

Nebraska legislature considers bill to implement bachelor's plus 30

The bachelor's plus 30 requirement passed by the Council at the 2006 Annual Meeting currently exists only in the NCEES *Model Law*, not having been enacted into any state laws establishing the requirements for engineering licensure.

That may change in Nebraska this year.

In January, state Sen. Joel Johnson of Kearney introduced legislative bill 742 to enact the bachelor's plus 30 requirement. If the bill passes, engineering licensure candidates would have to complete 30 additional hours of board-approved coursework credits (or a master's degree in engineering from a school with ABET-accredited programs) beyond the bachelor's degree before sitting for the Principles and Practice of Engineering exam in Nebraska.

Under the proposed Nebraska legislation, candidates with master's degrees in engineering would also be eligible to sit for the PE exam.

The bill was a surprise to the Nebraska Board of Engineers and Architects, whose chair, Mike Conzett, P.E., has been a strong proponent of the additional education requirement. Conzett also serves as chair of the NCEES Bachelor's + 30 Task Force, which was created in September to address issues related to the Council's implementation of the *Model Law* language, which currently has an effective date of January 1, 2015.

Conzett says the Nebraska bill came at the request of the American Society of Civil Engineers rather than state board, although it supports incorporating the requirement into state law.

"We've got to make this work for everybody, not just the civil engineers," he said, adding that the board had planned on waiting at least a year before pushing forward the legislation.

"We need time to educate people on the issue and work out the specifics of implementation."

Conzett said his task force has recommended to the NCEES Committee on Uniform Procedures and Legislative Guidelines that it propose amending the *Model Law* to move the bachelor's plus 30 implementation date to 2020, citing feedback from several Member Boards indicating that implementing the requirement by 2015—and ensuring that potential candidates are aware of the heightened licensure requirements—would present logistical difficulties.

Because of this, the Nebraska Board lobbied state legislators to amend the state bill to include a 2020 effective date for the additional education requirements.

"We didn't want Nebraska to be five years' different than the rest of the country," said Conzett.

The bachelor's plus 30 requirement—as it has become known—was passed as a motion from the UPLG committee at the 2006 Annual Meeting in Anchorage, Alaska. Outlined in *Model Law* 130.10, the bachelor's plus 30 resulted from a process that began in 2001 with the NCEES Engineering Licensure Qualifications Task Force.

ELQTF spent two years evaluating the licensure system and engineering education in the United States. Its conclusions pointed to a decline in math and science-based course requirements among bachelor degree programs in engineering. These findings led to the creation of the Licensure Qualifications Oversight Group, which successfully presented a motion to charge the UPLG Committee with proposing increased education standards for engineering licensure in the *Model Law* and *Model Rules*.

Nebraska LB 742 remained in legislative committee at press time. The legislative session is scheduled to conclude April 17.

UPLG, Bachelor's Plus 30 Task Force propose revisions to additional education requirements



Michael J. Conzett, P.E.
Chair, Bachelor's Plus 30
Task Force



Skip Harclerode II, P.E.
Chair, UPLG Committee

The NCEES Committee on Uniform Procedures and Legislative Guidelines and the Bachelor's Plus 30 Task Force have spent the past several months addressing their charges while working with other groups within the Council and the engineering profession to determine ways to improve the engineering licensure process as outlined in the NCEES *Model Law* and *Model Rules*.

Both the UPLG Committee and the Bachelor's Plus 30 Task Force plan to make several motions at this year's Annual Meeting. One in particular will be discussed at the upcoming zone meetings as well as in Minneapolis. This motion deals with a clarification to the language introduced to the *Model Rules* regarding the additional education requirement and addresses a misconception that has resulted from its current wording.

