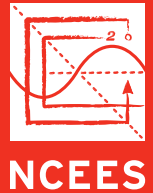


Licensure EXCHANGE

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DAVID L. WHITMAN, PH.D., P.E., F.ASEE
WYOMING BOARD OF REGISTRATION
FOR PROFESSIONAL ENGINEERS AND
PROFESSIONAL LAND SURVEYORS
MEMBER AND NCEES PAST PRESIDENT



WYOMING'S PH.D. PATHWAY TO LICENSURE: AN 18-MONTH UPDATE

IN 2009, AS NCEES PRESIDENT, I CHARGED A TASK force of licensed P.E.s to examine the issue of faculty licensure. This blue ribbon group presented a pathway for licensure that, while supported by many NCEES member board members, failed to garner enough support to be inserted into the NCEES *Model Law*. Based on the task force efforts, in early 2013 the Wyoming Board of Registration for Professional Engineers and Professional Land Surveyors sponsored a modification to its practice act that created a new licensure path for those engineers with doctoral degrees. On July 1, 2013, the law went into effect. This report represents the progress of the pathway after nearly 18 months.

The pathway effectively recognizes the earning of a doctoral degree in engineering as evidence that both the education and examination portions of licensure's "three-legged stool" are met. Most of the candidates for this pathway will have already earned a baccalaureate degree in engineering, and it was felt that the number of examinations completed as

a licensure candidate earns the advanced doctoral degree were sufficient to waive both the FE and PE exams. The third leg—four years of progressive experience—is still required for licensure. Because Wyoming law defines the teaching of upper-division design subjects and performing research investigations as the practice of professional engineering, it is not necessary for the candidate to have industrial experience. However, his or her teaching experience must show increasing responsibility and scope.

While attractive to faculty, the license is not limited to those who teach and is not a restricted license. It carries all of the rights and responsibilities of a Wyoming P.E. license that is achieved by any of the board's pathways.

Specifically, the Wyoming Statute (Title 33, Chapter 29) states,

An applicant for a license as a professional engineer who has graduated from a doctoral curriculum in engineering approved by the board shall submit evidence satisfactory to the board showing that the applicant:

- (a) Is of good moral character and repute;
- (b) Has passed any examinations required by rule of the board to establish competence at a professional level in Wyoming licensing laws and professional ethics; and
- (c) Has four (4) years of engineering experience in increasing responsibility and scope of a grade and character that evidence the applicant is competent to practice as a professional engineer.

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COMMITTEE FOCUS

NCEES committees and task forces begin work on 2014-15 agenda

WITH ITS COMMITTEES AND TASK forces addressing more than 70 charges this year, NCEES has a full range of issues to consider in 2015. President David Widmer, P.L.S., assigned to the 12 standing committees charges that focus on areas such as exams, law enforcement, and education. He also appointed a task force to study the future of surveying.

The following highlights the issues they will address this year. A full list of charges and the membership of each group is available on the MyNCEES section of the NCEES website. Each committee and task force will present its preliminary findings at the zone interim meetings this spring and get feedback from NCEES delegates. The groups will then submit their final reports, and the Council will vote on any resulting motions at the annual meeting in August 2015.

Advisory Committee on Council Activities

Chair: Dennis Truax, Ph.D., P.E.
Board of directors liaison: David Widmer, P.L.S.
Staff liaison: Donna Moss, PHR
Charges: 10

ACCA makes recommendations on policy issues that are not assigned to another standing committee or that involve several

committees. It also reviews the NCEES *Manual of Policy and Position Statements* and recommends needed revisions.

This year, the committee will continue to study the issue of structural engineering practice and its method of regulation. It will recommend changes to the *Model Law* and *Model Rules* as deemed necessary. It will consider whether an affiliate member status should be available for foreign partners that offer NCEES exams and other groups as designated by NCEES. The committee will also develop a position statement that reflects the Council's concern about the overall reduction of core courses from engineering curriculum, the expanding body of knowledge required to be an engineer, and the need for reform in engineering education to ensure that graduates of engineering programs are prepared to enter professional practice.

Committee on Awards

Chair: Ted Sack, P.L.S.
Board of directors liaison: David Widmer, P.L.S.
Staff liaison: Sherrie Holcomb
Charges: 2

The Committee on Awards will collect nominations for NCEES service awards to be presented during the 2015 annual

meeting and recommend recipients to the board of directors.

Committee on Education

Chair: Roger Helgoth, P.E.
Board of directors liaison: Mike Konzett, P.E.
Staff liaison: Davy McDowell, P.E.
Charges: 6

The Committee on Education serves in an advisory role for education issues related to ABET, requirements prior to initial licensure, continuing professional competency (CPC), and foreign degree or unaccredited program evaluation.

The committee will address several charges related to CPC requirements for licensure renewal, including assisting NCEES staff in the development of a CPC registry for users to maintain a record of CPC information, as approved by the Council at the 2014 annual meeting. It will work with the Committee on Member Board Administrators to develop a plan to promote the adoption of common CPC requirements and reporting provisions by all member boards. It will also study the possibility of requiring CPC activities upon certification as an engineer intern.

