

CANADIAN ENGINEERING ACCREDITATION BOARD
Abridged minutes of the 169th virtual meeting

CONFIDENTIAL

3134 DATE AND PLACE

The 169th meeting of the Canadian Engineering Accreditation Board took place via Zoom on February 6, 2021.

3135 ATTENDANCE

The following were in attendance:

Chair: R. (Bob) Dony, FEC, P.Eng.
Vice-Chair: P. (Pierre) Lafleur, FIC ing.
Past-Chair: L. (Luigi) Benedicenti, FEC, P.Eng.
Members: S. (Suzelle) Barrington, FIC, ing.
P. (Pierre) Bourque, ing.
E. (Emily) Cheung, FEC, P.Eng.
P. (Pemberton) Cyrus, FEC, P.Eng.
W. (Waguih) ElMaraghy, FEC, P.Eng.
R. (Ray) Gosine, FEC, P.Eng.
P. (Paula) Klink, P.Eng.
A.M. (Anne-Marie) Laroche, ing.
M. (Mrinal) Mandal, P.Eng.
J. (Julius) Pataky, P.Eng.
J. (Jeff) Pieper, FEC, P.Eng.
A. (Allen) Stewart, P.Eng.
R. (Ramesh) Subramanian, FEC, P.Eng.
T. (Tara) Zrymiak, FEC, P.Eng.

Secretariat: E. (Elise) Guest
J. (Johanne) Lamarche
A. (Alexander) Olivas, FEC (Hon.)
A. (Adam) Rodrigues
M. (Mya) Warken

Regrets: S. (Suzanne) Kresta, FEC, P.Eng.

Engineers Canada Board Directors:

J. (Jeff) Card, FEC, P.Eng.
T. (Tim) Joseph, P.Eng.

Observers: (the following were in attendance for all, or part, of the meeting)

A. (Ali) Akgunduz, (Concordia University)
A. (Abby) Al-Takriti (Western University)
A. (Amanda) Aschaber, P.Eng. (Seneca College)
A. (Amarjeet) Bassi, P.Eng. (Western University)
R. (Ranjan) Bhattacharya (Seneca College)
J. (Jean) Boudreau, FEC, P.Eng. (President, Engineers Canada)
A. (Ahmed) Chériti (Université du Québec à Trois-Rivières)
G. (Gabriel) Cormier, ing. (Université de Moncton)
R. (Réal) Daigneault, ing. (Université du Québec à Chicoutimi)
M. (Mourad) Debbabi (Concordia University)
K. (Kevin) Deluzio, P.Eng. (Queens University)
C. (Chris) Donaldson (York University)
M. (Mamadou Lamine) Doumbia, ing. (Université du Québec à Trois-Rivières)
C. (Carole) El Ayoubi (Concordia University)
M. (Marie-Isabelle) Farinas, ing. (Université du Québec à Chicoutimi)
B. (Benjamin) Gobeil-Jobin, ing. (Université du Québec à Chicoutimi)
R. (Ryan) Huckle (Conestoga College)
C. (Carol) Jaeger, P.Eng. (University of British Columbia)
M. (Mahmoud) Mahmoud, P.Eng. (Chair, Qualifications Board)
R. (Ryan) Melsom (Secretary, Qualifications Board)
L. (Lyes) Kadem (Concordia University)
K. (Kate) McLachlan (Engineers Geoscientists Saskatchewan)
C. (Christine) Moresoli, ing. (University of Waterloo)
J. (John) Newhook, P.Eng. (Dalhousie University)
M. (Marie-José) Nollet, ing. (École de technologie supérieure)
J. (James) Olson, P.Eng. (University of British Columbia)
J. (Jason) Ong, (Engineers and Geoscientists British Columbia)
P. (Patti) Ostrickoff (University of British Columbia – Okanagan)
A. (Aleksandra) Pajic (University of Saskatchewan)
G. (Greg) Philipps, P.Eng. (Royal Military College)
G. (Gillian) Pichler, P.Eng. (Engineers and Geoscientists British Columbia)
S. (Stephanie) Price, P.Eng. (Engineers Canada Executive vice-president)
F. (François) Rivest (École Polytechnique de Montréal)
K. (Kate) Sisk, FEC (Engineers Geoscientists New Brunswick)
S. (Sierra) Sparks (Canadian Federation of Engineering Students)
B. (Bruce) Sparling, P.Eng. (University of Saskatchewan)
C. (Caroline) St-Denis (École de technologie supérieure)
C. (Charir) Than, ing. (Myanmar Engineering Council)
T. (Tony) Thoma, P.Eng. (Conestoga College)
J. (Jeff) Wood, P.Eng. (Western University)

3136 OPENING OF THE MEETING

3136.1 CALL TO ORDER AND APPROVAL OF AGENDA

The Chair called the meeting to order and presented a list of meeting attendees. The confidentiality of the Accreditation Board proceedings was shared with all present.

Two additional agenda items were added to the agenda:

1. (Draft) CEAB COVID communiqué (February 2021) was added to the agenda under section 5.4 and recorded under section 3139.4 of these minutes.
2. A standing agenda item was added under section 5.5 and recorded under section 3139.5 of these minutes. This item will give CEAB members an opportunity for a closed discussion should they wish to raise any issues.

The following motion was carried unanimously:

MOTION:

"That the agenda be approved as amended and that the Chair be authorized to revise the order of business as necessary to accommodate the needs of the meeting."

