National Council of Examiners for Engineering and Surveying, Clemson, SC  $\,$ 

June 2

## Governance Task Force proposes series of motions, recommendations

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At this year's Annual Meeting, the Governance Task Force will introduce several important changes designed to improve the way the Council operates. Constituted by President Raimondi at the recommendation of the Board of Directors, the task force addressed six charges related to the Council's governance mechanisms and procedures.

### Combining the Constitution and Bylaws

Among the charges was one that asked the task force to consider legal counsel's advice to combine the NCEES Constitution and Bylaws into one document. Counsel noted that "bylaws," as defined by the South Carolina Nonprofit Corporation Act, now includes any governing document other than the articles of incorporation. This language precludes the need for a separate constitution, and, although the law does not require the

Council to combine the two documents into one, legal counsel advises that doing so would eliminate potential discrepancies between the two documents.

The Governance Task Force believes that it is in the best interest of the Council to follow this advice; therefore, it will present a motion authorizing NCEES legal counsel to create a new governing document combining the Constitution and Bylaws into a single document. This would provide an opportunity to update various governance provisions contained within the document and would ensure that NCEES is in full compliance with state and federal requirements for nonprofits. The motion will be presented at this year's Annual Meeting and, if it is approved, the revised governing document prepared by counsel will be presented at the 2008 Annual Meeting for discussion and adoption.

### New constitutional definitions proposed for "state board"

The Governance Task Force also plans to present a motion to revise the constitutional definitions of state board, Affiliate Member Board, and associate member. The motion is designed to address inconsistencies between these definitions as they appear in the governing documents and their current use within the Council's operations.

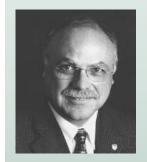
The Constitution currently defines a state board (or, Member Board) as a "legally constituted board of any state, territory, or political subdivision of the United States of America that administers any Act regulating the practice of professional engineering, a single branch of professional engineering, or land surveying" (Article 1, Section 1.02). After evaluating current practices, the task force determined that several NCEES Member Boards serve only

in an advisory capacity to an agency of state government that is charged with enforcing laws regulating the professions. Because of this, the task force concluded that, according to the constitutional definition of state boards, these Member Boards are technically ineligible to be NCEES Member Boards and should be consigned to affiliate status, meaning that they would lose their voting privileges.

Therefore, the task force will propose a definition of "state board" that conforms more closely to current NCEES practices and avoids disenfranchising any Member Boards.

In doing this, the task force also agreed it is necessary to revise the definition of Affiliate Member Board. This was based on the need to create a category of membership for entities An official NCEES publication for the exchange of information, opinions, and ideas regarding the licensure of professional engineers and surveyors.

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Dale A. Jans, P.E. Chair, Governance Task Force

Governance Task Force proposes series of motions, recommendations (continued from page 1)

other than Member Boards with interests coinciding with the mission and vision of NCEES.

The Governance Task Force found a further disconnect between the constitutional definition of associate member and the Council's interests. The existing constitutional definition requires associate members to be employees of Member Boards—this prevents many Member Board administrators (MBAs) who are state government employees rather than employees of the boards from being associate members. The task force believes that the Council would benefit from allowing these MBAs to be associate members and enjoy floor privileges and the opportunity to serve on committees. Therefore, the task force will move to change this definition.

### Electing the president-elect: a more open process

Another important issue addressed by the Governance Task Force is the election procedure for NCEES president-elect. Currently, nominees for the office are presented by zones on a rotating basis. Constitutional provisions require nominees for the office to be NCEES members for at least four years, attending at least two Annual Meetings during that time. They also require nominees to be U.S. citizens and a member of a state board during the calendar year of his or her nomination.

The charge asked the task force to provide for a nomination process for the office of president-elect in the event that the zone in line to nominate a candidate is unable to provide someone who is sufficiently qualified and experienced in the business of the Council.

In addressing the charge, the task force evaluated the advantages and disadvantages of the current system of rotating among the zones. It concluded that it would be in the best interest of the Council to do away with the rotating system and instead open the nominating process to each of the zones so that willing and experienced candidates have the opportunity to lead the Council. Therefore, at this year's Annual Meeting, the task force will present a recommendation calling for this change in the election process. The task force's recommendation would, however, keep in place the constitutional requirement that the president and president-elect not be from the same zone (Article 4, Section 4.04). Thus, under this recommended election process, the nominee

for president-elect in a given year could come from any of three zones rather than limiting the candidate pool to a single zone.