Committee on Examination Audit

Chair: George Roman, P.E.

Board of directors liaison: Dan Turner, Ph.D., P.E., P.L.S.

Staff liaison: Lehmon Dekle, P.E.

Charges: 4

The Committee on Examination Audit conducts regular audits of the NCEES exam program. This year, it will review administrations of the FE and FS exams and the following PE exams: Architectural, Control Systems, Environmental, and Petroleum.

Committee on Examination Policy and Procedures

Chair: Paul Tyrell, P.E., P.L.S.

Board of directors liaison: Christy VanBuskirk, P.E.

Staff liaison: Tim Miller, P.E.

Charges: 5

The EPP Committee reviews the effectiveness of the NCEES exam process and recommends revisions to exam policies and procedures when needed.

In 2014–15, the committee will review several exam administration policies concerning electronic devices prohibited from the exam room to ensure that they address current and evolving technology. It will also review EAP 9, Providing

Examination Scores for Licensing by Comity, to consider if it needs to be revised based on current processes.

Committee on Examinations for Professional Engineers

Chair: Dave Whitman, Ph.D., P.E.

Board of directors liaison:

Mike Conzett, P.E.

Staff liaison: Tim Miller, P.E.

Charges: 5

The EPE Committee oversees the development and scoring of the FE and PE exams. Its recurring charges include conducting content reviews to update exam specifications, monitoring the training of exam development volunteers, and recommending changes to exam policies and procedures as needed.

The committee has several charges related to moving PE exams to computer-based testing (CBT), which was approved by the Council in 2012. These include working with exam development committees to develop detailed timelines for CBT implementation for PE exams.

The committee will also review the recommendations of the Engineering Licensure Qualifications Task Force and the Licensure Qualifications Oversight Group regarding the need for additional practice-related items on PE exams. The committee

will consider the viability and necessity for adding these items and the potential format changes needed.

Committee on Examinations for Professional Surveyors

Chair: Lisa Hanni, L.S.

Board of directors liaison: Pat Tami, P.L.S.

Staff liaison: Tim Miller, P.E.

Charges: 6

The EPS Committee oversees the development and scoring of the FS and PS exams. It reviews item performance, monitors the training of exam development volunteers, and recommends changes to exam policies and procedures as needed.

The committee will continue working toward moving the PS exam to computer-based testing. Like the EPE Committee, EPS will be considering the need for additional practice-related items on the PS exam. It will also investigate the potential for member boards to house state-specific exams electronically with NCEES, which would allow these exams to be used by other member boards. It will also consider whether the requirement that experience must be earned before a candidate can take the PS exam should be removed from the *Model Law*, as has been done for the PE exam.

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COMMITTEE FOCUS

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Committee on Finances

Chair: Dale Jans, P.E.

Board of directors liaison: Gary Thompson, P.L.S.

Staff liaison: Betsy Pearson, CPA

Charges: 7

The Committee on Finances studies the financial needs of NCEES and recommends sources of income and ways and means of securing adequate funds for its operation. The committee will review the results of the 2013–14 audit and the current financial condition of NCEES. It will work with NCEES leadership to recommend an income and expense budget for 2015–16.

Its other charges for this year include determining revenue and cost trends of FE and FS exams for the past three years and tracking trends for 2014 to identify any anomalies associated with CBT. It will also review the financial policies on funds set aside for exam breaches and general NCEES reserves.

Committee on Law Enforcement

Chair: John Greenhalge

Board of directors liaison: Jim Purcell, P.E.

Staff liaison: Bob Whorton, P.E.

Charges: 11

The Committee on Law Enforcement promotes greater uniformity and cooperation between member boards in the enforcement of licensure laws. The committee maintains the NCEES *Investigation and Enforcement Guidelines* and *Investigative Training Manual*, best practice manuals for enforcement activities and training. It also conducts a law enforcement

A full list of charges and the membership of each group is available on the MyNCEES section of the NCEES website.

program at the NCEES annual meeting and writes the column “Enforcement Beat” for *Licensure Exchange*.

This year, the committee’s other charges include working with the MBA Committee to devise a strategy for collecting member board disciplinary actions taken against licensees and incorporating them into the Enforcement Exchange database. It will research the various application requirements of member boards, such as criminal background checks and fingerprinting, and provide recommendations for effective applicant screening. It will also investigate the potential benefit and cost to require background checks for Record holders.

Committee on Member Board Administrators

Chair: Kathy Hart

Board of directors liaison:

Patty Mamola, P.E.

Staff liaison: Steven Matthews

Charges: 8

The Committee on Member Board Administrators is responsible for

coordinating meetings for MBAs at the NCEES annual meeting and zone interim meetings. The committee facilitates cooperation between MBAs and assists with any member board efforts to address licensure processes and practices. It also writes a *Licensure Exchange* column, “Member Board Brief.”

