



# Questionnaire for Evaluation of an Engineering Program

**Submitted by:**

---

Name of Higher Education Institution

---

Program name

---

Date

**Canadian Engineering Accreditation Board**

300 – 55 Metcalfe Street Ottawa, ON K1P 6L5

Tel.: (613) 232-2474 / Fax: (613) 230-5759

[visits@engineerscanada.ca](mailto:visits@engineerscanada.ca)

## Revision History

Version	Document	Description of Changes
Complete questionnaire 2023 (Accreditation Visit Cycle 2023-2024)	EN_2023-2024_Questionnaire.docx Glossary of terms	<p>Definitions have been added for several terms, and the definition of minimum path has been updated:</p> <p><b>Core Learning Activities:</b> Learning Activities that all students must successfully complete to graduate from the Program.</p> <p><b>Culminating Design Experience:</b> 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.</p> <p><b>Elective Learning Activities:</b> 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.</p> <p><b>Faculty of Engineering (or equivalent):</b> the administrative body governing the program.</p> <p><b>Learning Activities:</b> typically consist of courses, but may include non-coursework requirements such as seminars, training sessions, or work terms as defined by the Program.</p> <p><b>Minimum Number (M) of Elective Activities Specified by the Program:</b> the number of Elective Learning Activities a student must take to graduate, as specified by the Program.</p> <p><b>Minimum Path:</b> 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 <b>M</b> 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.</p> <p><del><b>Minimum path:</b> The set of courses which provide the least number of AU within each Accreditation Board curriculum content category.</del></p>

		<p><b>Shortest Graduation Path:</b> the smallest set of Learning Activities a student needs to complete to be granted a degree from a program.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>
	<p>EN_2023-2024_Questionnaire.docx Page 8-10</p>	<p>The general instructions have been updated to reflect the new list of visit materials that programs are required to prepare for a visit:</p> <p><a href="#">Required Visit Materials</a></p> <p>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)</p> <p>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.</p> <p>B. Graduate Attributes and Continual Improvement Detailed Explanation (Criteria 3.1, 3.2)</p> <p>This information may be given at a presentation to all visiting team members or provided at other meetings during the visit.</p> <ol style="list-style-type: none"> <li>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.</li> <li>2 Describe the philosophy behind the curriculum, including sequencing of courses, highlighting linkages.</li> <li>3 Explain the choice of indicators, linking to course learning objectives.</li> </ol>

		<ol style="list-style-type: none"> <li>4 Explain philosophy and choice of assessment tools.</li> <li>5 Explain compilation and interpretation of results.</li> <li>6 Explain the improvement process, and how GAs contribute to decisions.</li> <li>7 Describe the program’s internal and external stakeholder consultations.</li> <li>8 Discuss improvement actions, their implementation, and timelines.</li> <li>9 Provide three examples where assessment results were considered as a part of program improvement actions.</li> <li>10 Evaluate the overall GA/CI process, discuss what is working, what is not working, and any improvements that have been identified and implemented.</li> </ol> <p>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.</p> <ol style="list-style-type: none"> <li>1 For Core Activities satisfying the Mathematics and Natural Sciences AU requirements, provide course syllabi.</li> <li>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.</li> <li>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.</li> <li>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 detailed, week-by-week (or equivalent) syllabi of course content and expectations, indicating engineering tool use and lab experience.</li> </ol> <p>D. Documentation of Assigned Work and Assessments (Criteria 3.1, 3.4.4, 3.4.6, 3.4.7)</p>
--	--	---

		<p>Document the assigned work and assessments of the Program’s Learning Activities which claim Engineering Science or Engineering Design Accreditation Units on the Shortest Graduation Path. This information should be provided in electronic form when possible, at a time agreed upon by the Visiting Team Chair and the Program.</p> <ol style="list-style-type: none"> <li>1. Provide problem set questions. If questions are from a textbook, provide the text or copies of the questions.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ol> <p>E. Evaluated Student Work (Criteria 3.1, 3.4.4, 3.4.6, 3.4.7)</p> <p>Evaluated student work should be provided in electronic form when possible, at a time agreed upon by the Visiting Team Chair and the Program.</p> <ol style="list-style-type: none"> <li>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,</li> </ol>
--	--	---

		<p>provide at least three works that, in the opinion of the instructor(s), are the lowest quality products.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>F. Evidence of a Culture of Safety (Criteria 3.4.7)</p> <p>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.</p> <p><u>On-site Materials</u></p> <p><del>Beyond the submission of the Questionnaire, Institutions are required to make the following materials available to the Visiting Team materials as listed below. These are required to</del></p>
--	--	---

		<p>verify/assess compliance with the criteria relating to both curriculum and graduate attributes. The materials may be made available in hard copy and/or electronic copy, except that design reports should be made available in hard copy.</p> <p><b>A. Course Materials</b></p> <p>A1. For each learning activity in a program's curriculum, institutions are expected to maintain up-to-date documentation on content (on a week-by-week or similar basis and including laboratory and project work if any), learning objectives and performance assessment methods. Such documentation would typically be distributed to students and should be available to the Accreditation Board visiting teams on-site for every learning activity in the program. Assessment materials issued to students, including as may be applicable, homework assignments, laboratory instruction sheets, project instructions, quizzes, mid-term and final exam question papers should also be available on-site for every learning activity in the program.</p> <p>A2. In addition to the materials specified in A1, dossiers of the materials listed below should be available on-site for a selection of 15 to 20 of the program's learning activities. The HEI should select the 15 to 20 learning activities from amongst those used by it to assess the levels of achievement for the graduate attributes. The selection should be such that assessment of each of the attributes is dealt with in at least one of the dossiers.</p> <ul style="list-style-type: none"> <li>● Samples of graded student work and examinations for each assessment tool, so as to include a range of student performances including as may be appropriate:</li> <li>● Graded tests, problem sets and examinations</li> <li>● Graded laboratory and design reports</li> </ul> <p><b>B. Graduate Attributes and Continual Improvement onsite documentation</b></p> <p>Programs are expected to have processes in place that demonstrate that program outcomes are being assessed in the context of the graduate attributes, and that the assessment results inform further development of the program. Exhibit 1 asks programs to describe 3-5 actions that were driven by GA data analysis. (see "Continual Improvement, Improvement actions").</p> <p>Onsite, the program will make available the evidence for <b>three examples where change to a program was considered</b>. The evidence should identify the threshold for change, whether the decision was to make a change to the program or that no change was required and illustrate the process that led to the decision. Evidence could include (but is not limited to):</p>
--	--	--