#### Other task force charges

Another charge asked the task force to evaluate the feasibility of conducting all zone interim meetings in a common location. The task force determined that there are some advantages to be gained from the zones meeting at a common location on the same dates. Better rates could be negotiated for larger groups, travel demands on the board and key staff would be reduced, and presentations at the meetings would have greater continuity and consistency. However, the task force decided that requiring the zones to meet jointly may negatively impact attendance and would not be universally supported by the Council. Therefore, it does not recommend any changes to the current planning procedures for zone interim meetings.

NCEES was chartered as a 501(c)(3) corporation, which gives it nonprofit status with regard to IRS regulations. Creating a 501(c)(6) corporation—which would allow the Council to lobby and engage in other political activities to promote its interests—has been suggested, and the Governance Task Force was charged with evaluating this possibility. It has determined that there is not sufficient need to create a 501(c)(6) at this time. It does, however, recognize the need for increased Council involvement in the legislative and political spheres as they impact professional licensure in engineering and surveying, and recommends the creation of a staff position responsible for monitoring and serving as a resource in such matters.

The final charge addressed by the task force was to consider whether the Council's organizational structure adequately reflects the changing nature of licensing interests within the engineering and surveying professions. After discussing the current structure, taking into account the strategy planning process implemented by the Board of Directors, the task force concluded that the current structure adequately serves the licensing interests of both the Council and the public and does not recommend any changes.

Dale A. Jans, P.E. Chair, Governance Task Force

### **MESSAGE**

## The importance of promoting licensure

This is an exciting time of year to be involved with the Council. Candidates from all corners of the country—not to mention a few places outside the country—are awaiting results from the April exam administrations. Zone meetings have just concluded, the Annual Meeting is steadily approaching, and the many dedicated professionals serving on NCEES committees and task forces are debating some very important issues.

With so much going on and so many important decisions to consider, it is easy to become lost in the minutiae of procedure and protocol. While we work to strengthen the licensure process for engineers and surveyors, we must also remember our responsibility to communicate the importance of licensure in the public sphere. This involves reaching out to several groups of people, including practicing engineers and surveyors who are interested in pursuing licensure, engineering and surveying students at colleges and universities, and middle and high school students with high aptitudes for math and science. Each should have the opportunity to discover the many doors that will be opened by pursuing engineering or surveying careers and attaining professional licensure.

NCEES and its Member Boards are involved in many initiatives designed to reach out to the next generation of licensed engineers and surveyors. The Council sponsors events and shows such as the Future City Competition during EWeek and *Design Squad* on PBS. It places advertisements in trade magazines and coordinates speaking events on college campuses. Professional engineers and surveyors across the Member Boards can multiply the effect of these efforts by participating in outreach efforts in their communities.

In March, I had the opportunity to attend the Lower Hudson Valley Engineering Expo in Valhalla, N.Y. The event was well attended, with roughly 70 display tables with representatives from various engineering firms and societies in addition to admissions counselors from universities across the region. Nearly 350 students attended the expo, which was held at an area community college. Students were mostly high school age, but I met several college students who were interested in hearing about the licensure process. Everyone who stopped by to speak with me was interested in learning about engineering licensure and how it can lead to a more varied and fulfilling career.

This event was not an unusual one. Just about every state has similar events geared toward students interested in engineering careers. They offer a great chance to be there for people who have questions about the professions, the licensure process, and the many professional benefits of becoming licensed. There couldn't be a better resource for this information than someone who has the license. Of course, you don't have to attend engineering expos to promote the profession to the public. Speaking to classrooms, scouting groups, and the like is an effective way to promote our professions. The NCEES Engineering and Surveying Speaker's Kits are excellent resources if you are planning to do this. The most important thing is to simply get out there and connect with people.

The work we do at NCEES and its Member Boards goes a long way toward sustaining the public's health, safety, and welfare by ensuring that licensed engineers and surveyors are knowledgeable, competent, and ethical. We must also ensure that in the future, the public will continue to enjoy the positive results of the licensure system. We can do that by getting out there and attracting the best and brightest to our professions.

