

AN OFFICIAL NCEES PUBLICATION FOR THE EXCHANGE OF INFORMATION, OPINIONS, AND IDEAS REGARDING THE LICENSURE OF ENGINEERS AND SURVEYORS

## FEATURE STORY

## JOIN THE 2013 EWEK CELEBRATION OF ENGINEERING

### NCEES honored to serve as lead society sponsor



DALE JANS, P.E.  
NCEES IMMEDIATE  
PAST PRESIDENT

**C**elebrate awesome. The week of February 17–23 will be a time to celebrate all the amazing things engineers do to make our world a better place. The 62nd annual National Engineers Week will be filled with awesome events, awesome volunteer opportunities, and awesome recognitions, so it makes sense that the National Engineers Week Foundation chose “Celebrate Awesome” as the 2013 EWeek theme.

This year, EWeek will be especially important for us because NCEES is the 2013 lead society sponsor, and I

am honored to represent NCEES as EWeek chair. Joining NCEES in sponsoring EWeek is the 2013 lead corporate sponsor, Lockheed Martin.

NCEES has been involved with EWeek for more than 10 years; however, this year is its first time

as lead society sponsor. NCEES has sponsored the Best Practices in Land Surveying special award and essay contest for the Future City competition in past years. In 2012, NCEES also co-sponsored the New Faces of Engineering–College Edition.

In addition to being the society sponsor, this year NCEES is the sole sponsor of the New Faces of Engineering–College Edition, the EWeek volunteer and Girl Day kits, the Future City essay contest, and the Future City Best Practices in Land Surveying regional and national awards.

As I have mentioned, this is the second year NCEES has been involved with New Faces of Engineering–College Edition. This program expands on the long-standing New Faces of Engineering program, which was created to honor the nation’s most promising young engineering professionals. The college edition of New Faces highlights those 3rd-, 4th-, and 5th-year students whose academic successes and involvement with engineering associations are sure to be a glimpse of their impact on the industry in years to come.

Another piece of our funding is the 2013 EWeek volunteer and Introduce a Girl to Engineering Day kits. The EWeek volunteer kit includes a promotional poster, classroom activities, and other resources that engineers, students, and volunteers can use to facilitate participation and outreach locally. The Introduce a Girl to Engineering Day kit includes the Girl Day poster, girl-friendly activities, and other resources to show girls how engineers are changing our world.

NCEES is also very involved in EWeek’s Future City competition. Future City unites 6th-, 7th-, and 8th-grade students with an educator and engineering mentor to imagine, design, and build cities of the future. Teams are presented an engineering problem to research and solve. They use software programs, create scaled models, and participate in a regional competition. Regional winners move on to compete in Washington, D.C., for the national title during EWeek. The winning team earns a trip to the U.S. Space Camp in Huntsville, Alabama.

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# NCEES committees and task forces begin work on 2012-13 agenda

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

**W**ith its committees and task forces addressing almost 100 charges this year, NCEES has a full range of issues to evaluate in 2013. President Gene Dinkins, P.E., P.L.S., has assigned the 12 standing committees charges focusing on areas such as exams, law enforcement, and education. He has also appointed a special committee on *Bylaws* and five task forces to study special topics.

The following is an overview of the issues they are addressing this year. A full list of charges and the membership of each group is available on the My NCEES section of the NCEES website.

Each committee and task force will present their 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 2013.

### Advisory Committee on Council Activities

**Chair: William (Bill) Dean, P.E.**

**Board of directors liaison: Gene Dinkins, P.E., P.L.S.**

**Staff liaison: Donna Moss, PHR**

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 look at several issues involving member engagement. It will study the impact of new-member funding for the NCEES annual meeting. It will consider efforts to engage younger members on the NCEES board of directors, including the possibility of including nonvoting members. It will also survey member boards to gauge the interest in and viability of allowing remote participation in zone or annual meetings. Its other charges include evaluating the existing *Model Law* requirement that candidates gain their four years of progressive engineering experience before taking the PE exam.

### Committee on Awards

**Chair: Louis Raimondi, P.S.**

**Board of directors liaison: Gene Dinkins, P.E., P.L.S.**

**Staff liaison: Sherrie Holcomb**

The Committee on Awards will collect nominations for NCEES service awards to be presented during the 2013 annual meeting and recommend recipients to the board of directors.

### Committee on Education

**Chair: Norma Jean Mattei, Ph.D., P.E.**

**Board of directors liaison: Michael Conzett, P.E.**

**Staff liaison: Davy McDowell, P.E.**

Delegates at the 2012 NCEES annual meeting voted to amend the *Bylaws* to add a standing committee on education. This committee serves in an advisory role for education issues related to

$$F = Q_B \rho V_B - Q_C \rho V_C = \rho \frac{\pi D_B^2}{4} V_B^2 - \rho \frac{\pi D_C^2}{4} V_C^2$$

ABET, requirements prior to initial licensure, continuing professional competency, and foreign degree or unaccredited program evaluation.

