

INTERNSHIPS KEY TO MOLDING NEXT GENERATION OF P.ENGs

By Michael Mastromatteo

PEO believes participation in a structured internship program is a key step in preparing the next generation of engineers. To succeed, however, the program will need a stepped-up commitment from supervisors and industry partners.

PEO IS MOVING forward on a voluntary structured internship program designed to engage the wider engineering community in preparing engineering graduates for licensure.

The new program will be in addition to the current intern program, known as the Engineering Intern Training (EIT) program, which has more than 5000 participants out of approximately 9000 active P.Eng. licence applicants. Those enrolled in the current program can choose to participate in its various activities or acquire and document their work experience on their own, making it more cumbersome for PEO to evaluate their work experience record.

The current program makes applicants responsible for finding suitable employers with which to acquire the necessary work experience for licensing, and is not well understood in the wider engineering community. In addition, there is limited contact among the applicant, his or her work supervisor and the regulator in assessing work experience and determining whether it is relevant and should qualify for licensing purposes.

Noreen Calderbank, P.Eng., PEO's manager, prelicensing programs, says the structured internship program is a significant move by the engineering regulator.

"This is an opportunity for PEO to be more proactive with its internship program," she says. "As is the case with other internship programs, there is an onus today on regulators to help find



Engineering intern Danuta Mahabir gets a cherry-picker view of road work on a southwestern Ontario highway. Currently with the Ministry of Transportation's Engineering Development program, Mahabir obtains transportation engineering experience while fulfilling some of the prelicensing work requirements of PEO. Ontario's engineering regulator is developing a more structured engineering intern program to complement its existing Engineering Intern Training (EIT) initiative. PEO is keen to work with partners in government and industry to create additional internships for engineering undergraduates.

work supervisors who are prepared to make a stronger stand in working with the regulator to form the next generation of practitioners."

THREE PROPOSED MODELS

When council first began to consider enhancing PEO's prelicensing activities, it asked that a white paper be developed to map out possible directions. The December 2007 white paper prepared by Gerry Meade, P.Eng., PEO's former EIT manager, proposed three models for a PEO internship program.

Under the recommended model, a voluntary, structured program with mandatory components, those registering in the structured internship program would be required to prepare and fulfill a specified development program. This program would have to be signed by a supervisor and approved by PEO, thereby requiring supervisors to play a greater role in directing the formation of interns.

The other possible models proposed in the white paper were an entirely voluntary program, and a mandatory program for the 12 months immediately preceding licensing. Interestingly, when comments on the white paper models were solicited from professional engineers and those in the current EIT program, 44.7 per cent of the 409 engineers who com-

mented supported the fully mandatory program, while 38.5 per cent of the 136 interns who responded supported the entirely voluntary program.

ELEMENTS OF THE PROGRAM

A key objective of all internship programs is to provide graduates with relevant, practical work experience—to link theory with practice. PEO hopes the addition of the structured internship option to its current EIT program will result in more applicants remaining on the path to eventual licensing.

“The structured internship program will require that interns register with PEO,” Calderbank explains. “The main difference is that regular interns, those in the current EIT program, are basically on their own, and must learn about the requirements for licensure and find ways of meeting them. Interns who also become part of the structured system, on the other hand, will have been hired into companies that have made arrangements with PEO and established a pre-approved training program that will provide interns all of the opportunities to fulfill the experience requirements for licensure.”

The structured program will require interns to be employed in a company capable of providing training and work experience that satisfies PEO licensing expectations. As a consequence, it's expected interns and the companies employing them will become more focused on PEO as the regulator and on their obligations under the *Professional Engineers Act*.

A number of companies and organizations, such as the Ontario Ministry of Transportation, already have intern programs to guide the development of the future engineers in their employ. The PEO effort, in a sense, is a bid to engage more companies and organizations in developing similar programs that provide internship opportunities that meet work experience expectations.

Engineering interns who fulfill the requirements of their approved development plan will be reviewed more quickly at the time of licensure. Those choosing not to enroll in the structured program may be subject to an additional review at the time of licensure.

“Recent Canadian engineering graduates and internationally educated engineers look to their provincial associations to give them more structured guidance as they gain the necessary experience to become a professional engineer,” Meade told *Engineering Dimensions* August 7. “PEO's review is addressing this very important aspect in the development of a professional engineer.”

WHERE TO FROM HERE?

PEO is confident that taking the middle ground by adding a voluntary, structured element to its EIT program will improve public awareness of how it actively participates in developing qualified licensed professionals, and be achievable in the near term where a fully mandatory program might not be.

According to a preliminary implementation timetable, the structured internship program should be fully functional by January 2012. Steps to be completed over the intervening years include piloting the program with selected industry/company partners, developing evaluation and progress measurement tools, undertaking a full communications and stakeholder consultation program, and conducting training sessions for interns, supervisors, mentors and reviewers.

As the structured internship effort takes shape, PEO will also be required to make adjustments to its existing EIT program to allow for a full distinction between the interns registered in it and those opting for the structured program.

Other key steps to be completed include developing a guideline for employers and supervisors to use in working with engineering interns, ensuring that the act and regulations support the aims of the revised internship program, and drawing up legal agreements. Much of the work toward the last two requirements is expected to occur in late 2010.

Calderbank says the structured internship program will require increased commitment from PEO and its staff and additional support from industry partners, who are crucial in providing the work experience for new engineers.

“Certainly, having the regulator more involved with the employers of engineers and interns should provide some benefits to the profession and to the recognition of the fact that it is a regulated profession and that PEO is the regulator,” Calderbank says. “Employers need to know that engineers have duties according to the act, which are paramount, meaning above their duties to an employer.”

She also says it's key that interns develop and learn from licensed engineers. As such, engineer employers should have a stake in allowing such learning experiences to take place. “This will lead to better prepared engineers in the long run, which will benefit both society and the employer,” she says.

In a separate but related initiative, engineering interns are now recognized in PEO's Regulation 941/90 as a class of person whose interests are related to those of the association, entitled to receive some rights and privileges associated with PEO membership (see *Engineering Dimensions*, July/August 2009, p. 32 and this issue's Enforcement Explained, p. 37). Σ