Louis A. Raimondi, P.E., L.S. NCEES President



Louis A. Raimondi, P.E., L.S. NCEES President



Betsy Browne NCEES Executive Director

### UPDATE

# As Zone Meetings wind down, Council looks ahead to Philly

The zone interim meetings, the last of which was held in Rapid City, South Dakota, May 17–19, were excellent opportunities for board members and administrators to hear from the committees and task forces about the work they have been doing throughout the year. At the meetings, those in attendance heard about the motions and recommendations that will be submitted by the committees at the Annual Meeting.

The NCEES Board of Directors met just before the Central Zone meeting to review committee and officer reports while finalizing the 2006–07 *Action Items and Conference Reports*. In reviewing the reports, the Board determined its position on each of the motions the Council will vote on in August. This information will be included in the Summary of Action Items section of the *Action Items and Conference Reports*, which will be sent to everyone who registers for the Annual Meeting.

The Annual Meeting will take place August 22–25 in Philadelphia. In this issue, you can read an overview of scheduled informational and developmental workshops. Registration packets were mailed in late April; if you did not receive yours, it can be downloaded from www.ncees.org (look in the "events" section). I encourage all of you to attend the Annual Meeting, as it will be a wonderful opportunity to help determine the Council's future while visiting a great city.

## Exam Development welcomes new staff, director

The past month has been an exciting one for

the Exam Development department at NCEES headquarters in Clemson. Two new exam development engineers have joined the department: Gary Alford, P.E., and David Scott, P.E.



Gary Alford, P.E.

Gary is responsible for overseeing the development of the structural, nuclear, and control systems exams. A native of Georgetown, South Carolina, Gary earned a B.S. in mechanical engineering from Clemson University and a master's in civil engineering from Colorado State University. Prior to joining NCEES,

he worked for Santee Cooper, a utility company in Goose Creek, South Carolina.

David oversees the development of the chemical, environmental, and mechanical exams. A native of North Augusta, South Carolina, he received his



David Scott, P.E.

bachelor's degree in chemical engineering from Clemson University. Before joining NCEES, David worked as the county environmental engineer for Anderson County in South Carolina.

As many of you probably know, NCEES Director of Exam Development Chuck Wallace, P.E., will retire at the end of June.

In his six years here, Chuck has become an exceedingly trusted and valuable member of the staff through his commitment to the Council and the engineering and surveying professions.

Tim Miller, P.E., will be

stepping into the exam



Tim Miller, P.E.

development director position upon Chuck's retirement. Tim has been with NCEES as an exam development engineer since June 2005 and has more than 20 years' experience as an engineering consultant and project manager. For those who have not already met him, Tim will be at the Annual Meeting in Philadelphia.

Betsy Browne NCEES Executive Director

## April exam candidate disqualified after posting item on Internet

The Internet is not always an ideal place to vent one's frustration—or preserve one's anonymity, for that matter. One Civil PE exam candidate recently learned this lesson the hard way when his results were invalidated after he posted, nearly verbatim, the contents of an item from the exam's morning session.

The post appeared on www.engineerboards. com, a Web site created by engineers interested in sharing advice—as well as some war stories—with others preparing for the FE and PE exams. The post was on the Internet for 10–15 minutes before being removed, according to NCEES Exam Development Engineer Tim Miller, P.E. The site is one of several that NCEES staff closely monitors in the days following exam administrations.

The offending post, which appeared the Tuesday after the April 20 administration, read, "I know its [sic] not cool to go over the PE questions, but can't help it!!! I got a question...which I did wrong, but want to confirm the answer."

The candidate went on to post the exam item, which asked candidates to calculate tensile force for a steel rod. Miller, who occasionally posts to the site under the user name Tim@NCEES, saw the post and contacted the site's administrators, who removed it and provided Miller with the e-mail and IP address of the poster. Miller relayed the information to Bob Whorton, P.E., the Council's security and compliance manager, who notified the candidate that his score would be invalidated and the incident reported to the board in Ohio, where the candidate took the exam.

Whorton said the candidate responded and acknowledged a breach of the agreement signed by candidates in which they pledge not to divulge exam content. He added the candidate's ability to take an exam at a future administration would depend on whether or not a state board allows him to do so.

Doug McGuirt NCEES Editor

Clemson, South Carolina June 2007

# Scheduled events: NCEES 86th Annual Meeting

### August 22-25, 2007 ♦ Loews Hotel ♦ Philadelphia, Pa.

In addition to the business sessions, this year's Annual Meeting in Philadelphia will provide an assortment of workshops designed to assist attendees in satisfying continuing education requirements and in learning more about the work of the Council.