This year, the Committee on Education will address several charges related to continuing professional competency requirements for licensure renewal, including a complete review of the NCEES *Continuing Professional Competency Guidelines* and consideration of how licensure could be included as a metric in the tenure process for engineering and surveying faculty. The committee will also continue ironing out the specifics of the master's-or-equivalent requirement for engineering licensure, which will go into effect in the *Model Law* in 2020. It will further develop the plan for a national clearinghouse to assist boards in determining whether candidates meet the new education requirement, with the goal of promoting consistency across jurisdictions as the requirement is implemented at the state level. It will also further define the education acceptable as equivalent to a master's degree.

### Committee on Examination Audit

**Chair: Larry Smith, P.E.**

**Board of directors liaison: Theodore Sack, P.L.S.**

**Staff liaison: Tim Miller, P.E.**

The Committee on Examination Audit conducts regular audits of the NCEES exam program. This year, it will audit administrations of the following PE exams: Electrical, Fire Protection, Mining and Mineral Processing, Nuclear, and Petroleum.

### Committee on Examination Policy and Procedures

**Chair: Gary Thompson, P.L.S.**

**Board of directors liaison: Michael Conzett, P.E.**

**Staff liaison: Tim Miller, P.E.**

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

In 2012–13, the committee will develop audit procedures for computer-based NCEES exams. It will study the pros and cons of administering the PE and PS exams on Saturday rather than Friday after the FE and FS exams move to computer-based testing, which begins in January 2014. Other charges include studying whether exam development volunteers could write exam questions in locations other than Clemson, where NCEES is headquartered, without compromising exam security.

### Committee on Examinations for Professional Engineers

**Chair: Robert Zahl, P.E.**

**Board of directors liaison: Patty Mamola, P.E.**

**Staff liaison: Tim Miller, P.E.**

The EPE Committee oversees the development and scoring of the FE and PE exams. Its recurring charges include conducting Professional Activities and Knowledge Studies, or content reviews, to update exam specifications; implementing Committee on Examination Audit recommendations that are approved by the

board of directors; 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 NCEES exams to computer-based testing. It will work with NCEES staff and the testing consultant to develop procedures for pretesting CBT exam items. The committee will monitor exam development committees as they begin to develop a formal report to move toward a supplied reference for the PE exam. It will also assist the newly formed PE/PS CBT Advisory Group in its efforts to define the parameters for converting the professional exams to a computer-based format.

### Committee on Examinations for Professional Surveyors

**Chair: Thomas Orisich, P.L.S.**

**Board of directors liaison: Von Hill, P.S.**

**Staff liaison: Tim Miller, P.E.**

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 implements Committee on Examination Audit recommendations that have been approved by the board of directors.

Like the EPE Committee, this group has several charges related to moving NCEES exams to computer-based testing.

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Additionally, the committee will work with the Committee on Member Board Administrators to review the requirements for state-specific exams, including length and format options, and develop a best practice manual for potentially converting a state-specific exam to CBT. It will also consider whether a candidate should obtain some progressive experience before being certified as a surveyor intern.

### Committee on Finances

**Chair: George Gibson, P.E.**

**Board of directors liaison: David Widmer, P.L.S.**

**Staff liaison: Jeannie van der Zalm, CPA**

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 2011–12 audit and the current financial condition of NCEES and will work with NCEES leadership to recommend an income and expense budget for 2013–14. Its other charges for this year include reviewing zone budget surpluses and determining how zones should handle the surpluses. It will also look at the reserves NCEES has generated in recent years and make recommendations on future reserves.

### Committee on Law Enforcement

**Chair: Theresa Hilliard Hodge, P.E.**

**Board of directors liaison: Theodore Sack, P.L.S.**

**Staff liaison: Bob Whorton, P.E.**

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; conducts a law enforcement program at the NCEES annual meeting; and writes the column “Enforcement Beat” for *Licensure Exchange*.

This year, the committee’s other charges include continuing to develop a training program for investigators, including creating online seminars, and it will develop guidelines to improve communications and cooperation between licensees, building code officials, permitting agencies, and other public officials.

### Committee on Member Board Administrators

**Chair: Donna Sentell**

**Board of directors liaison: Howard (Skip)**

**Harclerode, P.E.**

**Staff liaison: Pam Powell**

Delegates at the 2012 NCEES annual meeting voted to amend the *Bylaws* to add a standing committee on member board administrators. This committee is now responsible for organizing the conference of MBAs at the NCEES annual meeting and zone interim meetings. Throughout the year, the committee will also facilitate cooperation between MBAs and assist with any member board efforts to address licensure processes and practices.

Its charges for 2012–13 include developing a CBT transition checklist for MBAs and defining the process for FE examinees to register directly with NCEES when the exam is administered in a computer-based format. The committee will also write a *Licensure Exchange* column, “Member Board Brief.”