The committee’s charges for 2014–15 include assisting the EPS Committee with investigating the potential for NCEES to store all state-specific surveying exams, which could then be used by other member boards. It will assist NCEES staff with changes to the Records program, including improvements to reporting and verification of progressive experience, information provided by references, and the integrity and accuracy of the Record, as well as a review of the forms currently used.

Committee on Nominations

Chair: Patty Mamola, P.E.

Staff liaison: Jerry Carter

Charges: 2

The Committee on Nominations submits the nominations for officers for the next

administrative year. This year, it will solicit a nomination from the Southern Zone for president-elect for 2015–16, nominations for treasurer, and a Nominations Committee member and alternate member from each of the four zones.

Committee on Uniform Procedures and Legislative Guidelines

Chair: Sallye Perrin, P.E.

Board of directors liaison:

Pat Tami, P.L.S.

Staff liaison: Keri Anderson

Charges: 5

Each year, the UPLG Committee looks for ways to strengthen the licensure process and proposes any necessary changes to the *Model Law* and *Model Rules*, the documents that provide member licensing boards

with a model for their own practice laws to regulate the engineering and surveying professions.

The committee's charges for 2014–15 include conducting a comprehensive review of the *Model Law* and *Model Rules* and proposing any necessary revisions to reconcile conflicts and inconsistencies between the two documents.

Future of Surveying Task Force

Chair: Donna Sentell

Board of directors liaison: Dan Turner, Ph.D., P.E., P.L.S.

Staff liaison: Jerry Carter

Charges: 3

The task force will evaluate the current state of the surveying profession in terms

of what NCEES can do to mitigate the low number of candidates seeking licensure as professional surveyors and to better promote the value of a career in the surveying profession. It will consider if revisions are needed to the definition of surveying to encompass new technology and methodology to broaden the potential base for licensed surveyors. It will also evaluate whether state-specific exams can be transitioned to region-specific exams or be eliminated.

Board presidents, administrators to hold biennial meeting in Atlanta

NCEES member board presidents and administrators will meet February 6–7 in Atlanta, Georgia. Member board administrators, or MBAs, will participate in a roundtable discussion, and new board presidents will attend an orientation to NCEES. NCEES staff will be on hand to give updates on current initiatives at headquarters, including computer-based testing, the merging of the Records and Credentials Evaluations systems, and marketing and outreach efforts. An open discussion session will give board presidents and MBAs time to share topics

for discussion, ask questions concerning ongoing initiatives, and find out about issues that other jurisdictions are experiencing.

In the evening, receptions and a dinner at the host hotel, the Atlanta Airport Marriott Gateway, will give opportunities to network and share information in a more informal setting.

“This meeting gives board presidents as well as MBAs the chance to communicate with each other and NCEES staff about their individual experiences and also learn

about initiatives that various committees and headquarters staff are working on,” said NCEES Chief Executive Officer Jerry Carter. “It’s a great opportunity to learn from one another.”

PATHWAY TO LICENSURE

continued from cover

The corresponding Wyoming Rules state,

- (a) A “doctoral curriculum approved by the Board” is defined as an earned doctoral degree in engineering from an institution that grants ABET accredited undergraduate or graduate degrees.
- (b) “Examinations required by Rule of the Board” are defined as
 - (i) A written examination on professional ethics and Wyoming licensing laws related to engineering and surveying, and
 - (ii) An oral interview with the Board.
- (c) The four (4) years of engineering experience must be obtained after the applicant completes his/her first degree (undergraduate or graduate) in engineering. No credit toward this experience requirement will be given for the applicant’s graduate education.
- (d) The applicant will be exempt from both the fundamentals (FE) and professional (PE) examinations.

Paragraph (a) of the Rules allows the board to deny any application from a candidate whose doctoral degree is from an institution that is not recognized by ABET—thus avoiding degrees from diploma mills.

As described in paragraph (b)(i) of the Rules, the pathway does involve an exam on the Wyoming board’s rules, regulations, and ethics. Candidates must pass this exam with a score of 90 percent or higher in order to pursue the pathway. This level of completion requires the candidates to closely study both the Wyoming rules and regulations and the National Society of Professional Engineers Code of Ethics.

The oral interview in paragraph (b)(ii) takes about 20 minutes and is either conducted face-to-face during a regularly scheduled board meeting (generally for University of Wyoming faculty) or via a conference call. The interview allows board members to get to know the candidate and understand the candidate’s reasons for pursuing this pathway. One of the questions that the board asks is, “Will you be able to utilize your licensure to encourage students at your institution to take the FE exam and, eventually, pursue licensure?” Or similarly, “Will you encourage other faculty or unlicensed engineers in your firm to pursue licensure?”

“Wyoming’s Ph.D. pathway recognizes the advanced academic skill level of engineers successfully acquiring that degree level while maintaining the practical experience and ethical conduct requirements of holding a professional engineering license.”

—Craig Myler, Ph.D.

The answer is always “yes,” but commentary on the question almost always relates back to the reason that many of the candidates chose to pursue licensure via this pathway—the desire to promote licensure to others from a position of being licensed themselves. This was one of the reasons that the board was so supportive of this new pathway.