#### Wednesday, August 22

#### **ABET Training**

Learn about the ABET evaluation process and expectations for board representatives.

#### What's My Ethical IQ? (3.0 PDHs)

Join ethics educator Deborah Long as she helps attendees explore pertinent ethical issues that sometimes arise in professional life.

#### **New Member Orientation**

Learn about the Council and its products and services, as well as volunteer and leadership opportunities within the organization. This session will benefit first-time meeting attendees, new board members, and anyone who wants to learn more about NCEES.

### Additional Education Requirements for Licensure Update

As a result of last year's Council vote to increase the education requirements for engineering licensure, this year's Committee on Uniform Procedures and Legislative Guidelines was charged with defining approved credits and approved course providers for inclusion in the Model Rules. The committee will provide an overview of its work in 2006–07 and the resulting motions.

#### Structural Task Force Update

The Structural Task Force was created this year to evaluate the Structural I and II exams and consider needed modifications, including the addition of items for jurisdictions with unique structural engineering requirements. In this session, delegates will learn about the resulting recommendations.

#### Practice Exam Update

Last year's Engineering Practice Exam Task Force recommended that the Council continue with a feasibility study and potential task analysis for an engineering professional practice exam. This session will provide an update about the work completed on the feasibility study in the past year.

### 100 Years of Engineering Licensure Celebration

In 1907, Wyoming passed the first engineering licensure law in the United States. Learn about how NCEES is celebrating this important anniversary and how it is preparing for the next century of professional licensure.

### NOAA's National Height Modernization Program (3.0 PDHs)

NOAA's National Geodetic Survey (NGS) aims to enhance the vertical component of the National Spatial Reference System—a system that defines latitude, longitude, height, scale, gravity, and orientation throughout the United States. Attendees will learn about the process of conducting height modernization surveys, as well as the development of guidelines, models, and tools being used by NGS and its partners.

#### Emerging Disciplines (3.0 PDHs)

New engineering disciplines are being introduced, while current disciplines are changing. This panel will address some of these disciplines, including software engineering, construction engineering, biorelated engineering, and materials and metallurgical engineering.

### Mold in Buildings: Is It Really a Health Problem? (1.5 PDHs)

What's behind the concerns about mold in buildings? What is the extent of the problem, and what should be done about it? This session will address these questions, as well as the professional engineer's responsibilities and legal liabilities concerning mold issues.

#### **Surveying Education**

Are graduate numbers meeting demand for entry-level surveyors? Are the four-year programs addressing the needs of the industry? Why do surveying programs fall within three ABET categories? This session will focus on the status of surveying education.

#### Thursday, August 23

#### Engineers' Forum (3.0 PDHs)

The discussion will focus on areas of interest to the entire engineering community, including licensure issues, trends in exam taking, and updates on current PAKS activities. Comments and discussion topics are welcome.

#### Surveyors' Forum (3.0 PDHs)

Topics will include the status of surveying education, exam performance statistics and trends, and exam audit findings. An update on the mapping sciences item bank for state-specific implementation also will be presented.

#### Member Board Administrators' Forum

Moderated by leaders of the MBA Networking Group, the session will facilitate the exchange of information about techniques and processes used by various jurisdictions. Comments and questions are welcome.

#### **Awards Luncheon**

#### Keynote Address and Business Session I

Herbert Shivers, Ph.D., P.E., deputy director of Safety and Mission Assurance at NASA's Marshall Space Flight Center, will deliver the keynote address.

#### **Zone Meetings**

#### Friday, August 24

Business Sessions II, III, and IV

#### Law Enforcement Forum

This forum will include topics covering issues related to the enforcement of licensure laws. Enforcement officers are encouraged to attend.

#### **Zone Meetings**

#### Saturday, August 25

Business Session V (if needed)

### 2007–08 Committee Organizational Meetings

### Law Enforcement Program (3.0 PDHs for a.m. session)

The Law Enforcement Program will focus on the NCEES *Model Rules*, with an emphasis on the sections relevant to a licensee's obligations to employers, clients, and other licensees.

#### **New MBA Training**

What are the governing documents for NCEES? How are NCEES committees created? These and many other questions will be addressed in this session for new MBAs. A question-and-answer session will follow.

