

Licensure of engineering faculty— a difficult proposition?

Section 110.20 of the *Model Law* defines the practice of engineering. That definition includes the “teaching of advanced engineering subjects.” To me, that’s a clear message that professional licensure should be required for engineering faculty members. And yet, at most institutions the number of faculty members who hold a P.E. license is relatively small. As a professor myself, this has always bothered me. In my opinion, we—the faculty—should hold ourselves as examples for students who will be working in an engineering field in the future and may need licensure. In fact, a past NCEES study showed that faculty members strongly influenced a student’s decision to take the FE exam and thus start on the path to licensure.

Licensure is uncommon among professors

In an attempt to get some additional insight, I polled my colleagues at the University of Wyoming (UW) about licensure. There are 65 faculty members in the College of Engineering and Applied Science who teach engineering topics. Of these, 38 (58.5 percent) replied to my e-mail request for information. Of the 38 who responded, 18 (47.4 percent) are licensed as a P.E. While this seems like a high percentage (at least relative to the overall national licensure rate of about 20 percent of all engineers), I suspect that those who are licensed were more likely to respond to my query. I recall a study at UW a few years ago that determined that approximately one-third of our faculty was licensed. Of the 20 who indicated they did not have a P.E., 8 indicated at least some intention to pursue licensure in the future.

What I found extremely interesting was that nearly 100 percent of the licensed faculty indicated that they pursued licensure for the purpose of consulting rather than teaching. A few had their licenses prior to becoming faculty members, but even those who pursued licensure while a faculty member indicated consulting as the primary motive.

The university system appears to be doing very little to encourage faculty to become licensed for the sake of following the *Model Law* in terms of teaching. Only a handful of faculty thought that licensure should become a requirement for tenure and promotion in the university system. However, a few expressed that if incentives (primarily salary) were high enough, they might be encouraged to pursue licensure.

Member Board efforts to encourage faculty licensure

I also asked NCEES Member Board administrators to respond to a couple of quick questions related to this subject. I heard from 27 jurisdictions. All of these jurisdictions indicated that, while they do have language in their statutes that is similar to the *Model Law*, none have laws that force a connection between licensure and the university tenure and promotion process. In addition, with the exception of Delaware, none of these jurisdictions appeared to know of any incentive programs for faculty to become licensed. Several years ago, the dean at the University of Delaware offered faculty a \$5,000 research incentive to become licensed, but the Delaware PE Board received no applications based on that incentive. Several jurisdictions reported methods of encouraging licensure that often included having representatives from academia on their boards. The Maine PE Board hosts a table during EWeek on college campuses in that state with giveaways and information about licensure.

Since 1988, Idaho’s statutes have included the requirement that faculty who teach upper-division engineering design subjects must be licensed. Its statutes provide a three-year window from the date of hire to the date of obtaining licensure. Each year, the deans provide the Idaho Board a list of upper-division courses that contain significant design content and the names of the professors who teach them. This appears to be working

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David L. Whitman, Ph.D., P.E.
 NCEES President-Elect

UPDATE

NCEES committees, task forces already at work on 2008–09 charges

The interval between the previous year's Annual Meeting and the zone interim meetings is an important time for the Council. Committee and task force members, juggling their responsibilities as NCEES members with the demands of their professional careers, begin addressing the charges assigned to them by NCEES leadership. This year, several committees have already held initial meetings, a sign that 2008–09 is shaping up to be an eventful year for the Council. Several initiatives, such as computer-based testing and requiring unique identification numbers for examinees, are under consideration. Also, the much-debated master's or equivalent requirement (previously called the bachelor's plus 30) for engineering licensure is being fine-tuned in light of the passage of a resolution at last year's Annual Meeting to consider potential effects of the requirement's implementation.

The NCEES president assigns charges to the committees and task forces in accordance with the *Bylaws* and with the input of the Board of Directors and Member Boards. The standing committees address areas such as examinations, finances, law enforcement, awards, and officer nominations. The president is authorized to appoint special committees and task forces to address other issues as needed. This year, these include the Computer-Based Testing Task Force, the Engineering Education Task Force, the Special Committee on Bylaws, and the Sustainable Building Design Task Force.

The following is a brief overview of each of the 2008–09 committees and task forces, along with a description of some of the charges that will be of interest to Council members. Each committee and task force will be represented at the zone meetings to provide a report of its progress, and any motions will be presented to the Council at the August 2009 Annual Meeting in Louisville, Kentucky. The 2008–09 committee charges are available for download at CouncilNet (www2.ncees.org).

Advisory Committee on Council Activities (ACCA)

Chair: Kenneth Vaughn, P.E.
Board liaison: Henn Rebane, P.E.
Charges: 9
Members: 9, with 2 additional consultants

ACCA advises the NCEES president and Board of Directors on various issues as assigned. It also conducts biennial reviews of the Council's *Manual of Policy and Position Statements*, suggesting revisions to be presented to the Council as motions.

For 2008–09, ACCA has nine charges. These include a charge to conduct a comprehensive review of the Council's *Bylaws*, which were adopted at last year's Annual Meeting. ACCA is also asked to propose methods for increasing attendance at the Annual Meeting, including options for having NCEES partially fund the attendance of newly appointed members of licensing boards.