At this time, 13 candidates have pursued this pathway, and four more are scheduled to be interviewed at the December 2014 board meeting. The distribution of the 13 is as follows:

- Four faculty from the University of Wyoming
- Four faculty outside the University of Wyoming
- Five practicing engineers in industry (including four from Bechtel National Inc.)

I asked some of the new licensees who chose this pathway to offer some words about their experiences with it.

Dennis Coon, Ph.D., University of Wyoming mechanical engineering faculty member:

I am an engineering educator with 26 years of experience. My teaching role is to prepare students to be successful in the profession of engineering. The engineering profession requires advanced training in technical skills and a responsibility to utilize those technical skills in the best

interest of the public. Engineering educators certainly have the advanced knowledge to prepare graduates with appropriate technical skills. However, my role as a researcher has isolated me from direct contact with the public as normally encountered in the practice of engineering, since advanced research does not immediately impact the public welfare. This dichotomy of roles as an engineering educator was recognized by the Wyoming State Board of Registration for Professional Engineers and Land Surveyors, and it took a revolutionary step to address the issue. It implemented a pathway to engineering licensure that was specific to those holding an earned doctorate in engineering. I chose to apply for a P.E. license through this new Ph.D. pathway. The process required completion of an engineering law and ethics exam. The exam was informative, thought provoking, and also a lot of fun! The exam provided critical information to supplement technical training as I prepare students for the practice of engineering. Completion of the Ph.D. pathway has helped me be better prepared to educate students. It has been a very positive experience all around.

Rao Govindaraju, Ph.D., Bowen Engineering Head and Christopher B. and Susan S. Burke Professor of Civil Engineering at Purdue University:

P.E. licensure is very valuable in a profession such as ours that carries a major responsibility for the nation's infrastructure. Society bestows on us a lot of trust, and licensure, along with the ethical considerations that go with it, helps ensure that this trust is not misplaced. Despite best efforts, not all qualified persons are able to avail themselves of the opportunity to obtain a license. The Ph.D. pathway allows a very qualified group of people an alternate mechanism to obtain licensure and become more useful members of society.

Ronald Bennett, Ph.D., School of Engineering Founding Dean and Professor Emeritus at St. Thomas University:

As an industry person turned academic, I have been searching for years for a viable path to licensure as a professional engineer. Why? It is my belief that modeling behavior is a major role of a professor. In order to encourage young engineering students to pursue licensure as a professional engineer, we as faculty should provide models and seek licensure ourselves. The pathway offered

by Wyoming is just what I needed and demonstrates the importance of "design," not just of products, but of processes, even of processes for licensure.

Craig Myler, Ph.D., Chief Engineer and Functional Manager, Process and Technology at Bechtel National Inc.:

The importance of professional licensing for engineers lies in the obligation of state governments to protect the public by ensuring technical competency and ethical conduct. Wyoming's Ph.D. pathway recognizes the advanced academic skill level of engineers successfully acquiring that degree level while maintaining the practical experience and ethical conduct requirements of holding a professional engineering license. The pathway attracts more qualified engineers to professional engineering positions and further promotes the goals of licensing.

The Wyoming State Board of Registration for Professional Engineers and Land Surveyors believes that our Ph.D. pathway to licensure has been successful in attracting licensees who will not only practice as professional engineers in the state but will also work tirelessly at promoting licensure to new engineering graduates throughout the nation.

FROM THE PRESIDENT



DAVID WIDMER, P.L.S.
NCEES PRESIDENT

Beginning of term gives time to focus on past, present, and future

SHORTLY AFTER RETURNING FROM THE ANNUAL MEETING in Seattle, I attended my first speaking engagement at the University of Pittsburgh for its Young Members Forum of the American Society of Civil Engineers (ASCE), which included students from Carnegie Mellon University. Close to 50 students came with questions concerning computer-based testing and how it differed from the old pencil-and-paper exams. It is amazing what a few free pizzas will do to get students out to a meeting. From a personal perspective, this was fantastic because I was able to talk informally with them about the process and share some historical data. The questions were impressive, and hopefully I answered them all to the students' satisfaction.

Shortly thereafter, Chief Operating Officer Davy McDowell, P.E.; President-Elect Mike Conzett, P.E.; and I traveled to Panama City to attend the ASCE annual conference. More than 1,000 attendees from 21 countries were present.

Our first order of business was to attend the Engineers Without Borders-USA meeting, which was being held during the ASCE meeting. EWB Executive Director Catherine Leslie, P.E., welcomed us and acknowledged the contribution that NCEES has recently made to EWB (see Headquarters Update on page 9).

EWB provides an opportunity for young engineers to work closely with their professional mentors to do a hands-on project from design through construction. Many of these projects involve public water or sewage treatment projects to aid in local public health of typically impoverished communities. There is no better way to get NCEES' message of protecting the health, safety, and welfare of the public than through mentoring younger engineers and surveyors.

We also had an opportunity to tour the ongoing construction of the third lane of the Panama Canal, which is celebrating its centennial this year. This \$3.2 billion project is being made to accommodate larger vessels and increase the number of vessels the canal can accommodate at one time.

