

114th MEETING OF THE CANADIAN ENGINEERING QUALIFICATIONS BOARD
SATURDAY, APRIL 10, 2021
11:30 a.m.– 6:30 p.m. EDT

Virtual meeting

AGENDA

	Agenda item	Presenter
1	Opening of the meeting	Mahmoud Mahmoud
1.1	Call to order and introduction of attendees	Mahmoud Mahmoud
1.2	Approval of the agenda <i>Motion: That the agenda for the 114th meeting of the Qualifications Board be approved as distributed.</i>	Mahmoud Mahmoud
1.3	Declaration of conflict of interest (attachment 1.3)	Mahmoud Mahmoud
2	Approval of minutes of the previous meeting (attachment 2) <i>Motion: That the minutes from the 113th meeting of the Qualifications Board held on January 28th, 2021 be approved as distributed.</i>	Mahmoud Mahmoud
3	Review of action items from last meeting	Ryan Melsom
4	Executive Committee Terms of Reference (attachment 4)	Mahmoud Mahmoud
5	Committee and task force reports	Mahmoud Mahmoud
5.1	Practice Committee	Sam Inchasi
5.2	Syllabus Committee	Amy Hsiao

5.2.1	Revised Software engineering syllabus (attachments 5.2.1 A-B)	Amy Hsiao
	<i>Motion: That the revised Software engineering syllabus be approved and distributed on the public site.</i>	
5.3	Task Force on Software Engineering	Ian Sloman
5.4	Task Force on Workplace Gender Equity	Margaret Anne Hodges
5.4.1	Draft general direction for a Guideline for engineers and engineering firms on workplace gender equity (attachments 5.4.1 A-B)	Margaret Anne Hodges
	<i>Motion: That the Draft general direction for a Guideline for engineers and engineering firms on workplace gender equity be approved for regulator consultation.</i>	
5.5	Task Force on Alternative Methods of Academic Assessment for non-CEAB Applicants	Amy Hsiao
6	National groups	Mahmoud Mahmoud
6.1	National Admissions Officials Group update	Sharon Sankar
6.2	National Discipline & Enforcement Officials Group update	Carol MacQuarrie
6.3	National Practice Officials Group update	Bill Hunt
6.4	Comments from the regulators	Mahmoud Mahmoud
7	Information and discussion items from other Engineers Canada groups	Mahmoud Mahmoud
7.1	Report from the Canadian Engineering Accreditation Board	Bob Dony
7.2	Report on Engineers Canada Board activities and decisions	Jeff Holm
7.3	Updates to the Code of Conduct	Nancy Hill
8	Other Qualifications Board business	Mahmoud Mahmoud

8.1	2022 priorities discussion (attachments 8.1 A-D)	Mahmoud Mahmoud
8.1.1	2022 priorities vote	Mahmoud Mahmoud
	<i>Motion: That the top 3 priorities chosen by CEQB be put on the 2022 priorities list and distributed for consultation.</i>	
8.2	Vice-Chair election process (attachment 8.2 A-B)	Jeff Holm
9	Items added to the agenda	Mahmoud Mahmoud
10	<p>Future meetings</p> <p><i>The next CEQB Teleconference in Summer 2021 will be determined by Doodle poll.</i></p> <p><i>The next Fall CEQB meeting will be held in Vancouver, on September 18-19.</i></p> <p><i>A CEQB Teleconference call will be held on January 25, 2022.</i></p> <p><i>A Spring CEQB meeting will be held in Ottawa, on April 9-10, 2022.</i></p>	Mahmoud Mahmoud
11	Review of action items of 114th Qualifications Board meeting	Ryan Melsom
12	Conclusion	Mahmoud Mahmoud

MINUTES OF THE 114TH MEETING
1. Opening of the meeting

The Chair welcomed everyone to the meeting.

