

WORK PLAN - 2019 Education Committee (EDU)

C-521-2.9
Appendix F(ii)

Approved by Committee: October 3, 2018	Review Date:
Approved by Council: <i>November 16, 2018</i>	Approved Budget: <i>[DATE]</i>
Mandate [as approved by Council]:	<p>Whereas, there has been a recent declining interest among students (especially female students) in STEM-related careers, and whereas, identified root causes for this decline include images of science, perception of careers, curriculum, teacher experience and gender-based perceptions, therefore, the Education Committee (EDU) commits:</p> <ul style="list-style-type: none"> • To be a leader and value-added influence in the development of education policy, curriculum, and outreach such that high school graduates will have the necessary knowledge, skill, and motivation to succeed in an engineering program. • To support PEO's Envisioned Future (Source: "PEO Envisioned Future", C-459-6.6, Appendix A, approved by Council Sept. 2009) as it relates to "Public awareness of the role of the Association" (PEA Sect 2 (4)4 – <i>Additional Object</i>). • To "support and encourage public information and interest in the past and present role of professional engineering in society" in PEA Sect 8(20). <i>[Approved by Council: 22 March 2013]</i> • To comply with "PEO Strategic plan" by conducting annual reviews and proposing new actions aligned with the future PEO goals and objectives.
Terms of Reference [Key duties]:	<p>The EDU Key Duties and Responsibilities are to support the PEO Envisioned Future and are an important portion of the EDU Terms of Reference. EDU addresses science, math and technology, literacy and other educational issues of relevance to PEO leading up to (but not including) the University / College educational level. The key duties of the Education Committee are:</p> <ol style="list-style-type: none"> 1.0 Chapters: Provide support for PEO Chapters to achieve their education outreach goals. The PEO Education committee plans and helps PEO chapters implement valuable learning activities for aspiring engineers, which aids the long-term health of the profession. 2.0 Equity and Diversity: Ensure that principles of equity and diversity are reflected in key activities (i.e. French translations of booklets and brochures) supported by the committee. 3.0 Guidance to PEO Council on education-related policy: Research and articulate proposed positions on elementary and secondary school education - mathematics, sciences and technology in particular and recommend same to Council. 4.0 Strategic Relationships: Establish productive relationships with other organizations whose objects are complimentary. 5.0 Program Development: <ul style="list-style-type: none"> • To enhance PEO's public image (A 2018-2020 strategic objective of PEO) by educating Ontarians on the important roles and valuable contributions of professional engineers and of the self-regulating engineering profession in society. <ul style="list-style-type: none"> ➤ <i>One key input to the overall PEO "regulatory" process is elementary and secondary education (with particular emphasis on STEM education in the academic preparation for aspiring engineers).</i> • To encourage STEM education from an early age as a matter of sound public policy.

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	<ul style="list-style-type: none"> ➤ <i>Elementary and secondary engineering education is very important to PEO in the overall context of public safety and protecting the public interest.</i> • To encourage and assist young people in making informed career choices related to science, technology, and engineering. <ul style="list-style-type: none"> ➤ <i>PEO needs to be certain that there remains a steady flow of talented and skilled individuals into the regulatory framework for engineers. This will ensure the continued existence of a self-regulating engineering profession which strives to keep society safe and also to promote a viable economy in Ontario.</i> • To advise government and the public on educational requirements (e.g. curriculum) for the knowledge economy in general and for engineering in particular. • To support the 30 by 30 program, in order that female students have role models for female engineering leaders <p>This may include (but is not limited to) the following:</p> <p>5.1 Reaching out to the public - Support holding public events that promote awareness of and the importance of science, technology, engineering and math education (STEM) and the PEO's role in protecting public safety and the public welfare.</p> <p>5.2 Reaching out to the teachers - Support holding information sessions for teachers (as required).</p> <p>5.3 Hard skills development – Focus on “Thinking Skills” and “Lifelong Learning” as the key essential skills for our future engineers.</p> <p>5.4 Soft skills development - Focus on Integrity, Work Ethic, Teamwork and Accountability as crucial work habits for our future engineers.</p>		
Equity and Diversity Awareness	<p>Q1. <i>Was the E & D module reviewed in order to have tasks and activities align with the E&D Policies? Yes.</i></p> <p>Q2. <i>Is each task/activity being done in an equitable manner and engaging diverse groups? Yes.</i></p> <p>Q3. <i>Are there any barriers to information dissemination, human resources, physical space, and cultural differences? No.</i></p>		
Tasks, Outcomes and Success Measures:	Task/Activities: CD -- Culture and Diversity <ul style="list-style-type: none"> • <i>Ensure that principles of equity and diversity are reflected in key activities supported by EDU.</i> 	Outcomes Success measures - Develop learning activities for the under-represented groups in engineering in collaboration with the different participating associations and institutions. - Consult with other organizations to create inclusive messaging for the under-represented groups in engineering, and to encourage our young and bright female and under-represented students to pursue future careers in science and engineering.	Due date: 2019

