

## Accreditation Best Practice Analysis

*Updated February 14, 2020*

### 4. CONSTITUTION, SCOPE AND GOVERNANCE OF THE ACCREDITATION AGENCY

Best practice accreditation systems may be operated by a range of types of bodies. Key characteristics for the constitution, scope and governance of accrediting agencies that are consistent with attaining best practice are listed below.

IEA Best Practice	Followed by TAC	Comments
4.1 The agency is legally incorporated in its jurisdiction or is a properly constituted board or committee of a legal entity and, in either case, has an appropriate ownership and governance structure.	Yes	
4.2: The agency is recognised within its jurisdiction as the sole or leading authority for accrediting engineering programmes.	Yes	TAC has the exclusive right to perform accreditation services for its member organizations.
4.3: The agency operates consistently and transparently in a defined relationship with any national educational regulations, such as a qualifications framework, or quality assurance system.	N/A	
4.4: The agency has a clear responsibility within its mission to accredit engineering education programmes whose primary purpose is to provide the educational base for independent practice in a defined engineering occupation.	Yes	
4.5: The agency is independent and acts autonomously in respect of accreditation. It has full responsibility for its operations and accreditation decisions should be taken without third party influence.	Yes	

4.6: The agency considers programmes for accreditation offered only by providers that have legal authority to operate and confer those degrees or other qualifications.	Yes	
4.7: Geographic bounds of accreditation activity, if any, are defined, indicating any differences in standards, processes and levels of recognition of programmes if these are different in different territories.	Yes	
4.8: The agency and the accreditation function has the support of and well established links with key stakeholders in the engineering academic and industry communities.	Yes	
4.9: The agency makes accreditation decisions on a peer judgment basis.	Yes	Accreditation rests solely with the audit team who are certified engineering technicians and technologists, certified applied science technicians and technologists or licensed engineers.
4.10: The agency, staff and peer experts observe sound governance principles and act with professionalism.	Yes	Staff and peer experts are bound by a code of ethics and various policies.
4.11: Governance, evaluation and accreditation decisions should be made with balanced inputs from engineering peers from industry and education backgrounds drawn mainly from the jurisdiction where the engineering programmes operate.	Yes	Auditors must have graduated from a recognized engineering technology or applied science program and have a minimum 5-years industry experience. All auditors must reside in Canada with at least one auditor residing in the province in which the institution seeking accreditation is located.
4.12: Providers of education programmes, while key stakeholders in the accreditation agency, do not have a controlling power over standards, policies and accreditation decisions of the accreditation agency.	Yes	
4.13: Functions and powers are clearly allocated to its boards, committees or other structures responsible for overall governance, determining standards, accreditation criteria and policy, evaluation of programmes and accreditation decision making.	Yes	The Board and each Council and Committee has a Terms of Reference.





<p>II. Practitioners teaching in the programme have an appropriate combination of academic and professional qualifications and experience;          III. Adequate physical and financial resources to support the programme; and          IV. Adequate planning and execution capability.</p> <p>j. Ongoing reviews and continuous improvement of the programme and its delivery are undertaken by the provider with input from students, employers, graduates and other stakeholders.</p>	<p>Yes</p>	<p>Components C.2 Continuous Improvement Policies, C.4 External Program Input</p>
<p>5.3: The accreditation criteria are defined in a way that gives the programme provider freedom to design and execute programmes to meet an outcomes-oriented graduate attributes standard.</p>	<p>Yes</p>	<p>The educational institution has the flexibility to list learning outcomes from any Canadian Technology Accreditation Criteria (CTAC) and may provide up to two custom learning outcomes.</p>
<p>5.4: The accreditation process requires the programme provider to account for the resulting quality of the curriculum and its execution, for attainment of the programmes outcomes/graduate attributes expected from the students and for continuous improvement of the programme.</p>	<p>Yes</p>	<p>The audit process involves verifying the continuous improvement policies and students have demonstrated successful achievement of both general and discipline learning outcomes.</p>

## 6. THE ACCREDITATION PROCESS: THE METHODS AND MEANS OF DELIVERY

The process of accreditation of programmes, including preparation, evaluation, reporting and decision making, and follow up conforms to generally accepted principles including:

IEA Best Practice	Followed by TAC	Comments
<p>6.1: Evaluation of programmes and accreditation decision making are based on appropriate, consistent and fair procedures.</p>	<p>Yes</p>	<p>Audit teams follow a standardized audit process, assessing whether each national accreditation component is compliant or not. The Governance and Audit Council</p>

		conduct a second level review to ensure the audit team followed the proper process.
6.2: If the accreditation process is performed jointly with another evaluation or quality assurance process, there are clear distinctions between the two sets of criteria and decision making.	N/A	
6.3: Programme evaluators, members of accreditation decision making bodies and administrators operate at all times in accordance with high standards of professionalism, ethics, impartiality and objectivity.	Yes	Staff, auditors and Council members are bound by a code of ethics and various policies.
6.4: The agency's accreditation process is documented, is self-consistent and supports the evaluation of the programme against the fundamental criteria for accreditation.	Yes	The accreditation process is posted on the TAC website.
6.5: The accreditation system should afford full information to all stakeholders (see 6.7 below) while striking an appropriate balance of transparency and confidentiality in the accreditation process for individual programmes (see 6.6 below).	Yes	The educational institution receives a copy of the Audit Report.
6.6: Within the accreditation process of a programme: a. The accreditation agency, its evaluators, observers, decision makers and staff observe confidentiality regarding information obtained in the course of the actual accreditation process; and b. At the same time, the evaluators are open with the provider; in particular, potential adverse findings are raised with the provider and an opportunity given to provide additional information.	Yes	The audit team communicates key challenges, issues throughout the audit process including during the preliminary audit, the exit meeting and in the Audit Report.
6.7: Outside of the evaluation of an individual programme, the accreditation system is completely transparent as evidenced by: a. Official, written policies, standards, criteria and procedures are available to the providers and to the public; and b. Those involved in the accreditation process have access to knowledge and competence in matters related to engineering	Yes	All details regarding the accreditation process are posted on the TAC website. TAC has staff, Board and Council experience from which to draw. TAC over 100 trained auditors and strong relationships with member organizations (i.e. certifying bodies).

accreditation, engineering education, the student experience and engineering practice.		
6.8: The agency has a policy on observers, including confidentiality requirements, restriction of influence on the process and participation protocols.	Yes	Code of Conduct, Confidentiality, Gift Acceptance policies for auditors exist.
6.9: A process for appealing adverse accreditation decisions is available involving only persons with no prior involvement in the decision being appealed and no conflict of interest.	No	Currently reviewing change to the appeals process.
6.10: A clear conflict of interest policy exists for all involved in the accreditation process including visiting teams, accreditation decision-makers and policy-makers.	Yes	
6.11: Practices exist to ensure that there is no conflict of interest at any stages of the accreditation process, including selection of programme evaluators and during accreditation decision making.	Yes	The educational institution reviews members on the audit team.
6.12: Individual accreditation decisions are made for each programme identified in the provider's rules and on the degree certificate and academic transcript.	Yes	
6.13 When appropriate, the evaluation process may consider groups of related programmes together.	Yes	TAC conducts joint and aligned program accreditations.
6.14: In cases where the programme is offered via multiple pathways, the pathway followed by a student is disclosed on the qualification certificate or academic transcript.	Yes/No	The National Accreditation Components (NAC) require that pathways (options) are disclosed on the transcript but not on the diploma.
6.15: Evaluations of programmes are conducted by peer evaluators, with disciplinary knowledge of the programme(s) being evaluated and a balance between engineering practitioners and academics.	Yes	The audit team must have at least one subject matter expert which is defined as a certified technician or technologist, certified applied science technologist or licensed engineer in the discipline in which the program is recognized.
6.16: Where the practice is to have a student member(s) of the visiting team, the following apply:	N/A	