1.1. Call to order and introduction of attendees

Canadian Engineering Qualifications Board Members	Mahmoud Mahmoud, PhD, FEC, P.Eng.	Chair
	Frank George, FEC, FGC (Hon.), P.Eng.	Vice-Chair
	Ron LeBlanc, FEC, P.Eng.	Past Chair
	Anil Gupta, P.Eng., FEC, FGC (Hon.)	Alberta, Northwest Territories and Nunavut Representative
	Frank Collins, FEC, P.Eng.	Atlantic Provinces Representative
	Amy Hsiao, PhD, MBA, P.Eng.	Atlantic Provinces Representative
	Karen Savage, FEC, P.Eng.	British Columbia, Yukon Representative
	Margaret Anne Hodges, FEC, FGC (Hon.), P.Eng., PMP	Member-at-Large Representative
	Qing Zhao, PhD, P.Eng.	Member-at-Large Representative
	Samer Inchasi, P.Eng., PMP	Member-at-Large Representative
	Roydon Fraser, PhD, FEC, P.Eng.	Ontario Representative
	Nadia Lehoux, ing., PhD	Québec Representative
Ian Sloman, MEng, P.Eng.	Saskatchewan, Manitoba Representative	
Engineers Canada Board Appointee	Jeff Holm, FEC, P.Eng., FGC (Hon.)	
Engineers Canada Board	Jean Boudreau, FEC, P.Eng.	
	Nancy Hill, P.Eng., LLB, FEC, FCAE	
Canadian Engineering Accreditation Board Representatives	Bob Dony, Ph.D., P.Eng., C.Eng., FIEE, FEC	
National Admissions Officials Group Representative	Sharon Sankar, P.Eng., FEC	Engineers Geoscientists Manitoba
National Practice Officials Group Representative	Bill Hunt, P.Eng., FEC	PEGNL
National Discipline and Enforcement Officials Group Representatives	Carol MacQuarrie, P.Eng.	APEGNB

Engineers Canada Staff	Stephanie Price, P.Eng., CAE	Executive Vice President, Regulatory Affairs
	Ryan Melsom, PhD	Manager, Qualifications and CEQB Secretary
	Mya Warken	Manager, Accreditation and CEAB Secretary
	Megan Falle	Manager, Regulatory Liaison
	Isabelle Flamand	Coordinator, Qualifications
Observers	Kate MacLachlan, PhD, P.Geo., FEC (Hon.), FGC	APEGS
	Gillian Pichler, FEC, P.Eng.	Engineers and Geoscientists BC
	Jason Ong	Engineers and Geoscientists BC
	Christine Lee	Engineers and Geoscientists BC
	Karen Leung	Engineers and Geoscientists BC
	Kate Sisk, MA, FEC (Hon.), FGC (Hon)	APEGNB
	Michael Gregoire, P.Eng., FEC	Engineers Geoscientists Manitoba
	Claudia Shymko	Engineers Geoscientists Manitoba

Regrets

Qualifications Board Members	Nikeetta Marshal, MSc, P.Eng.	Member-at-Large Representative
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1.2 Approval of the agenda

Motion: That the agenda of the 114th Meeting of the Qualifications Board be approved as distributed was moved by Ian Sloman, and seconded by Roydon Fraser. 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. Minutes

Motion: That the minutes from the 113th meeting of the Qualifications Board held on January 28th, 2021 be approved as distributed, moved by Amy Hsiao, and seconded by Karen Savage. None were opposed. The minutes were approved.

3. Review of action items from last meeting

Action item		Assigned to	Status
113.1	Present the terms of reference of the Task Force for a Feasibility study on alternative methods of assessing non-CEAB applicants to the CEQB for approval when they become available.	Secretariat	Chair will provide update today
113.2	Bring forward the previously proposed workplan items that received regulator interest/assent in 2020 at the CEQB April 2021 meeting.	Secretariat	Completed

4. Executive Committee Terms of Reference

The Executive Committee is a standing committee of the CEQB, whose purpose is to enhance the CEQB's effectiveness and efficiency. The composition of the committee is Vice-Chair, Chair, and Past Chair of the CEQB. The CEQB Secretary participates in meetings and supports as a non-voting member.

A member expressed that these Terms of reference do not invoke several principles of collegial governance (e.g., appointment of committee members, decision-making, etc.). It was also stated that there is no mention of time commitment and expectations in terms of meeting attendance (e.g., Engineers Canada Board meetings, etc.). The Terms of reference (ToR) were drafted based on the CEAB Executive Committee's ToR and the current and on-going CEQB Executive Committee practices. Time commitment and meeting attendance expectations are listed in the CEQB Terms of reference.