		<p><del>relevant GA/CI curriculum meeting minutes, data, tools used to analyze the data, etc.)</del></p> <p><del>This is a collection of assessment data and processed results, presented in the format in which they were used to make decisions—additional formatting is not necessary.</del></p> <p><del><b>C. Onsite HEI presentation on Graduate Attributes/Continual Improvement to the visiting team</b></del></p> <p><del>At the beginning of the visit, the HEI will make a presentation to the visiting team on Graduate Attributes/Continual Improvement. This presentation shall describe the institution’s overall GA/CI process including the functions of the GA/CI committee (or equivalent), their interactions with internal and external stakeholders, and how the procedures and processes are implemented at an institutional level. The HEI is also asked to reflect on the overall GA/CI process, discuss what is working and what is not working and whether any improvements have been identified and (if applicable) have been implemented.</del></p> <p><del>The visiting team may also request that the HEI set aside some time to respond to questions about the GA/CI information provided in Exhibit 1.</del></p> <p><del><b>D. Safety Manuals and Procedures</b></del></p> <p><del>Please provide copies of any manuals and/or policies and procedures documentation that relate to health and safety practices in the unit.</del></p>
Complete questionnaire 2021 (Accreditation Visit Cycle 2021 – 2022)	EN_2021_Questionnaire.docx Page 6	<p>Submission of materials – Wording was updated to clarify the AB’s decision to no longer require paper copies to be sent to the Secretariat or the visiting team members:</p> <ul style="list-style-type: none"> <li>○ You will be requested to upload a series of files to a CEAB website. In addition, <del>in lieu of being requested to prepare paper copies for some members of the site visit team</del>, you are requested to upload the complete questionnaire for each program through two or three sequential pdf files. <b>Note that you are no longer required to send paper copies of your submitted materials to the Secretariat, or to the visiting team members.</b></li> </ul>
	EN_2021_Questionnaire.docx Page 21	<p>Change to criterion 3.4.6</p> <ul style="list-style-type: none"> <li>○ The program must have a minimum of <del>1,950</del> <b>1,850</b> Accreditation units that are at a university level.</li> </ul>
Complete questionnaire 2020 (Accreditation)	EN_2020_Questionnaire.docx	<p>On-site materials, <b>Section B</b> was re-worded to reflect the CEAB’s move toward a greater focus on GA/CI process.</p> <p><b>B. Graduate Attributes and Continual Improvement onsite documentation</b></p>



Questionnaire for Evaluation of an Engineering Program – 2024/2025 visit cycle

<p>Visit Cycle 2020 - 2021)</p>		<p>Programs are expected to have processes in place that demonstrate that program outcomes are being assessed in the context of the graduate attributes, and that the assessment results inform further development of the program. Exhibit 1 asks programs to describe 3-5 actions that were driven by GA data analysis. (see “Continual Improvement, Improvement actions”).</p> <p>Onsite, the program will make available the evidence for three examples where change to a program was considered. The evidence should identify the threshold for change, whether the decision was to make a change to the program or that no change was required and illustrate the process that lead to the decision. Evidence could include (but is not limited to): relevant GA/CI curriculum meeting minutes, data, tools used to analyze the data, etc.)</p> <p>This is a collection of assessment data and processed results, presented in the format in which they were used to make decisions – additional formatting is not necessary.</p>
	<p>EN_2020_Questionnaire.docx</p>	<p>On-site materials, <b>Section C</b> is new to reflect the CEAB's move toward a greater focus on GA/CI process.</p> <p><b>C. Onsite HEI presentation on Graduate Attributes/Continual Improvement to the visiting team</b></p> <p>At the beginning of the visit, the HEI will make a presentation to the visiting team on Graduate Attributes/Continual Improvement. This presentation shall describe the institution's overall GA/CI process including the functions of the GA/CI committee (or equivalent), their interactions with internal and external stakeholders, and how the procedures and processes are implemented at an institutional level. The HEI is also asked to reflect on the overall GA/CI process, discuss what is working and what is not working and whether any improvements have been identified and (if applicable) have been implemented.</p> <p>The visiting team may also request that the HEI set aside some time to respond to questions about the GA/CI information provided in Exhibit 1.</p>
	<p>EN_2020_Questionnaire.docx</p>	<p>(new criterion) 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 delivered by faculty members holding, or progressing toward, professional engineering licensure as specified in the Interpretive statement on licensure expectations and requirements.</p>
	<p>EN_2020_Questionnaire.docx</p>	<p>Criterion 3.4.4.1 changed to 3.4.4.2</p>

Questionnaire for Evaluation of an Engineering Program – 2024/2025 visit cycle

	EN_2020_Questionnaire.docx	Criterion 3.4.4.2 changed to 3.4.4.3
	EN_2020_Questionnaire.docx	Criterion 3.4.4.3 changed to 3.4.4.4
	EN_2020_Questionnaire.docx	Criterion 3.4.4.4 changed to 3.4.4.6
	EN_2020_Questionnaire.docx	(new criterion) 3.4.4.5 A minimum of 225 AU 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.
	EN_2020_Questionnaire.docx	Criterion 3.4.4.5 changed to 3.4.4.7
	EN_2020_Questionnaire.docx	<p>Additional wording was added to section 7.2 Exhibit 2: Degree certificates and transcript entries</p> <p>Provide copies of degree certificates and transcript entries for all variations of the program. Required to satisfy Criterion 3.4.8, preferably using the template for student records provided in workbook EN_2020_6A.xlsm. <a href="#">Where options are offered provide at least one example of each option for which there was a graduate.</a></p> <p>If this is a program from which no students have yet graduated but at least one student is expected to graduate by the time of the decision meeting of the Accreditation Board, attach a copy of the transcript of the student that you judge “most likely to graduate”. <a href="#">See paragraph <del>Criterion 3.6.11</del> 4.1 in the Accreditation Criteria and Procedures.</a></p>
	EN_2020_Questionnaire.docx	<p>An additional table was added to section 5. Data tables to list the non-auto-filled tables that are included in the excel 6C.</p> <p><a href="#">Non-auto-filled tables: Programs manually enter required data.</a></p> <p>3.1.1 <a href="#">Graduate Attribute Curriculum Map</a>  3.1.2 <a href="#">Indicators and Learning Activities</a>  4.3 <a href="#">Enrolment and Degrees Data</a></p>
Complete questionnaire 2019 (Accreditation Visit Cycle 2019 - 2020)	Purpose of accreditation (page 8), Questionnaire for Evaluation of an Engineering Program	Reference to " <a href="#">Interpretive statement on significant change</a> " was deleted for consistency with the 2018 Criteria and Procedures.
	Criterion 3.3.2 (page 13), Questionnaire for Evaluation of an Engineering Program	An additional question was added:

Questionnaire for Evaluation of an Engineering Program – 2024/2025 visit cycle

		<p>"Provide a link to the program's academic integrity policy and procedure (alternatively provide as an attachment).</p> <p>If an engineering student's academic integrity is called into question, how is this investigated? How might a breach of the academic integrity policy (or equivalent) impact the promotion and/or graduation of the student?"</p>
	<p>Criterion 3.4.5 Complementary studies, Questionnaire for Evaluation of an Engineering Program</p>	<p>The wording "<del>that complement the technical content of the curriculum</del>" was deleted for consistency with the 2018 Criteria and Procedures.</p>
	<p>Criterion 3.4.5.2 Language instructions, Questionnaire for Evaluation of an Engineering Program</p>	<p>The following paragraph was deleted for consistency with the 2018 Criteria and Procedures.</p> <p><del>"Language instruction may be included within complementary studies provided it is not taken to fulfill an admission requirement. Furthermore, curriculum content that principally imparts language skills can be counted towards the required AU of complementary studies but cannot be used to satisfy the requirements for subject matter that deals with central issues, methodologies, and thought processes of the humanities and social sciences."</del></p>