ACCA is also charged with reviewing Examination Administration Policies 5 and 10, which address the administration of NCEES exams in foreign countries. ACCA shares this charge with the EPP Committee.

Committee on Awards

Chair: William Karr, P.L.S.
Board liaison: Henn Rebane, P.E.
Charges: 2
Members: 5

The Committee on Awards collects nominations for NCEES service awards to be presented during the Annual Meeting and provides recommendations to the Board of Directors for awards recipients. It is made up of former members of the Board of Directors who have received the Distinguished Service Award.

Committee on Examination Audit

Chair: Bill Dickerson, P.E.

Board liaison: Gene Dinkins, P.E., P.L.S.

Charges: 4

Members: 5, with 3 additional consultants

The Committee on Examination Audit is responsible for conducting an annual review of all aspects of the NCEES examination program. It examines the development process to ensure the use of proper psychometric standards, audits exam administrations, and reviews its own audit procedures.

Committee on Examination Policy and Procedures (EPP)

Chair: Thomas Kiefer, P.E.

Board liaison: Larry Smith, P.E.

Charges: 10

Members: 9, with 2 additional consultants

The EPP Committee reviews the effectiveness of NCEES exams and how they are administered and presents recommendations for improving the process that are consistent with trends in the engineering and surveying professions. Usually, these recommendations are presented as revisions to the Council's exam development and exam administration policies published in the *Manual of Policy and Position Statements*.

In 2008–09, EPP is charged with reviewing and combining two exam administration policies specifying how NCEES administers exams in foreign countries in order to make the requirements more clear. Beginning next year, NCEES will administer exams in Egypt and Korea. It has administered exams in Japan since 2006.

EPP is also charged with considering an exam policy that would assign a unique identification number to all candidates registering for NCEES exams. This charge follows the Council's 2006 vote to approve implementing and requiring such a system to improve exam security. This system will create a database of all NCEES exam registrants to be shared by Member Boards and is intended to help boards better identify repeat examinees.

The committee is also working with the Committees on Examinations for Professional Engineers (EPE) and Surveyors (EPS) to determine whether limits should be placed on the amount of reference material allowed in the exam room during open-book exams.

Committee on Examinations for Professional Engineers (EPE)

Chair: George Roman, P.E., P.L.S.

Board liaison: David Whitman, Ph.D., P.E.

Charges: 11

Members: 13, with an additional consultant

The EPE Committee supervises the preparation of exam specifications and is responsible for the content and scoring of all FE and PE exams. As part of its recurring charges, it also reviews exam scores and makes cut score recommendations.

The EPE Committee has several other charges that will help determine the future course of exam development. These include a charge to evaluate the effectiveness of the general module of the FE exam, which candidates can choose to take in the exam's afternoon session instead of one of the six discipline-specific modules.

EPE will also consider the security benefits of mixing PE disciplines when seating candidates and offering multiple versions of the morning sessions of the breadth-and-depth PE exams (currently Civil and Mechanical). The committee will also work with the EPP and EPS committees to determine whether limits should be placed on the amount of reference material candidates are permitted to bring into the exam room when taking the PE exam.

EPE chair George Roman, P.E., P.L.S., noted that the committee will continue an ongoing investigation of the PE exam disciplines to determine to what extent they test candidate knowledge gained through work experience versus academic knowledge gained through coursework. The results of the investigation will be used to improve the exam development process for the PE exam.

"The analysis last year was only performed on three exams because the effort was quite labor intensive," said Roman.

Roman explained that NCEES will use exam scoring data to develop criteria for writing items that more effectively test knowledge gained through "real world" experience.

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Committee on Examinations for Professional Surveyors (EPS)

Chair: Gilbert Chavez, P.S.
Board liaison: Patrick Tami, P.L.S.
Charges: 4
Members: 13, with 2 additional consultants

The EPS Committee supervises the preparation of exam specifications and is responsible for the content and scoring of all FS and PS exams. As part of its recurring charges, it also reviews exam scores and makes cut score recommendations.

This year, the EPS Committee is also charged with working with the EPE and EPP committees to determine whether limits should be imposed on the number of reference books allowed during the administration of an open-book examination. Currently, examinees taking the PS exam have no limits on the number of reference books they may bring with them into the exam room. EPS will also develop a succession plan for chairs of exam development committees.

Committee on Finances

Chair: James Foley Jr., P.E.
Board liaison: Larry Smith, P.E.
Charges: 7
Members: 9

The Committee on Finances will review the results of the financial audit for 2007–08 and assist NCEES leadership in compiling income and expense budgets for 2009–10. It will also review exam revenue and projected expenses and recommend whether changes to exam prices are necessary.

Among its other charges, the committee will review all Council financial policies and recommend necessary revisions, including the possible addition of a policy to state that the Board of Directors will conduct annual reviews of replacement costs for exam items.

Committee on Law Enforcement

Chair: John Greenhalge
Board liaison: Henn Rebane, P.E.
Charges: 9
Members: 10, with an additional 2 consultants and a resource

The Committee on Law Enforcement studies the ways that Member Boards enforce their existing laws defining and regulating

engineering and surveying licensure. It also works to promote cooperation between Member Boards in enforcing licensure laws. When necessary, it presents motions designed to strengthen the *Investigation and Enforcement Guidelines*, a publication for board members and enforcement staff.