<p>a. The student or students contribute to evaluation of programmes in areas where they are competent, including :</p> <ul style="list-style-type: none"> <li>I. Meeting with a cross-section of students in the programmes being assessed and student leadership;</li> <li>II. Participating in the evaluation of student services, assessment, teaching and learning facilities, library support, safety as instructed and practiced and the student body's understanding of the programme educational objectives.</li> <li>III. Participating in the evaluation of the learning conditions as perceived by the students: scheduling, pedagogical methods, workload, etc.</li> </ul> <p>b. To be eligible for inclusion in an evaluation team a student:</p> <ul style="list-style-type: none"> <li>I. Is registered in an undergraduate or masters engineering programme</li> <li>II. Has demonstrated leadership among students;</li> <li>III. Does not have a disciplinary decision on record; and</li> <li>IV. Has attended training as required by the accreditation agency.</li> </ul>		
<p>6.17: The evaluation process includes a visit to the programme provider's premises.</p>	<p>Yes</p>	
<p>6.18: The accreditation process includes periodic re-evaluation to maintain accreditation status and a follow-up process when the recommendations and decisions so dictate.</p>	<p>Yes/No</p>	<p>An annual report is required by the educational institution. Will be recommending to add a formal reporting process for opportunities for improvement.</p>
<p>6.19: The accreditation process requires:</p> <p>a. Pre-visit completion of a self-study/self-assessment report by the provider of the programme seeking accreditation using a structure and format specified by the agency to assemble information that demonstrates how the programme meets the</p>	<p>Yes</p>	<p>TAC requires the educational institution to complete a self-assessment package. TAC generally requires 8 weeks between the time the self-assessment is provided and the date of the site visit. The educational institution is provided a site visit schedule which clearly outlines what</p>

<p>accreditation criteria; the onus for such demonstration falls on the programme provider.</p> <p>b. A curriculum description is part of the self-study report and gives comprehensive information on all the modules in the programme.</p> <p>c. Documentation to be provided to evaluators in time for adequate preparation for the visit.</p> <p>d. Clearly specified evidence that must be available on-site during the visit.</p>		<p>will take place and what is required of the educational institution.</p>
<p>6.20: The visit schedule gives the evaluators time and opportunity to:</p> <p>a. Gather, check and evaluate all required information including evaluation of evidence of student attainment of the graduate attributes/programme outcomes;</p> <p>b. Interview the main stakeholders of the programme (management, teachers, students, staff, alumni, employers);</p> <p>c. Examine and evaluate the available facilities (including computers, laboratories, etc.); and</p> <p>d. Conduct private discussion, reflection and refinement of their evaluation as the visit proceeds.</p>	<p>Yes</p>	
<p>6.21: Accreditation decision making:</p> <p>a. Is criterion-based evaluation, within framework of exercising peer-judgement;</p> <p>b. Makes a judgement of the sustainability of the programme;</p> <p>c. Has a clearly defined set of allowed accreditation processes and decisions, including proceeding to regular evaluations at predetermined intervals and interim evaluations under defined conditions;</p>	<p>Yes</p> <p>No</p> <p>Yes</p>	<p>Accreditation decision making is based on an evaluation of whether the program is compliant with all National Accreditation Components.</p> <p>Have determined judging the program’s sustainability is not the audit team’s place.</p>

<p>d. Has a rational approach to dealing with non-compliant programmes that encourages and verifies improvement of quality;</p> <p>e. Is receptive to innovation in engineering technologies and teaching methods and does not inhibit the introduction of new subjects and ways of teaching; and</p> <p>f. Has a method of dealing with new and extensively revised programmes involving material change during the period in which the programme is accredited and with programmes being terminated.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>The accreditation process allows the institution a reasonable period of time to make changes to any non-compliant components.</p> <p>The institution provides an Annual Report each year on the anniversary date of the accreditation. The Report details any changes to the program. If such changes may affect the status of the accreditation, an audit of such changes will be conducted by the audit team.</p>
<p>6.22: The agency follows defined reporting protocols. In particular:</p> <p>a. Visit reports provide sufficient detail for its Accreditation Board (or equivalent) to make informed decisions whether or not to accredit particular programmes, or to impose conditions.</p> <p>b. Reports use standardised ways of recording recommendations and decisions. Defined keywords such as defect, weakness, concern, comply, commend are used.</p> <p>c. While evaluation templates or questionnaires may be used, the team’s findings are clearly recorded and recommendations and decisions based on evidence and accreditation criteria are developed in report form.</p> <p>d. The agency provides a written report to the institution that clearly distinguishes between actions required for the provider to reach or maintain accreditation and actions recommended for academic programme improvement.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>The Audit Report has comprehensive notes from the site visit.</p> <p>The audit team completes a standardized Audit Report which assesses components as compliant or non-compliant, identifies best practices and opportunities for improvement.</p> <p>Auditors use an Audit Form to assess the components and document notes from their review of the materials and the site visit.</p> <p>TAC provides a copy of the Audit Report to the institution which clearly indicates which components are compliant or not.</p>
<p>6.23: The process provides for right of reply on factual matters by relevant official of the provider, for example dean or head of</p>	<p>Yes</p>	<p>Communication from the lead auditor occurs during the audit and at the site visit.</p>

