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Minutes

ACADEMIC REQUIREMENTS COMMITTEE (ARC)

Friday, April 12, 2019

PRESENT

Members

Ramesh Subramanian, Chair	Jüri Silmberg
Leila Notash	Michael Hulley
Sanjeev Bhole	Bob Dony
Gosha Zywno	Roydon Fraser
Barna Szabados	Amin Rizkalla
Ross Judd	Medhat Shehata
Remon Pop-Iliev	Ian Marsland
Magdi Mohareb	

Staff

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

Regrets

Waguih ElMaraghy, Vice-Chair	George Nakhla
Seimer Tsang	John Yeow
Shamim Sheikh	Joe Lostracco
Judith Dimitriu	Allen Stewart
Meilan Liu	Stelian George-Cosh
Amir Fam	

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 Chair Ramesh Subramanian at 10:30 AM.

2. Approval of the Agenda

MOTION

It was **moved by** Bob Dony and **seconded** Leila Notash that the agenda be approved as distributed.

CARRIED

3. Approval of the Minutes of March 15, 2019

Under Item 8.1 – Licensing Committee Update, Ross Judd asked that the pronoun “he” under the last bullet, be identified as Barna Szabados as to avoid any confusion.

MOTION

It was **moved by** Roydon Fraser and **seconded by** Jüri Silmberg that the minutes of the March 15, 2019 be approved as revised.

CARRIED

4. Matters Arising from the Minutes

- Leila Notash referred to Item 10.3 – Summer Students. She asked Roydon Fraser whether he had presented his White Paper to Council regarding the hiring of summer students. Both he and the Chair responded by saying that the initiative would not happen until next year.
- Leila Notash also referred to Item 10.4 – Volunteer Compliance Training. She asked the Chair whether there was data on how many ARC members completed the training. She informed members that she experienced a problem receiving her password when registering for the training modules. Though she contacted PEO’s office about the issue initially, she finally had to contact the company administering the modules in order to receive her password. David Kiguel also registered but did not receive confirmation until 2-3 weeks later. Roydon Fraser made 3 attempts to register without receiving any confirmation or password. He acknowledged that there was obviously a problem with the system which makes it difficult for a volunteer to register and asked the councillors present to take this matter into account.

5. Chair’s Report

Chair Ramesh Subramanian reported the following:

- ARC feedback regarding the consultation documents from the Canadian Engineering Qualifications Board (CEQB) was discussed at the March 15, 2019 ARC meeting. Feedback received from ARC member Barna Szabados on the Consultation Paper on Entrepreneurship, and from Faris Georgis, Manager, Registration, on the Regulators Guideline on the Use of the Syllabi (Draft) was returned to the CEQB via email, prior to the April 10, 2019 deadline.
- The PEO Council is requesting that one of its councillors be delegated as ARC Council Liaison. The Chair suggested that the ARC nominate Leila Notash as she is the Past Chair of the ARC and, in March 2019, she was elected as a Councillor-at-Large.

MOTION

It was **moved by** Bob Dony and **seconded by** Barna Szabados that the ARC recommend the nomination of Leila Notash as ARC Council Liaison.

CARRIED

- The Chair will inform Ralph Martin, Manager, Secretariat of the ARC motion passed to recommend Leila Notash as the ARC Council Liaison nominee.

6. **Staff Report**

Moody Farag, Manager, Admissions reported the following:

- A 20% increase of all PEO fees was approved by Council at its March 2019 meeting, including annual membership fees. The new fees will take effect May 1, 2019.
- Council has not approved, as yet, the proposed fee for interviews to waive examinations. Discussions are ongoing.
- The proposal to charge a fee for credit card payments was also put on hold.
- The Chair read from a March 27, 2019 email from PEO: The by-law changes currently exclude the two new fees approved by Council in November 2018: interviews to waive the technical examination and the \$10 credit card convenience fee.
- Leila Notash suggested that PEO members have the option to renew their membership through direct deposits. Moody Farag affirmed that her suggestion would be brought to the attention of Financial Services.