### Committee on Nominations

**Chair: Dale Jans, P.E.**

**Staff liaison: Jerry Carter**

The Committee on Nominations submits the nominations for officers for the next administrative year. This year, it will solicit a nomination from the Northeast Zone for president-elect for 2013–14 and nominations for treasurer for 2013–15, as well as a Nominations Committee member and alternate member from each of the four zones.

### Committee on Uniform Procedures and Legislative Guidelines

**Chair: Miller Love, P.E.**

**Board of directors liaison: David Widmer, P.L.S.**

**Staff liaison: Keri Anderson**

Each year, the UPLG Committee looks for ways to strengthen the licensure process by proposing 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 2012–13 include conducting a comprehensive review of the *Model Law* and proposing any necessary revisions. It will also recommend *Model Law* and *Model Rules* amendments to add a definition of disciplinary action and update the Rules of Professional Conduct.

### Computer-Based Testing Implementation Task Force

**Chair:** Lance Kinney, P.E.  
**Board of directors liaison:** Howard (Skip) Harclerode, P.E.  
**Staff liaisons:** Steven Matthews and Davy McDowell, P.E.

The CBT Implementation Task Force will review the activities of NCEES committees and staff and testing vendor Pearson VUE related to the implementation of computer-based testing. The task force will recommend any additional actions necessary to begin administering the FE and FS exams via computer in January 2014.

It will also assist the EPE and EPS committees and NCEES staff with organizing a subcommittee of exam development volunteers representing the PE and PS exams to explain the transition process to them. The task force will evaluate and recommend which PE exams, if not all, could be transitioned to CBT and how often each exam should be offered.

### Engineering Surveys Task Force

**Chair:** David Whitman, Ph.D., P.E.  
**Board of directors liaison:** Von Hill, P.S.  
**Staff liaison:** Jerry Carter

After the issue was raised at the 2012 annual meeting, President Dinkins created a task force to consider if the term “engineering surveys” or its definition should be removed from or modified in the *Model Law* definition of the practice of engineering.

### Industrial Exemption Task Force

**Chair:** Sonny Launey, P.E.  
**Board of directors liaison:** Patty Mamola, P.E.  
**Staff liaison:** Jerry Carter

The task force will study issues related to licensure exemptions for industry. It will survey member boards to determine which boards have statutory language that provides for an industrial exemption, which boards allow an industrial exemption by tradition or interpretation, and which boards do not allow an industrial exemption. It will create a database of the results, noting commonalities and differences among boards. The task force will also report on any industrial exemption initiatives previously undertaken by jurisdictions. Lastly, it will develop information that boards can use when discussing eliminating industrial exemptions with their legislators.

### Mobility Task Force

**Chair:** David Curtis, P.E.  
**Board of directors liaison:** Gene Dinkins, P.E., P.L.S.  
**Staff liaison:** Donna Moss, PHR

The Mobility Task Force will survey member boards to determine their current processes for licensing Model Law Engineers by comity, and it will study how other professions handle comity between jurisdictions for fully qualified licensees. The task force will develop a conceptual plan to make mobility easier and faster for Model Law Engineers. It will also explore alternative methods of evaluating progressive experience in order to qualify for initial licensure.

### Public Outreach/Communications Task Force

**Chair:** Douglas Cooley, P.E.  
**Board of directors liaison:** Dale Jans, P.E.  
**Staff liaison:** Nina Norris

The task force will assess the results of the national survey commissioned by NCEES to study the general public’s awareness of professional engineering and surveying licensure and NCEES. It will assist NCEES staff with the development and promotion of a speaker’s kit on the importance of licensure aimed at the general public. It will help NCEES staff distribute and promote plans for the 2013 society sponsorship of National Engineers Week and consider other programs NCEES can promote to bring attention to the engineering and surveying professions.

### Special Committee on Bylaws

**Chair:** James Purcell, P.E.  
**Board of directors liaison:** Patty Mamola, P.E.  
**Staff liaison:** Davy McDowell, P.E.

President Dinkins convened the Special Committee on Bylaws this year to recommend changes to the NCEES *Bylaws* to require the Committee on Education to review and update the *Continuing Professional Competency Guidelines* at least every five years and to require assistant zone vice presidents to perform the duties outlined in the *Zone Meeting and Continuity Guidelines*.

## E WEEK

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NCEES is sponsoring the Best Practices in Land Surveying award at Future City's regional and national competitions. The award will be given to the team that employs the best land surveying practices, taking into consideration the high standards used by surveyors to help protect the public's safety and welfare. NCEES is also sponsoring the 2013 Future City essay contest, which has the theme "Rethink Runoff: Design Clean Solutions to Manage Stormwater Pollution." I also have the privilege of serving as a judge for the national Future City competition and make what I'm sure will be a difficult decision crowning the overall winning team.