This year the Law Enforcement Committee has nine charges. These include one to study the ways Member Boards investigate allegations of licensees practicing outside areas of competence and another to provide recommendations for modifying licensure applications to require greater accuracy in reporting criminal convictions and disciplinary actions. The committee will also evaluate the *Model Law* and *Model Rules*, paying attention to how an applicant's criminal history can affect licensure eligibility.

Another charge reflects a growing interest in energy conservation and sustainability. The committee will examine design services in the area of green or sustainable design to determine whether there is a law enforcement role in deterring unlicensed practice in this area.

Committee on Nominations

Chair: Gene Corley, Ph.D., P.E., S.E.
Charges: 2
Members: 9

The Committee on Nominations submits the names of candidates for the NCEES offices of president-elect and treasurer. The committee's chair is the immediate past president of the Council, and the committee consists of one member and one alternate from each of the four zones. This year, it will solicit nominations from the Northeast Zone for the office of president-elect for 2009–10. It will also solicit nominations from the Council for the office of treasurer, which has a two-year term.

Committee on Uniform Procedures and Legislative Guidelines

Chair: Henry Liles Jr., P.E.
Board liaison: Joe Timms, P.E.
Charges: 8
Members: 13, with 3 additional consultants

Each year, the UPLG Committee looks for ways to strengthen the licensure process and then proposes any necessary changes to the *Model Law* and *Model Rules*, the documents that provide Member Boards with a model for their own practice laws for the engineering and surveying professions.

The committee is charged with conducting a comprehensive review of the *Model Law* and *Model Rules* every five years. The committee reviewed the *Model Law* last year, and this year it will review the *Model Rules*. UPLG chair Henry Liles, P.E., said that the committee's review of the *Model Rules* will likely result in a large number of motions similar to last year, in which UPLG presented 45 motions.

"As the *Model Rules* is revised each year to keep up with the changes in the profession, there comes a time to go back and review it in a comprehensive manner to iron out all inconsistencies, ambiguity, conflicts, et cetera," said Liles.

Apart from the comprehensive *Model Rules* review, UPLG is also charged with addressing dual-level accreditation from ABET, under which university engineering programs are now able to pursue accreditation for bachelor's and master's degree programs in the same subject area. This will affect some areas of the *Model Law* and *Model Rules*, which reflect the previous ABET practice of not allowing schools to pursue master's accreditation in programs offering accredited bachelor's degrees.

Computer-Based Testing (CBT) Task Force

Chair: David Curtis, P.E.
Board liaison: Gene Dinkins, P.E., P.L.S.
Charges: 4
Members: 9, with 2 additional consultants

Last year, the Computer-Based Testing Task Force proposed two projects designed to gather information on the feasibility of NCEES administering its exams via computer: a market study of potential examinees to determine their receptiveness to CBT, and a request for information (RFI) from potential vendors of CBT-related services. Both projects were approved by the Council at last year's Annual Meeting, and this year the task force is already well under way with implementing them.

Task force chair David Curtis, P.E., spoke recently about the group's November 7–8 meeting in San Antonio, Texas, during which the task force members reviewed a draft of the RFI.

"The RFI will be the foundation for everything we do from here on out," said Curtis, who explained that the RFI was submitted to potential vendors on November 13 .

Responses will be collected until January 26, 2009, after which the task force will review the vendor proposals before making a recommendation in early March. The task force will meet again in February to review the proposals, using an evaluation form developed at the November meeting.

"The task force wants to be careful to gather extensive information through the RFI process so that the Council can make an informed decision about CBT," said Curtis.

The second project, a market study of potential examinees, is also being developed. Curtis said that it will try to determine what effect price increases associated with moving to CBT will have on future exam registrations.

The CBT Task Force is also charged with providing estimates for the amount of time and money it will take to increase item banks to suitable levels for CBT conversion.

Engineering Education Task Force

Chair: Michael Conzett, P.E.
Board liaison: Dale Jans, P.E.
Charges: 6
Members: 11, with an additional 3 consultants and 7 resources

The Engineering Education Task Force has several important charges related to the Council's ongoing initiative to raise the education requirements for engineering licensure. Last year, the task force was called the Bachelor's Plus 30 Task Force, but the name has been changed to reflect the shift toward emphasizing a master's degree as the preferred qualification when the requirement goes into effect in 2020.

The task force is charged with addressing the issues outlined in the Southern Zone resolution adopted at the 2008 Annual Meeting. These issues include addressing the potential for advances in technology to compensate for fewer academic credits, the effect of the requirement on future demand for licensure, and the potential effects of the requirement on interstate comity. The resolution asks the task force to prepare an analysis of the potential impact of the requirement in its current form and of alternative solutions to raising education requirements. The task force is charged with completing this analysis prior to the interim zone meetings in spring 2009.

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Apart from addressing the resolution, the task force's other charges include developing a white paper detailing the Council's position on the strengthened education requirement and suggesting ways of communicating the Council's position on additional education requirements to the appropriate professional and technical societies. The task force has already conducted conference calls to discuss the charges and will have its first meeting in early December. Reflecting the shared interest in this initiative, the task force includes a number of resources that represent various technical and professional societies.