3136.2 DECLARATION OF CONFLICTS OF INTEREST

Board members and members of Board committees have an ongoing obligation 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").

B. Dony directed meeting attendees to declare any conflicts of interests they may have. No conflicts of interests were reported.

3137 CONSENT AGENDA

3137.1 Approval of the minutes

MOTION

"That the minutes of the September 19, 2020 Accreditation Board meeting be approved as distributed."

Moved by P. Klink, seconded by R. Subramanian

Carried

3137.2 Follow up on action items from the minutes of the September 19, 2020 Accreditation Board meeting

3137.3 Accreditation Board's observation of the September 21, 2020 Canadian Engineering Qualifications Board (CEQB)

P. Lafleur submitted a written report on his observation of the CEQB meeting held on September 21, 2020. An update on the following items judged to be directly pertinent to the Accreditation Board's work was provided:

- CEAB visits, decisions, and recent meetings
- Accreditation Improvement Program
- Accountability in Accreditation
- Working groups

3137.4 2020 Graduate Attribute & Continuous Improvement Process (GACIP) Summit Plus

B. Dony provided a written report on his attendance at the GACIP summit. The summit was held virtually on December 10, 2020 in Toronto, Ontario and was a collaborative event between the Engineering Graduate Attribute Development (EGAD) group and the Engineering Collaboration for Online and Remote Education (E-CORE), featuring three sessions:

1. CEAB update on:
 - CEAB recent relevant changes
 - CEAB working groups, taskforces and consultations

- COVID-19 response
 - 2021/2011 visit information
2. Supports/Engagement/Experience Speed Updates from a variety of groups (E-CORE project, students groups, etc.)
 3. A panel of successful experimentation in engineering education from the past six months.

The CEAB also hosted a virtual lunch table, a casual drop in "room" where participants could discuss accreditation-related matters.

ACTION ITEM:

- Secretariat to share the link to the GACIP Summit Plus report with CEAB members

3137.5 Accreditation Board's attendance at the November 19 & 20, 2020 Engineering Deans Canada (EDC) meeting

P. Lafleur provided a written report on his attendance at the EDC meeting which was held virtually on November 19 & 20, 2020. His presentation at the EDC meeting included an update on the CEAB's work in response to the EDC's concerns as presented at the September meeting of the CEAB.

MOTION 3137

Moved by R. Subramanian, seconded by T. Zrymiak

"That the consent agenda items 3137.1, 3137.2, 3137.3 and 3137.4 be approved."

Carried

3138 REPORTS TO THE BOARD

3138.1 ENGINEERING DEANS CANADA (EDC)

J. Olson, Chair, Deans Liaison Committee (DLC) provided a summary of EDC concerns and activities including:

- Current status of undergraduate engineering education in Canada: University of British Columbia example:
 - Completed first full Fall term of on-line remote courses
 - Winter 2021 and Summer terms will be on-line/remote
 - Plans for September 2021 remain uncertain
- Future considerations: University of British Columbia example
 - A new capacity for remote instruction and online learning (both students and faculty) has been developed and implemented – The future is blended learning:
 - Students expect courses to be available on-line
 - Students expect to have shorter, more engaged in person experience
 - Faculty expect to continue to deliver remote and online. Faculty have invested a year to learn new technology, new pedagogy, to develop online content, experiences, design projects, laboratories and assessments.
 - What is the role of Accreditation Unit (AU) in this system?
- Definition of engineering design:

EDC encouraged institutions to provide feedback to the CEAB and to share their feedback with DLC. DLC received 10 submissions from HEIs. Feedback themes from HEIs included:

- Comments on the completeness of the definition
- Recommendations around civil engineering and use of codes
- Calls for additional illustrative examples in the interpretive statement

J. Olson also presented on the EDC's perspectives on concerns previously expressed to the CEAB:

- Increased scope of accreditation:
 - Accreditation is used to fulfill Engineers Canada's broad mandate (examples: student mental health, diversity and inclusion)
 - Partnership should be richer than that of auditor/auditee. EDC requests to develop other communication and policy partnerships and to be more hands-on to make process improvements to the accreditation system.
- *Interpretive statement on licensure (Appendix 3-CEAB Accreditation Criteria and Procedures)* and removal of limitations that restrict AUs claimed within a single course :
 - Restrictions on AU allocation (in an interpretive statement) limit curriculum reform and adds an additional constraint to an already complex process.
 - These constraints on the quantification of course content are now in direct contradiction to the spirit of the outcomes-based assessment and the continual improvement process.
 - EDC and DLC are supportive of proposed recommendation.
- On-site documentation for accreditation visits:
 - Volume of materials required for accreditation purposes is high
 - Experience inconsistencies in what individual visit teams request when on-site
 - EDC/HEIs Looking forward to formal consultation and feedback
- Response to the 2019 paper *Curriculum content measurement: Beyond the AU*
 - EDC calls to shift from Accreditation Units to Learning Units
 - Focus of accreditation should be solely on outcomes (Graduate Attributes) rather than both outcomes and inputs (AUs)
- Interpretive Statements – Role & status:
 - Interpretive statements appear to undergo significant changes without appropriate input of HEIs and without approval or oversight of the Engineers Canada Board.
 - One interpretive statement was moved into criteria without consultation with HEIs in 2019.
 - P&P recognizes that there is confusion about the role of interpretive statements, this is not yet resolved.
 - CEAB considers this matter of 'consultation' resolved with the new consultation process.
 - DLC – is concerned with transition of Interpretive Statements to criteria without consultation
 - DLC – is concerned with the use of Interpretive Statements as criteria
- On-boarding of new faculty:
 - Wishes for programs to count specific AUs for both Engineering Science and Engineering Design for instructors in the first 5 years of their appointment provided they are actively pursuing licensure or have EIT status and are working under the supervision of a P.Eng.
 - Would make it easier to start new programs / schools / departments

