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Minutes

ACADEMIC REQUIREMENTS COMMITTEE (ARC)

Friday, March 15, 2019

PRESENT

Members

Ramesh Subramanian, Chair	Jüri Silmberg
Waguih ElMaraghy, Vice-Chair	Michael Hulley
Leila Notash	Bob Dony
Judith Dimitriu	Meilan Liu
Stelian George-Cosh	Roydon Fraser
Amir Fam	Allen Stewart
Sanjeev Bhole	Amin Rizkalla

Staff

Moody Farag
Pauline Lebel
Faris Georgis
Anna Carinci Lio (Regrets)
Esther Kim
Irene Zdan
Claire Riley

Regrets

Seimer Tsang	Ian Marsland
Gosha Zywno	George Nakhla
Remon Pop-Iliev	John Yeow
Shamim Sheikh	Magdi Mohareb
Medhat Shehata	Ross Judd
	Barna Szabados
	Joe Lostracco

Guests

David Kiguel, ERC Chair
Changiz Sadr, ERC Vice-Chair

1. Call to Order and Chair's Remarks

The meeting was called to order by the Chair at 10:37 AM.

2. Approval of the Agenda

Added for discussion under Item 10 – **Other Business** was: **Section 8.2.3** (Applicants with Canadian Non-Engineering Degrees or Non-CEAB-Accredited Engineering Degrees) and **Section 8.3.3** (Applicants with International Non-Engineering Degrees) of the Procedures Manual of the Academic Requirements Committee (aka, the Red Book).

MOTION

It was **moved** by Waguih ElMaraghy and **seconded** Amir Fam that the agenda be approved as amended.

CARRIED

3. Approval of the Minutes of February 15, 2019

The following amendment was noted:

- Added to Item 8.5 – the Experience Requirements Committee (ERC) Report was: The ERC conducted a total of 898 interviews in 2018.

MOTION

It was **moved by** Leila Notash and **seconded by** Waguih ElMaraghy that the minutes of the February 15, 2019 be approved as amended.

CARRIED

4. Matters Arising from the Minutes

- The Vice-Chair requested that the changes outlined in the Distance Education Subcommittee Report #4 – approved by the ARC at the February 15, 2019 meeting – be added to the Red Book.
- It was confirmed that Barna Szabados added any approved changes to the Red Book. He sent the revised Red Book to Moody Farag, Manager, Admissions for publishing, electronically, and to update the hard copies that are used during the meetings.
- Moody Farag told the committee that a soft copy (PDF) of the revised Red Book will be sent to ARC members soon.

5. Chair's Report

The Chair reported the following:

- On behalf of the ARC, on March 8, 2019, he sent an email to the former Deputy Registrar Michael Price with an attached letter thanking him for the many years of support he provided to the ARC.
- The 2018 ARC minutes have been posted on the website with the exception of the missing months of February, March and April that the administrative assistant will have to locate in the database folders. January 2019 ARC minutes have also been posted on the website.
- ARC member Sanjeev Bhole is the recipient of a pin and certificate for his 15 years of dedicated volunteerism at PEO with the ARC.
- He attended his first ERC meeting on February 22, 2019 and found it both enjoyable and informative.

6. Staff Report

Moody Farag, Manager, Admissions reported the following:

- At the February 15, 2019 ARC meeting, Anna Carinci Lio, Supervisor, Examinations was asked to provide statistical data on the Professional Practice Examination (PPE) and

Technical Examination for the December 1, 2018 sittings. The information compiled was presented on Appendices A and B and distributed to the committee.

- The PPE results were divided into Canadian Engineering Accreditation Board (CEAB) and Non-CEAB for the 20% failure-rate statistics of the 1358 PPE papers written.
- The committee discussed the statistics at length. The data presented will be identified as Appendix A of the March 15, 2019 ARC meeting.