7. **Endorsements**

7.1 **Reading Assignment of Technical Reports/Synopses**

There were 4 synopses: 3 in Manufacturing Engineering and 1 in Mechanical Engineering.

1. A synopsis in Manufacturing Engineering titled: Reduction in Notification (Request for Work) Creation Errors: submitted by applicant with File Number 100140902. The report will be reviewed by Stelian George-Cosh.
2. A synopsis in Manufacturing Engineering titled: Process Improvement Project Using (DOE) Design of Experiment Technique: submitted by applicant with File Number 100520367. The report will be reviewed by Stelian George-Cosh.
3. A synopsis in Manufacturing Engineering titled: Toothpaste Filler Retrofit: submitted by applicant with File Number 100517548. The report will be reviewed by Remon Pop-Iliev.
4. A synopsis in Mechanical Engineering titled: Detailed Engineering Study Replacement of Generator Sets Central Utilities Building (CUB) for Brock University: submitted by applicant with File Number 100084933. The report will be reviewed by Judith Dimitriu.

7.2 **Issues Arising from ARC/ Registrar Recommendations**

There were no issues to report.

7.3 **Issues Arising from ERC Recommendations for Applicants Referred by ARC**

There were no issues to report.

7.4 February 6, 2019 Professional Practice Examination (PPE) Results

Anna Carinci Lio, Supervisor, Examinations reported the following on the statistics for the PPE results of February 6, 2019:

- 77 applicants registered to write the exam at this additional sitting; 67 applicants wrote the exam with a 69% pass mark. She noted that the passing percentage was much lower than previous sittings.
- She opined that the low passing marks may have been the result of applicants rushing to write the examination in February as opposed to choosing to write the exam at the April 2019 sitting.
- She provided the committee with a breakdown of previous sittings to compare results. (Appendix A)

8. Procedural and Related Matters

8.1 Licensing Committee (LIC) Update

LIC Chair Barna Szabados reported that there were no LIC meetings since the last ARC meeting and there was no update to report.

8.2 Canadian Engineering Accreditation Board (CEAB) Update

ARC Chair Ramesh Subramanian reported the following:

- The next CEAB meeting will be held on June 1 and 2, 2019 in Ottawa. Decisions will be made based on the results of the university accreditation visits during the 2018 and 2019 cycle.
- The Chair called on CEAB Chair Bob Dony to share his following comments:
 - On behalf of PEO, there is an opportunity for the ARC to provide its input on the guidelines for institutions in the process of accreditation.
 - In the recent past, as part of the accreditation visits, the institutions provided graded examples of students' work for all courses. However, there was a push by various CEAB members to reduce the workload for the institutions and, currently, the guidelines require 20 core engineering courses.
 - At the February 2019 CEAB meeting, members met with chairs and designated officials from institutions undergoing accreditation to discuss expectations. CEAB staff communicated that there is a variation among chairs about the expectation of graded work. The consensus seems to be that the current guidelines are not well defined and they are asking for firmer guidelines on the graded student work the institution must provide.

- Bob Dony is working on a White Paper that will address reducing the counting of Academic Units (AU's) during accreditation visits and to, instead, put the focus on the technical depths of exams, the content of the material and the flow of the curriculum. He suggested that the ARC further discuss the issue in order to put together a position paper that can be submitted to Council so that Council can present the ARC's position to the Engineers Canada Board on behalf of PEO.
- Chair Ramesh Subramanian, Bob Dony and Roydon Fraser agreed to draft a paper, compiling the details related to the guideline for accreditation visits to present to the ARC for further feedback and input.

