complete a specified number of activities selected from a list of eligible electives to graduate from the Program.

Minimum Number (M) of Elective Activities Specified by the Program: the number of Elective Learning Activities a student must take to graduate, as specified by the Program.

Minimum Path: the set of Learning Activities which provide the least number of Accreditation Units (AUs) within each Canadian Engineering Accreditation Board curriculum component, calculated based on Course Information Sheet input. The Minimum Path calculation assumes the student chooses courses with the lowest number of Engineering Science or Engineering Design AUs, which may require the student to complete more Elective Learning Activities than the minimum number **M** specified by the program to meet the Criteria specifications, particularly if a Program offers a significant number of Elective Learning Activities with low Engineering Science or Engineering Design AUs.

Shortest Graduation Path: the smallest set of Learning Activities a student needs to complete to be granted a degree from a program.

- If the Program meets all AU minima in Core Learning activities, the Shortest Graduation Path includes the Core Learning Activities and any **M** Elective Learning Activities.
- If the Program requires Elective Learning Activities to meet AU minima, and the Program has internal mechanisms to constrain Elective Learning Activities to ensure AU minima are met, the Shortest Graduation Path includes the Core Learning Activities and **M** Elective Learning Activities that follow the constraints.
- If the program requires Elective Learning Activities to meet AU minima, and has no internal mechanisms to constrain Elective Learning Activities to ensure AU minima are met, the Shortest Graduation Path includes the Core Learning Activities and the Elective Learning Activities calculated by the Minimum Path.

Faculty of Engineering (or equivalent): the administrative body governing the program.

Culminating Design Experience: significant design experience based on the knowledge and skills acquired in earlier work, and preferably involves teamwork and project management. A capstone design course is one example of a culminating design experience.

A. Program Operational Information (Criteria 3.1, 3.2, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.4.7, 3.4.8)

This information is provided in the questionnaire and associated documents before the visit. Links to documents (or areas in a larger document) that provide a direct answer to the question posed are acceptable. If a precise link to information is not possible, provide a short summary.

B. Graduate Attributes and Continual Improvement Detailed Explanation (Criteria 3.1, 3.2)

This information may be given at a presentation to all visiting team members or provided at other meetings during the visit.

- 1 Explain the strategy of GA/CI, including involvement of teaching staff, curriculum or other committees involved with the process, how the procedures and processes are implemented at program, faculty, and institutional levels, and how these levels participate in the process.
- 2 Describe the philosophy behind the curriculum, including sequencing of courses, highlighting linkages.
- 3 Explain the choice of indicators, linking to course learning objectives.
- 4 Explain philosophy and choice of assessment tools.
- 5 Explain compilation and interpretation of results.
- 6 Explain the improvement process, and how GAs contribute to decisions.
- 7 Describe the program's internal and external stakeholder consultations.
- 8 Discuss improvement actions, their implementation, and timelines.
- 9 Provide three examples where assessment results were considered as a part of program improvement actions.
- 10 Evaluate the overall GA/CI process, discuss what is working, what is not working, and any improvements that have been identified and implemented.

C. Detailed Syllabi (Criteria 3.1, 3.4)

Course Syllabi and additional information as required should be provided in electronic form, at a time agreed upon by the Visiting Team Chair and the Program.

- 1 For Core Activities satisfying the Mathematics and Natural Sciences AU requirements, provide course syllabi.
- 2 For Core and Elective Activities satisfying the Engineering Science and Engineering Design AU requirements, provide a week-by-week (or equivalent) description of course content and learning outcomes, indicating engineering tool use and lab experience.
- 3 For Core Activities satisfying the Complementary Studies or Other AU requirements, provide references or links to calendar descriptions; a week-by-week (or equivalent) description of course content is not required. If calendar descriptions don't provide clear evidence of humanities, social sciences, arts, languages, management, engineering economics, or communication content, detailed course syllabi including learning outcomes must be provided.
- 4 For Core and Elective Activities taught outside the Faculty of Engineering (or equivalent) that directly support evidence of Graduate Attributes and are not covered in items C.1 to C.3, provide a detailed, week-by-week (or equivalent) syllabi of course content and expectations, indicating engineering tool use and lab experience.

D. Documentation of Assigned Work and Assessments (Criteria 3.1, 3.4.4, 3.4.6, 3.4.7)

Document the assigned work and assessments of the Program's Learning Activities on the Shortest Graduation Path claiming Engineering Science or Engineering Design Accreditation Units. This information should be provided in electronic form when possible, at a time agreed upon by the Visiting Team Chair and the Program.