A member recommended that the Executive Committee meet after each CEQB meeting to debrief and discuss possible improvements that can be made, and that the communication between Executive Committee members and Committee/Task force chairs be increased. It was stated that these Executive Committee meetings are already taking place, but that they should be documented. CEQB members are invited to send any additional comments to Ryan Melsom. The revised version of the Executive Committee ToR will be distributed to CEQB members (**action item 114.1**). CEQB members were reminded that more information can also be found in the Board Policy Manual (section 6.10) on the Engineers Canada website.

5. Committee and Task Force report

5.1 Practice Committee

Sam Inchasi, chair of the Practice Committee, presented. Since January, the RFP process to hire a project consultant has been underway and is nearly complete. The successful bidder will be announced following a legal finalization. It is expected that the Practice Committee will meet for a kick-off in April. A workshop is planned for September, which will be taking a unique format given the topic and virtual considerations.

5.2 Syllabus Committee

Amy Hsiao, chair of the Syllabus Committee, presented. Since January, two expert panels are being created to review the 2004 Agricultural/biosystems/bioresource/food engineering syllabus and the 2010 Metallurgical engineering syllabus. The development of the new Aerospace (Aeronautical/Space) engineering syllabus continues, and the Complementary studies syllabus review will begin late 2021.

5.2.1 Revised Software Engineering Syllabus

In April 2020, the CEQB approved that the previous [Basic studies'](#) Discrete Mathematics examination (BS-16) be moved to the Computer and Software engineering syllabi. Given the lack of program information about computer and software engineering programs at that time, the CEQB agreed to add the new [20-Comp-B14 Discrete Mathematics](#) as Group B examinations and review program information to make a decision on whether they should remain as Group B examinations (optional) or be moved as Group A examinations (compulsory). Discrete Mathematics is found as a compulsory topic in all software engineering programs. For that reason, the expert recommended moving Discrete Mathematics in Group A.

Motion: That the revised Software Engineering Syllabus be approved and distributed on the public site, moved by Amy Hsiao, and seconded by Qing Zhao. Roydon Fraser and Frank Collins were opposed. The motion carried.

A member mentioned they believe there are flaws in the current review process (e.g., the inconsistency in the number of required exams, not taking into consideration what examinations the regulators are currently using), and that there is a risk that regulators will opt to stop using the examination syllabi. A member countered that statement, and said that the process for the review of this syllabus was evidence-based and consistent with that of other syllabi, and that the syllabi are only recommendations made to the regulators which can be adapted for their use. This statement was echoed, and it was mentioned that the inconsistency may be more related to how the regulators use the syllabi for academic assessments, as opposed to how they are developed. Other CEQB members agreed that the numbers of required exams could vary based on the discipline. Another CEQB member stated that the

issue is not that there are more Group A examinations since the core is well defined in this discipline, but that the academic requirements for individuals being assessed for software engineering are not the same for equivalent to that of other engineering disciplines.

5.3 Task Force on Software Engineering

Ian Sloman, chair of the Task Force on Software Engineering, presented. Revisions incorporating 2020 feedback were completed over the past year and are now ready to be reviewed by the task force. A meeting is scheduled in April to discuss the revisions and the approach for developing appendices. The current plan is to develop a survey for subject matter experts around software engineering applications or areas of practice.

5.4 Task Force on Workplace Gender Equity

5.4.1 Draft general direction for a Guideline for engineers and engineering firms on workplace gender equity

Margaret Anne Hodges, chair of the Task Force on Workplace Gender Equity, presented. Since January, the task force has completed the Draft general direction document for a Guideline for engineers and engineering firms on workplace gender equity, and is presented today for consultation approval. If approved, the next steps will include regulator/stakeholder consultation and finalization of the general direction. The drafting of the guideline could begin as early as July.