## Table of contents

Table of contents.....	1
Glossary of terms.....	2
General instructions .....	6
Purpose of accreditation.....	10
1. General information about the higher education institution and the program .....	11
a. Contact information .....	11
b. Options in this program .....	12
c. Program objectives and plans .....	12
d. Resolution of previous issues.....	12
2. Self-appraisal .....	13
3. Accreditation criteria .....	14
a. Graduate attributes .....	14
b. Continual improvement .....	14
c. Students .....	14
d. Curriculum content and quality .....	17
e. Program environment .....	24
f. Additional Criteria .....	29
4. Accreditation policies and procedures .....	31
a. Initiation and timing of accreditation visit .....	31
5. Data tables .....	32
6. Required exhibits.....	33
a. Exhibit 1: Graduate Attributes and Continual Improvement .....	33
b. Exhibit 2: Degree certificates and transcript entries .....	33
7. Appendices .....	33
Course information sheets: <b>EN_2023_6C.xlsm</b> .....	33
Summary of students' records: <b>EN_2023_6A.xlsm</b> .....	33
Academic staff information sheets: <b>EN_2023_6B.xlsm</b> .....	33

## Glossary of terms

**Accreditation Units (AU)** are defined on an hourly basis for an activity which is granted academic credit and for which the associated number of hours corresponds to the actual contact time of that activity between the student and the faculty members, or designated alternates, responsible for delivering the program:

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

This definition is applicable to most lectures and periods of laboratory or tutorial work. Classes of other than the nominal 50-minute duration are treated proportionally. In assessing the time assigned to determine the AU of various components of the curriculum, the actual instruction time exclusive of final examinations should be used.

**Assessment tools:** sources of data on student learning. Measurement devices (metrics) used to develop sources of data on student learning (e.g. tests, quizzes, examinations, rubrics, etc.)

*– Illustrative example: design report, presentation, essay, examination, standardized exam, oral examination, observed behaviour, focus group, survey, etc.*

**Attribute Indicators:** Descriptors of what students must do to be considered competent in the attribute; the measurable and pre-determined standards used to evaluate learning (i.e. measurable characteristics of attributes or components of attributes).

**Complex Engineering Problems:** In 2012, the CEAB adopted the definition of complex problem used in the Washington Accord (WA) graduate attribute exemplar. A defining characteristic of professional engineering is the ability to work with complexity and uncertainty since no real engineering project or assignment is exactly the same as any other. Accordingly, the attributes place as central the notions of complex engineering problems and complex problem-solving.

A complex engineering problem is defined by the following characteristics:

1. It must require the application of *in-depth knowledge*
2. It must satisfy at least one of the following additional characteristics:
  - involves wide-ranging or conflicting Issues
  - has no obvious solution such that originality is required
  - involves infrequently encountered issues
  - is outside accepted standards and codes
  - involves diverse stakeholders and needs
  - is posed at a high-level with many components or sub-problems

### **Content Instructional Level:**

Programs are asked to classify the instructional level of content relating to one or more graduate attribute in each learning activity (usually a course). It is important that the visiting team verify that course information sheets (CIS) are accurate, complete and current.

It is assumed that learning activities associated with delivering attributes are organized in a progression from **introductory (I)** through intermediate **development (D)** to advanced **application (A)** level. These

terms classifying instructional level require contextual definition with reference to engineering course content. Over the four years of an engineering program:

1. The depth and the complexity of the material increases
2. The way the material is covered changes
3. Expectations for success change
4. How a student uses the material changes

At the **introductory level** the students learn the working vocabulary of the area of content, along with some of the major underlying concepts. Many of the terms need defining and the ideas are often presented in a somewhat simplified way.

At the **intermediate development level**, the students use their working vocabulary and major fundamental concepts to begin to probe more deeply, to read the literature, and to deepen their exploration into concepts. At this level, students can begin to appreciate that any field of study is a complex mixture of sub-disciplines with many different levels of organization and analysis.

At the **advanced application level**, the students approach mastery in the area of content. They explore deeply into the discipline and experience the controversies, debate, and uncertainties that characterize the leading edges of any field. An advanced student can be expected to be able to relate course material across different courses, to begin to synthesize and integrate and achieve fresh insights. Students at this level are working with the knowledge very differently, perhaps even creating new knowledge through independent investigation.

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

**Curriculum content:** This need not mean an entire course dedicated to specific material; for example, it may include separate units within an array of courses which address the material.

**Curriculum map:** a plotted representation (often in the form of a table) that shows the relationship between learning activities (e.g. courses, co-ops, co-curricular activities), instructional and assessment methods, and intended learning for each aspect of a given program so that the relationships and connections among all the elements are easily seen.

*– Illustrative example: If a program identifies three indicators to demonstrate the graduate attribute Lifelong Learning, as described above, a table could be used to show which learning experiences (e.g. courses) are used to develop abilities and assess indicators*

**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.

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

**First Principles:** First principles are the fundamental concepts or assumptions on which a theory, system, or method is based. In engineering, first principles start directly at the level of established laws of

chemistry, physics, and mathematics and do not argue by analogy or make use of any empirical formulae or assumptions.

**Graduate Attributes:** generic characteristics, specified by the Accreditation Board, expected to be exhibited by graduates of accredited Canadian engineering programs at the time of graduation.

**In-Depth Knowledge:** In-depth knowledge means knowledge gained from courses/learning activities beyond the introductory instructional level.

**Indicators:** descriptors of what students must do to be considered competent in the attribute; the measurable and pre-determined standards used to evaluate learning.

*– Illustrative example: Criterion 3.1.12 requires that students possess the attribute Lifelong Learning. A program might consider that the **indicators** required to demonstrate that students possess this attribute are:*

- *Critically evaluates procured information for authority, currency, and objectivity.*
- *Describes professional and academic societies in the discipline and how new knowledge enters discipline.*
- *Identifies resources and professional associations that address student's own ongoing professional development.*

**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.

**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.

**Modern engineering tools:** This refers to tools such as equipment, processes, codes of practice, software, simulation packages, etc. that are considered essential for the given discipline.

**Performance Descriptors:** Scales of descriptors of the performance levels students have achieved for a specific assessment indicator (e.g. [A/B/C/D/F]; [>80%/70-79%/60-69%/50-59%/<50%]; [innovates/applies/comprehends/knows]; [acceptable/marginal/unacceptable]; [students have mastered.... /students can apply.... /students can describe.... /students know....]). Performance descriptors should have an "action verb" (apply, comprehend...) and a description of content but either of these components can be implicit or abbreviated in a particular context. (e.g. >80% means "students have mastered introductory chemistry"; <50% means "students have insufficient knowledge of introductory chemistry")

**Research:** Primary research involves experiments, investigations, or tests carried out to acquire data first-hand. Research in the context of this guide is used more broadly to include data gathered from

appropriate technical and non-technical sources, including but not restricted to the peer-reviewed engineering literature, specifications, standards, codes, and reports.

**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.

**“Specific” Accreditation Units:** Curriculum content delivered by faculty members that meet the Accreditation Board accreditation licensure requirements. Engineering licensure is examined only for courses that include engineering science and/or engineering design curriculum content. Please see the [Interpretive statement on licensure expectations and requirements](#) for further information.

**Weakest-link principle:** All options in the program are examined. Following the principle that a program is only as strong as its “weakest link”, a program is accredited only if all such variations meet the criteria.



## General instructions

As part of the accreditation process, the Canadian Engineering Accreditation Board (the Accreditation Board) conducts visits to the higher education institution that has requested an evaluation of its engineering program for accreditation. The visiting team selected by the Accreditation Board consists of qualified licensed professional engineers from the academic and non-academic sectors.