- Previous work on EDC concerns about barriers to student exchanges presents similar constraints within criteria/Interpretive statement on licensure requirements for faculty
- For first 5 years - Non-licensed instructors should be approved to teach specific-AUs if oversight of licensed engineer approves detailed syllabus, assessment and delivery/mode of course
- Independent review of the engineering professional accreditation system in Canada:
 - A desire to conduct an independent review of the accreditation system
 - Position paper developed by EDC Chair.
 - As a signatory of the Washington Accord, Engineers Canada's accreditation system is subject to external review every six years or less. DLC has requested participation in review
- Accreditation as a barrier to international exchanges:
 - Specified AU requirements limit student willingness/ability to participate in international exchanges as it adds time to degree completion
 - Build confidence and problem-solving skills to better deal with ambiguity in the workplace
 - Exposure to diverse design, analysis & innovation approaches
 - Exposure to different policy and regulatory jurisdictions
 - Valued by industry – increases employability
 - Accreditation is a barrier to participation
 - DLC - Foreign non-licensed instructors should be approved to teach specific-AUs with oversight of licensed engineer approves detailed syllabus, assessment and delivery/mode of course.
- In subsequent discussion, it was noted:
 - The pandemic will have an impact on faculty mental health in addition to student mental health.
 - The pandemic has made it difficult to have 1:1 contact with students and HEIs are being creative with the ways in which they maintain this contact.

3138.2 UPDATE ON THE QUALIFICATION BOARD'S ACTIVITIES

M. Mahmoud provided an update on the work of the Canadian Engineering Qualifications Board (CEQB). As part of the 2020 work plan, CEQB is currently:

- Developing a new aeronautical/space engineering syllabus
- Analyzing survey results in support of the new guideline on diversity and inclusion
- Revising the Paper on Software Engineering
- Finalizing the review of the Public Guideline on Risk Management
- Finalizing examination syllabi for software and computer engineering

In 2021, CEQB is expected to start:

- Creating a new public guideline for engineers and engineering firms on the topic of Indigenous consultation and engagement on engineering projects
- Revising the metallurgical as well as the agricultural, biosystems, bioresource and food engineering syllabi

3138.3 UPDATE ON ACTIVITIES FROM THE CANADIAN FEDERATION OF ENGINEERING STUDENTS (CFES)

S. Sparks provided general updates on the President's meeting held on September 26-27, the Conference on Diversity in Engineering held on November 21-22 and the Canadian Engineering Leadership conference.

The CFES' stance on remote education was provided including:

- At the Canadian Engineering Leadership Conference 2021, an official Stance on Remote Education was adopted.
- This stance uses data collected from the COVID-19 survey, as well as input from students across Canada, to effectively advocate for improvements to engineering education in a remote setting.
- Engineering students want to make sure that their quality of education and access to educational resources do not suffer due to remote learning.
- Main areas for concern were tuition and costs, quality of education and assessments, and mental health and social isolation.

An overview of the National Student Survey on COVID-19 was provided:

- Survey was open for a month
- Received 4172 responses
- 44 institutions represented across all four regions
- National report to be released during the Winter 2021 semester

S. Sparks provided the following highlights:

Living conditions:

- 18.97% of students were required to move out of their place of residence due to COVID-19
- 62.07% of students living with family, 29.63% living with roommates, 8.30% living alone
- 6.41% of students cannot reliably access anything on the internet
- 17.91% of students either do not have access to the required hardware for their studies, or had to buy it
- 20.95% of students lost an internship or co-op due to COVID-19. This includes students who may not have formally secured co-ops or internships before the pandemic.

Mental Health:

- 58.44% of students found that the content and expectations of their courses were appropriately adapted to online learning with respect to access to necessary tools, but 67.5% did not think that they were appropriately adapted with respect to student's mental health.

Course delivery and quality:

- 89.22% of students have some lectures live streamed, 85.07% have some pre-recorded video lectures, 36.70% have PowerPoint slides without audio, and 51.71% have PowerPoint slides with audio
- 5.87% of students admitted to cheating on a quiz/test/exam prior to COVID-19, while 23.13% admitted to cheating on a quiz/test/exam during online education for COVID-19
- 65.52% of students are not comfortable with any online proctoring methods

University and Faculty response:

- The average rating for the support received from students' universities to deal with additional stress and anxiety was 2.8/5
- The average rating for the university and faculty communication throughout the pandemic was a 3.05/5

ACTION ITEM:

- Secretariat to share CFES's full survey report with CEAB members when available

3138.4 UPDATE ON THE ENGINEERS CANADA BOARD OCTOBER 1 & 2, 2020 AND DECEMBER 7, 2020 MEETINGS

B. Dony provided an update on the recent Engineering Canada Board meetings.

The following agenda items were discussed at the October 1 & 2, 2020 meeting:

- 2021 draft budget
- 2021 CEAB and CEQB draft work plans
- Approval of new national position statement "Professional Practice in Cyber Security"
- Policy updates
- Approval of Operational imperative 7: Managing risks and opportunities associated with mobility of work and practitioners internationally
- Continuation of Engineers Canada's scholarship program, with amendments
- CEAB Updates on EDC concerns