EWeek was kicked off by a live webcast funded by NCEES on October 30 in Clemson, South Carolina. Jeff Wilcox, vice president of engineering at Lockheed Martin; Doris Helms, Ph.D., vice president for academic affairs and provost at Clemson University; France Jackson, a Clemson University engineering graduate student; and I participated in an informal question-and-answer session about engineering and how to get involved with EWeek. We also had the pleasure of introducing this year's theme and artwork. The event was well received by those in attendance, as well as those watching live on their computers across the country.

You can watch the webcast on YouTube ([youtube.com/user/nceesmedia](http://youtube.com/user/nceesmedia)), and we will hold a follow-up webinar in January to jumpstart planning local activities. More information on that webinar will be available online at [eweek.org](http://eweek.org) in the next few weeks.

NCEES has also decided to take this opportunity of sponsoring EWeek to debut some of our recent findings about the public's perception of engineering, NCEES, and licensure. This information was a result of the Public Outreach/Communications Task Force I created during my presidency and which current president Gene Dinkins, P.E., P.L.S., is continuing during his term. McKinley Advisors assisted NCEES through focus group surveys administered to a sample of the general public.



### CELEBRATE AWESOME

*The National Engineers Week Foundation encourages students, teachers, and the engineering community to "Celebrate Awesome" with a range of upcoming EWeek activities. The 2013 theme and artwork were unveiled on October 30 during a live webcast funded by NCEES.*

The NCEES Public Affairs Department will launch a speakers kit in conjunction with the announcement of these findings. This new kit will enable NCEES members and our licensed engineering and surveying peers to go out into the community and speak on the value of licensure to the public. More information about these findings and the speakers kit will be available closer to EWeek.

So, what can you do to "Celebrate Awesome" during EWeek? Get involved in judging regional Future City competitions, introduce a girl to engineering, speak at a local elementary or middle school, or write to your local newspaper about the importance of engineering. Of course, there are more opportunities to be a part of EWeek, and I encourage you to visit [eweek.org](http://eweek.org) to find the best way to get involved in your area.



## Mobility, public protection remain key issues for 2013

Since its founding in 1920, helping licensed professionals work in other states has been a central concern of this organization. We have made great strides in this area, but we can do more. I formed the Mobility Task Force this year to study how to make comity licensure simpler and quicker for professional engineers who meet the requirements for Model Law Engineer designation.

The definition of a Model Law Engineer is actually listed in the *Model Rules* (Section 210.10 B). To paraphrase, a Model Law Engineer is a professional engineer who has been licensed in at least one U.S. jurisdiction by

- Earning a bachelor's or master's degree in engineering from an EAC/ABET-accredited program
- Passing the FE and PE exams
- Completing four years of acceptable engineering experience (Less time is required for those with advanced engineering degrees.)
- Having a record clear of disciplinary action

Many states expedite the licensure process for Model Law Engineers applying for comity licensure in their jurisdiction, but we can do more to make this process easier for P.E.s who have met the rigorous requirements of this designation.

The task force will survey member boards to determine the existing process of licensing Model Law Engineers by comity, and it will explore how other professions, such as accounting and nursing, handle comity licensure for fully qualified licensees. Finally, the task force will develop a concept plan to make mobility between states simpler and quicker for Model Law Engineers.

### Industrial exemption

Protecting the health, safety, and welfare of the public is of paramount importance to NCEES and its member licensing boards, and the licensing of engineers plays a vital role in fulfilling this charge.

Many states have provisions in their statutes that exempt some level of industry from state engineering licensure laws. These exemptions often refer to engineering services performed by an employee of a firm or corporation that does not offer engineering services to the general public. Many people are surprised when they hear that equipment in the plane they're flying on doesn't have to be designed by a licensed engineer but the runway the plane lands on does.

I convened a task force this year to study these industrial exemptions. In November, the task force sent a survey to NCEES member board administrators asking which jurisdictions have licensing exemptions and which have taken steps to eliminate these exemptions. Finally, the task force will develop a resource for boards to use when they communicate with their legislatures about eliminating the industrial exemption.

The licensing of engineers is critical to protecting the American public, not just from technical incompetence but also from unethical practices. There are many competent and ethical engineers practicing today who are not licensed. What licensure does, though, is require a professional engineer or surveyor to abide by the Rules of Professional Conduct.

Protecting the health, safety, and welfare of the public is of paramount importance to NCEES and its member licensing boards, and the licensing of engineers plays a vital role in fulfilling this charge.

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## Is this disciplinary action?

If a violation of the law or a code of ethics has been proven and some corrective action is required, a disciplinary action has been taken.

**A** licensee has paid a fine to a regulatory board for practicing outside his area of expertise. Has that individual been disciplined? A licensee has been ordered to take a course in ethics for violating the code of ethics. Is this considered discipline? A consent agreement has been reached. Is this discipline?

*Discipline is defined as behavior in accordance with rules of conduct; punishment inflicted by way of correction and training; improvement by corrective and penal methods.*

Revocation, suspension, or probation of a license; education; and fines are some of the outcomes of a disciplinary action. Although boards have different methods for resolving a disciplinary matter—including settlement conferences, settlement agreements, administrative orders, and hearings—we are all in agreement that these are disciplinary matters and are reportable.