There is no better way to get NCEES' message of protecting the health, safety, and welfare of the public than through mentoring younger engineers and surveyors.

We attended the installation of incoming ASCE President Robert Stevens, Ph.D., P.E., during this conference. It seems funny, but all installation speeches seem to stem around one common denominator, and that is we have to get youth involved in our respective professions. I also had the opportunity to spend some time speaking with incoming ASCE Executive Director Thomas Smith and discuss common issues. I am confident Tom will do well in his new assignment, and I look forward to working with him and President Stevens.

I just returned from Overland Park, Kansas, where I was asked to be the keynote speaker along with Curt Sumner, L.S., of the National Society of Professional Surveyors to address the members at the joint meeting of the Kansas and Missouri Land Surveyors Associations. I discussed the falling numbers for both the FS and PS exam and the task force that I formed to identify ways to change this trend. The lack of mentoring in the surveying profession seemed to dominate our discussions.

The first few months as NCEES president have given me opportunities to celebrate the past, discuss present initiatives, and look to the future of engineering and surveying. I look forward to continuing to work with other organizations to advance the professions.

HEADQUARTERS UPDATE



JERRY CARTER
NCEES CHIEF EXECUTIVE OFFICER

Board of directors authorizes contribution to Engineers Without Borders-USA

AT THE FINAL MEETING OF THE 2013–14 NCEES BOARD of directors, the board authorized a contribution of \$200,000 to Engineers Without Borders-USA (EWB) to support projects for the coming year. The contribution will be used as matching funds for EWB's year-end campaign. NCEES will be recognized throughout the year, which will provide an opportunity to introduce more people to our organization and the work that it does.

This contribution, which was approved in August, is a continuation of support for EWB. In 2013, the board authorized four \$5,000 grants to support proposed projects under the supervision of EWB. Many of us have heard of this organization, but few have a full appreciation of who is involved in the projects or how they deliver services. Through these initial grants, the NCEES board became familiar with the significant humanitarian contributions that EWB delivers while providing opportunities for young engineers to develop their technical and leadership skills.

Sustainable solutions for those in need

EWB was created in 2002 with the foundation of “connecting a developing community that has a specific infrastructure need to engineers who can partner with the community to design a sustainable solution.”

Since its inception, EWB has grown rapidly and currently has more than 14,700 members. It includes hundreds of student chapters at U.S.-based universities and colleges. The number of projects has also increased significantly, and in 2013, EWB was involved in 684 projects in 39 countries.

Guidance from P.E. mentors

Each EWB project includes a commitment to a community and typically has a 5-year lifespan. Each project must result in substantial improvement in the quality of life in the chosen community, and each project team is required to have a mentor, who is typically a professional engineer. One member of the

professional mentor team must be designated as the responsible engineer in charge (REIC), who assumes overall responsibility for the project. The REIC provides technical guidance on all designs, ensures that all reports are accurate and adequately detailed, provides a final review, then seals and signs the documents. Although some projects may have an REIC who is not a professional engineer, any project where failure of the project may result in death, severe illness, injury, or significant damage of property requires the REIC to be a professional engineer. In addition to technical competence, the REIC must be a member of EWB and involved with an EWB-USA chapter.

As noted, there are numerous EWB chapters at U.S. institutions, which are affording the opportunity for future engineers to enhance their classroom learning by gaining hands-on experience on projects that, after completion, can be sustained by the local community on a long-term basis. The seven types of projects that EWB is engaged in include water supply, sanitation, civil works, structures, energy, agriculture, and information systems. The goal as defined by EWB is to “create global engineers who are capable of working in multicultural and multidisciplinary teams to effectively manage projects both domestically and internationally.” This experience provides the opportunity for students to gain a better understanding of engineering principles as well as the concept of working as a team. Students are also exposed to the extreme level of poverty in various parts of the world and come to understand how engineering can make a positive change in the lives of the people they are helping.

Support for the profession's future

As a major sponsor, NCEES will aid in supporting the humanitarian efforts of EWB while helping engineering students involved in the various projects to bridge the gap between their classroom experience and the application of engineering in real-world situations. The board believes that these individuals will change the world in the future, and they will do so as professional engineers.

ENFORCEMENT BEAT



RICK HUETT
ALABAMA STATE BOARD OF LICENSURE
FOR PROFESSIONAL ENGINEERS AND
SURVEYORS INVESTIGATOR

Application experience highlights another use for Enforcement Exchange

RECENTLY, THE ALABAMA BOARD RECEIVED A COMITY licensure application, along with the individual's NCEES Record, that provided a learning experience for board staff. As part of the application process, board staff reviews the application as well as the NCEES Enforcement Exchange database, an Alabama public record search using the Alacourt system, and a public record search using LexisNexis. The search of Enforcement Exchange and Alacourt did not provide additional information. However, the LexisNexis search revealed a felony criminal conviction that the individual did not identify on his application to the board or for the NCEES Record.

