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Internships

A necessary transition period

“Why an internship?” is a question often asked by a number of young engineering graduates. This puzzling thought is understandable because once we get that diploma, we cannot wait to prove ourselves. However, the reasons behind this transition period completely favour future engineers. Here’s why...

SELF-MANAGEMENT, A PRINCIPLE WITH CERTAIN IMPLICATIONS

The Québec professional system allows engineers to self-manage and self-discipline, as is the case for all professionals. By bringing together all the engineers who have the right to practice in Québec, the Ordre des ingénieurs du Québec (hereafter “the Ordre”) provides guidance to its members, and by its members, in compliance with governing laws and regulations.

In fact, the Ordre has an obligation of professional guidance towards its members because the engineer’s competence and oversight of the quality of his or her professional practice help to ensure the public’s protection, which happens to be the Ordre’s main concern. To that end, the government granted the Ordre certain powers, namely:

- controlling admission to the engineering profession;
- monitoring its members’ competence and discipline;
- adopting various regulations in order to control and supervise the practice of engineering by its members.

Self-management is a valuable tool for engineers based on the respect of values common to all, such as:

- competence: competent engineers strive to master all the appropriate knowledge required to practise their profession. Competence refers first and foremost to the application of scientific principles, and also to drawing upon one’s practical judgement and the ability to efficiently use one’s skills;
- responsibility: responsible engineers fully assume the consequences of their professional actions. They will personally vouch for their work towards their clients, employers and society as a whole;
- sense of ethics: engineers act according to their professional conscience, namely with integrity, availability, independence and professional discretion, all the while striving to achieve scientific and technical success in accordance with all governing laws and regulations;
- social commitment: above all, engineers demonstrate their commitment towards society by practising their profession with a high level of quality. Through their professional practice, engineers can also contribute to society by offering clarity as regards immediate and future choices.

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In order to breathe life into these values, the Ordre adopted a code of ethics which includes rules aimed at governing the engineering practice as well as one’s conduct in any given situation. These rules rely on engineers’ awareness of their duties and obligations towards the public, their clients and employers, and the engineering profession itself.

INTERNSHIPS DO HAVE SOME BENEFITS

Currently, the Ordre has nearly 60,000 members, including 14,000 junior engineers and engineers in training. Junior engineers do have the required university training but lack the practical experience they need to be professionally independent, as required by the Québec professional system.

In order to attain this autonomy, junior engineers must understand and be able to apply trade practices, governing laws and regulations as well as the underlying values of the profession. The internship aims primarily at allowing future engineers to become familiar with these rules, regulations and values.

In order to practise engineering safely and responsibly, a university degree is merely a minimum; engineering also requires practical training as well as adequate knowledge of its legal and ethical context. Internships provide such added element by allowing seasoned engineers to share their knowledge with junior engineers and by helping juniors fulfill their role as professionals. It is based on these solid foundations that juniors will obtain the title of engineer and the rights related thereto.

Among the requirements of an internship, acquiring experience provides the utmost benefit for junior engineers. By working during 36 consecutive or non-consecutive months in one’s

field of expertise, a junior engineer becomes more and more competent and confident, and is able to carry out increasingly complex tasks, under an engineer's immediate supervision.

Why such supervision? It is a tried and tested method adopted by the vast majority of professions and regulated trades. Supervision allows the junior engineer to benefit from adequate and continued guidance and ensures that his or her work will be reviewed by a competent peer.

The professional exam is another internship requirement and is also very useful for junior engineers because it motivates them to study and master all the principles relating to the practice of engineering, ethical concepts and professionalism as well as the previously discussed obligations. Junior engineers also look at Québec professional law and other basic legal notions that are deemed necessary to practise engineering. By successfully passing the exam, they are sure to have the adequate knowledge of the legal, regulatory and ethical environment of their profession, an asset which will serve them well throughout their practice.

Finally, an internship also includes a mentoring program which aims at promoting the profession's fundamental values. By having an experienced engineer as a mentor, the junior engineer is introduced to the rights and obligations that are

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inherent to being an engineer and this will foster the junior's integration within the profession. The mentoring program is optional.

In engineering, quality work is impossible if one does not have the required professional competence, the profession's first fundamental value. This competence is acquired namely through an internship and gaining professional independence. It bears reminding that the internship is and must remain a “transition” period, in other words, a temporary one. This is all the more true given that in today's economic reality, the title of engineer and a permit to practise engineering often open doors to employment or promotions...