"The task force will rely on the input of these society resources," said Michael Conzett, P.E., the task force chair. "Their perspectives will help us as we develop the additional education requirements for licensure."

Special Committee on Bylaws

Chair: Doris Willmer, P.E.
Board liaison: Henn Rebane, P.E.
Charges: 3
Members: 5

The Special Committee on Bylaws incorporates changes approved by the Council at the previous year's Annual Meeting into the NCEES *Bylaws*. This year, the committee will revise two sections of the *Bylaws*. The first revision is to Section 4.04, which addresses elections and terms of office, to specify that completing one year of a two-year term in the office of treasurer does not constitute a full term for term-limit purposes. The second

revision is to Section 6.02, dealing with quorums and voting, to specify the process for a Member Board to designate an associate member to represent it at Council meetings. Both revisions result from ACCA motions passed by the Council at the 2008 Annual Meeting.

Sustainable Building Design Task Force

Chair: William Dean, P.E.
Board liaison: Gene Dinkins, P.E., P.L.S.
Charges: 2
Members: 8, with an additional consultant

The Sustainable Building Design Task Force is a new addition to the NCEES committees and task forces. It was constituted by President Rebane to address the relationship between sustainable building guidelines and licensure.

The task force has two charges for 2008–09. The first charges the group with studying the criteria used for Leadership in Energy and Environmental Design (LEED) certification by the U.S. Green Building Council (USGBC). The committee will focus on ensuring that unlicensed individuals are not being asked to give opinions on engineering matters that require the services of a professional engineer. It will suggest ways for NCEES to communicate any concerns about unlicensed practice to the USGBC.

The task force is also charged with considering whether it is appropriate for NCEES to assist sustainability-focused organizations such as the USGBC with developing standards related to sustainable building design.

Doug McGuirt
NCEES Editor

MESSAGE

NCEES looks to expand role in promoting mobility for licensees

“Why don't you do something about making registration requirements uniform?”

That is the question I hear most often. As an answer, I would like to focus attention on comity licensure. As anyone with a P.E. or P.S. license knows, becoming licensed in more than one state or territory can be a complicated process. No two states have identical practice laws. For that reason, NCEES has an important role to play in facilitating comity licensure. It is a role that benefits both member licensing boards and the profession as a whole, and it's one that NCEES takes seriously.

The Council's Records Program is the best answer to many of the challenges faced by licensees seeking to practice in other states. Although it has been operating in one form or another since the 1920s, many licensees are not aware it exists. I encourage Member Boards to inform applicants of the services offered by the Records Program. The best time to open a Council Record is when an engineer or surveyor first becomes licensed. In many cases, licensees find themselves later on in their careers working on projects that take them to different states. They may find themselves relocating to a different part of the country. If these engineers establish a Council Record upon first obtaining licensure, it will be far easier to become licensed in additional states in the future.

The Records Program provides candidates with a centralized storage system for the paperwork necessary for comity licensure applications. It stores academic transcripts, exam results, and information regarding employment and references. Then, when applying for a license in a new state, the Record holder can have NCEES submit the files to the member licensing board. Record holders are sent renewal forms each year to allow them to update information as necessary. Holding a Council Record doesn't necessarily guarantee licensure in every state and territory; those decisions are ultimately left to the licensing

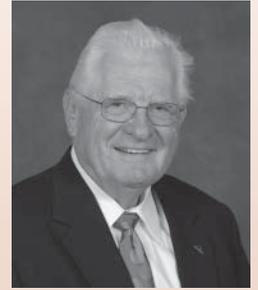
board. But it makes the process far easier for the licensee and for Member Boards.

Another service offered by the Council to help mobility is the Registered Continuing Education Providers Program. This program helps connect licensees with providers of the professional development courses required by most states to maintain licensure and helps licensees track their completion of the continuing education requirements in the states where they are licensed. It allows registered users to find courses offered by approved course providers in their area. NCEES pays close attention to ensuring that the providers listed in this directory meet high standards of quality. Anyone interested in learning more about this program should visit www.rcepp.com.

The continuing education providers program is still not very well-known, but I am convinced that more licensed engineers and surveyors will begin to inquire about this program as the word gets out about it. I encourage the Member Boards to communicate to their licensees that this program is up and running and can provide some much-needed help to professionals who hold licenses in multiple jurisdictions and may be struggling to balance the continuing education requirements of each jurisdiction. It hurts the professions when a licensee does not renew his or her license simply because of a technicality in the continuing education requirements.

Ultimately, it is the Member Board that controls the requirements and the time it takes to become licensed. NCEES services facilitate comity licensure based on the *Model Law* and *Model Rules*, but it is up to the Member Boards to review their laws for general alignment with the model. Differences across states will exist due to local circumstances. We should, however, do everything we can to make the requirements consistent wherever possible. Doing so will strengthen the licensure process.