1. Provide problem set questions. If questions are from a textbook, provide the text or copies of the questions.
2. Provide laboratory information given to students, as well as detailed marking schemes or detailed rubrics for the Program's Learning Activities on the Shortest Graduation Path. When detailed marking schemes or detailed rubrics are not available, submit up to six samples of marked laboratory work. These samples must include at a minimum three examples of work that in the opinion of the instructor(s) marginally meet expectations at the time of assessment. If all work meets expectations, provide at least three works that, in opinion of the instructor(s), are the lowest quality products.
3. Provide project descriptions with detailed marking schemes or detailed rubrics for the Program's Learning Activities on the Shortest Graduation Path. When detailed marking schemes or detailed rubrics are not available, submit up to six samples of marked project work. These samples must include at a minimum three examples of work that in the opinion of the instructor(s) marginally meet expectations at the time of assessment. If all work meets expectations, provide at least three works that, in the opinion of the instructor(s), are the lowest quality products.
4. Provide quizzes, tests, exams, and other summative assessments with detailed marking schemes or detailed rubrics, if available for the Program's Learning Activities on the Shortest Graduation Path.

E. Evaluated Student Work (Criteria 3.1, 3.4.4, 3.4.6, 3.4.7)

Evaluated student work should be provided in electronic form when possible, at a time agreed upon by the Visiting Team Chair and the Program.

- 1 For culminating design experiences, provide all student deliverables from ten evaluated projects, including, but not limited to, written reports, physical models, or mathematical models as appropriate. If less than ten projects were completed in the course, include all projects. These samples must include at a minimum, three examples of work that in the opinion of the instructor marginally meet expectations at the time of assessment. If all work meets expectations, provide at least three works that, in the opinion of the instructor(s), are the lowest quality products.
- 2 For ten Core Learning Activities providing Engineering Science and Engineering Design AUs (other than the Engineering Design Culminating Experiences) taken by all students in the program in the final two years of study, provide exams, quizzes, tests, or other summative assessments that are worth in any combination at least seventy-five per cent of the total mark in the Core Learning Activity. For each assessment, up to six samples may be submitted. These samples must include at a minimum three examples of work that in the opinion of the instructor marginally meet expectations. If all work meets expectations, provide at least three works that, in the opinion of the instructor(s), are the lowest quality products.
- 3 If the Program requirements for the final two years of study consist of fewer than ten Core Learning Activities, the Program can choose to submit Core Activities in the previous year of study, or high enrolment Elective Learning Activities on the Shortest Graduation Path in the final years. The Program should provide sufficient information to demonstrate compliance to the Criteria.
- 4 Provide additional examples of performance in Graduate Attributes that have not been included in the culminating design experience (E.1) or the ten learning activities selected in E.2 and E.3 so that at least one sample set related to each of the Graduate Attributes is available. These examples should be taken from courses on the Shortest Graduation Path at an intermediate development (D) or advanced application (A) level. Up to six examples may be provided to support compliance to each of the Graduate Attributes not addressed in E1, E2, or E3, but they must include at least three examples of work that, in the opinion of the instructor(s) at the time of marking, marginally meet expectations.

F. Evidence of a Culture of Safety (Criteria 3.4.7)

Evidence of a culture of safety should be available at the visit, including, but not limited to safety manuals, documentation of training provided to students, safety meeting minutes, records, and signage.

5. Definitions of terms used in the Report on the 2021 consultation on the Required Visit Materials Working Group Report

CEAB, AB: The Canadian Engineering Accreditation Board, or simply the Accreditation Board. Though referred to as a 'Board' the CEAB is technically a committee of the Board of Directors of Engineers Canada.

Engineers Canada Board: The Board of Directors of Engineers Canada.

Higher education institution, HEI: A post-secondary institution, which would refer to an institution offering educational programming after high school.

Regulators: The provincial and territorial associations established under law to regulate the practice of professional engineering within their respective jurisdictions, and who are the Members of Engineers Canada, as defined in the Articles of Continuance.