Individuals applying for licensure or renewing a license are routinely asked to share whether they have been disciplined by any other jurisdiction. Many times, though the answer is no, we later discover that the individual agreed to a consent order; since an agreement was reached, he or she did not consider it a disciplinary action. This couldn't be further from the truth.

Delaware recently revised its law to require licensees to report instances of out-of-state discipline within 60 days of the final order imposing said discipline. Previously, the majority of disciplinary action reports took place during the biennial renewal cycle.

If a violation of the law or a code of ethics has been proven and some corrective action is required, a disciplinary action has been taken. This information must be shared with the other jurisdictions in which a licensee has been licensed. Whether or not any reciprocal action is taken is up to the individual jurisdictions.

Although it may sound redundant, when a disciplinary action is taken, the final order, the consent agreement, etc., should state directly that this is a reportable disciplinary action. This solves the mystery of whether such an action has been taken. And, of course, the action should be entered into the NCEES Enforcement Exchange database for the use of other boards.

The Delaware board's routine procedure upon receipt of any application—exam, comity, certificate of authorization, etc.—is to review Enforcement Exchange to check whether any disciplinary action has been reported. This takes just a few minutes, but we feel that enforcement is as important as the other three E's (education, examination, and experience).

Take the guesswork out of the disciplinary arena: If you have disciplined an applicant or licensee, tell them, "This is a disciplinary action." Licensees can help streamline the application and renewal process by providing this information up front, and boards have myriad tools at their disposal to easily share this important information with other licensing boards.



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$$M^0 L^0 T^0 = M^{j+1} L^{i-3j+2k} T^{-2c}$$

## Character matters in protecting the public

If your board has followed Section 130.10 C of the NCEES *Model Law*, chances are it has a statutory provision for issuing a license only to those applicants who are “of good character and reputation.” If a reference from an employee or acquaintance indicates character deficiencies or a bad reputation, that applicant is usually denied licensure. The reason applicants are expected to possess good character and reputation is obvious: Those seeking professional licensure should possess firm moral qualities, such as integrity, honesty, and fairness, that are obvious to their employers, peers, and the public.

For example, when a landowner decides to subdivide his land, he should rightfully be confident that his professional surveyor has not only the technical ability to do the job properly but also the integrity to give his very best effort.

What about the applicant who, due in part to the evidence of his good character and reputation, becomes a licensee of your board and, years later, is subject to disciplinary action because of fraud, misconduct, incompetency, or negligence? There is no doubt that the disciplinary action against that individual’s professional license would be swift and decisive because those professional actions clearly present a danger to the health, safety, and welfare of the public and are clearly prohibited by the licensing law. Licensees are also subject to disciplinary action if they are convicted of one or more felonies, regardless of whether the crime was connected to their professional practice. Obviously, a licensee who is disciplined for any of those things would suffer a severely damaged reputation.

But what if your board discovers personal behavior by a licensee that is outside the violations currently listed in the licensure law and not directly related to professional practice? Examples of that kind of behavior are a licensee who has developed a well-established pattern of domestic violence in connection with substance abuse or if that pattern resulted in court-ordered mental health evaluations. These actions are personal, outside the workplace, and in many states *not* considered felonies, which in some jurisdictions would limit the board’s ability to consider disciplinary action. Each of your board members would rightfully be very concerned about the ability of such a professional to competently protect the health, safety, and welfare of the public.

In a perfect world, each board would have the statutory authority to take such behavior into consideration not only when deciding whether to grant a license to an applicant but also when deciding whether to take disciplinary action against a licensee. But, let’s not forget that boards *do* have statutory authority to make, adopt, amend, and promulgate rules that aren’t inconsistent with their state’s constitution and statutes.

Being able to take disciplinary action against licensees whose personal behavior demonstrates a lack of good character and reputation is a public protection issue that needs to be examined by our state boards. Hopefully, the discussion generated will result in each board promulgating rules that not only better protect the citizens of our states but also further motivate licensees to be aware of their actions, both personal and professional.

Those seeking professional licensure should possess firm moral qualities, such as integrity, honesty, and fairness, that are obvious to their employers, peers, and the public.



JERRY T. CARTER  
NCEES EXECUTIVE DIRECTOR

## HEADQUARTERS UPDATE

# 2013 set to be an eventful year

We are now more than 18 months into the transition of the FE and FS exams to computer-based testing, and we have significant work ahead of us before January 1, 2014, when we will begin offering the new exam format.

**W**e recently held an annual breakfast meeting with the NCEES staff to kick off the new fiscal year. We discussed how we fared as an organization the previous year and what above-and-beyond tasks lay ahead. I was pleased to be able to report that we met all milestones for the 2011–12 administrative year and that our financial situation remains healthy. As we listed the projects for the coming year, it quickly became clear to all that the 2012–13 administrative year is going to be one to be remembered.