#### Dynamics of Exam Security

Learn how to discover and deal with the methods, strategies, and instruments people can use to cheat, steal, and trick their way to licensure. Gregg Colton will discuss cheating and the black market for exam material.

### Research and the U.S. Department of Transportation (2.0 PDHs)

The Research and Innovative Technology Administration (RITA) coordinates the U.S. Department of Transportation's research programs and leads the department in many areas. This presentation will illuminate some of the RITA programs that will affect the future of transportation safety in the United States.

### International Building Code: Are You Up to Speed on the I-Codes? (2.0 PDHs)

Learn about the codes that safeguard residents and businesses by guiding construction and renovations and how they are affecting NCEES examinations.

### Legal Issues Pertaining to the Prosecution of Exam Subversion (1.5 PDHs)

Joan E. Van Tol, corporate counsel for the Law School Admission Council (LSAC), will discuss legal considerations associated with the prosecution of candidates suspected of exam subversion.

#### FE Institutional Reports

After each exam administration, NCEES sends reports to institutions and Member Boards detailing the performance of FE examinees. This session will review the information contained in these reports and give suggestions about how reports can be used.

#### Australia's Licensure System

Presented by Engineers Australia, this workshop will discuss the current interest in and requirements for accepting educated, experienced engineers seeking work abroad. It will also focus on global trends relating to both bilateral and multilateral agreements.

### Fulfillment of the Engineering Body of Knowledge via Education and Experience

One of the prime components of ASCE's efforts in helping NCEES define engineering education requirements for licensure has been the development of the body of knowledge (BOK) for civil engineering. This session will describe the latest version of the BOK and its relationship to the education definitions considered by NCEES.

### Registration Deadline: July 13, 2007

For more information, including downloadable registration forms, go to www.ncees.org/amreg.html.

#### MISSION

The Mission of NCEES is to coordinate with domestic and international organizations to promote licensure of all engineers and surveyors.

NCEES Strategic Plan



David L. Whitman, Ph.D., P.E. Western Zone Vice President

## Two birds, one stone: Western VP makes the case for the FE exam

During the 2004–05 academic year, the United States conferred 73,600 bachelor's degrees in engineering, but only 21,600 currently enrolled engineering students took the FE exam for the first time. That means only about 30 percent of senior engineering students took the FE exam. Why is this the case?

When I pursue this question among my colleagues, I often hear statements such as, "I don't encourage my students to pursue licensure because they won't need it in their career. Therefore, why should I encourage them to take the FE exam?" While I don't disagree that many future engineers will be able to perform under the umbrella of an industrial exemption, this statement can be very shortsighted, since no one knows what path one's career might ultimately take.

I propose providing faculty members with a method to encourage the FE exam for students on their campus without a direct statement supporting future licensure. This involves disconnecting the FE exam from licensure and simply viewing the adoption of the FE exam as *one* of the primary assessment tools for EAC/ABET accreditation. ABET has long been a supporter of direct-assessment methods that include standardized exams. The FE exam certainly qualifies as a direct-assessment method when used correctly. For example, an institution should not use the FE exam pass rate

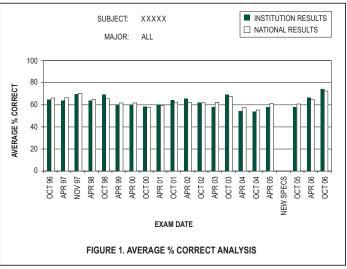
as a measure of assessment. Instead, faculty members need to examine how their students are performing on individual topic areas.

If more institutions would adopt the FE exam as *one* of their assessment tools, we would get two birds with the same stone—better assessment for each engineering program and more students started on the road to licensure.

The following graphs show how the FE exam can be used as an assessment tool. This data is from a hypothetical institution that requires the FE exam as a graduation requirement.

While students don't have to pass the exam to earn their degree, the institution does require a good-faith effort. This approach is commonly used at many engineering schools. The NCEES-supplied Subject Matter Report provides the necessary data (both institutional and national) in a very usable format.