*Henn Rebane, P.E.
NCEES President*



Henn Rebane, P.E.
NCEES President

CBT Task Force already deep into information gathering phase



David L. Curtis, P.E.
Chair, Computer-Based
Testing Task Force

Whether or not you believe that computer-based testing (CBT) is where NCEES should be going with its examinations, the evolution and continuous improvement of our exams is necessary and, in fact, has been a reality for some time. Twenty years ago, the Fundamentals of Engineering examination was open-book, and all candidates answered the same questions. It is now supplied-reference, with a choice of 7 afternoon modules, 6 of which are discipline specific. Twenty years ago, the Principles and Practice of Engineering exam was open-book, with a free-response, or essay, format. Candidates typically had 20 questions from which they could choose 8, and some jurisdictions even allowed candidates to select questions from multiple disciplines in what was called a combined examination. By comparison, the PE exam disciplines used for initial licensing are now multiple-choice and either no-choice or depth-and-breadth format. They remain open-book exams. We have gone from pretesting questions on exams to the use of item-response theory. Much has changed in 20 years, and we are kidding ourselves if we think that our examinations will be static for the next 20.

Many professions, if not most, have converted their paper-and-pencil examinations to CBT. Nursing, accountancy, medicine, architecture, and others have made the conversion, with varying results. There are lessons to be learned from each of these professions and the way in which they made the conversions. However, there are some aspects of the NCEES examinations that make them unique, and we need to keep that in mind as we consider converting to CBT.

First, most other professions have only one examination. They may have separate and distinct modules, but in the end those who are licensed have taken the same exam. Compare that to the NCEES examinations. First, we are unique because we use two-tiered testing. At the fundamentals level, we have the Fundamentals of Engineering (FE) exam and the Fundamentals of Surveying (FS) exam. At the professional level, we have the Principles and Practice of Surveying (PS) exam, and

no fewer than 16 separate disciplines of the Principles and Practice of Engineering (PE) exam. But it doesn't end there. Within the FE exam, there are 7 afternoon modules from which to choose. Within the 16 PE exam disciplines, Civil has 5 different afternoon modules, Mechanical has 3 different afternoon modules, and Electrical and Computer has 3 entirely different 8-hour exams. In all, we have one 6-hour exam, seventeen 8-hour exams, and three 8-hour exams that consist of eighteen 4-hour modules. No wonder we haven't converted earlier—this is a daunting task!

The consideration of CBT needs to be a step-wise process. We should not convert to CBT just because other professions have done so and it is in vogue. There must be value added to the stakeholders in the process, including the Council, the individual Member Boards, and the candidates. We must also consider the public, which we are all pledged to protect. We need to be careful not to ask the Member Boards to “trust us” and make the conversion to CBT without giving them reason, and sufficient detail, to do so.

The first step toward developing a rationale for CBT and gathering the necessary details is the preparation of a request for information (RFI) as authorized by the Council at the 2008 Annual Meeting. The RFI process asks potential vendors to let us know their approach to the solution of problems associated with our potential CBT conversion. Given the number of exams, it is a safe bet that not all of them will be good candidates for conversion. The small number of candidates tested in some exams will simply not justify the effort and presumed cost increase for converting. However, we are asking vendors to make recommendations regarding which exams are the best candidates and what we would need to do to make the actual conversion. We are asking them to evaluate whether our item banks are sufficient for CBT conversion. We are asking them to consider linear as well as adaptive exams. We are asking about cost, which would include item bank development as well as test

development and administration on the part of the vendor. We are asking about security and whether it will be enhanced compared to the current paper-and-pencil delivery. We are asking about the time frame for development and delivery of the potential new CBT exams. In short, we are asking them to tell us everything they know or can anticipate about computer-based exams as it might specifically apply to NCEES and our unique examination process.

The conversion to CBT would have a domino effect on other aspects of the Council. ELSEES, the NCEES exam administration service, has become a major activity for the Council, and also a major source of revenue. If the exams are converted to CBT, they will likely be administered through a system that does not include ELSEES, and we need to understand and anticipate what impact that will have on Council finances. Some of the professions that have converted to CBT have experienced a significant, although in most cases temporary, decrease in the number of candidates. What impact would that have on our finances, as well as on our professions as a whole?

Myriad questions need to be asked and answered before a decision is made to begin converting to CBT. We also need to be mindful, however, of the potential vendors. Through the RFI process, we are asking them to expend significant resources to provide us a response. The vendors are not paid for this response. If they make this significant investment in time and resources to respond to the RFI, we need to be prepared to act on recommendations that are in our best interest and allow us to make improvements to our examinations.

Consideration of conversion to computer-based testing will have far-reaching impacts on the Council. We need to be careful, but we also need to be cognizant of the fact that conversion to CBT, if it happens, will be only the latest step in the evolution of our exams.

*David L. Curtis, P.E.
Chair, Computer-Based Testing Task Force
Executive Director, Idaho Board of
Professional Engineers and Professional Land Surveyors*

Advisory council brings experience, expertise to Center operations

Two years into the existence of the Center for Professional Engineering Education Services, we are working to identify ways to improve the quality of our service to the Member Boards. The Center Advisory Council, which met October 29–30 at our offices in Miami, plays an important role in this process. During their visit, the advisory council reviewed the Center’s activities, paying close attention to the processes we use to evaluate applicants and to the evaluation reports we deliver to Member Boards.

The advisory council includes longtime Council members from academia, private practice, and Member Board staff. Combined, they have extensive knowledge of the challenges inherent in evaluating the academic credentials of licensure candidates from foreign countries. They also are aware of the needs of the NCEES Member Boards, which are charged with making the decision of whether or not to admit foreign-educated candidates to the licensure exams. The advisory council includes several individuals who have been active within the ABET accreditation process and have knowledge of both the traditional ABET criteria and the new, more outcomes-based ABET 2000 criteria.