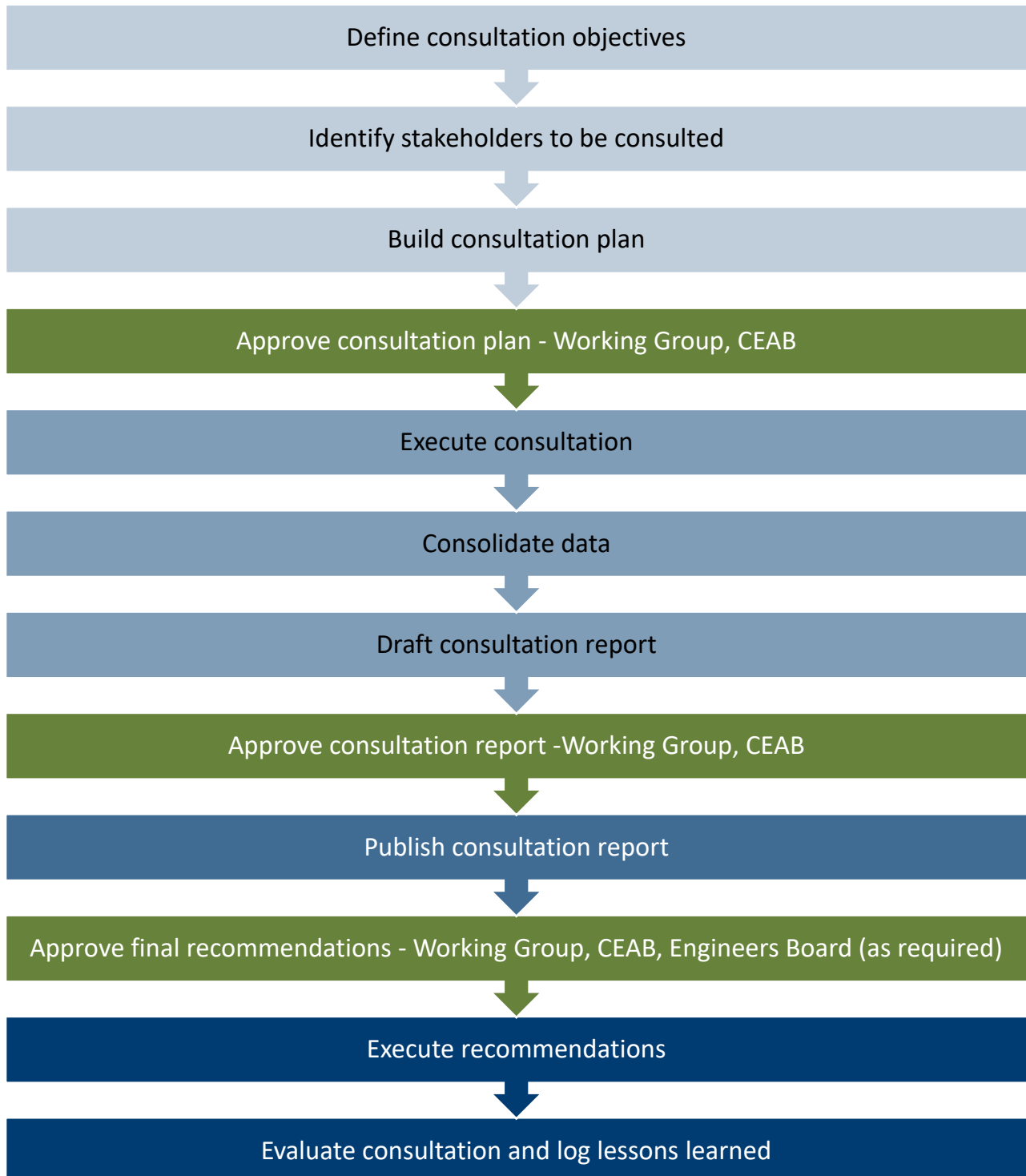
Working group: For the purposes of this report, a working group is a subcommittee operating for a defined period with a specific task. Working groups may include members who are not members of the committee or Board that created the group.

6. Appendices

Appendix 1: Proposal for consultation

The Required Visit Materials Working Group report can be viewed on [the Engineers Canada website here.](#)

Appendix 2: Engineers Canada's Consultation Process



Legend:

Decision point

Workplan process

Appendix 3: Required Visit Materials Consultation Invitation Email

(le français suit)

RE: Consultation on the Required Visits Materials Working Group Report

Dear colleagues,

(Distribution: Engineers Canada Board, CEO Group, NAOG)

At their February 6, 2021 meeting, the Accreditation Board directed the Required Visit Materials Working Group to consult stakeholders on the recommendations of their report regarding changes to the type and quantity of materials that programs have to provide to visiting team members as part of an accreditation visit. **All regulators are invited to provide comments on the recommendations contained within the report.** The consultation period will be between April 6 and June 4, 2021.