The following agenda items were discussed at the December 7, 2020 meeting:

- 2021-2022 CEAB and CEQB leadership (approved)
- 2021 budget and 2023 per capita assessment fee
- 2021 CEAB and CEQB workplans (approved)
- Governance effectiveness survey content
- Board consultation plan
- Policy updates
- Chair assessment survey content
- Various Committee reports (including risk register items #26- Accreditation process and #28-AB and QB oversight)

3138.5 ACCREDITATION IMPROVEMENT PROGRAM UPDATE

M. Warlen provided an update on the Accreditation Improvement Program (AIP) including:

- In November, *Accreditation Matters*, a monthly newsletter of accreditation at Engineers Canada, was launched. This is the next evolution of the AIP Update, which was originally developed to keep stakeholders informed on the Accreditation Improvement Program. A key pillar of that program has been to improve stakeholder communication and consultation. As improvements to these approaches have taken form, it was a natural next step to re-envision the AIP Update as a broader update about the work of accreditation at Engineers Canada while continuing to keep stakeholders up-to-date on AIP activities.
- The accreditation visitor training program continues to evolve using methodology established under the AIP. The September CEAB workshop on decisions is one such example of this work. The next significant piece of work is to revamp the online program visitor training module in 2021.

- The AIP team is currently working with our vendor (Armature) and the AIP System Advisory Committee to configure Tandem, Engineers Canada's new data management system to support accreditation.
- A continual improvement process to intake, analyze, prioritize, and follow-up on suggestions for improvement to accreditation and to the Enrolment and Degrees Awarded Survey (EDAS) has been operationalized.

3139 ACCREDITATION ACTIVITIES

3139.1 REMINDER: MEMBER ASSIGNMENTS FOR THE JUNE 2021 ACCREDITATION BOARD MEETING

B. Dony presented the members' assignments for the June 2021 meeting for information. No concerns or comments were noted.

ACTION ITEM:

- Secretariat to add the Université du Québec en Abitibi-Témiscamingue decision to the June 2021 meeting agenda

3139.2 REQUESTS FOR ACCREDITATION VISITS – FALL 2021 AND WINTER 2022

M. Warken reported that the CEAB secretariat has received requests for accreditation visits from 17 institutions for 79 programs including 13 new programs.

ACTION ITEM:

- Secretariat to update materials assigning A.M Laroche to chair the visit to École Polytechnique and S. Barrington to chair the visit to Université de Sherbrooke

3139.3 ANTICIPATED ACCREDITATION VISITS 2021-2025

M. Warken presented the 2021-2025 anticipated accreditation visits forecast for information and workload planning purposes.

3139.4 PROGRAMS UNDER DEVELOPMENT

M. Warken presented the list of programs under development. Meeting participants were encouraged to report anything of interest related to this issue. Three new engineering programs emerging at Humber College were reported.

ACTION ITEMS:

- Secretariat to add the following three new programs at Humber College to the June meeting documentation:
 - Bachelor of Engineering – Information Systems Engineering
 - Bachelor of Engineering – Mechatronics
 - Bachelor of Engineering – The Built Environment
- Secretariat to remove Laurentian University's Civil Engineering program from the programs under development list

3140 ABRIDGED ACCREDITATION DECISIONS

3140.5 ABRIDGED IN-CAMERA SESSION

3141 POLICY ITEMS

3141.1 REPORT FROM CEAB SUB-COMMITTEES AND WORKING GROUPS

B. Dony provided an update on the activities of the CEAB sub-committees and working groups.

ACTION ITEMS:

- AB members are invited to send emails/written feedback to working group and task force chairs on work-to-date.
- Add a "General Folder" to CEAB collaboration space for standing information, such as organizational chart, the Committee membership list, etc.
- Update organizational chart as follows:
 - Add the P&P Terms of Reference working group
 - Review and update the membership lists for all committees, working groups, and Task Forces
 - Add an explanatory note that the lines between groups denote lines of responsibility
 - Add the AIP Advisory Committee

3141.2 POLICIES AND PROCEDURES COMMITTEE REPORT

P. Lafleur noted that the P&P last met on January 14, 2021. The following topics and timelines were discussed:

- CEAB workplan
- Engineering Deans Canada concerns
- Actions to date
- Plan activities
- Task Group updates which is detailed in the following topics

3141.3 CEAB CONSULTATION PROCESS OVERVIEW

B. Dony provided an overview of the current CEAB consultation process.

3141.4 ACCOUNTABILITY IN ACCREDITATION COMMITTEE UPDATE

R. Gosine, chair of the committee provided a status update on the work of the committee including:

- The first data collection cycle was launched in June 2020 where the following groups were invited to complete their feedback forms:
 - Institutions who received a decision in June 2020
 - Regulators
- Feedback has been slow to return to the secretariat. This is assumed to be pandemic related. The secretariat has sent several reminders to stakeholders to submit their feedback.
- Visiting team members, HEIs, and students from the 2020/2021 visit cycle will be invited to submit their feedback forms once their visits have concluded.
- This fall, a webpage dedicated to the Accountability in Accreditation process was launched, featuring:
 - An introduction to the project and its goals
 - Information on the Accountability in Accreditation Committee
 - Details on the development and components of the evaluation strategy

- The program logic model depicting the indicators and outcomes to be measured,
- The evaluation cycle
- Sample surveys through which stakeholders will provide their feedback
- Due to the deferral of the 2020/2021 accreditation cycle, the data collected this year will be limited. The report on the first cycle will still be published with contextual information explaining why it does not reflect a full data set.