8.3 Canadian Engineering Qualifications Board (CEQB) Update

Roydon Fraser reported the following:

- He attended a CEQB meeting the weekend of April 6 and 7, 2019 focused mainly on operational issues.
- The aeronautical syllabi are moving forward with the work plan requested from PEO.
- The draft of the *Consultation Paper on Regulators Guideline on the Use of the Syllabi* is out for feedback. PEO provided its feedback prior to the April 10, 2019 deadline. One item outlined in the guideline will be the mixing and matching of Groups A and B examinations, somewhat easing prior restrictions, as well as specifying “depth and breadth” – introductory, developing and advanced.
- A motion was passed for an Experience Competency White Paper Guideline to be distributed for consultation. The guideline is only competency-focused with conclusions based upon preliminary experience.
- A workshop on entrepreneurship and admissions to the profession was held, very specifically regarding graduates' entrepreneurship. A major question was put for the: How do regulators essentially impart the value of a professional engineering licence (P.Eng.) to students and graduates? He opined that the predominate answer was to refer to demand-side legislation. It was difficult for members to come up with other solutions as to how to convince students and graduates about the advantages to obtaining licensure.
- Bob Dony pointed out that demand-side legislation is legislation requiring a P.Eng. to adhere to something that is not covered under the *Professional Engineers Act* (the Act). He opined that if such adherence was covered under the Act, there would be no need for demand-side legislation to strengthen the profession. Roydon Fraser reiterated the need to promote the value in obtaining licensure.
- Roydon Fraser attended the session on competencies. There was considerable discussion around competencies and the concept of graduating, waiting, and eventually obtaining a licence. The conclusion was that the 4-year experience requirement in the admissions process needs to be changed.
- The last item to discuss was “good character.” Roydon Fraser noted that this is the one item he brought forward that was included in the 2019 CEQB Work Plan. He stated that it is very clear that *good character* ties into both admissions and competencies for experience.

- He opines that the one thing competencies do not do on professionalism is to question whether a person practices their ethics properly. They give examples of decisions they have made, and this is considered some practice of good character. But it is the practice of observing someone in a situation where they are not coming up with examples on their own; they are independently observed. This is not part of the competencies as they are being proposed.

8.4 ARC Distance Education (DE) Subcommittee Update

DE Subcommittee Chair Waguih ElMaraghy was not in attendance and there were no items to report.

9. New Procedural Matters for Discussion

9.1 Engineering Report Grading Sheet

Roydon Fraser summarized the following:

- There are 5 areas of review on the 2-page grading sheets: (1) Introduction, Objective; (2) Approach and Methods; (3) Analysis, Synthesis, Testing Design; (4) Results and Conclusions; (5) Technical Writing and General Organization. Each category has an equal weight of 20%.
- He gave an example of a report he reviewed where there was no analysis included (regarding page 1 ranking of the grading sheet). However, with the current ranking system, the report still passed.
- Barna Szabados shared his experience of entering 9 in the 0 column (page 2 of the grading sheet) and it was accepted. As well, there was no technical verification necessary in the report he was reviewing, and, in this case, he suggested that instead of marking 0, there needs to be a “non-applicable” column added to the grading sheet to permit more flexibility by the markers.
- Roydon Fraser proposes that the ARC look at the entire grading sheet, with initial focus on the “weighting” of the 5 areas. He suggested that committee members discuss the ranking matrix and propose ways in which to change the current system at the next ARC meeting.

MOTION

It was **moved** by Roydon Fraser and **seconded** by Leila Notash that, as of April 12, 2019, the five areas of ranking for the Engineering Report Grading Sheet be changed to reflect the following new grading schematic:

1. Introduction, Objective (10%);
 2. Approach and Methods (10%);
 3. Analysis, Synthesis, Testing, Design (30%);
 4. Results and Conclusions (30%);
 5. Technical Writing and General Organization (20%)
- AND** that these changes be included in the Procedures Manual of the Academic Requirements Committee (aka, the Red Book). These changes will be in effect until the ARC meets and decides differently.