programme, before the accreditation recommendation or decision is made.		
6.24: The agency publishes or makes available to the public a list or searchable database of accredited programmes that clearly identifies each programme for which an accreditation decision has been made and the period of validity of the accreditation. The agency’s policy may require publication of the rationale for their decisions or other information, subject to any limitations arising from confidentiality and other relevant considerations.	Yes	All accredited programs are listed on the TAC website.
6.25: In actual operation of the accreditation system, evaluators, decision makers and staff ensure that: a. Accreditation visits are conducted in accordance with its own published accreditation policies and procedures;  b. They apply standards and criteria in a consistent and fair manner from institution to institution, programme to programme and year to year; c. The accreditation system and the way that it is operated are robust; unusual circumstances are handled in a sensitive way and difficult decisions are made in a way likely to be beneficial to the engineering community in the longer term; and d. Substantial changes to the accreditation system’s standards, criteria, policies or procedures are managed in a way realistic to all stakeholders.	Yes  Yes  Yes  Yes	TAC’s Governance and Audit Council conduct a second level review to ensure the audit team followed proper process.   A continuous improvement report is prepared annually which recommends changes to the accreditation process.

## 7. THE AGENCY’S CAPACITY TO CONDUCT ACCREDITATION ACTIVITIES

Accreditation of engineering programmes requires resources to initially implement and to sustain an accreditation system. Delivery of education programmes must be sustained over a long period while the cyclical accreditation process must also be sustained indefinitely. Both the providers and the agency require continual improvement. Best practice therefore requires that the agency has the capacity to initially develop (if applicable), operate and further develop accreditation activities on an ongoing basis. Essential components of this capacity are:

IEA Best Practice	Followed by TAC	Comments
7.1: The agency has sufficient and sustainable funding prospects to support an effective and sustainable accreditation system.	Yes	TAC has secured a 5 year funding commitment from its members.
7.2: The agency has sufficient, appropriately skilled staff to manage and operate the accrediting process effectively.	Yes	
7.3: Adequate numbers of qualified engineering peers with both academic and industry backgrounds are available for appointment to the accreditation board and its substructures, if present.	Yes	TAC has forged strong relationships with the provincial professional associations and educational institutions to populate its Board and Councils
7.4: A corps of experienced evaluators is available in all the disciplines in which programmes are put forward for accreditation and to be team chairs and visit chairs.	Yes	TAC has over 100 trained auditors on its registry and is currently recruiting additional auditors in specific disciplines to ensure an adequate pool of auditors in each discipline.
7.6: An effective process is applied for the recruitment, selection, training and appraisal of programme evaluators. Appropriate eligibility criteria are applied in the selection of evaluators.	Yes	Eligibility criteria for auditors is posted on the TAC website. A selection process has been developed.
7.7: An effective training process for evaluators is in place and is supported by written training materials.	Yes	

<p>7.8: The accreditation agency benchmarks its criteria and processes and conducts periodic self-review to improve its standards, criteria, policies and procedures. Methods may include the use of international evaluators and observation of other agency's processes.</p>	<p>Yes</p>	<p>Ongoing dialogue takes place with lead auditors, auditor to review the accreditation process. Auditors and customers provide feedback through online surveys. The accreditation and standards setting processes are reviewed annually.</p>
<p>7.9: The agency's procedures ensure that its standards and methods of working are reviewed at regular intervals, are subject to external scrutiny and are updated as required.</p>	<p>Yes</p>	<p>Annually, the accreditation and standards setting processes are reviewed formally. TAC has committed to a 5-year project (CTAC Review Project) to review all national standards which will involve stakeholder input.</p>

