

121st MEETING OF THE CANADIAN ENGINEERING QUALIFICATIONS BOARD

MONDAY, January 30th, 2023

3:00pm – 7:00pm EST

Virtual

AGENDA

	Agenda item	Scheduled time	Presenter
1	Opening of the meeting	3:00pm	Margaret Anne Hodges
1.1	Call to order and introduction of attendees		
1.2	Approval of the agenda		
	<i>Motion: That the agenda for the 121st meeting of the Qualifications Board be approved as distributed.</i>		
1.3	Declaration of conflict of interest (attachment 1.3)		
2	Consent agenda (Attachment 2.2)	3:30pm	Margaret Anne Hodges
2.1	CEQB members may request that an item be removed from the consent agenda for debate and deliberation. THAT the consent agenda motions listed below (2.2) be approved in one motion.		
2.2	Approval of minutes of the previous meeting (attachment 2.2)		
	<i>Motion: That the minutes from the 120th meeting of the Qualifications Board held on September 19, 2022, be approved as distributed.</i>		
2.3	Approval of the revised Guideline on good character		
	<i>Motion: That the revised CEQB guideline on good character be recommended to the Engineers Canada Board to be approved for publication on the Engineers Canada website.</i>		
2.4	Approval of the draft General direction for a guideline on duty to report		
	<i>Motion: That the draft General direction for a guideline on duty to report be approved for regulator consultation</i>		
2.5	Approval of the Mechanical engineering syllabus		
	<i>Motion: That the revised Mechanical engineering syllabus be approved for publication on the Engineers Canada website.</i>		
	Approval of the Electrical engineering syllabus		

2.6	<i>Motion: That the revised Electrical engineering syllabus be approved for publication on the Engineers Canada website.</i>		
3	Review of action items from last meeting	3:45pm	Ryan Melsom
4	Committee and task force reports		Margaret Anne Hodges
4.1	Admissions Issues Committee	3:50pm	Qing Zhao
4.2	Continuing Competence Committee	4:05pm	Anil Gupta
	Practice Committee	4:20pm	Sam Inchasi
4.3	<i>Motion: That the new CEQB Guideline on Indigenous consultation and engagement be recommended to the Engineers Canada Board to be approved for publication on the Engineers Canada website.</i>		
15-minute BREAK 4:35-4:50pm			
4.4	Syllabus Committee	4:50pm	Kamran Behdinan
	Task Force on Alternative Methods of Academic Assessment for Non-CEAB Applicants	5:05pm	Amy Hsiao
4.5	<i>Motion: That the Feasibility study on alternative methods of academic assessment for non-CEAB applicants be recommended to the Engineers Canada Board for approval to distribute to the engineering regulators, and that the Task Force on Alternative Methods of Academic Assessment for Non-CEAB Applicants be stood down with gratitude</i>		
4.6	Task Force on Software Engineering	5:20pm	Ian Sloman
4.7	Executive Committee	5:35pm	Margaret Anne Hodges
5	2024 Work plan process	5:50pm	Ryan Melsom
6	Primer on CEQB syllabi	6:05pm	Kamran Behdinan
7	Items added to the agenda	6:35pm	Margaret Anne Hodges
8	Future meetings	6:40pm	Margaret Anne

	CEQB Spring meeting: April 1-2, 2023 (Ottawa) CEQB Teleconference call: July 2023 (Date to be determined by Doodle poll) CEQB September meeting: September 17-18 (Edmonton) CEQB January meeting: January 2024 (Date to be determined by Doodle poll)		Hodges
9	Review of action items of 121st Qualifications Board meeting	6:50pm	Ryan Melsom
10	Conclusion	7:00pm	Margaret Anne Hodges

MINUTES OF THE 121st MEETING

1. Opening of the meeting

The chair welcomed everyone to the meeting.