7. Endorsements

7.1 Reading Assignment of Technical Reports/Synopses

There were five synopses:

1. A synopsis in Electrical Engineering titled: Smart Grid to Cognitive Grid: submitted by applicant with File Number: 100224809. The report will be reviewed by Barna Szabados.
2. A synopsis in Electrical Engineering titled: Energy Audit and Simulation of a Two-Storey Residential House: submitted by applicant with File Number: 100214162. The report was reviewed and accepted by Roydon Fraser.
3. A synopsis in Manufacturing Engineering – Automotive titled: Drive Shaft Failure Analysis: An Investigation and Improvement of an Industrial Band Saw Drive System: submitted by applicant with File Number: 100216247. The file was reviewed by Waguih ElMaraghy and he commented that the report was admissible, however, it needed to include various failure theories and criteria.
4. A synopsis in Mechanical Engineering titled: Important Considerations in Selecting and Specifying a Paint System as a Coating in Mechanical Design: submitted by applicant with File Number: 100506799. It was reviewed and accepted by Stelian George-Cosh.
5. A synopsis in Metallurgical Engineering titled: Automated Surface Inspection Systems for Steel Strip Inspection: submitted by applicant with File Number 100218323: Ramesh Subramanian agreed to be the examiner.
6. A synopsis in Mechanical Engineering (**submitted to Roydon Fraser at the February 15, 2019 ARC meeting**) titled: Effects of Temperature to the Demagnetization of Magnets: submitted by applicant with File Number: 100145333. The report was denied, and the applicant is required to resubmit a new synopsis.

7.2 Issues Arising from ARC/ Deputy Registrar Recommendations

At the Vice-Chair's request, the Chair agreed that the title of **Item 7.2 Issues Arising from ARC/Deputy Registrar Recommendations** be changed to: **Issues Arising from ARC/Registrar Recommendations**.

7.3 Issues Arising from ERC Recommendations for Applicants Referred by ARC

There were no issues to report.

8. **Procedural and Related Matters**

8.1 **Licensing Committee (LIC) Update**

LIC Chair Barna Szabados reported the following:

- The LIC met on March 14, 2019. Bernard Ennis, Director, Policy and Professional Affairs is the new LIC staff advisor.
- At the meeting, Bernard Ennis reported on recent feedback regarding the Office of the Fairness Commissioner (OFC) including:
 - In response to the internal review of applicant files, the OFC requested that if new information is received after a Notice of Assessment (NOA) is issued, the file is to be evaluated by someone other than the original assessor. PEO retained legal counsel to examine its review process and concluded that PEO/ARC was correct since the Notice of Assessment is not a Notice of Determination. Therefore, when there is new information, it is an assessment and there is no issue with having the same reviewer. It is not a registration decision, it is an assessment decision.
- In August 2018, the Legislation Committee expressed concern as to whether the ARC has the legal authority to institute a legal review and advised the LIC to seek legal review. As yet, the LIC has not received a response from PEO's outside counsel with regard to the proposed 3rd stage (External Review) of the process for the Independent Review of Academic Assessments. Stage 1 (Review with New Information) and Stage 2 (Internal Review) are in the Red Book. If the response from legal counsel is positive, Stage 3 will be included in the Red Book. Until then, this stage cannot be part of the assessment review process.
- In response to one of the OFC recommendations, PEO engaged a psychometrician to review its Professional Practice Examination (PPE). The psychometrician assessed the PPE and confirmed its validity.
- The LIC is looking at what the *Professional Engineers Act* defines as “good character.” Barna Szabados opines that “good character” is not well defined but is rather open to interpretation. The Act and Regulations provide little detail as to what is meant by “good character” and how this attribute should be assessed in applicants. LIC member George Comrie gave a presentation at the March 14, 2019 meeting addressing the suitability to practise professional engineering in Ontario and the assessment of the good character requirement. Once further along, the LIC will seek input from both the ARC and ERC.

8.2 **Canadian Engineering Accreditation Board (CEAB) Update**

ARC Chair Ramesh Subramanian reported the following:

- The next CEAB meeting is scheduled for June 1 and 2, 2019 in Ottawa. Decisions will be made based on the results of university accreditation visits in 2018 and 2019.
- The CEAB is seeking nominations to fill 1 to 3 member-at-large positions. Selection of candidates will be made in May and the appointment begins July 1, 2019. A profile of the position was distributed to the committee for review. Members interested in submitting their candidacy were informed to apply directly to Engineers Canada, however, PEO must agree to appointment if the candidate is from Ontario.