Next steps:

- The committee will seek a new member drawn from the Policies and Procedures Committee
- Updates on data collection will be presented at each CEAB meeting
- Regular updates on the initiative will be reported at each meeting of the Engineers Canada Board
- CEAB Secretariat to collect feedback and suggestions for improvement on the process throughout the data collection period (June 2020 – April 2021)

3141.5 NOMINATING COMMITTEE REPORT

J. Card, chair of the committee provided a status update on CEAB memberships:

CEAB leadership

- At their December 7 meeting, the Engineers Canada Board approved the appointment of the Accreditation Board leadership for the period of July 1, 2021 to June 30, 2022:
 - Paula Klink as Vice-Chair
 - Pierre Lafleur as Chair
 - Bob Dony as Past-Chair

Re-appointments

- All current CEAB members eligible for re-appointment have received support from the CEAB Nominating Committee and their regulators. These members include:
 - Suzelle Barrington (Quebec)
 - Emily Cheung (member-at-large)
 - Ramesh Subramanian (Ontario)
- Re-appointments will be submitted to the Engineers Canada Board for approval at their May 2021 meeting.

New members

- The CEAB is recruiting one new member-at-large for a term beginning July 1, 2021
- The call for nominations closed on January 15 and the Nominating Committee will meet to discuss potential nominees
- As per Engineers Canada's Board Policy 6.9, Section 6.9.3.3, support of the regulator will be sought for any individual nominated as member-at-large
- All new appointments will be submitted to the Engineers Canada Board for approval at their May 2021 meeting

3141.6 DEFINITION OF ENGINEERING DESIGN TASK FORCE

J. Pieper, chair of the committee provided a status update on the work of the committee including:

- A national consultation on the recommendations of the CEAB Engineering Design Task Force Report ran from October 1 to December 4, 2020.
 - English and French webinars were recorded on October 15th and 16th (respectively) to introduce the consultation.
 - Subsequently, Jeff Pieper (supported by Suzanne Kresta) attended the EDC's November meeting to further the conversation with the Deans on the proposal.
- The following stakeholders were invited to provide comments on the recommendations:
 - CEAB members
 - CEEA Design Education/Design Communication Special Interest Group
 - CEQB members
 - Canadian Federation of Engineering Students
 - Engineering Deans Canada
 - Engineering regulators' councils/Boards of examiners/Academic review committees
 - Higher Education Institutions
 - NSERC Design Chairs
 - National Admissions Officials Group (NAOG)
- In total, 43 comments were received.
 - Comments ranged from general support for the initiative/change, to detailed wordsmithing, to marked-up versions of the Task Force's Consultation Report. In total, the Task Force is reviewing 85 pages of materials.
 - Feedback was received from individuals and institutions, from academia and industry, and from across Canada.
 - Feedback was generally positive for the proposed initiative of having a single definition of engineering design and the proposed definition.
 - Common themes observed in the feedback were as follows:
 - The differences each engineering discipline has for what could be considered design need to be recognized.
 - There is a desire to acknowledge the diversity of society and cultural in the conception of engineering design.
 - The AUs for engineering design are a concern for stakeholders, particularly with any proposed change in how engineering design would be defined.
 - Stakeholders expressed a concern related to how visiting team members will assess engineering design within the context of the new definition.
 - Creativity is a contentious concept in engineering design; some disciplines view it as critical while others find it an inappropriate inclusion in the proposed definition.

Next steps:

- The Task Force will present their findings to CEAB at the June 2021 meeting.

3141.7 CEAB TASK FORCE ON VIRTUAL VISITS

L. Benedicenti, chair of the task force provided a status update on the work of the task force including:

- Since the task force updated the CEAB at the September meeting, they have discussed the following:
 - Institution-specific plans for the upcoming virtual visits based on the *Guide for the Virtual Evaluation of an Engineering Program*

- Challenges with finding volunteers to participate in virtual reviews
- Flexibility around document submission deadlines to suit the needs of programs and visiting teams (specifically related to the materials typically provided on-site)
- Various formats for virtual lab tours
- One member's experience as a virtual visitor for a recent ABET review (specifically lessons learned and best practices)

In subsequent discussion, it was noted:

- It was noted that there is a comment in the documentation that says screenshots of any shared documents or presentations will not be permitted. What if permission is granted sort of like when you're in an in-person interview and somebody pulls a pamphlet or leaflet out of their desk and says well this answers your question. They might hand it to us in an in-person interview, could not the same permission be done in a video interview?
 - That is a very good consideration, there are a couple of thoughts around it, one of which is the fact that if there is something that requires privacy, then you need to have an explicit release for it.