1.1. Call to order and introduction of attendees:

<u>Canadian Engineering Qualifications Board Members</u>	Margaret Anne Hodges, FEC, FGC (Hon.), P.Eng., PMP	Chair
	Frank Collins, FEC, P.Eng.	Vice-chair
	Frank George, MBA, FEC, FGC (Hon.), P.Eng.	Past chair
	Anil Gupta, FEC, FGC (Hon.), P.Eng.	Alberta Representative
	Amy Hsiao, PhD, MBA, P.Eng.	Atlantic Provinces Representative
	Marcie Cochrane, MBA, P.Eng.	Member-at-Large Representative
	Kamran Behdinin, PhD, FAAAS, FASME, FCAE, FEIC, P.Eng.	Member-at-Large Representative
	Samer Inchasi, P.Eng., PMP	Member-at-Large Representative
	Nadia Lehoux, ing., PhD	Québec Representative
	Ian Sloman, M.Eng., P.Eng.	Saskatchewan, Manitoba Representative
	Qing Zhao, PhD, P.Eng.	Member-at-Large Representative
Engineers Canada Board Appointee	Sudhir Jha, M.Eng., FEC, P.Eng.	
	Marisa Sterling, FEC, P. Eng.	
Engineers Canada Board	Danny Chui, FEC, P.Eng.	

	Marlo Rose, MBA, FEC, P. Eng.,	
	Arjan Arenja, MBA, P. Eng. ,	
Engineers Canada Staff	Stephanie Price, P.Eng., CAE	Executive Vice President, Regulatory Affairs
	Ryan Melsom, PhD	Manager, Qualifications and CEQB Secretary
	Isabelle Flamand	Specialist, Qualifications
	Alison Peverley	Coordinator, Qualifications
	Brent Gibson	Manager, Communications
Observers:	Jason Ong, P. Eng.	Engineers and Geoscientists British Columbia
	Allan Ng, P. Eng.	APEGA
	Delee Silvius, MBA, P.Eng., PMP	APEGS
	Michael Gregoire, MBA, P. Eng.	Engineers Geoscientists Manitoba
	Stamatia Baker M.A. FEC (Hon.), FGC (Hon.)	APEGNB
	Allen Stewart P. Eng.	CEAB Member
	James Landrigan, MBA, FEC, P. Eng.	Engineers PEI
Regrets:	Karen Savage, FEC, P.Eng.	British Columbia, Yukon Representative
	Roydon Fraser, PhD, FEC, P.Eng.	Ontario Representative

1.2 Approval of the agenda

Motion: That the agenda of the 121st Meeting of the Qualifications Board be approved as distributed was moved by Frank George and seconded by Sudhir Jha. None were opposed. The agenda was approved.

1.3 Conflict of interest

CEQB members have an ongoing obligation to conduct themselves in an ethical, professional, and lawful manner, and to identify and disclose actual, reasonably perceived, and potential conflicts of interest. These obligations are set out in case law and are also codified in statute, under the *Canada Not-for-profit Corporations Act* ("CNCA"). Members that cannot act in the best interests of Engineers Canada or are conflicted should recuse themselves from the relevant part of the meeting, and they shall not vote on the decision at hand. Members must support the legitimacy and authority of CEQB decisions, regardless of their personal position on the issue, and shall not publicly discuss the varying opinions of individual members.

2. Consent agenda (attachments 2.2)

A CEQB member requested that the guideline for good character be pulled from the consent agenda for further discussion.

Motion: THAT the consent agenda motions listed below (2.2) be approved in one motion was moved by Frank George and seconded by Sudhir Jha. None were opposed. The motion carried.

2.2 Approval of minutes of the previous meeting

A few minor edits to the minutes were sent ahead of time and will be made for the final version of the September minutes.

Motion: THAT the minutes from the 120th meeting of the Qualifications Board held on September 19th, 2022, be approved as distributed.

2.4 Approval of the draft General direction for a guideline on duty to report

Motion: That the draft General direction for a guideline on duty to report be approved for regulator consultation.

Send the draft General direction for a guideline on duty to report be approved for regulator consultation **(Action item 121.1)**.

2.5 Approval of the Mechanical engineering syllabus

Motion: That the revised Mechanical engineering syllabus be approved for publication on the Engineers Canada website.

Publish Mechanical Engineering syllabus on the Engineers Canada Website **(Action item 121.2)**.

2.6 Approval of the Electrical engineering syllabus

Motion: That the revised Electrical engineering syllabus be approved for publication on the Engineers Canada website.

Publish Electrical Engineering syllabus on the Engineers Canada Website **(Action item 121.3)**.