The first step in the evaluation process is to complete this questionnaire for each program being evaluated. For the convenience of those preparing this questionnaire and those who assess it, each section is keyed to the relevant criterion, and there are indications of where the visiting team will expect to find evidence that demonstrates compliance. **The Accreditation Board emphasizes that it is the responsibility of the higher education institution to make the case that the program meets each and every criterion.** Accordingly, space is provided for information which the Board has not specified but the higher education institution feels is relevant. This is especially important where less conventional and more innovative educational processes are underway.

This questionnaire is based on the Accreditation Board's *Accreditation Criteria and Procedures for 2022*.

In addition to the submission of the questionnaire, institutions are required to make materials available to the Visiting Team on-site as detailed below.

### Questionnaire and tables

The questionnaire is intended for the collection of data concerning the higher education institution and the program being evaluated and to give the higher education institution an opportunity to describe educational objectives and procedures and demonstrate the quality of the program. It should be filled out with care to provide the data completely and accurately. To facilitate the work of the program reviewers, you are asked to submit responses in “.docx” format, and all tables in “.xslm” format using the templates provided. Do not use “.pdf” or portable document format.

**The higher education institution must respond to each criterion in this questionnaire.** Please use as much space as required to provide your responses. Tables are provided for the higher education institution to complete as appropriate by using the macro-enabled workbook included with this package. Only three user-filled tables are required.

#### **3.1.1 Summary Graduate Attribute Curriculum Map**

#### **3.1.2 Indicators for Learning Activities Assessed**

#### **4.3 Enrolment and Degree Data**

All other tables are auto-filled from the course information sheets (CIS) through user-accessible macros provided in the workbook **EN\_2023\_6C.xslm**. The CIS template strictly controls and validates data entry. CIS must be complete and accurate. The workbook also provides user-accessible macros to verify CIS and generate eleven auto-filled tables. Programs are requested to check the auto-filled tables which have extracted data from the CIS. If necessary, errors in the CIS may be corrected and the auto-filled tables regenerated. The auto-filled tables should not be edited.

### Calendars

Electronic copies (or a web link) of the latest calendar must be included for all recipients of the questionnaire. In cases where the latest calendar information does not correspond to the curriculum of the upcoming graduation class, an appropriate explanation must be part of the “\*Notes” field in the appropriate CIS.

### Required Visit Materials

#### 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.

#### Exhibits

Supplemental information should be attached at the end of the completed questionnaire, **in a .docx file or a PDF file enabled for commenting**. For more information on the exhibits, see Required exhibits.

- **Exhibit 1:** Information about Graduate Attributes and Continual Improvement of the program.
- **Exhibit 2:** Sample copy of the degree certificate and a sample copy of an official transcript for all variations of the program.

#### Submission of Materials

Contact the Accreditation Board Secretariat in Ottawa for instructions on the delivery of materials.

#### **Accreditation Board Secretariat**

E-mail: [visits@engineerscanada.ca](mailto:visits@engineerscanada.ca)

Telephone: (613) 232-2474

Toll free at: 1-877-408-9273

You will be requested to upload a series of files to a CEAB website. In addition, you are requested to upload the complete questionnaire for each program through two or three sequential .pdf files. Note that you are no longer required to send paper copies of your submitted Questionnaire to the Secretariat, or to the visiting team members.

## Purpose of accreditation

The purpose of accreditation is to identify to the constituent associations of Engineers Canada those engineering programs whose graduates are academically qualified to begin the process to be licensed as professional engineers in Canada. The process of accreditation emphasizes the quality of the students, the academic and support staff, the curriculum and the educational facilities.

The engineering profession expects of its members competence in engineering as well as an understanding of the effects of engineering on society. Thus, accredited engineering programs must contain not only adequate mathematics, science, and engineering curriculum content but must also demonstrate a knowledge base for engineering, problem analysis, an ability to conduct investigations, an ability to design solutions, use of engineering tools, teamwork, develop communication skills, demonstrate professionalism, an understanding of the environmental, cultural, economic, and social impacts of engineering on society, the concepts of sustainable development, ethics and equity, economics and project management and the capacity for life-long learning.

The criteria are intended to provide a broad basis for identifying acceptable undergraduate engineering programs, to prevent over-specialization in curricula, to provide sufficient freedom to accommodate innovation in education, to allow adaptation to different regional factors, and to permit the expression of the higher education institution's individual qualities, ideals, and educational objectives. They are intended to support the continuous improvement of the quality of engineering education.

Interpretations, regulations, and guidelines are published and updated annually and are included as appendices in the 2022 Canadian Engineering Accreditation Board's *Accreditation Criteria and Procedures*, which is available on the Engineers Canada website: [www.engineerscanada.ca](http://www.engineerscanada.ca). The following policies, procedures, regulations and interpretive statements are in effect:

- *Regulations for granting transfer credits*
- *Interpretive statement on natural sciences*
- *Interpretive statement on licensure expectations and requirements*
- *Interpretive statement on curriculum content for options and dual discipline programs*
- *Use of the K-factor*
- *Interpretive statement on distance learning*
- *Interpretive statement on Accreditation Unit categories*
- *Interpretive statement on Graduate Attributes*
- *Interpretive statement on Continual Improvement*
- *Confidentiality: Policies and procedures*
- *Conflicts of interest guideline*
- *CEAB Complaints Policy*
- *Program development advisory procedure*
- *Procedures for Engineers Canada substantial equivalency evaluations*
- *Guidelines relating to coincident reviews*
- *Procedures for formal review of an Accreditation Board decision to deny accreditation*

# 1. General information about the higher education institution and the program

## *a. Contact information*

### **Name and postal address of the higher education institution**

{Contact details here}

### **Name and title of the chief executive officer of the higher education institution. Indicate the professional designation, province/territory where licensed, license #.**

{Contact details here}

### **Name, title and mailing address of the dean (or equivalent). Indicate the professional designation, province/territory where licensed, license #.**

As appropriate, provide the dean's name (or person in an equivalent position), title, mailing address, telephone number and other means of communication (e.g. courier address, e-mail address, fax number, etc.).

{Contact details here}

### **Person responsible for organizing the visit. Indicate the professional designation, province/territory where licensed, license #.**

Provide the name, title, mailing address, telephone number and other means of communication (e.g. courier address, e-mail address, fax number, etc.) of the person responsible for organizing the visit. If the person is the same as above, please indicate.

{Contact details here}

### **Person responsible for the program. Indicate the professional designation, province/territory where licensed, license #.**

Provide the name, title, mailing address, telephone number and other means of communication (e.g. courier address, e-mail address, fax number, etc.) of the person responsible for the program. If the person is the same as above, please indicate.

{Contact details here}

## b. Options in this program

List the names of all the options for the program being evaluated, if applicable. Use the names as specified in the calendar. A separate workbook (using **EN\_2023\_6C.xlsm** as the template) must be provided for each option. It is recommended that a copy of the **EN\_2023\_6C.xlsm** workbook for the primary (“regular”) option is modified to fit any other options.