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		<ul style="list-style-type: none"> - Encourage local and Ontario-wide business sponsorship to increase funding for future education outreach activities. - Engage the post-secondary engineering Chapter scholarship recipients in EDU activities. - Encourage post-secondary Chapter scholarship recipients to share their experience with our young minds and the future leaders. 	
	<p>CL -- Chapter Liaison</p> <ul style="list-style-type: none"> • <i>Provide enhanced support for the chapter system as recently generally requested by Council.</i> 	<ul style="list-style-type: none"> - Liaise with the Chapters on a regular basis through circulation of an interactive website / discussion forum. - Communicate the EDU team activities with an annual digital newsletter and other new forms of digital communication. - Form a Chapter Liaison sub-committee to visit multiple education events held by our chapters and other education organizations each year and, document and pass the knowledge and new skills to the EDU committee members for leading them to success with reaching out to the public and informing them about our profession. - Review chapter funding requests. - Document chapter activity content for evaluation and lessons learned. - Share lessons learned with other EDU stake holders. 	2019
	<p>EC -- Education Conference</p> <ul style="list-style-type: none"> • <i>Organize a conference which will provide the chapters with resources and information to develop innovative education outreach programs</i> 	<ul style="list-style-type: none"> - Execute an Education Conference with the active participation of PEO Chapters, with a view toward cost efficiencies through ongoing evolution of the structure, format and frequency of the conference. - Invite stakeholders from the government and our organization to attend the event. 	2019

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		<ul style="list-style-type: none"> - Create awareness about the education program and identify the areas where it needs improvement. - Decide on new actions with Boards of Education to address the current and future needs. - Enable Chapters to develop educational outreach programs that engage students, educators, and the public at large in understanding the diversity of the engineering profession. - Develop a strong partnership between the Chapters and the Education Committee to work together to enhance the promotion of our regulatory engineering profession. - Plan speakers and stakeholders with the ability to make a change to the education curriculum to attend the conference each year. - Include 'Hands-On' learning activities and take aways to the conference scheme. - Initiate new activities and meet semi-annually to measure progress and decide on new actions. - Plan documented activities and material for the education and training of the conference participants. - Invite chapters and members with an interest and current stake in the activities to attend the conference and draw conclusions and decide on new actions from the discussion items at the conference. <p><i>Q2: The multi-cultural calendar was considered when scheduling the workshop date.</i></p> <p><i>Q3: Persons with disabilities and food allergies were appropriately accommodated.</i></p>	
	EIF -- Engineering Innovations Forum Liaison	- Liaise with Engineering Innovations Forum by attending multiple meetings.	2019

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	<ul style="list-style-type: none"> <i>To raise public awareness of engineering innovations and their impacts on Ontario elementary and secondary school students.</i> 	<ul style="list-style-type: none"> - Collaborate with industry leaders to promote the culture of innovation in our society. - Connect with post-secondary institutions and our bright students to drive and promote innovation activities 	
	<p>ER -- Educator Resources</p> <ul style="list-style-type: none"> <i>Contribute to science, math and technology curriculum development.</i> 	<ul style="list-style-type: none"> - Research and review information relating to what society needs from an education system, including creating and distributing relevant communications through applicable media. - Share descriptive and concise messages about our organization and regulated practice of the engineering through our communication channels. - Work with the Ministry of Education to revise Ontario's Math education curriculum. - Collaborate with the Ministry of Education to produce STEM education activities - Review and critic the teaching and education practices in our province - Design an EDU website with our view and recommendations about the education systems in Ontario. - Collaborate with engineering faculties, and partner with others (i.e. Let's Talk Science, Science Rendezvous, FIRST Robotics) with respect to outreach events and programs. 	2019
	<p>LTP -- Long-Term Planning</p> <ul style="list-style-type: none"> <i>To formulate a long-term strategy to increase Ontario Secondary School student awareness and interest in Engineering as a rewarding profession; to identify the competencies required for success in an Engineering program at University; to focus on development of the "essential" skills through self-directed learning beyond the Ontario education</i> 	<ul style="list-style-type: none"> - Monitor EDU committee activities and prepare a summary report to identify how the committee has achieved the goal of increased awareness. - Maintain strong partnerships with stakeholders (both internal and external to PEO) and as pertaining to elementary, secondary and post-secondary education and development of "essential skills". 	2019

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	<i>curriculum; and, to provide access and support to a variety of external educational resources available at PEO.</i>	- Complete the Terms of Reference / Human Resources Plan / Work Plan for 2020 in collaboration with EDU Committee members.	
	<p>POS -- Articulate PEO Positions</p> <ul style="list-style-type: none"> • <i>Research and articulate proposed PEO positions on elementary and secondary school education, relating to mathematics, sciences and technology in particular.</i> 	<ul style="list-style-type: none"> - Statements / positions relating to Physics, Computer Science and Computer Engineering Education (in collaboration with OSPE) to be considered for proposals to PEO Council. - Work with the Ontario government and the Ministry of Education with respect to the current Ontario math curriculum, as a expert consultant to ensure the STEM curriculum evolves to equip graduates for success in a knowledge-based global economy 	2019
	<p>PWC -- Province Wide Challenge</p> <ul style="list-style-type: none"> • <i>Coordinate Development of a Province-Wide Engineering Challenge.</i> 	<ul style="list-style-type: none"> - Target senior primary and junior secondary students with province wide engineering challenges that promote our organization regulatory image. - Work with the Chapter Liason sub-committee to hold the first province wide 'PEO Engineering Math Competition'. - Plan 'PEO Design Challenge' competition' at the 'Skills Ontario event'. - Work with external public and private sector partners for financial support and sponsorship 	2019
	Prepare and submit Annual EDU report to council	Submitted.	2019
	Develop and submit 2020 Work Plans and HR Plans for Council's approval	Submitted.	Sept, 2019
	Hold regular EDU meetings	<p>At least 6 meetings per year.</p> <p>Q2: <i>The multi-cultural calendar was considered when scheduling the workshop date.</i></p> <p>Q3: <i>Persons with disabilities and food allergies were appropriately accommodated.</i></p>	2019
Stakeholders:	PEO Council, PEO Chapters , GLC, OSPE		
Version Control	Version 1.0 [October 3, 2018] Changes were made to sections in the Education Conference (EC)		