Who should participate

The Required Visit Materials Working Group has identified engineering regulators as potential participants in this process.

How to participate

1. Introduction to the consultation process - webinar

Any individual within your organization who may be interested is invited to attend one of our scheduled introduction webinars. By clicking their preferred option below, participants will be provided within instructions on how to register:

- Wednesday, April 7th at 3pm – 4pm EDT (offered in English)
- Thursday, April 8th at 2pm – 3pm EDT (offered in French)
- Monday, April 12th at 1pm – 2pm EDT (offered in English)
- Tuesday, April 13th at 12pm – 1pm EDT (offered in French)

The introduction webinar will provide an overview of the report development process, highlight the recommendations contained within the report, and define the ways by which we will consult each stakeholder group. Any individual who is not able to participate in the live webinar will be able to access the webinar recording on the [Engineers Canada website](#).

2. Webinar meeting with organization officials

Should you or your colleagues wish to organize a web meeting to discuss the Required Visit Materials Working Group recommendations, please email accreditation@engineerscanada.ca to schedule the meeting.

3. Submit written feedback

You are invited to participate in the consultation through any of the means listed above. Additionally, you are invited to submit a formal written response. Written responses should be directed to accreditation@engineerscanada.ca or by mail to:

Required Visit Materials Working Group
 c/o Elise Guest
 Engineers Canada
 300-55 Metcalfe St.
 Ottawa, ON K1P 6L5

Written responses must be received by **June 4, 2021**.

How your feedback will be used

All feedback from all stakeholders will be collected and presented to the Required Visit Materials Working Group, CEAB, and Engineers Canada Board of Directors. A summary of all feedback received will be circulated to stakeholders and posted on the Engineers Canada website.

Background

Following feedback from programs, Engineering Deans Canada and CEAB members, the Required Visit Materials Working Group was struck to determine what efficiencies could be found in the list of documents prepared for CEAB accreditation visits. Briefly, the proposed changes are:

| Comparison of existing and proposed required materials to support a CEAB visit | | | |
|--|---|---|--|
| Existing request | Proposed request | Change | Workload savings |
| Description of the policies and regulations that cover various aspects of the program, including, but not limited to admission, appeals, grade approval and practices. | Links to source materials online that describe the appropriate policies, procedures, and regulations. | Description no longer required. Links to source documents are sufficient. More Precise specification of visiting team needs. | Written descriptions are replaced by documents, or links to documents. |
| Syllabi for all learning activities in the program curriculum. | Syllabi for courses on the minimum path that incorporate Math, NS, ES, ED, and CS. | Syllabi are only required for courses on the minimum path. | Fewer courses need to be documented. |
| Assessment materials and three examples of student work from the low, middle, and high end of each assessment in 15 to 20 courses. All graded lab and design reports. | Assessment materials and three examples of student work with the lowest acceptable performance as judged by the instructor at the time of assessment, representing 75 per cent of the final course assessment for ten course taken by all students with ES, ED, and GAs. Instructor’s discretion to add any three more. | Only ten courses on the minimum path are sampled. Only 75 per cent of the assessment is required. Only examples of the lowest acceptable work are required, other samples are at the instructor’s discretion. | Fewer assessment materials required. All learning activities do not need to be sampled: only 75 per cent of assessments are required. |

| Comparison of existing and proposed required materials to support a CEAB visit | | | |
|---|---|---|---|
| Existing request | Proposed request | Change | Workload savings |
| Ten examples of the culminating design experience. | Ten examples of the culminating design experience, including the three minimum acceptable examples. | The three minimum acceptable samples must be included. | No difference. |
| Dossiers with examples for 15-20 courses which measure the graduate attributes. | Examples of minimum acceptable student work in courses on the minimum path with attributes at the D or A level. | These samples are only required if not included with the assessment covering ES + ED. | A separate dossier of GAs with samples is no longer needed. |
| Exhibit 1 | Exhibit 1 – detailed expectations | No change – requirements are specified in detail. | Less time spent preparing documentation as expectations are clearer. |
| GA/CI presentation | GA/CI presentation – detailed expectations | No change – requirements are specified in detail. | Less time spent preparing presentation as expectations are clearer. |
| Health and safety manuals required. | Health and safety manuals not required. | No safety manuals required. Safety culture will be assessed on-site. | No time spent gathering manuals. |
| Changes in data collection requirements made every year. | Changes in data collection requirements made every six years. | Requirements are frozen for six years at a time. | Less time spent preparing as information can be gathered over several years. |
| Collection requirements not explicitly tied to criteria. | Every requirement is tied to a specific criterion. | Criterion-based data collection. | Less time spent preparing as HEI knows how information will be used by visiting team. |

