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Towards Fostering Lifelong Learning in Engineering Programs

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Abstract

Faced with the challenge of measuring whether our students are prepared to develop their own lifelong learning journey, the University of New Brunswick's Faculty of Engineering (FoE) created a four-part Engineering Profession Lecture Series. In these courses, instructors prepare 13 lectures per term and students must attend at least ten, with and option of up to two of those ten being replaced by the Association of Professional Engineers & Geoscientists of New Brunswick (APEGNB) Professional Development Hours (PDH).

The first two courses take place in the first two terms for all engineering degrees at UNB. They focus on study and well-being skills, the engineering profession, and the engineering code of ethics. These courses also provide engineering students in the common core with information to help them select one of the nine engineering disciplines offered at UNB.

The senior versions cover diverse topics and serve as PDH for students, faculty, and members of the APEGNB. These lectures cover key graduate attributes required for accreditation by Engineers Canada such as professionalism, ethics, sustainability, and accessibility with the primary goal of fostering lifelong learning among graduating students.

Here, the focus is on the senior series prepared for provincial association members, including members of the FoE, to earn PDH credits. As instructors, we are tasked with securing 26 quality speakers throughout the academic year. This academic year, nearly three quarters of the presentations came from UNB's external partners.

The lecture series benefits for our students are multiple: it highlights the importance of maintaining professional engineering status through continued professional development, and fosters a closer relationship between association members, the FoE, and our undergraduate students. For APEGNB members, the lecture series provides a source of free PDH at a regular evening schedule, and fosters collaboration with graduating students.

Moving forward, we foresee the following challenges: ensuring topic and presenter diversity to appeal to APEGNB colleagues, maintaining the high quality of a weekly engineering profession lecture series, and securing resources to attract high-profile speakers. Fortunately, the FoE supports the series by providing financial resources including two teaching resources, and dedicating part of our engineering partnership coordinator's time to contact potential guest speakers.

Given that all professional associations in Canada track PDH credits, developing the life-long learning habit in graduating students is imperative. Although implementing a seminar series can be resource intensive, the benefits for the students and the profession are significant, regardless of the jurisdiction.

Keywords-component

Lifelong learning; Professional Development Hours; Graduate Attributes; Engineering Accreditation; CEAB