3. Review of action items from last meeting

Action item		Assigned to	Status
120.1	ADD resources to the guideline on workplace equity for women as recommended by a CEQB member.	Secretariat	Complete
120.2	RECOMMEND that a communications plan for the Guideline on	Secretariat	Complete

	workplace equity for women include the development of a one-pager.		
120.3	SEND the guideline on workplace equity for women to be sent to the Engineers Canada Board for approval.	Secretariat	Complete
120.4	STAND DOWN the Task Force on Workplace Gender Equity.	Secretariat	Complete
120.5	DELIVER the consultation and summit on the Feasibility study on alternative methods of academic assessment for non-CEAB applicants.	Secretariat	Complete
120.6	COMMUNICATE the chair recommendation to the Engineers Canada Board.	Secretariat	Complete

4. Committee and Task Force reports

4.2 Continuing Competence Committee

Anil Gupta, Committee Chair, presented:

- The Continuing Competence Committee has traditionally advised on issues of continuing professional development, but has been assigned this guideline's development because of its relevance to bigger questions about what competency means and what happens when a registrant's competence becomes compromised for reasons beyond their control.
- The committee advised on the development of the January workshop, and will also be consulted on the development of a second workshop which will be held in April, and will focus on content specifics for the guideline.
- The development of the draft general direction is expected to commence in summer 2023.

4.3 Practice Committee

Sam Inchasi, Committee Chair, presented:

The final Guideline for engineers and engineering firms on Indigenous consultation and engagement is presented for approval today.

- There was outstanding regulator and stakeholder engagement on the guideline, with 111 feedback items, all of which were addressed in the revisions.
- There is already significant interest from regulators and academics in making use of the guideline, including through the development of webinars and other resources.
- In the coming months, a communications approach will be developed and aligned with the strategic plan.

Ongoing work items in 2023:

- Development of a Guideline on duty to report (draft approved today);

- Review of the Guideline on conflict of interest (working group formed);
- Review of the Guideline on code of ethics (working group formed); and
- Regulators surveyed in January on key areas for improvement.

New work item assigned to the Practice Committee in 2023:

- Review of the 2014 regulator Guideline on principles for character investigations.

The CEQB discussed the feedback provided for the Guideline for engineers and engineering firms on Indigenous consultation and engagement. There was a substantial amount of feedback received and it is felt that a balance has been met between keeping the document a reasonable length and including important points. There was discussion around the ongoing communications plan involved with the guideline.

Send the CEQB Guideline on Indigenous consultation and engagement to the Engineers Canada Board for approval (**Action item 121.4**).

Motion: That the final Guideline for engineers and engineering firms on Indigenous consultation and engagement be recommended to the Board of Engineers Canada for approval to publish on the Engineers Canada website motion was moved by Kamran Behdinin and seconded by Marcie Cochrane. None were opposed. The motion carried.

4.4 Syllabus Committee

Kamran Behdinin, Committee Chair, presented:

The examination syllabi continue to be one of the most used CEQB products, presenting significant value for regulators. The December meeting saw a record number of approvals:

- Final Mechanical engineering syllabus (Approved today);
- Final Electrical engineering syllabus (Approved today);
- Draft Complementary studies syllabus (For consultation);
- Draft Chemical engineering syllabus (For consultation); and
- Draft Mechatronics engineering syllabus (For consultation).

Syllabi to be reviewed in 2023:

- 2007 Building engineering
- 2017 Industrial engineering
- 2017 Petroleum engineering

4.5. Task Force on Alternative Methods of Academic Assessment for Non-CEAB Applicants

Amy Hsiao, Committee Chair, presented:

- As discussed in September, direct consultation sessions were held with National Admissions Officials Group and Canadian Engineering Accreditation Board, with the objective of seeking

their responses to the feasibility study's findings.

- The sessions focused on areas of agreement/overlap and potential future collaboration, as well as areas of difference among jurisdictions.
- The findings have been appended to the final paper presented today.
- Following publication on the members-only site of engineerscanada.ca, regulators hope to further engage their academic review experts and other academic stakeholders, looking for opportunities for improvement coming out of the study's findings.

Motion: That the Feasibility study on alternative methods of academic assessment for non-CEAB applicants be recommended to the Engineers Canada Board for approval to distribute to the engineering regulators,

And

That the Task Force on Alternative Methods of Academic Assessment for Non-CEAB Applicants be stood down with gratitude.

The motion was moved by Amy Hsiao and seconded by Frank Collins. None were opposed. The motion carried.

Send the CEQB Feasibility study on alternative methods of academic assessment for non-CEAB applicants to the Engineers Canada Board for approval (**Action item 121.5**).

Stand down the CEQB Task Force on Alternative Methods of Academic Assessment for Non-CEAB Applicants (**Action item 121.6**).