We were pleased that the advisory committee provided positive feedback, noting the effective design of our database of program and course information and also of our online system for allowing candidates to check their application status. They also complimented our authentication process for incoming materials and the quality of our evaluation reports. The advisory council made several valuable recommendations related to how we apply ABET criteria to our evaluations of candidates’ college-level coursework. As always, our chief commitment is to provide the Member Boards with evaluations that provide accurate and comprehensive information about a candidate’s academic qualifications for licensure. This is vital to ensuring the integrity of the licensure process.

News from around the world

In order to do what we do in an effective manner, it is vital that the staff at the Center remain up-to-date on developments that relate to higher education and academic fraud. Doing

so helps establish the authenticity of records issued within academic years where institutions are not operating due to war, natural disaster, or economic crisis.

The higher education system in Zimbabwe is no longer functioning, according to reports from the country. The University of Zimbabwe will not reopen for the 2008–09 academic year due to widespread economic and political turmoil in the region.

Israel’s publicly financed universities narrowly avoided a cancellation of the opening of the academic year in November. According to reports, the presidents of Israeli universities had threatened to keep campus doors shut unless the government restored funding that had been cut in previous years, going so far as to e-mail enrolled students to warn them of the crisis. However, the universities opened as scheduled after an emergency meeting of government ministers resulted in restoring the funding that had been cut.

Annual Meeting presentation

The Annual Meeting in August provided the opportunity to meet many Council members, and I enjoyed hearing your thoughts about the Center’s work. My presentation during the Annual Meeting on the Center’s activities was well attended; for those interested, the PowerPoint presentation is available online at CouncilNet (see Workshop Presentations section). It describes the overall process of conducting credential evaluations, and includes information about the steps we take to authenticate the documents we receive as well as how we go about determining whether a candidate’s coursework is comparable to the criteria ABET uses when accrediting programs in the United States. Our goal is to become the clearinghouse for information related to the foreign education of engineering licensure candidates, and we look forward to building relationships with the Member Boards.

Eva-Angela Adán
Center Director

UPDATE

Meeting brings together MBAs and NCEES staff

The first Member Board administrators meeting at NCEES headquarters was a success. Thirty-four MBAs joined NCEES staff and President Henn Rebane, P.E., in Clemson on October 15 to hear presentations about Council operations and participate in forums devoted to issues of importance to their boards.

Director of Exam Services Tim Miller, P.E., led a discussion of upcoming issues for exam development and administration. NCEES directors, managers, and other key staff also gave presentations on their departments to provide a better understanding of the work that goes on at Council headquarters. In turn, MBAs provided staff with valuable feedback on how NCEES can continue to improve its services to Member Boards.

The Council approved the funding for this meeting, the first of its kind for MBAs, at the 2008 Annual Meeting. It was marked by open dialogue about the Council and its services, and gave MBAs the chance to tour NCEES facilities and meet the staff members who they had only communicated with via telephone and e-mail in the past. I feel that the MBAs and Council staff both benefited from the meeting and hope we can do it again in the future.

Administrators who were unable to attend can visit CouncilNet to view the presentations for the meeting.

Candidate ID system

A key issue for discussion was the development of a system to provide a unique identification number for each examinee.

In 2006, the Council voted to implement and require a national exam registration system that requires candidates approved by their Member Boards to register with NCEES in order to sit for an NCEES exam. This decision followed recommendations from a 2004 independent security audit and the Examination Administration Task Force to

move to such a system to strengthen exam security and provide a better mechanism for tracking repeat candidates.

The 2007–08 ACCA recommended that the MBA Networking Group work with NCEES staff to develop the identification system. Recognizing the need to address any barriers to implementation by Member Boards, the leadership of the MBA Networking Group and NCEES staff wanted to discuss these issues with those attending the MBA meeting.

Attendees considered the potential challenges, including setting a uniform registration deadline and accommodating individual boards' registration systems. They were united in the belief that the challenges could be overcome.

In support of the Council's 2006 vote to require a candidate identification system, President Henn Rebane has assigned the Committee on Examination Policy and Procedures with considering a policy to require candidates to obtain a unique NCEES identification number.

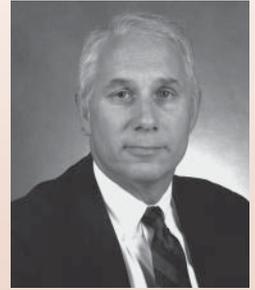
NCEES is now set to develop the identification system with input from Member Board members and administrators. Current plans are to begin using it for the October 2010 exam administration. This new system will allow boards to work together to better safeguard the integrity of the licensing exams.

Board Presidents' Assembly

Finally, I look forward to the Board Presidents' Assembly, which will be held February 20–21, 2009, in Atlanta, Georgia.

The Board of Directors set the BPA agenda at its November 14–15 meeting, with the goal of organizing a meeting that is of value to everyone attending.

Jerry T. Carter
NCEES Executive Director



Jerry T. Carter
NCEES Executive Director

MISSION

- ◆ Assist Member Boards in the promotion and promulgation of regulatory processes for engineering and surveying which demonstrate high standards of knowledge, competence, professional development, and ethics.
- ◆ Provide services to Member Boards that promote uniform licensing procedures which emphasize quality education, examination, experience, and continuing professional competency.
- ◆ Coordinate and cooperate among domestic and international organizations to promote licensure of all engineers and land surveyors.