Future work will include:

- Authoring a report that details the planning and execution of the virtual visits to the new programs
- Authoring a report (following the June 2021 CEAB meeting) to assess the efficacy of the virtual visit process, in general

Next steps:

- The task force will continue with its monthly meeting
- An interim version of the first reported noted above will be provided to the CEAB for the June 2021 meeting, with the final report submitted at the September 2021 meeting
- The task force will monitor the planning and execution of the virtual visits of the three new programs and provide advice to the visiting team chairs as required

3141.8 CEAB WORKING GROUP ON STUDENT LEARNING EXPERIENCES IN THE AGE OF COVID

P. Lafleur, chair of the working group noted that they met four times over the fall of 2020 and have identified the following areas as high-impact for undergraduate engineering education as a result of COVID-19:

- Hands-on, virtual and remote laboratory experience
- Academic integrity and assessments
- The Accreditation Unit in light of changes to program delivery models
- Culminating significant design experiences (capstone projects)
- The well-being of faculty and students

3141.9 CEAB WORKING GROUP ON REQUIRED VISIT MATERIALS

P. Klink, chair of the working group provided a status update on the work of the group. Since the September AB meeting, the group took the following actions:

- Considered feedback on the draft report from AB members and the DLC

- Reached out to AB members and HEI advisors to obtain their feedback on number of courses to be fully documented with student samples, and the nature of the samples
- Discussed the draft report with the Policies and Procedures Committee
- Finalized their report which proposes the required visit materials for an accreditation review include the following:
 - **Program Operational Information** requirements are explicitly stated, eliminating the need for the visiting team to search HEI websites, and HEIs to describe their processes in the questionnaire. This information is already a requirement in the questionnaire.
 - **Program Operational Information for Graduate Attributes and Continual Improvement Documentation** details information that should be included in the Questionnaire Exhibit 1.
 - **Graduate Attributes and Continual Improvement Detailed Explanation** is the information typically provided during presentations and question/answer periods at the HEI, to help guide the HEI in their planning process for the visit.
 - **Detailed Syllabi** are required for all courses on the minimum path claiming Mathematics, Natural Sciences, Engineering Science, Engineering Design, and Complementary Studies AUs or equivalent curriculum measurement scheme(s). These syllabi are readily available at most HEIs, and part of the current information collection.
 - **Documentation of Assigned Work and Exams** for all Engineering Science and Engineering Design courses on the minimum path, requires all problem set questions, lab information, project descriptions and quizzes, tests, exams, and other summative assessments with detailed marking schemes or detailed rubrics, if available.
 - **Evaluated Student Work** are required for specified courses:
 - For the culminating design experience, provide all deliverables from ten projects (or fewer if there are fewer than ten participants/groups in a course). Among these projects, provide three that, in the opinion of the instructor, are of the lowest quality.
 - For ten courses (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 combination at least 75 per cent of the total mark in the course. For each assessment, provide three examples of work that, in the opinion of the instructor, marginally meet expectations. If all work meets expectations, examples that in the instructor's opinion are the lowest quality products will be provided. Up to three more examples may be added at the HEI's discretion.
 - Provide additional examples of GAs at an intermediate or advanced level of instruction in Design, Communication, Impact of Engineering on Society and the Environment, Ethics and Equity, and Economics and Project Management if they have not been provided in the culminating design experience or the ten courses selected. These examples should be chosen from courses on the minimum path. The HEI does not have to create a separate GA dossier for this work. For each assessment, provide three examples of work that, in the opinion of the instructor, marginally meet expectations. If all work meets expectations, examples that in the instructor's opinion are the lowest quality products will be provided. Up to three more examples may be added at the HEI's discretion.
- A final report on the work of the working group was included in the meeting materials. It contained a full description and rationale for each of the

requirements, a comparison of existing and proposed requirements, connections between criteria and information requirements, a survey of visit materials required by some other accreditation bodies, and an implementation plan.

- The final report was also supported by a pre-recorded presentation of the group's work.
- Consultation will commence in March 2021 and a final report will be submitted to the CEAB for their September meeting.

In subsequent discussion, it was noted:

- Detailed syllabi, assigned student work, and exams are required for all courses on the minimum path (including first and second year courses) claiming Mathematics, Natural Sciences, Engineering Science, Engineering Design, and Complementary Studies AUs or equivalent curriculum measurement scheme(s). This includes all problem set questions, lab information, project descriptions and quizzes, tests, exams, and other summative assessments with detailed marking schemes or detailed rubrics, if available.
- It would be valuable to include previous program visitors in the list of stakeholders to be consulted.

After discussion, the following motion was carried unanimously:

MOTION:

***"THAT** the Required Visit Materials (RVM) working group consult with stakeholders on the recommendations in their report titled "Required materials for CEAB visits."*

ACTION ITEMS:

- Consider ways to engage previous program visitors in the upcoming consultation
- Make adjustments to required visit materials as discussed

3141.10 CEAB TASK FORCE TO RESPOND TO THE ENGINEERS CANADA "30 BY 30" INITIATIVE RECOMMENDATIONS

J. Pieper, chair of the working group provided a status update on the work of the group including:

- The group has identified a series of possible interventions that can be made in the accreditation system in support of the 30 by 30 initiative in the following categories:
 - The CEAB Criteria and Procedures
 - The interpretive statements
 - Encouraging recruitment and retention to the engineering profession
 - Volunteer management
 - General accreditation-related activities
- The working draft of the Group's report was included in the meeting materials. The intention of providing this early draft of the report was to solicit comments and feedback from the members of the CEAB on the recommendations that are being considered and the metrics which are being developed.

In subsequent discussion, it was noted:

- By focussing on women in engineering, the report ignores other underrepresented groups but the report is within the scope of the working group which was specific to women in engineering. The task force participated in a workshop on Equity, Diversity, and Inclusion in accreditation which prompted conversations about the scope of the report and recommendations. In the end, the task force has a mandate to address 30 by 30 but conversations and perspectives have been beyond that original mandate.
- The task force was cautioned about the use of interpretive statements in the overall accreditation system. One of EDC's concerns is the use of interpretive statements as criteria and therefore, consideration should be given as to whether recommendations are more appropriate to the criteria rather than the interpretive statements.
- A challenge for women in the workplace is their responsibilities at home. Therefore, the accreditation system could ask questions about parental leave policies available to both male and female faculty members.
- 30 by 30 is an endeavour for a societal shift and any suggestions made should put the societal shift at the centre of the conversation.
- We can anticipate resistance from EDC on some of the recommendations. Ensuring EDC representation on the task force is one way to ensure the Deans have a voice at the table. The task force and the CEAB should reflect on ways to engage the Deans in the discussion and build support for its recommendations.