On behalf of the Required Visit Materials Working Group, the Canadian Engineering Accreditation Board, and Engineers Canada, thank you for considering this invitation. Should you have any questions, please do not hesitate to contact me (mya.warken@engineerscanada.ca or at 1-877-408-9273 extension 206) or Elise Guest (elise.guest@engineerscanada.ca or at 1-877-408-9273 extension 260).

Best regards,

Mya Warken
 Manager, Accreditation

Objet : Consultation sur le rapport du Groupe de travail sur la documentation requise

(Distribution : conseil d'Ingénieurs Canada, Groupe des chefs de direction, GNRA)

Chers collègues,

Lors de sa réunion du 6 février 2021, le Bureau d'agrément a demandé au Groupe de travail sur la documentation requise de consulter les parties prenantes sur les recommandations de son rapport concernant les modifications à apporter au type et au nombre de documents que les programmes doivent fournir aux membres de l'équipe de visiteurs dans le cadre d'une visite d'agrément. **Les organismes de réglementation sont invités à faire part de leurs commentaires sur les recommandations présentées dans le rapport.** La consultation se tiendra du 6 avril au 4 juin 2021.

Participants recherchés

Le Groupe de travail sur la documentation requise a désigné les organismes de réglementation comme des participants potentiels à cette consultation.

Comment participer

1. Présentation du processus de consultation – webinaire

Toute personne intéressée de votre organisme est invitée à assister à l'un de nos webinaires. Il suffit de cliquer sur l'une des options ci-dessous pour s'inscrire :

- Mercredi 7 avril, 15 h-16 h (HE) en anglais
- Jeudi 8 avril, 14 h-15 h (HE) en français
- Lundi 12 avril, 13 h-14 h (HE) en anglais
- Mardi 13 avril, 12 h-13 h (HE) en français

Dans le webinaire de présentation, nous passerons en revue le processus d'élaboration du rapport, les recommandations qui y figurent et les modalités de consultation de chaque groupe de parties prenantes. Si vous n'êtes pas en mesure d'assister au webinaire en direct, vous en trouverez un enregistrement dans [le site Web d'Ingénieurs Canada](#).

2. Webinaire avec les représentants des organismes

Si vous ou vos collègues voulez organiser une réunion en ligne pour discuter des recommandations du Groupe de travail sur la documentation requise, veuillez envoyer un courriel à agrement@ingenieurscanada.ca pour fixer une date.

3. Soumission de commentaires par écrit

Vous pouvez participer à la consultation d'une des façons indiquées ci-dessus. Vous pouvez aussi soumettre vos commentaires par écrit à agrement@ingenieurscanada.ca, ou les envoyer par la poste à l'adresse suivante :

Groupe de travail sur la documentation requise
a/s de Elise Guest
Ingénieurs Canada
55, rue Metcalfe, bureau 300
Ottawa, ON K1P 6L5

Les réponses écrites doivent nous parvenir au plus tard le **4 juin**.

Utilisation de vos commentaires

Les commentaires de toutes les parties prenantes seront colligés et présentés au Groupe de travail sur la documentation requise, au Bureau d'agrément et au conseil d'Ingénieurs Canada. Un résumé de tous les commentaires reçus sera envoyé aux parties prenantes et affiché dans le site d'Ingénieurs Canada.

