

THE ENGINEERING PROFESSION'S POSITION

- Self-regulation of the engineering profession protects and enhances public health, safety, welfare, the economy, and the environment for all Canadians. Provincial and territorial regulators must ensure that all licence holders have a certain minimum acceptable breadth and depth in education to practise engineering safely in Canada.
- Engineering regulators set high professional and ethical standards, establish codes of conduct, and administer regulatory processes and standards of practice to ensure protection of the public interest.
- An individual's application for engineering licensure is thoroughly reviewed by the provincial or territorial regulator to ensure the applicant meets the education, work experience, language, ethics, and good character requirements.

The challenge(s)

A 2017 Canadian Broadcasting Corporation Marketplace investigation uncovered that more than 800 Canadian citizens have purchased illegitimate degrees from unaccredited institutions—often referred to as diploma mills—in fields related to nursing, education, health, law, and engineering. A diploma mill sells academic degrees, diplomas, and transcripts to individuals without providing educational experience and without being recognized by an educational accrediting body. Individuals practicing in these fields without proper academic requirements place the health, safety, and economic well-being of Canadians at risk.

With this apparent increase in illegitimate credentials in Canada, the legitimate efforts of existing accredited educational institutions are undermined. Diploma mills that use similar names to existing accredited institutions may confuse prospective students and the public. Similarly, employers who hire individuals with illegitimate credentials risk undermining their professional standards and reputation while simultaneously threatening public trust in the services they provide to the community. An employee with illegitimate credentials poses a great threat to public health, safety, the economy, and individual well-being, particularly if their illegitimate credentials supposedly affirm their expertise in professions such as engineering.

What the provincial and territorial regulators have done

An individual's application for engineering licensure is thoroughly reviewed by the provincial or territorial regulator to ensure that the applicant meets the academic, work experience, language, ethics, and good character requirements. The engineering regulators will assess an applicant's academic credentials based on their education and confirm that:

- Applicants possess an authentic and valid degree from a legitimate institution that has not been forged or altered in any way. A specified level of breadth and depth of education is expected by the regulators in order for an applicant to become licensed.

- Applicants who hold a degree from a non-accredited institution are examined further to confirm that they possess a level of education in engineering to meet the requirement for licensure.
- Examinations may also be assigned if educational deficiencies are identified in an application, to ensure that those applicants meet the required educational standards or to confirm the academic depth of the applicant's educational background.

Regulators have a strong role in identifying illegitimate academic qualifications that could threaten public safety and public interest. Their responsibilities go beyond licensing and affect the regulation of practice for professional engineers as well. Each regulator across Canada maintains a directory that allows the public to verify if an individual holds a valid licence to practice engineering in that jurisdiction. All engineering regulators are responsible for ensuring that only licensed individuals use the title "professional engineer". Regulators have the mandate to investigate and ensure that only individuals who are licensed may use the professional engineering title and practice professional engineering.

What Engineers Canada has done

The protection of the public is of paramount concern to the engineering regulators in Canada, and Canada's stringent regulatory framework for engineering is recognized across the world as rigorous. In Canada, "engineer" is a protected term, and can only be used by individuals who have been licensed to practice by Canada's 12 provincial or territorial engineering regulators regardless of where their engineering degrees have been obtained. Applicants are individually assessed to ensure they meet requirements for licensure.

Engineers Canada, through the Canadian Engineering Accreditation Board (CEAB), accredits undergraduate engineering programs at Canadian higher education institutions. There are currently 281 accredited engineering programs at 43 higher education institutions across Canada. The Accreditation Board ensures that accredited undergraduate engineering programs provide students with the education they need to meet the

provincial and territorial regulators' education requirements for licensure as a professional engineer in Canada. In this way, the public can continue to feel confident that professional engineers have the right education and skills to practice engineering with competence and integrity.

The Accreditation Board will also continue to:

- Ensure Canada's engineering education system remains amongst the best in the world;
- Foster continual improvement of engineering education and provide expertise and efficiency in assessing engineering education on behalf of the provincial and territorial engineering regulatory bodies; and
- Maintain a list of accredited undergraduate engineering programs in Canada that provincial and territorial regulators may access to ensure that credentials are legitimate.

The Canadian Engineering Qualifications Board (CEQB) has developed a publicly available [national guideline](#) on admission to the practice of engineering in Canada. The guideline provides an overview of current general admission requirements for applicants and fosters the harmonization of admission practices throughout Canada. Applicants who hold a non-accredited degree but successfully complete all assigned examinations are normally considered academically qualified for licensure. Regulators may alternatively opt to evaluate the academic qualifications of experienced practitioners through a review of their engineering work experience. Such an evaluation allows senior practitioners to demonstrate that they have the knowledge, skills, and level of judgement required to practise engineering competently.

All regulators authenticate and verify academic documents. Engineers Canada also maintains its International Institutions Degrees Database (IIDD) tool, which is able to assist the regulators obtain some preliminary data about an institution and the degrees that are offered, as well as the country's education system.

Finally, Engineers Canada is a signatory to [The Washington Accord](#), an agreement that was put in place by a number of international signatories, recognizing their approaches and systems for accrediting engineering programs as comparable, to facilitate the expeditious review of the academic credentials of an applicant engineer from one party by the licensing/regulatory body of another party. The intended benefits from the accord are:

- Increased familiarity with applications arising from signatory countries;
- Confidence in the accreditation systems by all signatories; and
- Expediting of the academic portion of application reviews.

Recommendations to the federal government

Provincial and territorial regulators appreciate that the federal government continues to recognize and respect the jurisdiction of the provincial and territorial regulators and acknowledge that provincial and territorial governments have delegated the authority to regulate the engineering profession to the regulators.

Provincial and territorial regulators consistently strive to ensure that their admissions and licensure practices are timely, transparent, objective, impartial, and fair. Provincial and territorial regulators also set high professional and ethical standards, establish codes of conduct, and administer regulatory processes of practice to ensure protection of the Canadian public. It is important for the federal government to recognize and support the self-regulation of the engineering profession in Canada.

How Engineers Canada will contribute

Engineers Canada actively works to support the engineering regulators in each jurisdiction to better serve the public's interest by making sure that only qualified individuals engage in professional engineering services by:

- Continuing to support the work the Accreditation Board does in accrediting undergraduate engineering programs at Canadian higher education institutions;
- Continuing to support the work the Qualifications Board does in development national guidelines and maintaining the national guideline on admission to the practice of engineering in Canada;
- Continuing to work to encourage the sharing and adoption of best practices amongst the provincial and territorial regulators, especially in the area of identifying fraudulent documents;
- Providing a forum for robust discussion of regulatory issues among the provincial and territorial regulators, especially in the area of identifying diploma mills and fraudulent documents;
- Continuing to support the work of the regulators in the areas of:
 - Administering registration practices that are timely, transparent, objective, impartial, and fair;
 - Licensing academically qualified individuals based on their ability to practice engineering with competence and integrity;
 - Examining the validity of credentials from applicants; and
 - Acting against those who are practicing engineering but who are not licensed professional engineers.