Refer to the Interpretive statement on curriculum content for options and dual-discipline program available in the 2022 Canadian Engineering Accreditation Board’s Accreditation Criteria and Procedures document, which is online at [www.engineerscanada.ca](http://www.engineerscanada.ca)

1. {option 1 name}
2. {option 2 name}

## c. Program objectives and plans

Outline the objectives and the future plans of the program being evaluated in the context of the engineering unit and the institution as a whole. **It is recommended that you limit your response to one-page or 500 words.**

{Response text}

## d. Resolution of previous issues

If general and program specific deficiencies, weaknesses or concerns were noted by the Accreditation Board in the previous decision letter, please refer to them and indicate in a succinct manner the action taken in each case. **It is recommended that you limit your response to one-page or 500 words.**

{Response text}

## 2. Self-appraisal

Briefly describe the current strengths and opportunities for improvement for the program. **It is recommended that you limit your response to one-page or 500 words.**

{Response text}



### 3. Accreditation criteria

The following sections describe the measures used by the Accreditation Board to evaluate Canadian engineering programs for the purpose of accreditation. The number indicated beside each criterion corresponds with the Accreditation Board's Accreditation Criteria and Procedures for 2022.

#### a. Graduate attributes

The institution must demonstrate that the graduates of a program possess the attributes under the following headings. The attributes will be interpreted in the context of candidates at the time of graduation. It is recognized that graduates will continue to build on the foundations that their engineering education has provided.

1. A knowledge base for engineering
2. Problem analysis
3. Investigation
4. Design
5. Use of engineering tools
6. Individual and teamwork
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

##### Instructions for criterion 3.1

Complete Tables 3.1.1 to 3.1.2 for the program to be accredited by using the macro-enabled workbook (EN\_2023\_6C.xlsm) included with this package. In addition, complete the information requested in the Exhibit 1 template word file also included with this package.

#### b. Continual improvement

Engineering programs are expected to continually improve. There must be processes in place that demonstrate that program outcomes are being assessed in the context of the graduate attributes, and that the results are applied to the further development of the program.

##### Instructions for criterion 3.2:

Complete the information requested in the **Exhibit 1** template word file included with this package.

#### c. Students

Accredited programs must have functional policies and procedures that deal with quality, admission, counselling, promotion, and graduation of students. Although all accreditation criteria connect directly and indirectly with their education, attention is drawn to the following in particular: admission; promotion and graduation; and academic advising.

Instructions and responses for criterion 3.3:

Compliance shall be based a review of the documents that contain a description of processes and policies for admission, promotion, and graduation, as well as academic advising. Provide information that describes the procedures to evaluate transfer credits (advanced standing, prior studies, transfer credits and/or exchange studies).

i. Admission

There must be documented processes and policies for admission of students. Admission involving advanced standing, prior studies, transfer credits and/or exchange studies must be in compliance with the associated Accreditation Board regulations. The document entitled Regulations for granting transfer credits is available in the 2022 Canadian Engineering Accreditation Board’s Accreditation Criteria and Procedures document, which is online at [www.engineerscanada.ca](http://www.engineerscanada.ca) and from the Accreditation Board secretariat.

Instructions and response for criterion 3.3.1:

Briefly summarize the general criteria and procedures for admitting students to the undergraduate engineering program including:

- Regular admission to the initial year of the engineering program at this higher education institution and,
- Non-regular admission including admission with conditions, advanced standing on an individual case-by-case assessment, formal agreements with other higher education institutions, etc. Describe how credit for advanced standing is evaluated.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

**3.3.1.1 Agreements: See Regulations for granting transfer credits**

If there are formal agreements for transfer credits provide a list of any and all formal agreements used to support transfer of credit.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

ii. Promotion and graduation

Processes and policies for promotion and graduation of students must be documented. The institution must verify that all students have met all its regulations for graduation in the program identified on the transcript and that the curriculum followed is consistent with that of the accredited program.

The program name must be appropriate for all students graduating from the program.

Instructions and responses for criterion 3.3.2:

Summarize the engineering unit's policy on promoting students through the program.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

Summarize the practices (including formal committee responsibilities) involved in monitoring the academic progress of students; include the practices related to determining probationary status and required withdrawal from programs. Briefly describe any appeal procedures available to **students**.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

Summarize any institutional and faculty policies and practices concerning the students with disabilities. Provide details of the manner in which accommodation is made in areas such as exams, laboratories, course requirements, work-experience programs, etc.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

Provide a link to the program's academic integrity policy and procedure (alternatively provide as an attachment).

If an engineering student's academic integrity is called into question, how is this investigated? How might a breach of the academic integrity policy (or equivalent) impact the promotion and/or graduation of the student?

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

iii. Academic Advising

There must be processes and sufficient resources in place for the academic advising of students. Clear statements of such policies and procedures should be available to faculty and students. Depending on the governance structures in place, aspects of students advising should normally be at both the program and Faculty levels.

Instructions and response for criterion 3.3.3:

Summarize the process involved in academic advising and counselling students. Include any approved list(s) of courses from which students make their selection and describe the use of such list(s). Please summarize below:

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

iv. Degree auditing

A requirement for accreditation is that the higher education institution has verified, using methodologies accepted by the Accreditation Board, that all its student-related policies, procedures, and regulations apply to, and are met by, all students.

For programs where there are more than 10 students, a sample of 10 anonymous student transcripts is required for the most recent graduating class. For programs with less than 10 students in the graduating year, provide all available transcripts with identifying information removed. Transcripts are to be provided for the program being visited and should be included with the completed questionnaire preferably using workbook EN\_2023\_6A.xlsm (see Appendix 6A). For new programs only, if no students have graduated from the program prior to the visit, provide transcripts for the students who are nearest to graduation.

Instructions and response for criterion 3.3.4:

Summarize the higher education institution's process for degree auditing in the space below. Compliance will also be based on transcript analysis (see 3.4.8 - Evaluation of curriculum content and quality).

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

d. Curriculum content and quality

The curriculum content and quality criteria are designed to assure a foundation in mathematics and natural sciences, a broad preparation in engineering sciences and engineering design, and an exposure to non-

technical subjects that supplement the technical aspects of the curriculum. All students must meet all curriculum content and quality criteria. The academic level of the curriculum must be appropriate to a university-level program. Evaluation of curriculum content and quality will be based on supporting materials for courses as specified in the "Onsite Materials" section on page 6 of this document.

i. Approach and methodologies for quantifying curriculum content

3.4.1.1 **Accreditation Units (AU)** are defined on an hourly basis for an activity which is granted academic credit and for which the associated number of hours corresponds to the actual contact time between the student and the faculty members, or designated alternates, responsible for delivering the program:

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

This definition is applicable to most lectures and periods of laboratory or tutorial work. Classes of other than the nominal 50-minute duration are treated proportionally. In assessing the time assigned to determine the AU of various components of the curriculum, the actual instruction time exclusive of final examinations should be used.

Note: AU can be claimed for co-op placements, so long as a program recognizes the co-op term for academic credit, compliance of all students with the co-op requirements and claims can be demonstrated, co-op is mandatory, and all students receive co-op placements.

Instructions and response for criterion 3.4.1.1:

Provide a calculation of the length of the academic term obtained by the following procedure: count the actual number of instructional days, excluding holidays and the final examination period, in both academic terms; divide by 2 X teaching days per week (for example, if there are 5 days per week for 2 terms the divisor is 10, if there are 6 days per week for two terms the divisor is 12). Also provide a description of how AUs were assigned to lectures, laboratories, and tutorials that were not of 50-minute duration.

Provide calculation and description

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

3.4.1.2 For an activity for which contact hours do not properly describe the extent of the work involved, such as significant design or research projects, curriculum delivered through the use of problem-based learning, or similar work officially recognized by the higher education institution as a degree requirement, an equivalent measure in accreditation units, consistent with the above definition, should be used by the higher education institution.

