

STUDENT CATEGORY OF MEMBERSHIP

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The Engineering and Geoscience Professions Act



The Association of Professional
Engineers and Geoscientists of Alberta

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1 Overview

This paper discusses whether the special student category of membership is still needed given the changes to the legislation in 2009 creating the Profession Licensee (P.L.) and the Professional Technologist (P. Tech.) designations.

2 Executive Summary

The current *Engineering and Geoscience Professions Act (The EGP Act)* provides for two categories of student:

1. Individuals enrolled in a full-time program at a university in Alberta leading to an undergraduate degree in engineering or geoscience
2. Individuals who do not have an undergraduate degree in engineering or geoscience but who have at least two years of post-secondary education relating to engineering or geoscience.

This paper addresses the second category of student (referred to as “special student” for the purposes of this paper).

Individuals with only two years of post-secondary education are eligible to apply to APEGA for registration as a Professional Engineer or Professional Geoscientist (P.Eng. or P.Geo.). However, without degrees in engineering or geoscience, they are typically deficient in a large number of courses and are enrolled as special students. The Board of Examiners (BOE) may assign up to 24 exams for engineering and up to 30 exams for geoscience. These exams are administered internally by APEGA.

This special student category is unique to Alberta. No other province or territory in Canada has this category.

This special student category has existed since 1981, prior to the introduction of the Professional Licensee (P.L.) and Professional Technologist (P.Tech.) designations. The P.L and P.Tech. designations currently allow individuals without undergraduate degrees in engineering or geoscience to obtain a licence to practice a specific scope of engineering or geoscience. Given this alternate pathway to licensure, the special student category is no longer necessary.

Few individuals who are in this special student category of membership complete the examinations. It is resource intensive for the BOE to evaluate the qualifications of these individuals and for APEGA to administer the corresponding examinations. These resources could be better used by increasing our capacity to evaluate the qualifications of foreign-trained individuals with engineering and geoscience degrees.

The special student category should be removed from the legislation.

The P.Tech. designation is available for individuals with at least two years of post-secondary education in areas relating to engineering or geoscience and would include individuals who fall within the current special student category. Please refer to the separate policy paper entitled *Professional Licensee* for a detailed discussion.

3 Existing Legislation

The current legislation has two categories of student membership with APEGA.

The first category is for individuals who are enrolled in a full-time program at a university in Alberta that is recognized by the BOE as leading to an undergraduate degree in engineering or geoscience (Appendix 1).

The second category (special student) is for individuals who have applied to APEGA for registration as a Professional Engineer or Professional Geoscientist but do not have an undergraduate degree in engineering or geoscience, but do have at least two years of post-secondary education in areas that relate to the science or technology of engineering or geoscience (Appendix 2).

The BOE assigns examinations to these individuals to fill the academic deficiencies. Individuals who complete all of the prescribed examinations are deemed to have met the academic requirements for registration as a P.Eng. or P.Geo. (Appendix 1)

4 Research Summary

With the creation of the P.L. and P.Tech. designations in 2009, an alternative pathway exists for individuals with two years of post-secondary education (Appendix 2). APEGA's statistics reveal that very few individuals who enrol as special students and are assigned examinations complete them. In the past five years, only three individuals out of about 1,000 completed their examinations and were registered as a P.Eng. or P.Geo. (Appendix 3).

A review of the comparable legislation across Canada revealed that no other jurisdiction has a similar special student category. Similarly, no other jurisdiction allows individuals with two years of post-secondary education to apply for registration as a Professional Engineer or Professional Geoscientist (Appendix 4).

The review also found that other Alberta professionals (architects, physicians and lawyers) do not allow individuals with two years of post-secondary education to apply for registration as a professional member (Appendix 5).

5 Discussion

Special Student Category

The special student category has existed in the legislation since 1981, before the creation of the P.L. and P.Tech. designations. These designations were created to provide a pathway for non-degree holders to obtain a licence to practise engineering or geoscience.

The special student category compels APEGA to maintain and distribute examinations for individuals who do not have the supporting academic knowledge a degree holder would have. As a result, APEGA is responsible for administering comprehensive technical exams to fill the gap of academic deficiencies. These individuals are typically lacking a large number of courses as compared to holders of undergraduate engineering or geoscience degrees and are assigned a large number of examinations to fill these deficiencies (up to 24 examinations in engineering and up to 30 examinations in geoscience).

It is time- and resource-intensive for the BOE to evaluate the academic qualifications of these special students. In addition, as these individuals do not have undergraduate degrees in engineering or geoscience, it can be difficult to evaluate how their education compares to an undergraduate degree in

engineering or geoscience. It becomes even more complex and difficult when the education is from international polytechnic or educational institutions.

Over the past five years, the BOE has assessed more than 1,000 applicants who were assigned to the special student category. It is estimated that the assessment of these candidates consumed between 2,000 to 3,000 hours of BOE effort. This effort could have instead been directed towards evaluating the qualifications of 2,000 to 3,000 individuals with engineering or geoscience degrees, thereby ultimately improving the efficiency and effectiveness of APEGA's registration processes.

It is neither APEGA's role nor mandate to act as an educational institution, and the outdated legislation requires APEGA to maintain an academic infrastructure capable of filling gaps in academic deficiencies across a large number of subjects for individuals who do not have degrees in engineering or geoscience.

Individuals who wish to be licensed as Professional Engineers or Professional Geoscientists should receive their academic training at a recognized post-secondary institution that offers appropriate lectures, laboratories, projects and related learning methodologies.

6 Recommendation

It is recommended that the special student category be removed as a pathway to licensure.

7 Appendices

Appendix 1 – The Engineering and Geoscience Professions Act, Section 30(9), Regulations Divisions 2 and 5

Appendix 2 – The Engineering and Geoscience Professions Act, Section 10 - Professional Licensee and Professional Technologist, Regulations, Division 2

Appendix 3 – APEGA Student Category Statistics

Appendix 4 – Student Category: Legislative Excerpts from Canadian Professional Engineering and Geoscience Associations

Appendix 5 – Student Category: Legislative Excerpts from Other Professions within Alberta