CARRIED

- Leila Notash requested that all revision comments and suggestions on the report assessments be copied or sent to the ARC Subcommittee members: Waguih ElMaraghy, Roydon Fraser, Ross Judd, Seimer Tsang and herself, with a copy to Moody Farag.
- It was also agreed that markers will have the choice to receive an engineering report for review in either an electronic or hard copy format. These choices should be communicated in the marker's accompanying cover letter.

10. Other Business

- Leila Notash referred to an April 2018 Filipino graduate's performance review. At that time, there was a discussion as to not having enough information at the time. As Past ARC Chair, she has requested that the review be updated.
- She asked that more data be added to last year's information compiled by staff and analysed by her: How many Filipino graduates have attended interviews? How many have written exams? What was their performance level.
- Moody Farag agreed to work with her on providing this update.

11. Experience Requirements Committee (ERC) Update

ERC Chair David Kiguel reported the following:

- There were no ERC meetings since he last reported on March 15, 2019. The next ERC Business Meeting is April 26, 2019.
- The ERC meeting minutes are up to date and now posted on the PEO website.
- The ERC Subcommittee met on April 8, 2019. It concluded its proposal to initiate a process to randomly select interviews to assess whether they have met the requirements and expectations. The subcommittee proposes that this initially be conducted on a trial basis.
- The subcommittee will seek ERC approval to modify the interview reporting forms. One form is for applicants to complete and submit two weeks before their interview which includes a brief description of the projects they want to discuss with the interview panel, and a description of their roles related to the projects. Applicants will also be asked to write a summary of what they did; to explain how they did it; and to include whether there were different engineering options and, if so, why they chose one option over the other. As yet, the form is not mandatory, but rather part of a pilot project. The form will be helpful to both the applicant and panel in preparation for the interview.
- The second form the subcommittee is proposing to modify is the form panel members complete after the interview that includes their recommendations and details on competencies, as presented by Pauline Lebel, Manager, Licensure at the December 2018 ARC meeting, titled: List of All Competencies and Generic Indicators. (The presentation and list of competencies were sent to all ARC and ERC members.)
- The initial form that will be distributed at the April 26, 2019 ERC meeting is the one that will be used for staff referrals to assess the experience. The same concept will be used for ARC referrals.

- The briefing note for the 30-hours of physical presence of the monitors at the workplace of the Engineering Interns (EITs) was revised. It was submitted to staff for consideration to add to Council's agenda. However, the briefing note was not included on Council's agenda and there was no feedback as to why it was not. David Kiguel opined that this may be a gap in communications that could be addressed.
- Roydon Fraser explained that the briefing note was not submitted to Council because Council is waiting for the results of the consultant's Regulatory Performance Review which is expected to be completed in June 2019. Bob Dony pointed out that if a committee has any questions as to whether its briefing note will be on Council's agenda, the process is to contact the PEO President who is charged with setting Council's agenda. David Kiguel commented that he would speak with President David Brown about the matter as the President is scheduled to attend the April 26, 2019 ERC business meeting.
- Through elections, ERC Vice Chair Changiz Sadr was appointed PEO member on the Engineers Canada Board at the March 2018 Council meeting.

12. **Adjournment**

The meeting adjourned at 11:53 AM

The next ARC meeting is schedule for **May 17, 2019**

Policy on Eliminating Bias in the Registration Process of the PEO

Purpose of this Policy

This policy is intended to further the commitment of Professional Engineers Ontario (PEO) to handle all registration matters in a transparent, objective, impartial and fair manner. The policy focuses on eliminating bias from the registration process.

This policy addresses the following subjects:

- a) identifying characteristics of bias, potential sources of bias, and circumstances that may compromise impartial assessment decisions;
- b) removing bias from the registration process; and
- c) providing guidance to those involved in the registration process should a situation of bias arise.