These graphs show the FE exam results for a specific topic. This could be a morning topic (same for all majors) or an afternoon topic (specific for each discipline). Figure 1 shows the percentage of correct answers for both the institution and the national average for exam administrations going back to October 1996. While it can be seen that students answer 60–70 percent of the questions correctly, the faculty of this institution have elected not to set a specific goal (expectation) on this measure since they have no control over

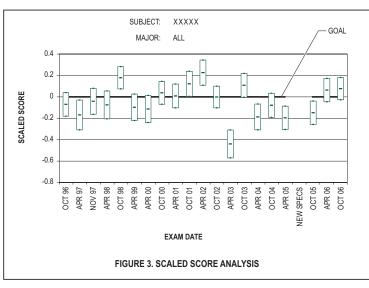


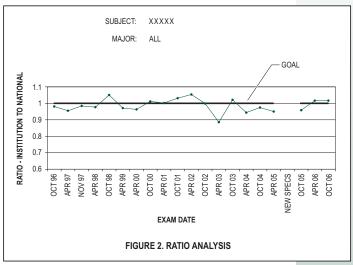
exam-item difficulty. In other cases, institutions *have* set specific goals for this measure. Either way, the graph can be quickly informative as to how well the students are doing.

Figure 2 presents the same data but in a ratio comparing institutional results to national averages. In this case, the institution has a desired goal or expectation of 1.00. That is, the faculty feel that their students should at least be performing at the same level in this topic area as the national average. Examination of this figure in detail reveals four consecutive exams below the goal (April 2004, October 2004,

April 2005, and October 2005). Following the third consecutive exam below the goal, it is hypothesized that the faculty took some sort of corrective action in this topic (used a different instructor, added a lab module, etc). After time is allowed for reaction to the corrective action, it can be seen that the students are back above the desired goal. This is an excellent example of what ABET calls "closing the loop."

Figure 3 presents the data in yet another manner. This graph uses what is defined as the scaled score, which involves the use of the national standard deviation and an "uncertainty bar" that accounts for the number of takers that a particular institution might have. One can see that for three of the four exams from April 2004 until October 2005 in which the ratio was below the goal, the scaled score (indicated by the uncertainty bar) was also below the goal. After the corrective measures had time to take effect, scaled scores also rose above the institution's goal. An institution may choose to use either or both of these last two methods of data analysis. The key is to have





some clearly defined event that triggers some sort of corrective action.

In summary, I encourage all licensees—especially those who are faculty members—to discuss the FE exam and assessment with the institutions of higher learning within their jurisdictions. If you would like me to come talk to particular institutions, please do not hesitate to contact me. Perhaps if we can

change the flawed perception that the FE exam is useful for licensure purposes only, we can actually get more institutions to adopt the FE exam for assessment purposes. If that gets more college seniors on the road to licensure, then we have achieved two goals.

David L. Whitman, Ph.D., P.E. Western Zone Vice President Professor, University of Wyoming

For more about using the FE exam as an assessment tool, see the NCEES white paper "Using the Fundamentals of Engineering (FE) Examination to Assess Academic Programs" online at www.ncees.org/feoat/assessment.php. The February 2006 issue of Licensure Exchange also features an excerpt of the white paper on page 5 (www.ncees.org/licensure/licensure\_exchange).

Clemson, South Carolina June 2007

### **UPDATE**

# EPP, EPE, and EPS continue tradition of improving Council exams

calls for printing three

forms—as well as separate

afternoon modules—of the

When exam issues are addressed at NCEES, three committees always skills are not ing examination. This year is no different for the Examination Policies and Procedures (EPP), Examinations for Professional Engineers (EPE), and Examinations for Professional Surveyors (EPS) committees, respectively chaired by Ralph Sweet, P.E., Bill Dickerson, P.E., and James Riney, P.E., P.S. These committees are responsible for continually updating and improving exam content and administration procedures for the engineering The motion's language

**EPP** to present policy revisions

and surveying licensure exams.

The EPP Committee will present six motions at this year's Annual Meeting, each with proposed revisions to the Council's exam development and exam administration policies. Among these motions is one outlining requirements for the deletion of a particular discipline or module from NCEES exams.

Civil PE exam beginning in October 2009, with Electrical and Mechanical to follow in April 2010.

To follow in April 2010.

To follow the exam beginning in October 2009, with Electrical and Mechanical to follow in April 2010.

The proposed revision to exam development policy (EDP) 7.B would require "an NCEES committee, technical society, or other group" to make requests to the EPE Committee when seeking to remove or rename a discipline or module, or to combine examinations or modules. Such requests "shall include proof of such need, estimate of usage, and impact on protection of public health, safety, and welfare."