Members mentioned that including statements or concrete examples of what can be done by engineers and engineering firms to foster inclusive and equitable workplaces. A member mentioned that a key element that is perhaps missing from the general direction is that the “right and bright” thing to do (i.e., the “why”) to ensure the sustainability of the profession is to reach the best and brightest and to sustain them in engineering workplaces.

A member requested that the statement “flavour of the month” in section 7 be removed. Members agreed to this change, which will be made prior to the launch of the consultation on the general direction (**action item 114.2**).

Motion: That the moved Draft general direction for a Guideline for engineers and engineering firms on workplace gender equity, with a minor edit, be approved for regulator consultation by Margaret Anne Hodges, and seconded by Frank George. None were opposed. The motion carried.

5.5 Task Force on Alternative Methods of Academic Assessment for non-CEAB Applicants

In December 2019, the Engineers Canada Board passed a motion which requested that a feasibility study on a national academic examination be assigned to the Canadian Engineering Qualifications Board

(CEQB). In Spring 2020, the CEQB consulted Officials Groups on the 2021 priorities, which included the proposal for a “New national feasibility study for entry-to-practice exam”. NAOG expressed their support and desire to participate in the development of a feasibility study, but added the request that the scope be extended to include more than one particular approach to assessing the academic requirements for licensure. The feasibility study has thus been expanded to investigate how to best assess and confirm the academic requirements for non-CEAB applicants, including the feasibility of an entry-to-practice exam as one component.

Since January, the task force was struck, and the membership includes four NAOG members, one CEAB member, and four CEQB members. The RFP process to hire a project consultant is complete, and the successful bidder will be announced following legal finalization. The task force met for a kick-off meeting in late March, and approved the Terms of reference for final approval by the CEQB. It is anticipated that a CEQB June 2021 workshop will be dedicated to this topic, but the format has not yet been determined.

Motion: That the Terms of reference for the Task Force on Alternative Methods of Academic Assessment for non-CEAB Applicants be approved as distributed was moved by Amy Hsiao, and seconded by Frank George. Roydon Fraser was opposed. The motion carried.

A member expressed that the RFP process should have included more reporting to the CEQB and that a second expert should be hired to review the work. CEQB members were reminded that RFP updates were provided in the chair’s monthly update emails. It was requested that the RFP process and the CEQB’s contributions in this process be discussed further at the next CEQB meeting. A member said that the task force should also take into consideration previous work on similar issues that was completed, approved, and disseminated by Engineers Canada. CEQB members will be able to provide further feedback on the matter during the workshop.

6. National Groups

6.1 National Admissions Officials Group update

Sharon Sankar, chair of the National Admissions Officials Group (NAOG), presented. NAOG’s recent admissions related initiatives and project updates include securing a vendor and starting work involved on National Member Database (NMDB) overhaul, completing the International Institutions and Degrees Database (IIDD) improvement project which is currently in its trial demo phase, and will shortly be completing the CBA system with most participating jurisdictions live or nearly live. Admissions Officials met virtually in September 2020 to discuss items such as the national reference points, updates from the CEQB and CEAB, and international exchanges and the Engineering Deans Canada’s proposed system to determine if international courses are substantially equivalent to Canadian courses. NAOG’s next annual meeting will be held virtually in April. Discussions will include regulator roundtables, current activities, and member questions (e.g., how to find the right assessors for applicants, how to avoid assessor burnout, how to deal with bounced back mail/emails from members, etc.).

6.2 National Discipline & Enforcement Officials Group update

Carol MacQuarrie, chair of the National Discipline & Enforcement Officials Group (NDEOG), presented. The Discipline and Enforcement officials met virtually in November of 2020 and March of 2021. The discussions included overcoming the challenges of remote investigations, experiences with virtual/semi-virtual hearings, the improper use of ‘engineering’ title from companies/individuals in job postings/positions, and media attention and disclosure rules surrounding investigations on significant incidents. NDEOG’s next meeting will be held virtually in June. Discussions will include regulator roundtables, current case volumes and activities, case history presentations, and the federal government’s use of job title ‘engineer’ with non-licensed individuals.