### Computer-based testing transition

We are now more than 18 months into the transition of the FE and FS exams to computer-based testing, and we have significant work ahead of us before January 1, 2014, when we will begin offering the new exam format. By the time this issue of *Licensure Exchange* is published, we expect the NCEES board of directors to have recommendations from our exam committees for setting the length of the computer-based FE and FS exams.

These recommendations will be supported by a standard-setting study completed in the fall for both the FE and FS exams and simulations conducted by our psychometricians. Once the NCEES board of directors has taken action, we will update each member board and affiliated test vendors on the length of both exams and any other information concerning decisions that have been made to effect this transition to CBT.

### Board Presidents' Assembly

We will hold the biennial Board Presidents' Assembly February 8–9, 2013, in Atlanta, Georgia. For this meeting, NCEES will fund each member board president (or another leader designated by a board) and each board administrator. This is always an important meeting and provides an important opportunity for the leadership of NCEES to receive reports and updates concerning ongoing initiatives and to address topical issues. For the 2013 BPA, a substantial portion of the agenda will be related to presentations and discussion on the CBT transition to ensure that everyone understands the actions already taken and those remaining prior to January 1, 2014.

### 2013 National Engineers Week

As if this was not enough to occupy everyone's time and energy, NCEES is serving as the lead society sponsor for Engineers Week 2013. This is quite an honor and privilege for NCEES to serve in this capacity, but it does not come without significant planning and effort.

NCEES staff and Immediate Past President Dale Jans, P.E., have been working with the EWeek Steering Committee for the past year to prepare for the event, which will be held February 17–23. See the article on page 1 for more information on how you can get involved.

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$$110,288 - 27,712$$

$$\frac{kg}{m} m^2 \left(\frac{m}{s}\right)^2$$

### Non-U.S. education, experience

I've penned several articles in recent issues directed at the number of applications that member boards have begun to receive from candidates who were educated and gained their professional experience outside the United States. This has been a topic of discussion by the member board administrators because the governance language for many member boards does not adequately address how to consider applicants not educated in the United States and, more importantly, those whose engineering experience was not gained while working in the United States, working under the direct supervision of a P.E., or working for a U.S.-based company.

The process for evaluating foreign experience is currently being studied by this year's Member Board Administrators Committee, which will hopefully provide guidance for member boards and suggestions for revisions to the NCEES *Model Law* and *Model Rules*.

Accreditation of a program by the ABET Engineering Accreditation Commission or a degree deemed to be equivalent is the "gold standard" that is included in the NCEES *Model Law* and is used by all member boards as the minimum evidence that an applicant is qualified for certification as an engineering intern. In recent years, ABET has received requests for accreditation visits for programs at institutions outside the United States that seek the EAC/ABET seal of approval.

The ABET accreditation process for programs located outside the United States is identical to the accreditation process for programs within the United States. A team of ABET program evaluators conducts visits to each foreign institution and applies the same processes and standards that are used to evaluate U.S.-based programs.

As of the first of October, 272 programs from 54 different institutions representing 20 countries had received full EAC/ABET accreditation. These numbers will continue to grow as ABET continues to receive requests for accreditation visits from institutions around the world. This, in turn, means that NCEES will continue to receive requests from foreign institutions that have received EAC/ABET accreditation for authority to administer the FE exam to their students.

The desire to offer the FE exam is primarily to use the exam as a metric for outcomes assessment purposes, but it also provides an opportunity for a program's graduates to pursue licensure in the U.S. as professional engineers.

It is commendable to know that a high value is being placed on the privilege of obtaining a license as a professional engineer in the United States. However, we all have work ahead of us to make necessary modifications to accommodate this evolution while ensuring that our mission of protecting the welfare of the public remains paramount.

# National museum celebrates surveying's history and its future

**E**very engineer and surveyor should have a “bucket list,” especially those of us who are in our senior years and retired. One of the items on my list was a visit to Abraham Lincoln’s National Museum of Surveying in Springfield, Illinois.

The museum is the only one of its kind in the country, dedicated to preserving the legacy of surveying and to promoting its future.

The recent NCEES annual meeting in St. Louis afforded an excellent opportunity to visit this museum since Springfield is only about 90 miles from St. Louis. So, my wife and I took advantage of this opportunity and visited the museum as well as several of the other Lincoln-related tourist attractions before the NCEES meeting. Doug Lechner, L.S., from the Indiana surveying board joined us for the tour of the museum, and on the Saturday after the NCEES annual meeting, Pat Tami, P.L.S., and Ric Moore, P.L.S., from the California board; Jim Riney, P.E., P.L.S., from the Kentucky board; and Elwood Ellis, L.S., of the Maine surveying board also drove up to Springfield to visit the museum.