4.6 Task Force on Software Engineering

Ian Sloman, Task Force Chair, presented:

- The task force reviewed a revision in November, which was based on the findings of the fall regulator consultation.
 - Revisions focused on refinement of language throughout the guideline, particularly as it pertains to jurisdictional differences.
 - Task force has had challenges in finalizing the new appendices, which outline sample practice areas as they apply to the definition outlined in the guideline.
 - National Discipline and Enforcement Officials Group is highly supportive of the document and feel it will be useful to regulation when complete.
- The task force will meet in early February to finalize the guideline for CEQB approval.

Distribute electronic approval of Engineers Canada paper on software engineering (**Action item 121.7**).

4.1 Admissions Issues Committee

Margaret Anne Hodges, CEQB Chair, presented:

The revised guideline on good character was sent for regulator consultation in July 2022, and the feedback received was used to finalize the guideline revisions.

- Introductory language to the Code of Ethics was removed (although the Code of Ethics is still referenced) to address regulators' concerns and to ensure it remains a useful document.
- The concept of governability of individuals was incorporated into the good character trait of responsibility.
- An example was added to illustrate "lack of responsibility" of registrants and its relation to governability.
- The Admission Issues Committee met in November 2022 to finalize and approve the revisions.
- The development of an Engineers Canada paper on emerging disciplines was assigned to the Admission Issues Committee as part of the CEQB's 2023 work plan.
- The work is planned to commence in Q3.

A CEQB member sent in feedback with concerns that the guideline is too ambiguous about the connection between good character and code of ethics. The current version reflects feedback from regulators and it was most appropriate to keep these concepts distinct. The CEQB member requested that their feedback be kept on file for the next time this guideline is reviewed.

Send the Revised CEQB Guideline on good character to the Engineers Canada Board for approval (**Action item 121.8**).

Motion: That the revised CEQB guideline on good character be recommended to the Engineers Canada Board to be approved for publication on the Engineers Canada website was moved by Qing Zhao and seconded by Kamran Behdinin. None were opposed. The motion carried.

4.7 Executive Committee

Margret Anne Hodges, CEQB Chair, presented:

- The Executive Committee met in November to develop January 2023 CEQB meeting agenda.
- The CEQB and CEAB have been asked by the Engineers Canada Board to review and make recommendations on term limits.
- The CEQB proposal grows out of a desire to 1) better retain institutional memory and 2) improve chair competence during their terms:
 - Proposals focuses on a number of term configurations to address these areas: 1+1+1+1, 2+2+2, and 1+1+1+1(+1).
- Sam Inhasi's nomination as vice chair was approved by the Engineers Canada Board in December:
 - As an interim solution to the Executive term length question, Sam has been invited to begin attending Executive meetings earlier than with past chairs elect.
- The Executive Committee is recommending that Amy Hsiao chair the EIT Committee for its upcoming work on the Guideline on supervising EITs (electronic vote).

Distribute electronic approval of Amy Hsiao as EIT Committee Chair (**Action item 121.9**).

4.8 Board appointee report

Sudhir Jha, CEQB Board Appointee, presented:

- The CEQB 2023 work plan was approved at the December Board Meeting.

- New Governance Secretary (Light Go) to be approved at the February Board Meeting.
- The Board is reviewing Engineers Canada's current vaccination policy.

5. 2024 Work plan process

Ryan Melsom, CEQB Secretary, presented:

- CEQB members are invited, but not required, to propose new work plan items for 2024.
- Non-CEQB stakeholders (e.g., officials) may also submit items.
- The template will be available on the CEQB Collaboration Space.
- **NOTE:** As of January 2023, the CEQB has 19 projects underway.

Timelines:

February 3, 2023: Template available

March 3, 2023: Proposed items due to Secretariat

April 1, 2023: All proposed items approved for consultation at CEQB meeting

July 2023: Work plan consultation reviewed at teleconference

September 17, 2023: Work plan approved by CEQB

October 2023: Work plan presented at Engineers Canada Board meeting for comments

December 2023: Work plan approved by Engineers Canada Board

CEQB members are to submit 2024 work plan items by March 1, 2023 (**Action item 121.10**).