8.3 **Canadian Engineering Qualifications Board (CEQB) Update**

Roydon Fraser reported the following:

- At the CEQB's April 2019 meeting, there will be a significant motion put forward for consideration as to how to use the syllabi. Currently, the CEQB is developing a guideline to this effect. He opined that the guideline may have a major effect on other provinces.
- One important item outlined in the guideline will be the mixing and matching of Groups A and B examinations, somewhat easing prior restrictions.
- Another notable item is specifying "depth and breadth" – introductory, developing and advanced – which is not explicitly in Groups A and B examinations.
- He will provide feedback to the committee in April.

8.4 **ARC Distance Education (DE) Subcommittee**

DE Subcommittee Chair Waguih ElMaraghy reported that there was no update to report, however, the subcommittee will work on the next steps and decide which information to collect from DE applicants.

9. **New Procedural Matters for Discussion**

9.1 **CEQB Consultations: The Use of Syllabi and Paper on Entrepreneurship**

- On February 14, 2019, Engineers Canada informed its members responsible for admissions that, on behalf of the CEQB, it was seeking feedback on the following documents: **Regulators Guideline on the Use of the Syllabi (Draft); Consultation Paper on Entrepreneurship; Example template: Annex 1: Instructions for Examiners; and 3 sample academic transcripts.**
- Feedback on the syllabi was submitted by Barna Szabados and Faris Georgis, Manager, Registration and was compiled in one document (Appendix B of the meeting minutes) which was distributed to the committee in the meeting materials. The Chair confirmed that feedback received will be presented to the CEQB as ARC feedback.
- The Chair asked Faris Georgis, Manager, Registration to share his feedback with the committee, after which members engaged in discussion.
- Pauline Lebel, Manager, Licensure shared feedback from an ERC member on the Paper on Entrepreneurship. The member was not supportive of the CEQB looking into entrepreneurship, questioning the CEQB's qualifications to look into entrepreneurship.
- The committee discussed at length how PEO could accommodate Ontario entrepreneurs in obtaining licensure, how potential barriers could be removed. Members also addressed the importance of an effective approach to regulating engineering entrepreneurs.

10. Other Business

10.1 30 by 30 Task Force

Bob Dony is a member of PEO's 30 by 30 Task Force, also comprised of the Chair, Helen Wojcinski, PEO Vice President Christian Bellini, Councillor Lola Hidalgo Salgado, and the Committee Advisor is Jeannette Chau, Manager, Government Liaison Programs. The 30 by 30 Task Force's mandate is to show visible leadership in addressing the underrepresentation of women licensed in the profession by formally endorsing the 30 by 30 initiative with Engineers Canada and committing to undertaking an action plan, as approved by Council, to resolve this inequity.

Bob Dony shared a 30 by 30 Task Force slide presentation on equity and outreach in engineering. In 2011, Engineers Canada launched this bold initiative, the 30 by 30. This initiative seeks to increase the number of newly licensed engineers who are women to 30% by the year 2030. In 2018, the initiative was further expanded through Engineers Canada's Strategic Priority 3 (SP3) to include recruitment, retention, and professional development of women in engineering.

PEO Council unanimously endorsed the 30 by 30 Initiative in September 2017 and PEO approved the establishment of a 30 by 30 Task Force in June 2018. PEO approved a PEO Action Plan in September 2018 based on Engineers Canada's nine promising practices in facilitating women obtaining their licences and succeeding in the engineering profession. The PEO Action Plan outlines specific actions that the key stakeholders along the pathway to licensure – universities, organizations supporting internationally educated engineers, PEO as the Regulator, and employers of engineers – need to undertake in order to reach the 30% goal.

After the presentation, members discussed various aspects of the initiative and measures to support it.