Upon arriving, we were greeted by museum volunteer Bob Church, who gave us and the other visitors a personalized tour. It was very enjoyable and educational to see the many displays of surveying artifacts, including old equipment, plats, and maps. Bob explained the connection of South Dakota’s Mount Rushmore to surveying: three of these four



*Located on E. Washington Street in Springfield, Illinois, the National Museum of Surveying sits between the historic Old State Capitol Building and the Abraham Lincoln Presidential Museum.*

presidents were at one time surveyors before taking office. Copies of plats prepared by Abraham Lincoln and George Washington are displayed at the museum.

After Bob completed his guided tour, the museum’s assistant director, Matt Parbs, showed us the Science on a Sphere exhibit. This informative presentation included illustrations such as wave propagation with

the tsunami after the 2011 earthquake in Japan, airline traffic around the world on a typical day of flying, and Facebook traffic across the globe.

We also had the opportunity to watch a video about surveying and engineering in modern times in the NCEES Educational Theater, which was developed with a \$75,000 donation from NCEES in 2009.

It was great to see the banners from nearly all of the state surveying associations displayed at the museum. These flags demonstrate our national unity in not only preserving surveying history but also perpetuating surveying professionalism across the nation. Bob expressed his sincere appreciation to NCEES, state and local surveying associations, and individual professional surveyors across the nation for their financial support of this national surveying museum. In the past, the museum has received donations from over 35 state surveying associations, 5 national associations, and 20 local surveying chapters.

All in all, the tour of the surveying museum was very enjoyable and a great educational experience in the history of the surveying profession. The only sad part of our visit was learning of the museum's financial struggles. Recently, the museum sent letters to all of the state surveying organizations seeking financial support to abate their current financial situation. I recently met with the board of directors of the South Dakota Society of Professional Land Surveyors, who then voted to make a major donation from their educational fund. If all of the other state surveying associations could equal or exceed this donation, the museum would meet its Reaching Our Orbit capital campaign goal. As I'm writing this, it is reported that 10 state associations and six individuals have already responded to this campaign. I hope that professionals across the country will see the value of this national surveying museum to the surveying and engineering professions and support it with their individual donations and collectively through their local, state, and national associations.

The museum's website, [surveyingmuseum.org](http://surveyingmuseum.org), is a great resource for teachers to get surveying in the classroom. There are surveying-related lesson plans for social studies and math, as well as general surveying lesson plans.

I urge you to visit [surveyingmuseum.org](http://surveyingmuseum.org) to learn more about the museum and its important outreach efforts.



*The National Museum of Surveying uses stories, murals, and original surveying equipment to explain the profession's contributions to the development of the United States. Focusing on surveying's role in the American experience, exhibits such as the legacy of Lewis and Clark (top) emphasize that the story of surveying is the story of America.*



# NCEES offering first PE Software exam, new videos to explain exam process

**W**hen exam registration opens on December 17, there will be a new exam option for licensure candidates: the PE Software exam. NCEES is now preparing for the first administration of the new exam, which will be offered for the first time in April 2013. After that, the exam will be administered yearly.

Partnering with NCEES as co-sponsor of the exam is IEEE-USA, assisted by the IEEE Computer Society, the National Society of Professional Engineers, and the Texas Board of Professional Engineers.

The NCEES board of directors approved the development of the new PE exam in 2009. In accordance with existing exam development policies, 10 member licensing boards of NCEES presented letters supporting the proposed exam.

For more information on the PE Software exam or to register for the April 2013 administration, visit [ncees.org/exams](http://ncees.org/exams). The exam specifications—the test blueprint of knowledge areas to be tested and their relative weights of emphasis—are also available online at [ncees.org/exams](http://ncees.org/exams).

To help examinees prepare for the new exam, IEEE-USA has published a book of sample questions and solutions, which includes the exam specifications, 40 representative questions with solutions, and a suggested reference list.

## New video explains scoring process

To help examinees understand why it takes 8 to 10 weeks for scores to be released to boards, NCEES has released a short video explaining the scoring process.

This is the third instructional video produced by NCEES this year. In October, it released “Have You Read Your Candidate Agreement?” to help examinees understand exam-day policies and highlight some of the most common offenses, such as arriving late, having a cell phone, or using an unapproved calculator. In September, it released a video explaining how to register for exams. All of the videos are posted on the NCEES website and YouTube and have been featured on the NCEES Facebook and Twitter pages.

“We wanted a different way to explain this information, and these do that in a casual, conversational way,” explained Director of Public Affairs Nina Norris. “They’re another way to tell candidates what to expect with the exam process, from registering to taking the exam to getting their results, and educates them on what to do—and not do—on exam day.”

Watch these videos and others previously released by NCEES at [youtube.com/user/nceesmedia](http://youtube.com/user/nceesmedia).