Since Alabama law does not allow the board to issue a license to someone with a felony criminal conviction (unless his or her civil rights have been restored), the board needed additional information to ascertain if the applicant could be licensed in the state. When the individual was contacted, he indicated that his failure to report the conviction on the application was unintentional—an administrative assistant had completed the application and was unaware of his prior conviction. The investigation of the matter eventually determined the following:

- The individual was found guilty of theft by deception in 1992 and required to serve a two-year probation period, undergo drug monitoring, pay restitution, and perform community service. In 1995, he plead guilty to one count of possession of a controlled dangerous substance (third degree) and one count of simple assault (fourth degree).
- The individual had filed an original application to a different board that identified the felony criminal conviction and was ultimately issued a professional engineer license in that state.
- The individual had submitted applications to other boards that also did not identify the felony criminal conviction.
- When transmitting an NCEES Record to a board, Council staff checks Enforcement Exchange prior to submitting the Record. In this instance, since Enforcement Exchange did not list a violation and NCEES was unaware of the felony criminal conviction, the Record listed the individual as a Model Law

As we neared the end of this process, board staff felt it would benefit other boards to have some avenue to ascertain this type of information without attempting to contact individual boards.

Engineer, an NCEES designation that means that the individual meets the standards listed in the NCEES *Model Law*.

The Alabama board ultimately denied the application since it believed that the individual had failed to divulge information that appeared to be felony criminal convictions. The application was denied, and the individual was advised that he had 30 days to notify the board if he wished to appeal its decision. He did not appeal.

The board staff alerted the appropriate NCEES personnel regarding the felony criminal conviction, and the individual's NCEES Record no longer identifies him as a Model Law Engineer.

As we neared the end of this process, board staff felt it would benefit other boards to have some avenue to ascertain this type of information without attempting to contact individual boards. Staff was aware of a recently added category to NCEES Enforcement Exchange that allows boards to post this type of information, and the individual's information was posted on the Exchange as a "License Denial—Non-Disciplinary." This information is now available to all boards that the individual may apply to in the future—just another great reason to use Enforcement Exchange.

MEMBER BOARD BRIEF



KATHY HART
OKLAHOMA STATE BOARD OF LICENSURE
FOR PROFESSIONAL ENGINEERS AND LAND
SURVEYORS EXECUTIVE DIRECTOR

Rethinking outreach for computer-based testing

THE LONG-ANTICIPATED START OF A NEW ERA IN computer-based testing (CBT), which began January 2, 2014, will close November 30 with the last window for taking the Fundamentals of Engineering (FE) and Fundamentals of Surveying (FS) exams. Throughout this first year, lessons were learned, adjustments were made, mindsets shifted, but most importantly, the students and other young upcoming professionals were successfully given the opportunity to fulfill this important step toward professional licensure.

Member boards may still be playing catchup with some of the administrative tasks—anticipated and unanticipated—that come with such a radical shift in the fundamentals examination process. Some boards are still working with their legislatures to revise statutory or administrative rule language to allow for automatic approval for applicants to sign up with NCEES directly to take the FE or FS exams. Many jurisdictions had to change application forms for intern certification to embrace the year-round CBT exams, and websites were rewritten to explain the new processes and procedures.

One very important part of the process for FE and FS applicants that has been affected by these changes is outreach activities. Member boards conduct these to ensure that the students, faculty, and other interested parties are educated on the licensure process and that students are encouraged to start pursuing licensure as early as possible. With the revisions to the examination process for fundamentals applicants, member boards must review their outreach strategies and determine whether they fit with current CBT practices.

As anticipated, the number of examinees has declined over the past year because students do not have the semiannual deadlines to sign up for exams. This makes it more important than ever for boards to keep information in front of students at every opportunity to encourage them to not procrastinate and to take the fundamentals exam as soon as they are ready. This may include making university visits, distributing flyers, using the NCEES Speaker's Kit to give

With year-round testing, the sign-up day concept is no longer relevant, so we are reviewing our strategies and creating new approaches to get the information in the right hands of the right people at the right time.

formal presentations, or using social media, just to name a few. In Oklahoma, one of our most important outreach opportunities was visiting universities to sign up students to take the FE exam twice a year when the cutoff date for applications was approaching. We would spend most of a day at the major universities talking with future examinees, students ready to sign up for the exam, and faculty who would visit our table asking questions in a very informal setting. With year-round testing, the sign-up day concept is no longer relevant, so we are reviewing our strategies and creating new approaches to get the information in the right hands of the right people at the right time. It's no small task, but the task that we are all facing.

As your board develops new strategies for outreach programs with students and universities, please share your experiences with other boards to assist them in their endeavors. As member board administrators, we all agree on one thing: there is no reason to reinvent the wheel. So don't hesitate to post on Basecamp something that you have tried that worked—or didn't work—regarding outreach. We will all profit from your experiences, and the students and the professions of engineering and surveying will be the main beneficiaries.



NINA NORRIS
NCEES DIRECTOR OF PUBLIC AFFAIRS

Engineers Week 2015 challenges profession to engineer new horizons

National outreach initiative offers many ways to give back

ENGINEERING NEW HORIZONS—IT'S WHAT WILL HAPPEN during DiscoverE Engineers Week 2015, which will be held February 22–28. This national celebration offers many ways to participate and many events that promote the engineering and surveying professions.