10.2 The Red Book

Roydon Fraser referred to Sections 8.2.3 and 8.3.3 of the Red Book, both dealing with non-engineering degree holders, and stated that the sections should be identical. He recommends that one of these two Red Book sections should simply refer to the other section; have Section 8.3.3 refer back to Section 8.2.3.

He also pointed out that Section 8.2.3 does not mention that with years of relevant engineering experience, the applicant may be referred to the ERC for an interview. There is no time given.

10.3 Summer Students

Member Leila Notash asked whether PEO was hiring summer students to help out at PEO. It is a matter that was already discussed in the past along with talks on developing an app for a student membership program. Roydon Fraser responded and said that he was preparing a White Paper on hiring summer students to present to Council.

10.4 Volunteer Compliance Training

The Chair reminded members about the Government of Ontario's mandated occupational health and safety and accessibility training for all volunteers. PEO 's People Development Department sent an email to staff and volunteers, via e-blast, on February 28, 2019. PEO volunteers are required to complete the following training courses by December 31, 2019:

- The Accessibility for Ontarians with Disabilities Act (AODA) Customer Service (condensed);
- Understanding Human Rights (AODA Edition);
- Workplace Violence and Harassment Training for Employees (Ontario – Bills 168 & 132).

The Chair urged members who did not complete the training to do so as soon as possible.

11. Experience Requirements Committee (ERC) Update

ERC Chair David Kiguel reported the following:

- The last ERC Business Meeting was on February 22, 2019. He noted that the ARC Chair attended.
- ERC member Christian Bellini also gave a 30 by 30 Task Force presentation. There was a lot of discussion after the presentation focusing on what the ERC and ARC members can do to contribute to the 30 by 30 goal.
- At this meeting, the ERC was informed that the Deputy Registrar Michael Price was no longer with PEO. The committee passed a motion to send a letter to Michael Price to thank him for his many years of support and contribution to the ERC. He wrote and sent the letter on the committee's behalf.
- The next ERC Business Meeting is April 26, 2019.

12. Adjournment

The meeting adjourned at 1:10 PM

The next ARC meeting is schedule for **April 12, 2019**



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Item 6. Statistical Report – Appendix A – Page 1 of 3

**STATISTICAL DATA
PROFESSIONAL PRACTICE EXAMINATION
December 1, 2018 sitting**

December 1, 2018	Number
Applications to write	1458
Financial Credit for Cause	2
Financial Credit Used	3
No Shows	98
Papers Written	1358 (93%)
Passed	1088 (80%)
Failed (225 -1 st -, 35, 2 nd – 9 , 3 rd , 1 – 4 th)	270 (20%)
Failed Part "A" Ethics Only	134
Failed Part "B" Law Only	77
Failed Both Part "A" and Part "B"	59



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First time failure

	CEAB	Non-CEAB	Total
1 st degree	95 (42%)	48 (21%)	143 (64%)
1 st degree plus Canadian post grad degrees	7 (3%)	56 (25%)	63 (28%)
1 st degree plus non-Canadian post grad degrees	0	19 (8%)	19 (8%)
Total	102 (45%)	123 (55%)	225 (100%)

Second time failure

	CEAB	Non-CEAB	Total
1 st degree	17 (49%)	7 (20%)	24 (69%)
1 st degree plus Canadian post grad degrees	0	4 (11%)	4 (11%)
1 st degree plus non-Canadian post grad degrees	0	7 (20%)	7 (20%)
Total	17 (49%)	18 (51%)	35 (100%)

Third time failure

	CEAB	Non-CEAB	Total
1 st degree	2 (22%)	4 (44%)	6 (67%)
1 st degree plus Canadian post grad degrees	0	3 (33%)	3 (33%)
1 st degree plus non-Canadian post grad degrees	0		
Total	2 (22%)	7 (78%)	9 (100%)

Fourth time failure

	CEAB	Non-CEAB	Total
1 st degree	0	0	0
1 st degree plus Canadian post grad degrees	0	0	0
1 st degree plus non-Canadian post grad degrees	0	1	1
Total	0	1	1