NCEES Strategic Plan

UPDATE

NCEES proactive in defending assets during financial turmoil



L. Robert (Larry) Smith, P.E.
NCEES Treasurer

Despite the events of the past few months, the finances of NCEES remain in good shape. Like any investor who holds positions in the stock market, we have suffered declines as shares of companies have dropped as a result of the financial crisis and recession. Despite this, the fiscal policy of NCEES has been to live within our operating income and not to rely on increases in investment value. This may seem obvious, but apparently it is a point that has been missed by many in the banking and investment industries.

Diversifying bank holdings, switching from funds to advisors

The Board of Directors took steps to diversify our banking during the early days of the subprime investment concerns. NCEES had an investment policy that required us to keep our operating funds in one bank, which was specifically named in the policy. Just to prove that Murphy's Law is correct, naturally, that particular bank was caught up in serious concerns and has since been acquired by another bank. Prior to this, the Board revised the financial policy to not name any specific institution and to require that NCEES operating funds be kept in at least three commercial banks insured by the Federal Deposit Insurance Corporation (FDIC).

The decision to diversify is a result of the Council's growth over the past decade. It is not possible to keep less than the FDIC insured maximum in any one bank. However, as we are now set up, we can transfer funds electronically between accounts and always be situated to cover our payments. This results in more work for the staff, but in these economic times we do not want to keep all our eggs in one basket.

Apart from that, some of our equity investments have been placed with private investment advisors rather than the previous practice of investing them in mutual funds.

The investment advisors have been beating their market sector averages, but again this did not necessarily mean they were making money. Instead of putting recent accumulations of excess capital into equities and bonds, the Board of Directors decided to buy ladder certificates of deposit at various banking institutions. This also helps reduce risk through dilution.

New auditor increases transparency

We have also switched auditors this year. It is not a bad policy to have new sets of eyes look at your financial policy. The new auditors seem pleased with what we are doing, but they have also been able to offer a number of suggestions that should be beneficial. The financial reports for 2007–08 will appear in the *NCEES Annual Report*, which will be posted online and mailed in early 2009.

The budgetary process continues to be refined, and we feel we are getting closer to setting realistic budgets. This allows us to evaluate financial performance on a realistic basis and, hopefully, to be in a position to plan more effectively. In closing, I would like to state that working with the NCEES financial staff has been a pleasure and we should all have great confidence in them and the job they do.

L. Robert (Larry) Smith, P.E.
NCEES Treasurer

Licensure of engineering faculty (continued from page 1)

well for all parties involved. In Kentucky, Montana, and other jurisdictions, the rules and/or regulations point toward the teaching of engineering design courses rather than the more generic upper-division courses. Perhaps this is a more viable requirement to try to enforce.

In Wyoming, the statutes define the teaching of engineering topics as the practice of engineering. The board's approach has been to require that the dean of the College of Engineering and Applied Science at the University of Wyoming be a licensed P.E. Effectively, this places the remainder of the faculty under a form of industrial exemption. I know that all of the UW deans since 1975 have either had a P.E. license upon their employment or completed the licensure process within a couple of years. In my estimation, this might be a form of compromise for those jurisdictions who feel powerless to enforce their statutes that deal with university teaching or for those who are considering removing the teaching of engineering topics from their current statutes.

As an additional thought that might encourage some faculty to pursue licensure, I would direct you to *Model Rules 230.40 (5)*. This section allows for a waiver of the FE examination

requirement for applicants holding a doctorate in engineering. As with other practitioners who have been "away from the basics" for a long time, the FE exam is often a more daunting hurdle to faculty than the PE exam. For jurisdictions that already have this provision in your rules: advertise it. For those who don't: consider adopting it. It might cause a few faculty members to reconsider their decision not to pursue licensure.

Final thoughts

The licensure of faculty has been—and will most likely continue to be—a difficult proposition. Requiring licensure to be a necessary element of the university system of tenure and promotion would probably be impossible to get through state legislatures, but passing and enforcing rules and/or regulations that more closely focus the definition of the practice of engineering to the teaching of upper-division engineering design courses might be palatable for all parties involved. I could easily see that having 100 percent of an institution's design courses taught by licensed P.E.'s would be an excellent student recruiting tool. Whatever we can do through the Member Boards to encourage more faculty to become licensed will be a step in the right direction.

*David L. Whitman, Ph.D., P.E.
NCEES President-Elect*

Member Board
NEWS

Arkansas

- ◆ William E. Ruck, P.E., P.S., is the new board chair. Robert D. Holloway, P.E., P.S.; Nora Moses; and Sherman D. Smith, P.E., P.S., are new appointees to the board. William F. Fletcher, P.E., P.S.; Mike Marlar, P.E., P.S.; and Barbara Smith are no longer on the board.

California

- ◆ Patrick J. Tami, P.L.S., is the new board president. David Luzuriaga, P.E., is a new appointee to the board. Arthur P. Duffy, P.E., and Robert L. Jones are no longer on the board.

Delaware PS

- ◆ Joseph McDonough is a new appointee to the board.