Next steps:

- The Working Group will finalize its report and present its findings / recommendations at the June 2021 CEAB meeting.

3141.11 CEAB TASK FORCE TO REVIEW THE P&P COMMITTEE TERMS OF REFERENCE REPORT

P. Lafleur, chair of the working group provided a brief update on the work of the group.

The working group is exploring a distributed leadership model. This model is a departure from the current structure of the P&P but would allow more CEAB members to take on leadership roles. In this model, what is normally undertaken by the Chair and the Vice-Chair would be distributed across three 'leads' with specific portfolios (academics, regulatory and improvement processes). The CEAB Chair would assume the overall direction of the P&P and coordinate the work of the committee through the Leads. Selection of P&P members would be the responsibility of the CEAB Executive Committee and volunteers would be chosen who meet the pre-established eligibility criteria.

Members of the Working Group continue to refine their proposal, taking into consideration the recommendation of the Engineers Canada Nominations Task Force, the operational flow of the CEAB, and the implications that could be a result of implementation of both models.

In subsequent discussion, it was noted:

- The work of the Continuous Improvement Lead should include improvements to the accreditation process itself. For example, by bringing audit principles to the work of the CEAB.

- The working model is a departure from the current structure of the CEAB. It might be in the group's best interest to seek AB input on the structure being proposed before proceeding with work on a Terms of Reference.
- The current P&P membership should be engaged in discussions as they proceed.

Next steps:

- The Working Group will finalize its report and present its recommendations at the June 2021 CEAB meeting.

3142 INTERNATIONAL RELATIONS

3142.1 INTERNATIONAL ENGINEERING ALLIANCE UPDATE

L. Benedicenti provided an update on the June 21-26 virtual International Engineering Alliance meeting.

The 2020 meeting of the IEA was to take place in Cape Town, South Africa, but, as a result of travel restrictions related to the COVID-19 pandemic, the meeting took place virtually June 21-26, 2020. The Engineers Canada delegation includes:

- Luigi Benedicenti, then Chair, CEAB
- Jean Boudreau, then President-Elect
- Gerard McDonald, CEO
- Beryl Strawczynski, Manager, Regulatory Research and International Mobility
- Mya Warken, Manager, Accreditation and CEAB Secretary

He also reported that the Engineers Canada monitoring visit has been postponed for one year.

3143 NEW BUSINESS

3143.1 VIRTUAL VS IN-PERSON ACCREDITATION VISITS

Travel restrictions and physical distancing requirements due to the COVID-19 pandemic significantly impacted the 2020/2021 accreditation visit cycle. On April 9, 2020 the CEAB made a decision to:

1. Defer the 2020/2021 accreditation visit cycle for one year (visits to new programs excepted), and
2. Grant a one-time, one-year accreditation cycle extensions to all programs who received a favorable accreditation decision before June 5, 2020.

This decision was subsequently supported by the Engineers Canada Board on April 28, 2020.

The ongoing pandemic restrictions on travel, physical gatherings, and on-campus activities continue to be a barrier to in-person accreditation visits. Therefore, the CEAB discussed the format of the 2021/2022 accreditation visits.

In subsequent discussion, it was noted:

- It may be too early to make the decision as the CEAB has not yet conducted a reasonable number of virtual visits. It might be best to wait until June or September to make the decision.
- The CEAB might consider planning for a virtual visit cycle but be flexible as to which format is permitted under health restrictions and the format that is preferred by the institution and the visiting team. Perhaps a hybrid visit format could be offered as an option, especially for larger visits.

- Making an early decision on the format provides the benefit of certainty for all involved.
- In-person visits offer a much richer experience, especially in our interactions with students, evaluating the learning space, and on-campus environment.
- The time commitment to produce virtual tours for visiting teams is significant.
- The CEAB might consider holding more visits in the months of January, February and March rather than in October, November, and December.
- Condensing the visits into three months rather than the traditional six may be difficult to administratively support by the Secretariat.
- At the time of the meeting, many institutions were uncertain as to whether their campuses would be available for in-person visits making it difficult to plan the visit format come September.

After discussion, the following motion was carried:

MOTION:

"THAT all 2021/2022 accreditation visits be conducted virtually."

3143.2 APPROVED 2021 CEAB WORKPLAN

The CEAB workplan is created annually and reflects the requests for accreditation visits submitted by undergraduate engineering programs, priorities under Engineers Canada's strategic plan, and continual improvement initiatives informed by stakeholder feedback (including higher education institutions, Engineering Deans Canada, accreditation visiting team members, and CEAB members).

B. Dony provided an update on the workplan including:

- The draft workplan was submitted in draft to the Engineers Canada Board for their feedback during their October meeting. No feedback was received at that time.
- The workplan was approved by the Engineers Canada Board at their December 7, 2020 meeting.

Next steps:

- The Executive Committee and CEAB Secretariat will monitor progress made on the workplan.
- The workplan and progress made will be presented at each CEAB meeting.
- The Chair will provide regular updates to the Engineers Canada Board on progress made on the workplan.