6. Primer on CEQB syllabi

Kamran Behdinan, Syllabus Committee Chair, presented:

How examination syllabi fit with the CEQB mandate:

- CEQB is one of two permanent Board committees of Engineers Canada (CEAB is the other):
 - A main CEQB focus is to provide tools to provincial/territorial regulators to assess applicants for licensure.
 - Examination syllabi aid regulators in the **academic** assessment of Non-CEAB applicants.
 - They are developed and maintained by the CEQB Syllabus Committee.

About examination syllabi:

- Represent an expert determination of the academic knowledge required to practice a particular discipline of engineering in Canada.
- Represent body of knowledge typically covered in a discipline of accredited engineering programs.
- Content does not necessarily correspond 1:1 with courses or credits, although a topic could be a course.

They are divided in the following categories:

- **Basic studies:** foundational math and science topics, common to most disciplines.
- **Complementary studies:** safety, economics, sustainability and engineering management topics; and
- **Discipline-specific studies:** divided by:
 - Group A (Core areas of knowledge); and

- Group B (Selected advanced areas of knowledge).

National Examinations Syllabi Review Process:

1. Automatic review is triggered every six years or upon regulator request.
2. Information is shared with an expert, who recommends if substantial, minimal or no change are appropriate.
3. If substantial changes, recommendation goes to an expert panel.
4. Expert panel reviews the information and drafts revised syllabus.
5. Syllabus is sent for national regulators consultation.
6. Result is reviewed by the expert and Syllabus Committee.
7. Final revised syllabus is approved by the CEQB.

How syllabi are used

- Using various methods, regulators compare non-CEAB applicant transcripts to the content covered in the syllabi.
 - Complex cases are generally handled through academic review committees (or their equivalent).
- Depending on the applicant's educational and risk profile, and the jurisdiction's practices, technical or confirmatory exams may be assigned.
- Exams are developed by PEO and OIQ, and are generally based on examination syllabi content (regulators maintain several additional syllabi).

There was discussion around indicators that determine when a syllabus should be up for review more consistently and what considerations go into forming an expert panel. Over time, the nature of disciplines can change, and the framing of syllabi need to be changed which requires a more thorough review.

A CEQB member had questions about the difference between syllabi and CEAB accredited programs and how great the "gap" is. Syllabi provide bodies of knowledge, provide content, description, references but does not dive into the courses. CEAB goes into programs and categories. The procedures of the CEAB and the CEQB are fundamentally different the CEAB sets requirements for graduate attributes and environmental factors for a program and CEQB sets requirements for an individual while the CEAB looks for coherence in the program. The syllabi are a reflection of what is taught and they are not intended to be compared.

7. Items added to the agenda

No new items were added to the agenda.

8. Future Meetings

CEQB Spring meeting: April 1-2, 2023 (Ottawa)

CEQB Teleconference call: July 2023 (Date to be determined by Doodle poll)

CEQB September meeting: September 17-18, 2023 (Edmonton)

CEQB January meeting: January 2024 (Date to be determined by Doodle poll)

9. Review of action items of 121st Qualifications Board meeting

Action item		Assigned to
121.1	Send the draft General direction for a guideline on duty to report be approved for regulator consultation.	Secretariat
121.2	Publish Mechanical Engineering syllabus on the Engineers Canada Website.	Secretariat
121.3	Publish Electrical Engineering syllabus on the Engineers Canada Website.	Secretariat
121.4	Send the CEQB Guideline on Indigenous consultation and engagement to the Engineers Canada Board for approval.	Secretariat
121.5	Send the CEQB Feasibility study on alternative methods of academic assessment for non-CEAB applicants to the Engineers Canada Board for approval.	Secretariat
121.6	Stand down the CEQB Task Force on Alternative Methods of Academic Assessment for Non-CEAB Applicants.	Secretariat
121.7	Distribute electronic approval of Engineers Canada paper on software engineering.	Secretariat
121.8	Send the Revised CEQB Guideline on good character to the Engineers Canada Board for approval.	Secretariat
121.9	Distribute electronic approval of Amy Hsiao as EIT Committee Chair.	Secretariat
121.10	CEQB members to submit 2024 work plan items by March 1, 2023.	CEQB Members

10. Conclusion

The meeting concluded.

Recording of meeting will be deleted once meeting minutes are approved.

Prepared by: Alison Peverley, Coordinator, Qualifications on behalf of:




Margaret Anne Hodges, FEC, FGC (Hon),
P.Eng., PMP
Chair, Canadian Engineering Qualifications
Board

Ryan Melsom, PhD
Secretary, Canadian Engineering
Qualifications Board