For those not familiar with the term, the bachelor's plus 30 is the name given to the requirement that licensure candidates complete an additional 30 academic credits beyond the engineering bachelor's degree before being allowed to take the PE exam. It is designed to address the steady and persistent decline in course requirements in technical subjects among bachelor degree programs in engineering. At the same time, it is also a response to the rapidly expanding body of knowledge needed for engineers to demonstrate professional competence. (For more information about the origins and rationale behind the bachelor's plus 30, see the cover article of the April 2007 issue of *Licensure Exchange*.)

The UPLG Committee introduced a motion at the 2006 Annual Meeting to add language to the Council's *Model Law* and *Model Rules* to require this additional education. The motion passed and was upheld at last year's Annual Meeting.

The current *Model Law* language as it applies to candidates earning bachelor's degrees from ABET-accredited engineering programs is as follows (it is found within Section 130.10, General Requirements for Licensure):

Licensure by Examination (Effective January 1, 2015) – The following individuals shall be admitted to an 8-hour written examination in the principles and practice of engineering:

- (1) An engineer intern with a bachelor's degree, with an additional 30 credits of acceptable upper-level undergraduate or graduate-level coursework from approved course providers, and with a specific record of 4 years or more of progressive experience on engineering projects of a grade and a character which indicate to the board that the applicant may be competent to practice engineering.

Section 230.40 B.4 of the *Model Rules* explains this requirement in greater detail. It contains the section that is the subject of the UPLG motion at the center of this discussion:

EXISTING LANGUAGE

Model Rules 230.40 Examinations

- B4. Effective January 1, 2015, a graduate with a bachelor's of science degree in engineering requiring more than 120 credits may request that credits earned in excess of 120 credits be applied to satisfy the requirements for an additional 30 credits of acceptable upper-level undergraduate or graduate-level coursework.

An unfortunate result of this language is that some have interpreted it to mean that NCEES considers 120 credits to be the standard for undergraduate degree programs in engineering. This concern was raised at last year's Annual Meeting and again in the meetings of the UPLG Committee and the Bachelor's Plus 30 Task Force.

The intention behind the inclusion of the "120 credits" language was to be fair to students enrolled in programs requiring more coursework and to allow them to apply "extra" coursework toward fulfilling the new requirement. However, each engineering program

is designed around a combination of ABET accreditation criteria and the institution's own core requirements. By appearing to advocate, however unintentionally, a 120 credit standard, the NCEES licensure model would likely dilute even further the course offerings at many engineering programs.

As a result of this feedback, the Bachelor's Plus 30 Task Force has recommended that the UPLG Committee present a motion at this year's Annual Meeting to remove the use of "120 credits." The following is the language agreed upon by both the Bachelor's Plus 30 Task Force and the UPLG Committee for the paragraph in question:

PROPOSED LANGUAGE

Model Rules 230.40

Examinations

- B4. Effective January 1, 2020, a graduate of an EAC/ABET-accredited baccalaureate program may request that credits earned in excess of the institution's requirements for his or her degree be applied to satisfy the requirements for an additional 30 credits of acceptable upper-level undergraduate and/or graduate-level coursework.

This language would allow candidates who earn credits in excess of those needed for graduation to apply them toward the additional education requirement. It does so without designating an arbitrary standard for how many credits should be required for graduation. As a result, this language continues to provide flexibility for each institution to design its own engineering curriculum to meet the demands of its constituents. It also eliminates any potential motivation for undergraduate engineering programs to lower their number of required courses to an artificial benchmark of 120.

The NCEES committee members involved with these motions understand that ABET-accredited engineering programs have different formulas for meeting accreditation criteria

and their own institutional core requirements. The proposed revision to the Model Rules is intended provide an even playing field for licensure candidates looking to fulfill the additional education requirements over the course of their undergraduate program.

Reviewing the Model Law and Model Rules

The UPLG Committee has conducted a comprehensive review of Model Law as outlined in the NCEES Bylaws. Normally, the UPLG Committee reviews both the Model Law and Model Rules every fifth year, but because there were a number of routine but necessary items that needed to be addressed in the Model Law, the comprehensive review of the Model Rules will be deferred to the 2008–09 UPLG Committee.