Application of the Policy

This policy applies to all PEO representatives involved in the registration process including the Registrar, PEO staff, members of the Academic Review Committee, Experience Review Committee and the Registration Committee. This policy is in addition to other policies that exist at PEO including human rights policies for PEO staff and codes of conduct that apply to Council and committee members.

Identifying Bias, its Sources and Circumstances that Can Compromise Impartial Decision Making

Bias, sometimes called an appearance of bias or a conflict of interest, exists where a reasonable member of the public would conclude that a person's personal or financial interests, relationships or affiliations may affect their judgment or the discharge of their duties.

Some examples of activities or circumstances that in many circumstances would constitute an appearance of bias for a PEO representative include the following:

- (a) Where the PEO representative has a connection with a person or issue to be determined that would reasonably be seen by those who know all of the circumstances as incompatible with their responsibilities as an impartial decision-maker;
- (b) Where the PEO representative is influenced by extraneous considerations such as a characteristic of the applicant protected by the Ontario Human Rights Code;

- (c) Where the decision could confer a more than trivial financial or other benefit to the PEO representative or their close relative or friend or affiliated entity;
- (d) Where the decision could impose a more than trivial financial or other burden on the PEO representative or their close relative or friend or affiliated entity;

It is impossible to identify all circumstances that might create an appearance of bias and PEO representatives should be diligent to apply critical thinking and professional judgment to their own circumstances and thought processes.

Removing Bias from the Registration Process

PEO representatives involved in the registration process are selected through a recruitment process that examines their qualifications and experience and current affiliations so as to ensure that registration decisions made by them are transparent, objective, impartial, fair and free of bias. The recruitment process also values the selection of PEO representatives that reflect the diverse demographics of Ontario.

PEO representatives involved in the registration process are trained upon first assuming their responsibilities and then annually to make registration decisions that are transparent, objective, impartial, fair and free of bias. This includes training on the nature and purpose of the registration requirements, decision-making criteria and processes, the proper use of precedents and balancing consistency and equity in making registration decisions.

PEO representatives involved in the registration process are encouraged to complete the "Human Rights 101" module, an e-learning module of the Ontario Human Rights Commission (<http://www.ohrc.on.ca/en/learning/human-rights-101>).

PEO representatives involved in the registration process are provided opportunities to identify and declare a bias. Depending on the nature of the registration decision, this includes notifying a supervisor (for PEO staff) and including on the agenda for meetings for PEO representatives an explicit opportunity to declare a bias.

Where registration decisions are made collectively, the Chair of the committee or other group ensures a systematic discussion of the issues including all decision makers to ensure that the process is transparent, objective, impartial and fair and to help identify any irrelevant considerations.

Guidance Should a Situation of Bias Arise

Where a PEO representative is in doubt as to whether they have an appearance of bias, the PEO representative shall consult with an appropriate person such as their supervisor (i.e., for staff), the Chair of the committee, or staff advisor (i.e., for committee members).

If a PEO representative believes that they have an appearance of bias in a particular matter, they shall,

- (a) prior to any consideration of the matter, declare that they have an appearance of bias that prevents them from participating;
- (b) not take part in the discussion of or vote on any question in respect of the matter;
- (c) leave the room for the portion of the meeting relating to the matter even where the meeting is open to the public; and
- (d) not attempt in any way to influence the voting or do anything which might be reasonably perceived as an attempt to influence other PEO representatives or the decision relating to that matter.

Where a PEO representative declares an appearance of bias, that fact shall be recorded in the registration file or in the minutes of that meeting of the committee.

Where a PEO representative believes that another PEO representative has an appearance of bias that has not been declared despite any appropriate informal communications, the first PEO representative shall advise an appropriate person such as their supervisor (i.e., for staff), the Chair of the committee, or staff advisor (i.e., for committee members) of the belief.

Where a PEO representative believes that another PEO representative has acted with an appearance of bias, they shall advise in writing an appropriate person such as their supervisor (i.e., for staff), the Chair of the committee, or staff advisor (i.e., for committee members) of the belief.