3.4.1.3 One method for determining an equivalent measure in AU is a calculation on a proportionality basis. This method relies on the use of a unit of academic credit defined by the institution to measure curriculum content. Specifically, a factor, K, is defined as the sum of AU for all compulsory courses for which the computation was carried out on an hourly basis, divided by the sum of all units defined by the higher

education institution for the same courses. Then, for each course not accounted for on an hourly basis, the number of AU is obtained by multiplying the units defined by the higher education institution for that course by K.

$$K = \frac{\sum \text{AU for all compulsory courses for which the computation was carried out on an hourly basis}}{\sum \text{Academic credits defined by the higher education institution for the same courses}}$$

3.4.1.4 The Accreditation Board can give consideration to departures from this approach and these methodologies in any case in which it receives convincing documentation that well-considered innovation in engineering education is in progress.

Instructions and response for criterion 3.4.1:

If a “proportionality basis” is used, provide the calculation of K below. If an alternate equivalent measure is used, describe it below. Major departures from the conventional use of AU must be fully described. In either case, answer “Yes” in the K-factor field on the CIS:

Provide calculation and description.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

ii. Minimum curriculum components

An engineering program must include the minima for each of its components.

- The entire program must include a minimum of **1,850** AU, as per criterion 3.4.6
- Mathematics: Minimum 195 AU
- Natural sciences: Minimum 195 AU
- Mathematics and natural sciences combined: Minimum 420 AU
- Engineering science: Minimum 225 AU
- Engineering design: Minimum 225 AU
- Engineering science and engineering design combined: Minimum 900 AU
- Complementary studies: Minimum 225 AU
- Laboratory experience and safety procedures instruction

iii. Mathematics and natural sciences

**A minimum of 420 AU of a combination of mathematics and natural sciences are required.** Within this combination, each of mathematics and natural sciences must not be less than 195 AU. The document entitled Interpretive statement on natural sciences is available in the 2022 Canadian Engineering Accreditation Board’s Accreditation Criteria and Procedures document, which is online at [www.engineerscanada.ca](http://www.engineerscanada.ca) and from the Accreditation Board secretariat.

#### 3.4.3.1 Mathematics

**A minimum of 195 AU in mathematics is required.** Mathematics is expected to include appropriate elements of linear algebra, differential and integral calculus, differential equations, probability, statistics, numerical analysis, and discrete mathematics.

##### Instructions for criterion 3.4.3.1:

Tables 4.4a, 4.4b, and 4.4c are auto-filled from the CIS. Use the pulldown list in the CIS template to specify up to two elements of mathematics.

#### 3.4.3.2 Natural sciences

**A minimum of 195 AU in natural sciences is required.** The natural sciences component of the curriculum must include elements of physics and chemistry; elements of life sciences and earth sciences may also be used to satisfy this category. These subjects are intended to impart an understanding of natural phenomena and relationships through the use of analytical and/or experimental techniques.

##### Instructions for criterion 3.4.3.2:

Tables 4.4a, 4.4b, and 4.4c are auto-filled from the CIS. Use the pulldown list in the CIS template to specify up to two elements of natural science.

### iv. Engineering science and engineering design

**A minimum of 900 AU of a combination of engineering science and engineering design.** Within this combination, each of Engineering Science and Engineering Design must not be less than 225 AU.

##### Instructions for criterion 3.4.4:

Tables 4.4a, 4.4b, and 4.4c are auto-filled from the CIS. Table 4.1 is auto-filled with instructor information from the CIS.

Note: Engineering design AU allocation is generally found in two places: (1) design projects (significant design experience, or “capstone project”); and (2) in subject courses in which elements of design are taught, often in combination with other curriculum categories.

In the case of capstone projects, a proportional (i.e., k-factor) method is generally used to compute the number of AU. The course description, its administration, and the student work are examined. The activity, especially as evidenced by project reports, should conform reasonably to the definition of design in order for the course to be accepted as 100% engineering design.

In the case of subject-specific courses in which engineering design AU are claimed, the entire scope given by the definition of engineering design in the Accreditation Board criteria documentation is not usually found. When the post-secondary institution is claiming engineering design AU in such a course or learning activity, it should be evident to the program visitor that the student would be aware that they are learning about elements of design, and there should be evidence of creative activity and “open-ended” problems that normally accompany such learning. If project or laboratory activities are part of such a course, the full scope of the engineering design definition may not be present in the project report, as one would expect in a capstone project. The proportion of engineering design AU from such a course would depend on the amount of design teaching and learning. The program visitor must be satisfied that the post-secondary

institution's assessment is reasonable. If the program visitor is not satisfied, the value assigned to the engineering design AU for the course can be adjusted. The program will be informed of such adjustments.

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 delivered by faculty members holding, or progressing toward, professional engineering licensure as specified in the Interpretive statement on licensure expectations and requirements.

## 2. Engineering science

**A minimum of 225 AU in engineering science is required.** Engineering science subjects involve the application of mathematics and natural science to practical problems. They may involve the development of mathematical or numerical techniques, modeling, simulation, and experimental procedures. Such subjects include, among others, the applied aspects of strength of materials, fluid mechanics, thermodynamics, electrical and electronic circuits, soil mechanics, automatic control, aerodynamics, transport phenomena, and elements of materials science, geoscience, computer science, and environmental science.

## 3. Other engineering science content

In addition to program-specific engineering science, the curriculum must include engineering science content that imparts an appreciation of the important elements of other engineering disciplines.

### Instructions for criterion 3.4.4.3:

Describe the engineering science content in this program which imparts an appreciation of important elements of other engineering disciplines.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

## 4. Engineering design

**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.

5. A minimum of 225 AU 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.

#### 6. Significant design experience

The engineering curriculum must culminate in a significant design experience conducted under the professional responsibility of faculty licensed to practice engineering in Canada, preferably in the jurisdiction in which the higher education institution is located. The significant design experience is based on the knowledge and skills acquired in earlier work and it preferably gives students an involvement in teamwork and project management.

##### Instructions for criterion 3.4.4.6:

Describe the curriculum content that satisfies this criterion and indicate the name(s) of the individuals responsible for supervising the culminating design experience. Provide sufficient detail in your description to demonstrate compliance with this criterion.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

#### 7. Modern engineering tools

Appropriate content requiring the application of modern engineering tools must be included in the engineering sciences and engineering design components of the curriculum.

##### Instructions for criterion 3.4.4.5:

Describe the curriculum content that satisfies this criterion.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

#### v. Complementary studies

**A minimum of 225 AU of complementary studies: Complementary studies include** humanities, social sciences, arts, languages, management, engineering economics, and communications.

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:

- a) Subject matter that deals with the humanities and social sciences

- b) Oral and written communications
- c) Professionalism, ethics, equity, and law
- d) The impact of technology and/or engineering on society
- e) Health and safety
- f) Sustainable development and environmental stewardship
- g) Engineering economics and project management

Courses that impart language skills are valid as complementary studies but do not satisfy the humanities or social science requirement.

Instructions for criterion 3.4.5.1:

Tables 4.4a, 4.4b, and 4.4c are auto-filled from the CIS. Use the pulldown list in the CIS template to specify up to two elements of complementary studies.

- vi. The program must have a minimum of 1,850 Accreditation Units that are at a university level.

Instructions for criterion 3.4.6:

Tables 4.4a, 4.4b and 4.4c are auto-filled from the CIS.