6.3 National Practice Officials Group update

Bill Hunt, vice-chair of the National Practice Officials Group (NPOG), presented. The Practice Officials met virtually in November 2020, in February 2021, and in March of 2021. There were discussions on various matters including providing feedback to the three regulatory research advisory groups on the topics of entity regulation, non-practicing status, and autonomous systems. There were also discussions around digital stamp providers, updates related to new CPD requirements, guidelines and standards, and potential cross-country collaboration on a nationwide Equity, Diversity and Inclusion (EDI) training module. The next virtual meeting is planned for May 2021.

6.4 Comments from the regulators

The regulators thanked the CEQB for inviting them to participate in these meetings, and the work they are helping move forward.

7. Information and discussion items from other Engineers Canada groups

7.1 Report from the Canadian Engineering Accreditation Board

The CEAB has wrapped up the 2020/2021 visit cycle, with three virtual visits conducted for new programs, and is planning virtual visits in the 2021/2022 accreditation cycle. The impact of Covid-19 on accredited programs is being monitored, and debrief interviews with HEIs on how the process can be improved for the next accreditation cycle are being conducted. The [*Guide for the Virtual Evaluation of an Engineering Program*](#) will be updated to reflect lessons learned. The CEAB has also revised the general visitor report template, and is collecting data on accountability in accreditation.

As part of the Accreditation Improvement Program (AIP), the monthly AIP Update email has been operationalized as a monthly accreditation update (*Accreditation Matters*). The monthly update will continue to include highlight AIP milestones but will also report on accreditation-related news and updates.

The accreditation visitor training program continues to evolve using methodology established under the AIP. Pre-visit webinars using the visiting team chair presentation as a template are held for every visit. The CEAB offers training and presentations at regional GA/CI meetings as well as national conferences such as the Canadian Engineering Education Association's annual meeting. The next significant piece of work is to revamp the online program visitor training module in 2021. Tandem, Engineers Canada's new data management system, was used for the 2019 and 2020 EDAS. The AIP team is currently working with a vendor (Armature) and the AIP System Advisory Committee to configure the system to support accreditation. A continual improvement process has been operationalized which provides a repeatable process to intake, analyze, prioritize, and follow-up on suggestions for improvement to accreditation and to the EDAS. The framework also provides a structure to measure the impact of any improvements made to the systems. The process will interface with the Accountability in Accreditation Evaluation Strategy as well as the ongoing work of the P&P.

The first measurement for Accountability in Accreditation began in June 2020. Due to COVID-19, and the deferral of the majority of visits in this accreditation cycle, the data collection stage for the Accountability in Accreditation project will be limited. The first report will be submitted to the CEAB in September 2021.

The Policies and Procedures Committee's terms of reference are under review. Various models from retention of status quo are being explored (with some adjustments to address concerns) to a radical departure from the current structure. The final recommendation is to be presented to the CEAB in September 2021.

A report was submitted to CEAB in February, regarding student learning experiences during Covid-19, which focused on the main concerns of HEIs (i.e., hands-on and virtual laboratory experience, academic integrity and assessments, AU calculations – online courses, Capstone project, and the well-being of students and faculty).

The working group to respond to Engineers Canada's 30 by 30 initiative has developed a draft report of possible interventions that can be made in the accreditation system (e.g., through reviewing the CEAB Criteria and Procedures, the Interpretive statements, interview questions, and volunteer management). The earliest possible implementation is for the 2023/2024 accreditation cycle (pending consultation, CEAB, and Board decisions).

Since September, the CEAB has conducted two consultations, namely regarding the definition of engineering design and the interpretive statement on licensure. The Required Visit Materials Working Group has also launched a consultation from April through June. The CEAB also has three other upcoming consultations regarding the CEAB Working Group on the 30 by 30 Initiative, the General Visitor Report Template and the CEAB 2022 Workplan. The CEAB also plans on launching a survey on Accountability in Accreditation Evaluation.

It was stated that all accreditation visits in 2021 will be virtual, but that they will not be held only virtually in the future as the in-person component is important. CEQB members were reminded that they are welcome to observe accreditation visits, or participate in the visits if they have the expertise.