Future City Competition

The Future City Competition is a national event where students in sixth, seventh, and eighth grades design and build cities of the future. Students present their ideas at the regional competitions in January, and the regional winners go on to compete at the national level in Washington, D.C., in February.

NCEES sponsors the Best Land Surveying Practices award. This award recognizes the design that employs the best land surveying practices, while taking into consideration the high standards used by surveyors to safeguard the public's health, safety, and welfare. The winning team must demonstrate skills and resources surveyors provide through the design, development, and maintenance of their future city.

NCEES has sponsored this award at the national competition for over 10 years, and this will be its third year offering the award at the regional level. The expansion into the regional level introduced 40,000 middle-school students to the surveying profession last year. In addition, more than 1,300 teachers and more than 30 NCEES volunteer judges were involved in the competition.

To ensure repeated success this coming year, NCEES needs volunteers to serve as judges at the regional competitions, which are held throughout the country. If you would like to serve as a

DiscoverE Engineers Week celebrations include many programs, and this means you can find many ways to volunteer.

regional judge and introduce the surveying profession to middle-school students, contact me at nnorris@ncees.org.

Girl Day

Girl Day began in 2001 as a way for women engineers to share their innovative careers with girls. It is now a movement to show girls that a career in engineering is about being creative and collaborative.

Girl Day can be celebrated in many ways. You may want to invite a girl to come to work with you and observe a day in the life of a woman engineer. You could also host a lunch or dinner for a group of girls and feature the contributions of women in engineering. Visit discoverE.org for more idea starters.

Other volunteer opportunities

DiscoverE Engineers Week celebrations include many programs, and this means you can find many ways to volunteer. All outreach, no matter the scale, will make a difference. Celebrate engineers, increase the public's knowledge of engineers, and bring engineering to life. Get involved and engineer new horizons in your community.

NCEES publishes 2014 Engineering Award Book, opens 2015 competition

New publication features six award-winning projects



SINCE 2009, NCEES HAS OFFERED THE NCEES ENGINEERING Award to promote understanding of the value of licensure and to encourage partnerships between the engineering profession and education. Its latest publication, the 2014 NCEES Engineering Award Book, celebrates this year's winners.

The book features the six winning projects and the collaboration involved between the students, faculty, and professionals. Seattle University's project, *Microgrid System for a Wind and Solar Farm Located in Rural Kenya*, is recognized as the \$25,000 grand prize winner and showcases the students, faculty, and professionals involved through interviews.

When asked how the participation of professional engineers improved the project, Patrick Berg, a student participant, replied, "They were very valuable to our learning of the power system and mentoring. I really learned a lot just by watching how they think about certain situations. Their expertise helped us polish this project into what it is today."

The book also features the five \$7,500 award winners: the Citadel, North Carolina State University, Seattle University, the University of Evansville, and the University of Notre Dame.

Nirmala Gnanapragasam, Ph.D., P.E., an associate professor in civil and environmental engineering at Seattle University and a member of the Washington State Board of Registration for Professional Engineers and Land Surveyors, was a faculty member on a 2014 award-winning team. Gnanapragasam contended that students can benefit greatly from teamwork and learn more than engineering skills. "The students develop valuable professional skills along the process—the ability to work as a team, leadership skills, written and oral communications skills, interacting with professional and/or lay clients, to name a few," she said.

2015 call for submissions

The 2015 award cycle has launched, and projects can now be submitted electronically. EAC/ABET-accredited engineering programs from all engineering disciplines are invited to compete for a grand prize of \$25,000 and five awards of \$7,500 each.

The deadline to enter is May 4, 2015. Detailed entry information is available at ncees.org/award. Also, all promotional materials, including the 2014 NCEES Engineering Award Book, are available to download. Copies of any promotional materials are available by request.

Board of directors approves 2014-15 exam item costs

THE NCEES BOARD OF DIRECTORS HAS APPROVED VALUES for each exam item for fiscal year 2014–15, which began October 1. Due to the transition to computer-based testing for the FE and FS exams, the values are now calculated in three groups: CBT multiple choice, which currently includes the FE and FS exams; multiple-choice items for pencil-and-paper exams, which include the PS exam, all PE exams, and the breadth portion of the 16-hour SE exam; and constructed response, or essay, questions for pencil-and-paper exams, which include the depth portion of the SE exam.

The following are the exam item costs for 2014–15:

- CBT exam item cost: \$2,510
- Pencil-and-paper exam item cost for multiple-choice items: \$2,307
- Pencil-and-paper exam constructed response: \$19,802

Each year, NCEES assesses the potential financial damages associated with an exam breach and sets a cost to replace an exam item, or question, if it can no longer be used. NCEES considers travel expenses, subject-matter experts' time, psychometric costs, and office and personnel costs when establishing the dollar value of each exam item.