- vii. Laboratory experience

Appropriate laboratory experience must be an integral component of the engineering curriculum. Instruction in safety procedures must be included in preparation for students' laboratory and field experience.

Instructions for criterion 3.4.7:

Table 4.2 is auto-filled from the CIS to summarize all aspects of the laboratory experience.

Describe how safety is addressed in the laboratory experience.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

- viii. Evaluation of curriculum content and quality

The requirements for curriculum content must be satisfied by all students, including those claiming advanced standing, credit for prior post-secondary-level studies, transfer credits, and/or credit for exchange studies.

Notes regarding criterion 3.4.8:

Conformance with this criterion will be evaluated based on a review of student transcripts and CIS. This review will be based on the Summary of Student Record (Appendix 6A).

#### 3.4.8.1 Prior education

It is recognized that, for programs at some institutions, some of the mathematics, natural sciences and complementary studies components of the curriculum may have been covered in prior university level (or post-secondary) education and this circumstance must be considered in the institution's admission policy.

##### Note regarding criterion 3.4.8.1:

Prior studies must be documented as a block of curriculum content using the PSIS worksheet in the macro-enabled workbook EN\_2023\_6C.xlsm accompanying this questionnaire. The PSIS is a customized CIS from which data is extracted for the auto-filled table 4.4c to calculate program totals.

#### 3.4.8.2 Other delivery modes of learning

These criteria do not limit accreditation to any particular mode of learning. In the case of distance learning, the Accreditation Board will rely on the Interpretive statement on distance learning, which is available in the 2022 Canadian Engineering Accreditation Board's Accreditation Criteria and Procedures document, which is online at [www.engineerscanada.ca](http://www.engineerscanada.ca) and from the Accreditation Board secretariat.

##### Notes regarding criterion 3.4.8.2:

Briefly describe any courses delivered other than face to face in the classroom.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

### e. Program environment

The Accreditation Board considers the overall environment in which an engineering program is delivered.

#### i. Quality of the educational experience

Major importance is attached to the quality of the educational experience as reflected by the following:

##### **3.5.1.1 The quality, morale, and commitment of the:**

- a. students
- b. faculty
- c. support staff
- d. administration

##### Notes regarding criterion 3.5.1.1:

Conformance with this criterion will be evaluated based on information provided in the [Academic Staff Information Sheet \(EN\\_2023\\_6B.xlsm\)](#) and interviews with students, faculty, support staff, and administrators. Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

**3.5.1.2 The quality, suitability, and accessibility of the:**

- a. laboratories
- b. library
- c. computing facilities
- d. non-academic counselling
- e. other supporting facilities

Notes regarding criterion 3.5.1.2:

Conformance with this criterion will be evaluated based on tours and interviews. Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

ii. Faculty

The character of the educational experience is influenced strongly by the competence, expertise, and outlook of the faculty. The faculty delivering the program must have the following characteristics:

**3.5.2.1 Faculty qualifications and experience**

There must be sufficient faculty to cover, by experience and interest, all of the areas of the curriculum.

Note regarding criterion 3.5.2.1:

Conformance with this criterion will be evaluated based primarily on a review of the academic staff information sheets (ASIS) using the template in appendix B (workbook EN\_2023\_6B.xlsm)

**3.5.2.2 Sufficient number of full-time faculty**

Even though the faculty involved in the delivery of program elements may include full-time and part-time members, there must be a sufficient number of full-time faculty members to assure adequate levels of student-faculty interaction, student curricular counselling and faculty participation in the development, control and administration of the curriculum.

Notes and response for criterion 3.5.2.2:

Conformance with this criterion will be evaluated based on a review of the Summary of Academic Staff (auto-filled table 4.1). Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

### **3.5.2.3 Balance of faculty duties**

Faculty administrative and teaching duties should be appropriately balanced to allow for adequate participation in research, scholarly work, professional development activities, and industrial interaction.

#### Notes and response for criterion 3.5.2.3:

Conformance with this criterion will be evaluated based on a review of them. Summary of Academic Staff (auto-filled table 4.1) Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

### **3.5.2.4 Under no circumstances should a program be critically dependent on one individual.**

#### Notes regarding criterion 3.5.2.4:

Conformance with this criterion will be evaluated based on a review of the Summary of Academic Staff (auto-filled table 4.1). Conformance may also be evaluated based on interviews that take place during the visit. Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

### iii. Leadership

The dean of engineering (or equivalent officer) and the head of an engineering program (or equivalent officer with overall responsibility for each engineering program) are expected to provide effective leadership in engineering education and to have high standing in the engineering community. They are expected to be engineers licensed to practice in Canada.

To evaluate this criterion, the Accreditation Board will rely on the Interpretive statement on licensure expectations and requirements, which is available in the 2022 Canadian Engineering Accreditation Board's Accreditation Criteria and Procedures document, which is online at [www.engineerscanada.ca](http://www.engineerscanada.ca) and from the Accreditation Board secretariat.

#### Notes regarding criterion 3.5.3:

Conformance with this criterion will be evaluated based on a review of the Summary of Academic Staff (auto-filled table 4.1) and the Academic Staff Information Sheet (workbook EN\_2023\_6B.xlsm).

iv. Expertise and competence of faculty

Faculty delivering the engineering curriculum are expected to have a high level of expertise and competence, and to be dedicated to the aims of engineering education and of the self-regulating engineering profession, which will be judged by the following factors:

- a. The level of academic education of its members.
- b. The diversity of their backgrounds, including the nature and scope of their non-academic experience.
- c. Their ability to communicate effectively.
- d. Their experience and accomplishments in teaching, research and/or engineering practice.
- e. Their degree of participation in professional, scientific, engineering, and learned societies.
- f. Their appreciation of the role and importance of the self-regulating engineering profession, and of positive attitudes towards professional licensure and involvement in professional affairs.

Notes for criterion 3.5.4

Conformance with this criterion will be evaluated based on a review of Summary of Academic Staff (auto-filled table 4.1) and Academic Staff Information Sheet in appendix 6B (workbook EN\_2023\_6B.xlsm). Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

v. Professional status of faculty members

Faculty delivering curriculum content that is engineering science and/or engineering design are expected to be licensed to practice engineering in Canada.

To evaluate this criterion, the Accreditation Board will rely on the Interpretive statement on licensure expectations and requirements. The document is available in the 2022 Canadian Engineering Accreditation Board's Accreditation Criteria and Procedures document, which is online at [www.engineerscanada.ca](http://www.engineerscanada.ca) and from the Accreditation Board secretariat.

Notes for criterion 3.5.5:

Conformance with this criterion will be evaluated based on information extracted from the CIS (auto-filled table 4.1). Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

vi. Program financial resources

The program's financial resources must be sufficient to ensure that:

**Qualified academic staff and qualified support staff can be recruited, retained, and provided with continuing professional development.**

Notes for criterion 3.5.6

Describe how the program complies with this criterion. Tabular financial information is not required.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

**Infrastructure and equipment can be acquired, maintained, and renewed.**

Describe how the program complies with this criterion. Tabular financial information is not required.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

vii. Authority and responsibility for the engineering program

The Engineering Faculty Council (or equivalent engineering body) must have clear, documented authority and responsibility for the engineering program, regardless of the administrative structure within which the engineering program is delivered.

Instructions and response for criterion 3.5.7:

Identify the engineering body or bodies that hold authority and responsibility for the engineering program.