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**STATISTICAL DATA
TECHNICAL EXAMINATION
December 2018 sitting**

a) # of applicants completed the exam program-Good Performance	55 (14%)
b) # of applicants completed the exam program-Average Performance	59(15%)
c) # of applicants allowed to continue-Average Performance	236
d) # of applicants allowed to Continue-Poor Performance	13
e) # of applicants failed to confirm-Poor Performance	14(4%)
f) # of applicants whose applications were close-Poor Performance	6(2%)
g) # of applicants who completed basic studies exams	9

Number of applicants sat for exams in Dec 2018 392

Notes:

1. Out of the 463 PEO technical exams, 125 exams only were requested by applicants for the Dec 2018 sitting.
2. 573 exam papers were written
3. Of the 573 exam papers written 476 (83%) obtained a passing mark.

CEQB CONSULTATIONS – WINTER 2019

Feb-14-2019:

Melanie Ouellette, Manager, Qualifications, Engineers Canada informed EC members responsible for admissions that the CEQB was seeking feedback on the following documents: **Regulators Guideline on the Use of the Syllabi (Draft); Consultation Paper on Entrepreneurship; Example template: Annex 1: Instructions for Examiners; and 3 sample academic transcripts.**

Feb-21-2019:

Further to discussions at the Feb-15 ARC meeting, a PEO request was sent to ARC members via email asking for their feedback; the above-noted documents were attached.

Mar-9-2019:

The ARC Chair sent a reminder email to ARC members asking for feedback.

Feedback Received:

From Barna Szabados on Feb-25:

“Item 3 (Entrepreneurship) would be of great interest. (We have this on our radar at LIC).

The others are good, but we essentially do that at ARC.”

From Faris Georgis on Mar-12:

As requested, below are my comments on the ‘Canadian Engineering Qualifications Board Consultations:

Draft Regulators Guideline on the Use of Syllabi and Template (Winter 2019):

1. **The proposed assessment of the education of applicants is very subjective, making equal treatment or fairness difficult.** For example, the statement, ‘*Although a minimum number of distinct areas of knowledge are suggested for each of the three I-D-A levels, some flexibility should be allowed to ensure that the profession remains open to competent individuals.*’. This implores the question “How much flexibility is considered appropriate?”, “Who is a competent individual?, and how was competency determined?”, “What is considered appropriate ‘documented justification’, as stated in the paragraph below?”, and “what are the rules on documented justification?”. Flexibility can be a two-way street – it can cause loosening or restricting, creating an unequal playing field, which would be very susceptible to bias and fairness concerns, even if unintentional.

2. **The document doesn't seem to deal with a consistently measurable degree of acceptable 'gaps' amongst the various provincial regulators.** For example, the statement, *'To identify gaps and provide a recommended treatment, the reviewer should use examinations syllabi, and consider consulting CEAB programs, previous assessment results and their own expertise, with documented justifications. To determine the number of confirmatory or gap filling examinations, reviewers can refer to their own jurisdictional-specific policies on number of examinations and thresholds.'*. There are a lot of variables here (e.g. the underlined phrases). Again, with so many variables, the assessment is very subjective, making equal treatment or fairness difficult. The questions that should be answered are, "Has this model been tested with all CEAB programs?", "If there can be gaps in CEAB programs, is it fair not to expect similar gaps in Non-CEAB programs?", "What is the appropriate benchmark for gaps?", and "If jurisdictional-specific policies are to override this guideline, what commonalities remain?".
3. With the above flexibility and variability in the approaches, not only between individual reviewers, but also between regulators, applicants can choose the easiest path through the easiest regulator and then transfer through the inter-provincial labour mobility provisions. This defeats the purpose of the task. This guideline should be made equal for reviewers from all provinces as well as for all applicants, by harmonizing the jurisdictional-specific policies. This should not be an impossible task, because there are not significant differences between the provinces to justify the different approaches. **A special task force, dedicated to the 'harmonization of inter-provincial academic assessments', is needed.**

* ** **Pauline will share feedback from an ERC member regarding the Paper on Entrepreneurship.**

*** **Engineers Canada is requesting feedback on all documents by April 10.**