Contexte

Pour donner suite aux commentaires des responsables des programmes, de Doyennes et doyens d'ingénierie Canada et des membres du BCAPG, le Groupe de travail sur la documentation requise pour les visites a été mis sur pied avec pour mandat de déterminer les gains d'efficacité qui pourraient être réalisés en ce qui concerne la liste des documents à préparer pour les visites d'agrément du BCAPG. En bref, les modifications proposées sont les suivantes :

| Comparaison entre les documents exigés actuellement à l'appui d'une visite du BCAPG et ceux proposés | | | |
|--|--|---|--|
| Demande actuelle | Demande proposée | Modification | Allègement de la charge de travail |
| Description des politiques et des règlements qui couvrent différents aspects du programme, notamment l'admission, les appels, l'approbation des diplômes et les pratiques. | Liens vers les documents sources en ligne qui décrivent les politiques, les procédures et les règlements appropriés. | La description n'est plus nécessaire. Les liens vers les documents sources suffisent. Précision des besoins de l'équipe de visiteurs. | Les descriptions écrites sont remplacées par les documents ou des liens vers les documents. |
| Plan de toutes les activités d'apprentissage du programme. | Plan des cours du cheminement minimal des catégories mathématiques, sciences naturelles, sciences du génie, conception en ingénierie et études complémentaires. | Seuls les plans de cours du cheminement minimum sont exigés. | Il y a un nombre réduit de cours pour lesquels il faut soumettre des documents. |
| Documents d'évaluation et trois exemples de travaux d'étudiants (note la plus faible, note moyenne et note la plus élevée) pour chaque évaluation de 15 à 20 cours. Tous les rapports de laboratoire et de conception notés. | Pour 10 cours suivis par tous les étudiants (sciences du génie, conception en ingénierie et QRD), documents d'évaluation et trois exemples de travaux qui, selon l'enseignant, satisfont minimalement aux attentes qui représentent au moins | Les échantillons proviennent de 10 cours du cheminement minimum seulement. Seules 75 % des évaluations sont demandées. Seuls des exemples de travaux minimalement acceptables sont demandés; les autres sont à la discrétion de l'enseignant. | Un nombre réduit de documents d'évaluation est demandé. Il n'est pas nécessaire de fournir des échantillons de toutes les activités d'apprentissage; seules 75 % des évaluations sont demandées. |

| | | | |
|--|--|---|---|
| | 75 % de la note globale du cours. À sa discrétion, l'enseignant peut en fournir trois autres. | | |
| Dix exemples de l'expérience de la conception en ingénierie. | Dix exemples de l'expérience de la conception en ingénierie, dont les trois travaux ayant obtenu les notes les plus faibles au-dessus de la note de passage. | Les trois travaux ayant obtenu les notes les plus faibles au-dessus de la note de passage doivent être inclus. | Aucune différence. |
| Dossiers contenant des exemples de mesures des QRD tirés de 15 à 20 cours. | Exemples de travaux qui satisfont minimalement aux attentes dans des cours du cheminement minimum qui couvrent l'évaluation des normes relatives aux QRD de niveau « en développement » ou « avancé ». | Ces exemples ne sont nécessaires que s'ils ne sont pas inclus dans les évaluations couvrant les sciences du génie et la conception en ingénierie. | L'établissement d'enseignement supérieur n'a pas besoin de créer de dossier distinct pour les QRD. |
| Tableau 1 | Tableau 1 — attentes détaillées | Aucun changement — les exigences sont précisées en détail. | Diminution du temps passé à préparer les documents, car les attentes sont clairement précisées. |
| Présentation des QRD/AC | Présentation des QRD/AC — attentes détaillées | Aucun changement — les exigences sont précisées en détail. | Diminution du temps passé à préparer la présentation, car les attentes sont clairement précisées. |
| Guides de santé et de sécurité exigés. | Guides de santé et de sécurité non exigés. | Les guides de santé et de sécurité ne sont pas exigés. La culture de la sécurité est évaluée sur place. | Pas de temps passé à rassembler les manuels. |
| Modification des exigences de collecte de données chaque année. | Modification des exigences de collecte de données tous les six ans. | Les exigences sont fixées pour six années. | Diminution du temps de préparation, car l'information peut être recueillie sur plusieurs années. |
| Les exigences de collecte ne sont pas explicitement liées aux normes. | Toutes les exigences de collecte sont liées à une norme précise. | Collecte de données fondée sur des normes | Diminution du temps de préparation, car les établissements d'enseignement supérieur savent comment l'équipe de visiteurs utilisera l'information. |

Au nom du Groupe de travail sur la documentation requise, du Bureau d'agrément et d'Ingénieurs Canada, je vous remercie de considérer cette invitation. Si vous avez des questions, n'hésitez pas à communiquer avec moi (mya.warken@ingenieurscanada.ca ou 1 877 408-9273, poste 206) ou avec Elise Guest (elise.guest@ingenieurscanada.ca ou 1 877 408-9273, poste 260).