New specs, design standards

The PE Civil exam (all modules) and PE Agricultural and Biological exam have revised specifications, beginning with the April 2015 administration. This includes all five of the PE Civil exam module options: Construction, Geotechnical, Structural, Transportation, and Water Resources and Environmental.

The SE exam will have revised design standards starting in April 2015. The PE Civil exam's Construction, Geotechnical, Structural, and Transportation modules and the SE exam have revised design standards, which also begin with the April 2015 administration.

Updated specifications and design standards are posted online at ncees.org/exams.

Calculator list approved

The board of directors recently approved the calculator models that can be used on NCEES computer-based and pencil-and-paper exams in 2015:

- Casio: All fx-115 models (Any Casio calculator must have fx-115 in its model name.)
- Hewlett Packard: The HP 33s and HP 35s models, but no others
- Texas Instruments: All TI-30X and TI-36X models (Any Texas Instruments calculator must have TI-30X or TI-36X in its model name.)

Limiting the types of calculators allowed in the exam room is one of the measures NCEES takes to protect the integrity of its exams.

MEMBER BOARD NEWS

ALABAMA Emeritus member Veston Bush passed away October 5.

ARKANSAS Board member Sherman Smith passed away September 18. David Beasley is a new appointee.

HAWAII Emeritus member Mike Miura passed away June 1. Ron Iwamoto is now an interim member. Norman Hong, Howard Lau, and Raymond Skelton are no longer members.

ILLINOIS SE Salvatore Di Bernardo is a new appointee. John Harms is no longer a member.

NEW HAMPSHIRE PE Robert Cruess is no longer a member.

NEW JERSEY Michael Kelly is a new appointee. Robert Marshall Jr. is no longer a member.

OREGON Amin Wahab is a new appointee. Anne Hillyer is no longer a member.

PENNSYLVANIA Earnest Long is no longer a member.

PUERTO RICO Fernando Fagundo and Lynnette Ramirez are new appointees. Ricardo Morales and Eduardo Reyes are no longer members.

RHODE ISLAND PE & PS Neena Sinha Savage is now the boards' legal counsel.

SOUTH DAKOTA The board's new office address is 2525 West Main Street, Suite 211, Rapid City, SD 57702-2439.

VIRGINIA Christopher Stone and Mike Zmuda are new appointees. Nancy McIntyre is no longer a member.

WASHINGTON Ivan VanDeWege and James Wengler are new appointees. Mel Garland and Dan Parker are no longer members.

WYOMING Shannon Stanfill is the new executive director. She replaces Christine Turk, who has retired.

CORRECTION In the October 2013 Member Board News, William Hanna was listed as NCEES president in 1997-98. He was president in 1977-78.

UPCOMING EVENTS

December 4-6

SE Exam Scoring Workshop
Clemson, South Carolina

December 5-6

Education Committee
Meeting
San Antonio, Texas

December 6

ACCA Meeting
San Antonio, Texas

December 9-10

PE Petroleum Exam Cut
Score Meeting
Houston, Texas

December 12

MBA Records/Credentials
Focus Group
Clemson, South Carolina

January 6-7

MBA Committee Meeting
San Francisco, California

January 8-10

PE Elec. and Computer
Exam Meeting
Clemson, South Carolina

January 9-10

EPE Committee Meeting
Clemson, South Carolina

UPLG Meeting
Charleston, South Carolina

January 16-17

PE Civil Exam Meeting
Clemson, South Carolina

Law Enforcement
Committee Meeting
Savannah, Georgia

January 21-22

PE Petroleum Exam Meeting
Houston, Texas

January 23-24

EPP Committee Meeting
Miami, Florida

FE/FS Exam
Committee Meeting
Clemson, South Carolina

January 24

ACCA Meeting
San Diego, California

January 29

EPS Committee Meeting
Clemson, South Carolina

January 30-31

PE Industrial Exam Meeting
PS Exam Meeting
Clemson, South Carolina



P.O. Box 1686
(280 Seneca Creek Rd)
Clemson, SC 29633 USA
864-654-6824

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NCEES seeks mining and mineral processing engineers for online survey

NCEES is currently seeking licensed mining and mineral processing engineers to participate in a professional activities and knowledge study, or PAKS, for the PE Mining and Mineral Processing exam. The results of this study will be used to update specifications for the exam, which is used throughout the United States for licensing purposes.

NCEES requires a cross section of licensed professional engineers practicing mining or mineral processing—including those working in industry, consulting, the public sector, and academia—to complete an online survey about the tasks and knowledge required of a licensed mining or mineral processing engineer with 4 to 6 years of experience to protect the health, safety, and welfare of the public. The survey can be completed in about 20 minutes.

“These studies help NCEES ensure its licensing exams remain relevant to current professional practice,” explained Director of Exam Services Tim Miller, P.E. “The value of this PAKS depends on the number of people who participate, so NCEES is eager to get a large response from P.E.s across all areas of mining and mineral processing engineering.”

For access to the online survey, visit bit.ly/PEMMP. Responses must be received by January 5. For more information, contact NCEES Exam Development Engineer Susan Cline, P.E., at sccline@ncees.org or 864-654-6824.