Where the Registrar, a supervisor (i.e., for staff) or a committee concludes that a PEO representative has an appearance of bias that has not been declared, it can direct that the PEO representative not participate in the discussion or decision, leave the room for that portion of any meeting and not try to or otherwise exert influence in the matter.

Where a PEO representative has not acted in accordance with this policy in a serious manner or on a repeated basis, an appropriate person such as their supervisor (i.e., for staff), the Chair of the committee, or staff advisor (i.e., for committee members) shall take action to preserve the ongoing integrity of the registration process including disciplining or removing the individual from their role in PEO registration matters.

This policy is effective *[on a date to be determined]*



ENGINEERING REPORT APPRAISAL

Report Title: _____

Author: _____

File Number: _____

Examiner: _____

NOTE TO EXAMINER: Please read the instructions provided in the attached guide to ascertain consistency, fairness and accountability between markers.

The Break down of marks below has been approved by ARC.

(if you feel that a different weighting is more appropriate to this report, please justify clearly your grading scheme)

- Introduction, Objective: (max 10 pts) _____
- Approach and Methods (max 10 pts) _____
- Analysis, Synthesis, Testing, Design (max 30 pts) _____
- Results and Conclusions (max 30 pts) _____
- Technical Writing and General Organization (max 20 pts) _____

TOTAL:

Are you willing to be the Examiner of a re-submitted report if needed? YES NO

Each year the S.E. Wolf Award is made to the candidate producing the best engineering report. If you feel that this report should be re-examined for this award please indicate

(if the mark is below 50% it is expected to have a detailed feedback on how to improve the report.)

COMMENTS

Date: _____

Signature: _____



GUIDELINES FOR REVIEWING ENGINEERING REPORTS

NOTE TO EXAMINER:

This guide has been prepared to assist you in establishing a numerical grade for engineering reports and suggests a grading scheme to maintain consistency between markers.

The grading should reflect the Candidate's thorough professional understanding of the subject, in addition to the professional communication in the form of an engineering report following the PEO engineering report guidelines. Should you wish to use a different breakdown, please indicate and justify your marking scheme.

In case your mark is below the passing mark of 50%, it is suggested that you report the marking in a letter with detailed comments, clearly indicating the areas which should be improved by the candidate in re-submitting the report. The candidate may receive a copy of your marking and the rating guide used. You may also annotate the report directly and return the annotated report with the standard form that will be passed on to the applicant.

SUBMISSION:

You may submit your assessment in the following formats:

- You may print out the Pdf (or word) form, and submit by mail (or email) the filled out form.
- You may also wish to write a letter outlining your thoughts and proposing a mark based on 100.
- You may submit your assessment using the on-line link provided to you (using the pre-filled form)

However, as mentioned previously, if a report is not acceptable, provide detailed comments to clearly indicate the areas which should be improved by the candidate in re-submitting the report (an annotated report might be of great help). The candidate may receive a copy of your marking and comments and the rating guide used.

BREAK DOWN OF THE ASSESSMENT:

The 5 main areas of the marking scheme may contain the following non exclusive items:

- 1) Introduction, Objective:**
 - Statement of the problem
 - Clarification of the need and requirements
- 2) Approach and Methods:**
 - Critical literature review
 - Engineering concepts and theories
 - Methods, models and tools
- 3) Analysis, Synthesis, Testing, Design:**
 - Data gathering
 - Analysis
 - Synthesis
 - Testing and validation
 - Results interpretation, deductions
- 4) Results and Conclusions:**
 - Critical evaluation of results
 - Recommendations and conclusions
- 5) Technical Writing and General Organization:**
 - Technical writing: grammar, spelling, clarity
 - Cover page and nomenclature
 - Figures, illustrations, tables
 - Abstract and table of contents
 - References and appendices