Cordialement,

Mya Warken
Gestionnaire, Agrément

Appendix 4: Consultation Presentation Slide Deck

**Required materials for visits
2021 consultation**

Paula Klink, P. Eng.
Chair, Required Materials Working Group
April 2021



Have a question?

Outline

1. Background
2. Report recommendations
3. Consultation process
4. How to participate in the consultation process



Background

Visit materials-Current state
Working group mandate
Approach to our work

Purpose of materials for a CEAB visit

During a visit, the Visiting Team evaluates the HEI on adherence to criteria specified in *The Accreditation Criteria and Procedures Report*

A review of policy documents, procedures, teaching materials, and curriculum committee meeting minutes help generate an accurate picture of the HEI's ability to educate students to depth and breadth quality standards required by engineering regulators.



Visit materials - Current challenges

- Information requests vary between visiting teams.
- Preparation and information review are intensive.
- Disconnect between course content and student competencies.
- Science courses at senior levels sometimes have limited samples of student work.
- Information from HEI varies by course, and sometimes is not efficient for review by the visiting team.
- Information access and confidentiality obligations at some institutions present challenges in making student work available.



Working group mandate

- To consider the current CEAB requirements for on-site course materials that are to be made available to the visiting team.
- To envisage how the requirements for on-site course materials could be amended to respond to feedback from:
 - HEIs (who note the significant work effort to collect and present the materials).
 - Visiting team members (who require information in order to adequately assess the curriculum content and quality).



Our approach

- **Examine** all currently required visit materials.
- **Clarify** materials requirements and their use by the visiting team for the HEI, allow the visiting team to know what to expect, reduce duplication, and reduce the workload of the HEI in gathering material.
- **Define** a consistent set of required materials for CEAB visits has been determined based on the Minimum Path and Weakest Link principles and based on best practices of audits.
- **Propose** a framework which would remain stable for the next six years.





Two recommendations

1. Adopt the new list of required program materials to support a CEAB accreditation visit.
2. If approved, the new list of requirements should remain unchanged for a period of six years. After three years, the list should be reviewed and necessary changes made. The new requirements may be announced but will not be in force until the end of the six-year period. HEIs will have a minimum of two years notification before the requirements are applied.



Required materials: Table 1

- Program operational information
- Program operational information for graduate attributes and continual improvement documentation
- Graduate attributes and continual improvement detailed explanation
- Detailed syllabi
- Documentation of assigned work and exams
- Evaluated student work

Proposed changes, part 1

| Comparison of existing and proposed required materials to support a CEAB visit | | | |
|--|---|--|--|
| Existing request | Proposed request | Change | Workload savings |
| Description of the policies and regulations that cover various aspects of the program, including, but not limited to admission, appeals, grade approval and practices. | Links to source materials online that describe the appropriate policies, procedures, and regulations. | Description no longer required. Links to source documents are sufficient. More precise specification of visiting team needs. | Written descriptions are replaced by documents, or links to documents. |
| Syllabi for all learning activities in the program curriculum. | Syllabi for courses on the minimum path that incorporate Math, NS, ES, ED, and CS. | Syllabi are only required for courses on the minimum path. | Fewer courses need to be documented. |

Proposed changes, part 2

| Comparison of existing and proposed required materials to support a CEAB visit | | | |
|---|--|---|---|
| Existing request | Proposed request | Change | Workload savings |
| Assessment materials and three examples of student work from the low, middle, and high end of each assessment in 15 to 20 courses. All graded lab and design reports. | Assessment materials and three examples of student work with the lowest acceptable performance as judged by the instructor at the time of assessment, representing 75 per cent of the final course assessment for ten courses taken by all students with ES, ED, and GAs. Instructor's discretion to add any three more. | Only ten courses on the minimum path are sampled. Only 75 per cent of the assessment is required. Only examples of the lowest acceptable work are required, other samples are at the instructor's discretion. | Fewer assessment materials required. All learning activities do not need to be sampled: only 75 per cent of assessments are required. |