3143.3 FEBRUARY 7, 2021 MEET-AND-GREET

The CEAB holds an annual introductory meeting between 2021/2022 cycle visiting team chairs and program officials from the institutions they will visit. The goal of the meeting is to enable Higher Education Institutions receiving accreditation visits in the upcoming cycle to meet with their designated team chairs before their visit. Institutions are encouraged to submit questions prepared ahead of time.

The meeting took place on Sunday, February 7, 2020 from 11am-2pm ET using Zoom.

3143.4 SEPTEMBER 2021 WORKSHOP TOPICS

B. Dony invited CEAB members to have an open discussion about the needs of the CEAB, the visiting teams, and the institutions. To stimulate thinking, the Chair provided some suggestions for topics for the September 2021 CEAB workshop:

- Given the volume of working group and task force work, there may be an opportunity to use the workshop time to explore the work of these groups, consider implementation plans and change management strategies.
- Considering the outcome of agenda item 8.1 (format of 2021/2022 visit cycle), the CEAB may wish to focus on the execution of the next visit cycle.

Other topics suggestions included:

- How to prepare for a virtual visit
- Measuring inputs (Accreditation units/Learning units)
- Assessments in the age of COVID

ACTION ITEM:

- CEAB members to send any other suggestions for workshop topics to the secretariat.
- The Executive Committee will propose September workshop topics at the June AB meeting.

3143.5 COMMENTS FROM OBSERVERS

B. Dony invited the meeting observers to provide feedback on the meeting.

The following comment was received:

- G. Pichler noted that the meeting was well chaired and thanked the CEAB for continuing to invite the Admissions Officials as it provides them with a lot of continuity.

3144 FUTURE MEETINGS

Proposed future dates and locations for the Accreditation Board meetings were presented. There was a suggestion that, to be consistent with the decision to make all visits virtual for 2021-2022, the CEAB meetings in Sept 2021 and February 2022 should be virtual as well. There are other considerations, including the fact that other Engineers Canada groups normally meet at the same time in September.

2021 meetings:

- Spring meeting: June 5 & 6 in Ottawa, ON.
- Fall meeting and workshop: September 18 & 19 in Vancouver, BC.

2022 meetings:

- Winter meeting and workshop: February 5 & 6 in Ottawa, ON.
- Spring meeting: June 3, 4 & 5 in Ottawa, ON.
- Fall meeting and workshop: September 17 & 18 in Charlottetown, PEI.

3145 SUMMARY OF ACTION ITEMS

M. Warken listed the summary of action items and are included in these minutes as appendix "A".

3146 MEETING EVALUATION BY ACCREDITATION BOARD MEMBERS

3146.1 MEETING EVALUATIONS REPORT

Members were reminded to use the link to the electronic survey provided in the agenda to submit their evaluation.

3147 ADJOURNMENT

The 169th meeting of the Canadian Engineering Accreditation Board adjourned at 19:00 on Saturday, February 6, 2021.

A handwritten signature in blue ink, appearing to read 'Bob Dony', with a large loop at the end.

Bob Dony, FEC, P.Eng.
Chair

A handwritten signature in black ink, appearing to read 'Mya Warke', with a large loop at the end.

Mya Warke
Secretary

APPENDIX "A"

Minute number / meeting agenda number and subject title	Action item	Notes
3137.4 / 2.4 2020 GACIP Summit Plus	<ul style="list-style-type: none"> • Secretariat to share the link to the GACIP summit and report to CEAB members 	Complete
3138.3 / 3.3 – Canadian Federation of Engineering Students	<ul style="list-style-type: none"> • Secretariat to share CFES's full survey report with CEAB members when available 	Complete
3139.1 / 4.1 Reminder: member assignments for the June 2021 AB meeting	<ul style="list-style-type: none"> • Secretariat to add the Université du Québec en Abitibi-Témiscamingue decision to the June 2021 meeting agenda 	Complete
3139.2 / 4.2 Requests for accreditation visits – Fall 2021 and Winter 2022	<ul style="list-style-type: none"> • Secretariat to swap chairs for A.M Laroche (École Polytechnique) and S. Barrington (Université de Sherbrooke) 	Complete
3139.4 / 4.4 Programs under development	<ul style="list-style-type: none"> • Secretariat to add the following three new programs at Humber College to the June meeting documentation: <ul style="list-style-type: none"> ○ Bachelor of Engineering – Information Systems Engineering ○ Bachelor of Engineering – Mechatronics ○ Bachelor of Engineering – The Built Environment • Secretariat to remove Laurentian University's Civil Engineering program from the programs under development list 	Complete
3141.1 / 6.0 Report from CEAB Sub-Committees, working groups and task forces	<ul style="list-style-type: none"> • AB members are invited to send emails/written feedback to working group and task force chairs on work-to-date. • Add a "General Folder" to CEAB collaboration space for standing information, such as organizational chart, the Committee membership list, etc. • Update organizational chart with P&P ToR, membership list, add that lines denote lines of responsibility • Add AIP Advisory Committee to organizational chart 	<ul style="list-style-type: none"> • Complete • Complete • Complete • Complete
3141.9 / 6.8 – CEAB working group on required visits materials recommendations	<ul style="list-style-type: none"> • Consider ways to engage previous program visitors in to consultation on required visit materials • Make adjustments to required visit materials as discussed 	Complete
3143.4 / 8.4	<ul style="list-style-type: none"> • CEAB members to send any other suggestions for workshop topics to the secretariat. 	Complete