{Response text}

### viii. Curriculum committee

Engineering program curriculum changes are expected to be overseen by a formally structured curriculum committee. The majority of the members of the committee are expected to be licensed professional engineers in Canada.

#### Instructions for criterion 3.5.8:

Table 4.5 is auto-filled from the CIS to identify voting members of the curriculum committee. Any voting members who are not involved in instruction and non-voting members may be manually added to the auto-filled table.

## f. Additional Criteria

3.6.1 For purposes of accreditation, a program is characterized by a formally approved and published curriculum that is regarded as an entity by the institution and that can be considered independently. All options in the program are examined. Following the principle that a program is only as strong as its “weakest link”, a program is accredited only if all options meet the criteria.

#### Instructions for criterion 3.6.1:

Provide of a web-link or other reference to the most recent authoritative document that fully defines the program under review.

{Response text}

3.6.2 An accredited program must have the word “engineering” in its title.

3.6.3 The title of an accredited engineering program must be properly descriptive of the curriculum content.

#### Instructions for criterion 3.6.3:

Attach as Exhibit 2 copies of degree certificates and copies of transcript entries, including all variations which might include options, distinctions, minors, etc. For “new” programs with no graduates at the time of the visit, a copy of the transcript of the student that you believe is most likely to graduate should be provided.



3.6.4 If a program, by virtue of its title, becomes subject to the content requirements for two or more engineering curricula, then the program must meet the Accreditation Board requirements for each engineering curriculum named.

Notes regarding criterion 3.6.4:

Conformance with this criterion will be evaluated based on a review of the Summary of Curriculum auto-filled tables 4.4a, 4.4b, and 4.4c. Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

3.6.5 The Accreditation Board must have evidence that all engineering options contain a significant amount of distinct curriculum content and that the name of each option is descriptive of that curriculum content. The document entitled Interpretive statement on curriculum content for options and dual-discipline program is available in the 2022 Canadian Engineering Accreditation Board's Accreditation Criteria and Procedures document, which is online at [www.engineerscanada.ca](http://www.engineerscanada.ca) and from the Accreditation Board secretariat.

Notes regarding criterion 3.6.5:

Conformance with this criterion will be evaluated based on a review of the Summary of Curriculum auto-filled tables 4.4a, 4.4b and 4.4c. Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

3.6.6 The Accreditation Board must have evidence that the program name is appropriate for all students graduating in the program regardless of the option taken.

Notes regarding criterion 3.6.6:

Conformance with this criterion will be evaluated based on a review of the Summary of Curriculum auto-filled tables 4.4a, 4.4b and 4.4c. Additional comments may be provided in the following space.

**It is recommended that you limit your response to no more than 12 lines.**

{Response text}

## 4. Accreditation policies and procedures

The accreditation process comprises two parts: program evaluation by a visiting team and accreditation decision by the Accreditation Board. The evaluation of the program is based on detailed data provided by the higher education institution and on the collective opinion of the members of the visiting team.

The accreditation decision is made by the Accreditation Board based on qualitative and quantitative considerations.

### a. Initiation and timing of accreditation visit

An accreditation assessment is initiated only at the invitation of an institution and with the consent of the appropriate member of Engineer Canada. Accreditation applies only to programs, not to departments of faculties.

The Accreditation Board does not evaluate or accredit non-engineering degrees, diplomas, or certificates or components thereof; only the engineering degree will be listed in the annual report section on accredited engineering programs.

An accreditation visit to assess or reassess an engineering program or programs normally takes place in October or November. A request from the institution for such a visit must be received by the Accreditation Board Secretariat by January 1st of the calendar year in which the visit is to take place.

Accreditation of a program is granted only after students have graduated from the program. For new programs, an accreditation visit may be undertaken in the final year of the first graduating class.

Notes: If this is a program from which no students have yet graduated but at least one student is expected to graduate by the time of the decision meeting of the Accreditation Board, attach as **Exhibit 2** a copy of the transcript of the student that you believe is most likely to graduate.

## 5. Data tables

Tables are an integral component of the evaluation process. Complete the tables 3.1.1, 3.1.2 and 4.3 by using the macro-enabled workbook **EN\_2023\_6C.xlsm** included with this package. Execute the user-accessible macros to verify CIS and generate ten auto-filled tables:

- 3.1.1a Assessed Courses and GA Curriculum Map**
- 3.1.1b GA Learning Level and CEAB Category Map**
- 3.1.1c Assessed GA Learning Level and CEAB Category Map**
- 4.1 Faculty Information**
- 4.2 Laboratory Information**
- 4.4a Compulsory Courses AU Content**
- 4.4b Elective Courses AU Content (showing minimum path)**
- 4.4c Program Total AU Content**
- 4.5 Curriculum Committee Members**
- 4.6 Average Grades and Failure Rates**

**Non-auto-filled tables: Programs manually enter required data.**

- 3.1.1 Graduate Attribute Curriculum Map**
- 3.1.2 Indicators and Learning Activities**
- 4.3 Enrolment and Degrees Data**

Programs are requested to check the auto-filled tables which have extracted data from the CIS. If necessary, errors in the CIS may be corrected and the auto-filled tables regenerated. Under no circumstances should the auto-filled table be edited (although explicit instructions allow for added lines in tables 4.1,4.3 and 4.5).

## 6. Required exhibits

The following information must be provided and is referenced at various points in the questionnaire. Please attach the exhibits at the end of the completed questionnaire.

### a. Exhibit 1: Graduate Attributes and Continual Improvement

To supplement the information provided in tables 3.1.1 and 3.1.2, complete the information requested in the word file included with this package

### b. Exhibit 2: Degree certificates and transcript entries

Provide copies of degree certificates and transcript entries for all variations of the program. Required to satisfy Criterion 3.4.8, preferably using the template for student records provided in workbook **EN\_2023\_6A.xlsm**. Where options are offered provide at least one example of each option for which there was a graduate.

If this is a program from which no students have yet graduated but at least one student is expected to graduate by the time of the decision meeting of the Accreditation Board, attach a copy of the transcript of the student that you judge “most likely to graduate”. See paragraph 4.1 in the Accreditation Criteria and Procedures.

## 7. Appendices

### Course information sheets: **EN\_2023\_6C.xlsm**

Complete the macro-enabled workbook (**EN\_2023\_6C.xlsm**) by using the CIS/FIC template worksheet for every course in the program. Refer to the file **EN\_2023\_Instructions\_6C.rtf** for detailed instructions. This workbook also contains user-filled tables 3.1.1, 3.1.2 and 4.3 which must be completed. **All other tables are auto-filled by user-accessible macros using the CIS.**

### Summary of students’ records: **EN\_2023\_6A.xlsm**

Complete the macro-enabled workbook (**EN\_2023\_6A.xlsm**) by adding a worksheet using the GSR/DDE template for all graduates of the program (or a sample of 10 graduates for larger programs). Where options are offered provide at least one example of each option for which there was a graduate. Refer to the file **EN\_2023\_Instructions\_6A.rtf** for detailed instructions.

### Academic staff information sheets: **EN\_2023\_6B.xlsm**

Complete the macro-enabled workbook (**EN\_2023\_6B.xlsm**) by adding a worksheet using the ASIS/FICP template for every member of the academic teaching staff participating in the program. Refer to the file **EN\_2023\_Instructions\_6B.rtf** for detailed instructions.