7.2 [Report on Engineers Canada Board activities and decisions](#)

Jeff Holm, Engineers Canada Board director, presented. CEQB members were invited to review the Engineers Canada Board December 2020 meeting report (linked above). At their April 2021 meeting, the Board reviewed the financial statements and auditor's report ahead of their May 2021 meeting. There are currently three items that affect the CEQB and are currently on the risk register (i.e., national collaboration, sustainability of engineering regulation, and women in engineering).

7.3 [Updates to the Code of Conduct](#)

Nancy Hill, chair of the Governance Committee, presented. Updates were made to the Engineers Canada Code of Conduct to provide clarity on certain policies, especially around the Conflict of Interest policy. Furthermore, the section on diversity and inclusion was removed, as it was decided it should be incorporated in all the policies, instead of it being a stand-alone policy. A number of these changes are informed by this decision. The Governance Committee welcomes comments and suggestions which would be addressed during the next cycle as they are reviewed biyearly.

8. Other Qualifications Board business

8.1 2022 priorities discussion

2022 Workplan

Since January, CEQB members were invited, but not required, to propose workplan items to the CEQB secretariat by March 1, 2021. No new items were proposed. Two proposed items having previously received regulator interest were moved forward from the 2021 workplan to be included in the 2022 workplan (i.e., a new public Guideline on fitness to practice, and a new public Guideline on whistle blowing).

8.1.1 2022 priorities vote

Motion: That the top 2 priorities chosen by CEQB be put on the 2022 priorities list and distributed for consultation, moved by Mahmoud Mahmoud, and seconded by Karen Savage. None were opposed. The motion carried.

Members agreed to an email vote to determine the third priority which will be included in the 2022 workplan consultation. The secretariat will distribute the list of priorities on which members will be asked to vote, which will include all previous suggestions from 2020 (**action item 114.3**). Due to the ongoing pandemic, multiple members advised against taking on too heavy of a workload, especially if

the resources are not available.

8.2 Vice-Chair election process

As per Engineers Canada policy 6.10, CEQB members now elect their vice-chairs. The upcoming vice-chair position is from July 1st, 2022 to June 30th, 2023. While this position is for one-year only, the successful candidate will be expected to remain for the chair, and past chair positions (pending Engineers Canada Board approval), for a total of three years. Interested CEQB members must fill the “Declaration of interest” form (attachment 8.2.B), secure support from their regulators to proceed in the process and send Ryan Melsom their CVs, by June 15, 2021. The list of candidates will be included in the September meeting agenda book, along with their CVs.

9. Items added to the agenda

A member requested an update on the engineering entrepreneur work which is now lead by NAOG. The secretariat will provide on update to CEQB members within the next few weeks (**action item 114.4**). The CEQB thanked Ron LeBlanc for his contributions to the CEQB for the past 6 years as his term is ending June 30, 2021. The CEQB also thanked Jeff Holm as his term as an Engineers Canada Board appointee on the CEQB is ending June 30, 2021.

10. Future meetings

The next CEQB Teleconference in Summer 2021 will be determined by Doodle poll.

The next Fall CEQB meeting will be held in Vancouver, on September 18-19 (Covid-19 permitting).

A CEQB Teleconference call will be held on January 25, 2022.

A Spring CEQB meeting will be held in Ottawa, on April 9-10, 2022.

11. Review of action items of 114th Qualifications Board meeting

Action item		Assigned to
114.1	Distributing the revised version of the Executive Committee ToR to CEQB members.	Secretariat
114.2	Making final edits to the general direction document for a Guideline for engineers and engineering firms on workplace gender equity prior to launching the stakeholder and regulator consultation.	Secretariat
114.3	Distributing the list of previous priorities suggested in 2020 for members to vote electronically on a third priority for the 2022 workplan.	Secretariat
114.4	The secretariat will provide on update to CEQB members on the engineering entrepreneur work.	Secretariat


12. Conclusion

The meeting concluded.

Prepared by: Isabelle Flamand, Coordinator, Qualifications on behalf of:



Mahmoud Mahmoud, PhD, FEC, P.Eng.
Chair, Canadian Engineering
Qualifications Board



Ryan Melsom, PhD
Secretary, Canadian Engineering
Qualifications Board