Florida PS

- ◆ Arthur Mastronicola Jr. is a new appointee to the board. Sidney Greer has been reappointed for another term. Pamela W. Nobles, P.S.M., L.S., is no longer on the board.

Iowa

- ◆ Ruth A. Ohde and Marlee A. Walton, P.E., L.S., are new appointees to the board. Gowri S. Kalavala is no longer on the board.

Kansas

- ◆ Richard Moberly is the new board chair. Wendy Ornelas and Steven S. Brosemer are new appointees to the board. Murray L. Rhodes, L.S., and Joseph A. Johnson are no longer on the board. George Barbee; George R. Dean, P.E.; Richard Moberly; Thomas E. Mulinazzi, Ph.D., P.E., L.S.; and Timothy R. Sloan, L.S., have been reappointed for another term.

Massachusetts

- ◆ Patricia M. Breslin is the new board administrator (patricia.m.breslin@state.ma.us).

Michigan

- ◆ Cary Junior is a new appointee to the board. Gwendolyn Hale is no longer on the board.

Missouri

- ◆ J. Christopher Ball and Robert S. Shotts, L.S., are new appointees to the board. Charles C. Hill and Patti L. Banks are no longer on the board.

Nevada

- ◆ Randall M. Long, P.E., and Alan R. Riecki, P.L.S., are new appointees to the board. Thomas A. Foote, P.L.S., and Dennis Anderson, P.E., are no longer on the board.

West Virginia PS

- ◆ Dennis D. Jarrell is the new board administrator. He replaces Marilee Bright, who has retired.

Wisconsin

- ◆ Yolanda McGowan is now the bureau director for the board (yolanda.mcgowan@wisconsin.gov).

EVENTS

DATE	EVENT	LOCATION
February 20–21	Board Presidents' Assembly	Atlanta, Georgia
February 27–28	Board of Directors' Meeting	St. Petersburg, Florida
April 2–4	Central Zone Interim Meeting	Des Moines, Iowa
April 16–18	Northeast Zone Interim Meeting	Norfolk, Virginia
April 24–25	Exam Administration	
May 14–16	Southern Zone Interim Meeting	New Orleans, Louisiana
May 28–30	Western Zone Interim Meeting	Banff, Alberta, Canada

Send letters to *Licensure Exchange* editor at NCEES, PO Box 1686, Clemson, SC 29633 or dmcguirt@ncees.org.

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Frank K. Loudon, P.E.

Frank K. Loudon, P.E., of Las Vegas, Nevada, passed away Monday, November 10, 2008. A lifetime member of IEEE–USA, Loudon was the chair of the electrical and computer PE exam committee at NCEES and a former member and chair of the Nevada Board of Professional Engineers and Land Surveyors.

His loss was mourned by many members of NCEES who had gotten to know him through the exam committees and other Council activities. Loudon served on several NCEES committees during his long involvement with the Council; he was a past chair of the committees on Examination Audit, Examinations for Professional Engineers, and Examination Policy and Procedures.

“Frank was the consummate professional,” said Executive Director Jerry Carter. “Many of us looked to him for his pragmatic views and his ability to wade through all the minutiae of provide clear solutions to what were often complicated issues.”

Bill Dickerson, P.E., himself a longtime exam committee volunteer and a recent EPE chair, echoed those thoughts. “Frank was a good friend and mentor and will be missed by all of us who worked with him.”

Loudon was the owner and operator of Loudon Engineering in Las Vegas. He is survived by his wife, Denice Loudon, two daughters, sister, and four grandchildren. In lieu of flowers, donations may be sent to Mountain View Presbyterian Church, 8601 Del Webb Blvd., Las Vegas, NV 89134; or to Best Friends Animal Sanctuary, 5001 Angel Canyon Road, Kanab, UT 84741.

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Jerry T. Carter
Executive Director
Clemson, South Carolina

National Engineers Week launches Million Hours Campaign

National Engineers Week has set the bar high for engineers in 2009. EWeek organizers are challenging engineers throughout the country to log one million volunteer hours of outreach in promoting science, technology, engineering and math education in the United States. They have created a Million Hours Campaign site linked to the EWeek home page that allows engineers to record the hours spent doing such activities as visiting classrooms to talk about their work, hosting Design Squad events, or attending career fairs.

“The Million Hours Campaign is a way for engineers to show children how engineering is really an imaginative profession that takes ideas and uses science to make them reality,” said Davy McDowell, P.E., NCEES director of Professional Services. “I’m confident that P.E.’s will play a major part in reaching the one million mark because we are a group that tends to be very enthusiastic about our careers,” he added.

National Engineers Week is scheduled for February 15–21, 2009, but has grown to include year-round activities designed to introduce elementary, middle, and high school students to careers in engineering and applied science while promoting math and science literacy in U.S. schools. NCEES is a longtime sponsor of the EWeek foundation and is a major sponsor of Design Squad, an initiative that brings applied science projects into elementary and middle school classrooms and includes a reality-based public television program.

Other EWeek events include the Future City Competition, Introduce a Girl to Engineering Day, and Discover Engineering Family Day at the National Building Museum in Washington, D.C.

For more information about the Million Hours Campaign and other information about EWeek, visit www.eweek.org.

Licensure

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