The Council's *Constitution and Bylaws* designates the UPLG Committee as the NCEES committee responsible for making motions to amend these documents. The Bachelor's Plus 30 Task Force was created as an offshoot of the UPLG Committee in order to devote the needed time and resources to the issue of education requirements and to reflect a wider representation of the Council.

Another significant change apparent in the proposed language above is that the implementation date for the bachelor's plus 30 has been moved back five years to 2020. This was suggested by the Bachelor's plus 30 Task Force in order to provide adequate time for the Council to work out the details of implementation, to allow Member Boards the time to work out the details of the new requirements, and to allow engineering students planning to pursue licensure to prepare their plans of study accordingly. This postponement will be presented by UPLG as a separate motion.

Members of both the UPLG Committee and the Bachelor's Plus 30 Task Force will be at each zone meeting this spring. We look forward to hearing feedback from the Council on this important issue.

Michael J. Conzett, P.E.
Chair, Bachelor's Plus 30 Task Force

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Chair, UPLG Committee

MESSAGE

Ahead of zone meetings, several issues merit close attention

This is an important time of year for the Council. The committees and task forces have completed their meetings and are in the process of finalizing their reports. Many of them are carefully wording the motions that will be presented at this year's Annual Meeting in Minneapolis.

Bachelor's plus 30 implementation

As usual, several of the motions will be presented to the Council by the Committee on Uniform Procedures and Legislative Guidelines and the Bachelor's Plus 30 Task Force. These groups have worked together to provide the means for the Council to move forward in implementing heightened education requirements for engineers who wish to obtain licensure.

I encourage Council members to read the article dealing with this on page ___ of this issue. The bachelor's plus 30 requirement will be the subject of much discussion at the upcoming zone interim meetings. Reading this newsletter and attending the Zone Meetings will give each of the Member Boards background information to vote at the Annual Meeting.

A few states have already moved forward to implement the requirement. As you can see on p. ___, lawmakers in Nebraska are considering a bill that would implement the additional education requirements in their state's code. I recently received a letter from the Georgia board indicating the board had voted unanimously to support the additional 30 hours as only a master's degree for fulfilling the additional education requirements.

The debate over additional education requirements for engineering licensure, and the implementation of the requirement at the state level, is an ongoing process that indicates the Council's commitment to ensuring that future licensees possess the necessary knowledge to protect the public through their work. It also indicates our commitment to upholding and even enhancing the level of prestige associated with holding the professional engineer license.

ANSI update

The Council's status as an accredited standards developer with ANSI is another means to enhance recognition of the profession. At the February meeting of the NCEES Board of Directors, the board discussed ongoing work of the ANSI Standards Task Force, which met at the end of last year. The task force determined that it would be best to pursue developing the Council's definitions of Model Law Engineer, Model Law Structural Engineer, and Model Law Surveyor as ANSI standards. This was presented to the board of directors, which passed a motion to develop these as ANSI standards. If they become standards, these professional designations will allow NCEES to better emphasize the value of licensure across the professions, with the general public, and with government agencies.

Potential MBA forum added to budget

There are several other items on the Council's agenda heading into the zone interim meetings. Plans are in place for NCEES to hold a forum for member board administrators in October. This planned annual event will allow MBAs—many of whom have never visited Council headquarters in Clemson—to meet the staff members they normally communicate with via phone or email. It will also provide opportunities for MBAs to learn in greater detail about the services and procedures in place at Council headquarters. The planned MBA forum has already been included in the 2008–09 budget, which will be placed before the Council for their approval at the Annual Meeting.

I encourage members of the Council to make plans to attend your zone's interim meeting, as it will provide the opportunity for Council leadership to hear from the members. It will also allow you to hear from the NCEES committees and task forces as they finalize their reports prior to the Annual Meeting. I look forward to seeing and hearing from you at the Zone Meetings this spring.

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