## Exam item costs approved

The NCEES board of directors has approved the following amounts as reasonable valuations of each exam item for 2012–13:

- FE exam item cost: \$2,174.65
- PE exam item cost—Group I exams: \$2,769.66
- PE exam item cost—Group II exams: \$2,206.36
- SE exam item cost—multiple-choice items: \$2,769.66
- SE exam item cost—free-response items: \$20,276.96
- FS/PS exam item cost: \$1,738.90

Each year, NCEES assesses the 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. Item costs for Group II exams do not include the travel expenses that sponsoring technical societies pay for their volunteers, who write items and assemble these exams.

The updated exam costs are in effect for fiscal year 2012–13, which began October 1.

## UPCOMING

# EVENTS

**DECEMBER 6-8** SE Exam Scoring Workshop, Clemson, South Carolina

**DECEMBER 7-8** PE Nuclear Exam Cut Score Meeting, Atlanta, Georgia

**DECEMBER 9-10** PE/PS CBT Advisory Group Meeting, Clemson, South Carolina

**DECEMBER 14-15** Education Committee Meeting and Industrial Exemption Task Force Meeting, Scottsdale, Arizona

**JANUARY 3-5** PE Electrical Exam Meeting, Clemson, South Carolina

**JANUARY 10-11** MBA Committee Meeting, Tampa, Florida

**JANUARY 11-12** ACCA Meeting, Orlando, Florida; FE Exam Meeting, Clemson, South

Carolina; SE Exam Item Writing Meeting, Sacramento, California

**JANUARY 12** Law Enforcement Committee Meeting, Charleston, South Carolina

**JANUARY 17** EPS Committee Meeting, Clemson, South Carolina

**JANUARY 18-19** EPE Committee Meeting and Surveying Exam Meeting, Clemson, South Carolina

**JANUARY 24-26** UPLG Committee Meeting, Scottsdale, Arizona

**JANUARY 25-26** PE Civil Exam Meeting, Clemson, South Carolina; PE Control Systems Exam Meeting, Dallas, Texas

## FROM THE PRESIDENT

*continued from page 7*

The member boards of NCEES have established the Rules of Professional Conduct to formalize the obligations that licensed professional engineers and surveyors have to society, their employers and clients, and other licensed professionals. These obligations are part of the *Model Rules*, and individual states have adopted similar rules. Licensees who do not adhere to these obligations are subject to disciplinary action by their state licensing boards, which could include fines, reprimands, probation, or suspension or revocation of their license.

I am not suggesting that someone who is licensed is infallible, but the licensure system does hold professional engineers and surveyors to a higher standard than those who are not licensed. Their first obligation is to the public welfare, not their employers.

Both of these task forces are addressing weighty issues, and at the end of the year, they will not have all the answers to solve these problems. But they are making a meaningful start to give NCEES and its member boards the information and resources to best advance licensure and, most importantly, protect the American public.

## Member Board News

**Colorado** The email address extension of board staff has changed to state.co.us. The board's general email address has changed to dora\_aesboard@state.co.us.

**Delaware PS** Amanda McAtee is the new board administrator.

**Florida PS** George Grubbs is a new appointee.

**Idaho** The board is seeking a new executive director. The successful candidate must be a licensee of the board or able to be so within six months of hire. Expected start date is approximately May 1. See [dhr.idaho.gov/stateJobs.html](http://dhr.idaho.gov/stateJobs.html) for more information.

**Louisiana** John Irving and David Lee Patterson are new appointees. Timothy Allen and Roger Danzy are no longer members.

**Tennessee PE** Jerome Headley and Frank Wagster are new appointees. James Hastings and David Schuermann are no longer on the board.

**Texas PS** Emeritus member and NSPS past president Jerry Goodson passed away October 29.

**Wisconsin** Tom Wightman is the new board administrator.

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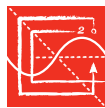
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## NCEES publishes 2012 Engineering Award Book, opens 2013 competition

**E**ngage. Enrich. Inspire. NCEES has published the 2012 NCEES Engineering Award Book to urge engineering educators and professional engineers to do just that for the next generation of P.E.s. The latest NCEES publication features the six engineering programs recognized this year for excellence in connecting professional practice and education.

The book describes each winning project, which involved collaborations with students, faculty, and professional engineers. The book also includes interviews with some of the participants for the grand-prize winning project from the Florida Atlantic University Department of Civil, Environmental, and Geomatics Engineering, which won the \$25,000 award for its project, *Dania Beach Nanofiltration Plant Expansion*.

### 2013 call for submissions

As it celebrates the 2012 winners, NCEES is also preparing for the 2013 award cycle. EAC/ABET-accredited programs from all engineering disciplines are invited to compete for

- Grand prize: \$25,000
- Five awards: \$7,500 each

The deadline to enter is May 6, 2013. More information on the award, including entry forms, is available at [ncees.org/award](http://ncees.org/award). Also go online to download a PDF of the NCEES Engineering Award Book or to request copies.

The deadline  
to enter is  
May 6, 2013.  
More information  
on the award,  
including entry  
forms, is  
available at  
[ncees.org/award](http://ncees.org/award).