Proposed changes, part 3

| Comparison of existing and proposed required materials to support a CEAB visit | | | |
|---|---|---|---|
| Existing request | Proposed request | Change | Workload savings |
| Ten examples of the culminating design experience. | Ten examples of the culminating design experience, including the three minimum acceptable examples. | The three minimum acceptable samples must be included. | No difference. |
| Dossiers with examples for 15-20 courses which measure the graduate attributes. | Examples of minimum acceptable student work in courses on the minimum path with attributes at the D or A level. | These samples are only required if not included with the assessment covering ES + ED. | A separate dossier of GAS with samples is no longer needed. |

Proposed changes, part 4

| Comparison of existing and proposed required materials to support a CEAB visit | | | |
|--|--|---|--|
| Existing request | Proposed request | Change | Workload savings |
| Exhibit 1 | Exhibit 1 – detailed expectations | No change – requirements are specified in detail. | Less time spent preparing documentation as expectations are clearer. |
| GA/CI presentation | GA/CI presentation – detailed expectations | No change – requirements are specified in detail. | Less time spent preparing presentation as expectations are clearer. |
| Health and safety manuals required. | Health and safety manuals and procedures not required. | No safety manuals required. Safety culture will be assessed onsite. | No time spent gathering manuals. |

Proposed changes, part 5

| Comparison of existing and proposed required materials to support a CEAB visit | | | |
|--|---|--|---|
| Existing request | Proposed request | Change | Workload savings |
| Changes in data collection requirements made every year. | Changes in data collection requirements made every six years. | Requirements are frozen for six years at a time. | Less time spent preparing as information can be gathered over several years. |
| Collection requirements not explicitly tied to criteria. | Every requirement is tied to a specific criterion. | Criterion-based data collection. | Less time spent preparing as HEI knows how information will be used by visiting team. |



Consultation questions

1. Does the description of required materials provide responsible individuals (including, but not limited to, designated officials, relevant faculty and administrative staff) with enough guidance on what materials to collect to demonstrate compliance with the CEAB Accreditation Criteria related to:
 - a. Graduate attributes
 - b. Continual improvement
 - c. Students
 - d. Curriculum content
 - e. Program environment
 - f. Additional criteria

Consultation questions (cont'd)

2. Is the description of required materials sufficient to allow the CEAB to identify those engineering programs whose graduates are academically qualified to begin the process to be licensed as professional engineers in Canada?
3. Does the description of required materials represent an actual reduction in the number of materials that programs will have to produce?
4. Do you have any other comments regarding the required materials that the CEAB ought to consider at this time?



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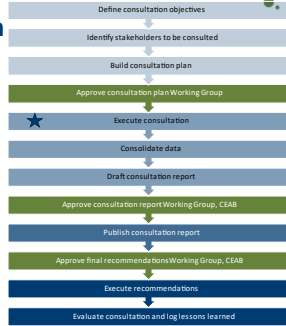
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Stakeholder groups being consulted

- CEAB members
- Higher Education Institutions (HEIs)
- Engineering Deans Canada (via the DLC), with a request for Deans to share with faculty
- Engineering regulators (via the CEOs and National Admissions Officials Group)
- The Graduate Attribute & Continual Improvement Professionals Network
- Program visitors from the last three years
- Visit chairs from the last three years, in addition to the CEAB members
- Canadian Federation of Engineering Students (CFES)

National consultation

Legend: Decision point Working process



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National consultation: objectives

1. Inform stakeholders that the CEAB is considering making changes to the required materials submitted to the visiting team for accreditation purposes.
2. Investigate stakeholder reaction to the Working Group's recommendations.
3. Identify the impact of the recommendations to the data collection needs of programs, accreditation visitors and CEAB members.
4. Identify barriers to change if the report recommendations are adopted.
5. Develop a reasonable implementation plan that accommodates the diverse viewpoints of stakeholders.

How to participate in this consultation



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How to participate in this consultation

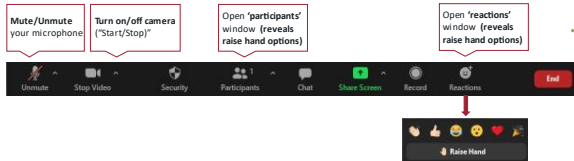
1. Groups can schedule a meeting with us to discuss the report's recommendations and provide your feedback.
2. Submit written feedback to:
accreditation@engineerscanada.ca
 Attn: Elise Guest
 Accreditation Program Advisor
 Engineers Canada

Submission deadline: June 4, 2021



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Have a question?



Thank you

For more information:
accreditation@engineerscanada.ca | 613.232.2474
engineerscanada.ca/accreditation