Another motion concerns the adoption of a new discipline-specific FE exam module, covered in EDP 6.B. The proposed language would require at least 10 Member Boards to each demonstrate a need for a new disciplinespecific FE exam module in their jurisdictions. In demonstrating the need for a new module, the boards would each need to provide evidence that certain knowledge areas and skills are not adequately measured in the existing examination or module.

A third motion would allow NCEES to contract, with the approval of the Board of Directors, to provide NCEES examinations to licensing bodies from foreign governments. Formerly, doing so required the approval of the Council. This change would occur in exam administration policy (EAP) 10, which states

that the foreign licensing bodies in question must be appropriately sanctioned and conform to several provisions set by NCEES.

Currently, NCEES administers the FE exam in Japan through the Japan PE/FE Examiners Council; it also

exam in Japan, beginning this October. Other motions include new EAP language requiring Member Boards

plans to administer the PE

to follow the exam administration audits established by the Board of Directors in 2006, language to EAP 6 setting time limits for Member Boards to request exam reviews and/or hand scores on behalf of candidates, and language in EAP 1 and 8 dealing with the invalidation of scores of candidates failing to adhere to guidelines outlined in the Candidate Information Sheet.

### **EPE** proposes printing separate modules

The EPE Committee will present one motion at the Annual Meeting. The committee also has several recommendations stemming from its work to address the 11 charges assigned to it for 2006–07.

The motion to be presented by the EPE Committee calls for the printing of multiple exam versions for the morning sessions of the Civil, Electrical and Computers, and Mechanical PE exams. Dickerson, the

committee's chair, said the motion is designed to make it difficult to copy/collude on exams. The Council currently prints three forms for the morning session of the FE exam. "We found evidence suggesting that using multiple versions of the morning FE exam results in fewer incidences of collusion, so we are recommending doing the same for the PE exams with high candidate volumes," said Dickerson.

The motion's language calls for printing three forms—as well as separate afternoon modules—of the Civil PE exam beginning in October 2009, with Electrical and Mechanical to follow in April 2010. The motion also calls for NCEES to print afternoon modules separately for the FE exam beginning in April 2010. This would require candidates in each of these exams to provide their choice of module at the time of exam registration.

The EPE Committee also looked at the structural module of the Civil PE exam to determine whether or not to continue including it in the exam. The committee recommended its continued use, with Dickerson pointing to an upcoming Structural Exam Task Force motion that calls for a single, uniform 16-hour structural exam to be used in jurisdictions requiring structural engineering licensure. "If that motion passes, then the Structural I exam will no longer exist," said Dickerson. "We need to keep the structural module in the Civil PE exam for the states without structural engineering licensure."

One of the recurring activities for the EPE Committee involves updating exam specifications as necessary. This year, updates were made to specifications for all Civil PE exam modules and the Naval Architecture and Marine Engineering PE exam (they will take effect in the April 2008 exam administration). Design standard changes will also be incorporated (beginning in April 2008) into the Structural I and II exams as well as the structural and transportation modules of the Civil PE exam.

### **EPE** and **EPS** address calculator usage

The EPE and EPS committees also examined the Council policy allowing candidates to bring their own calculators to the exam site. The policy—which limits the approved calculators to four approved models—is the result of past work by EPE, EPS, and EPP to develop a system of calculator usage to reduce the likelihood of candidates using calculators to cheat on or compromise the exams.

Both EPE and EPS surveyed exam development volunteers, providing calculators from the Council-approved list of four and asking for their preferences among the models. The EPS Committee favored adopting the HP 33S as the sole approved calculator due to its ability to convert angles to degrees, minutes, and seconds as well as its ability to work in algebraic and reverse Polish notation (RPN) modes.

The EPE Committee also favored the HP 33S for the same reasons, but noted that many exam development volunteers voiced strong preferences for the Texas Instruments and Casio models. The EPE Committee also pointed to an ELSES survey of exam candidates that found preferences evenly divided among the HP, TI, and Casio models. Pointing to this, EPE does not support the idea of supplying candidates with a single calculator model. It instead recommends that at least two models be provided if NCEES decides to provide examinees with calculators.

#### Exams continue to perform well

The EPE and EPS committees routinely analyze psychometric data measuring the effectiveness of the exams at measuring minimum competency. Riney, the EPS Committee chair, says that NCEES exams continue to perform well thanks to its system of having volunteer item writers work with Council staff and psychometricians.

"The training and exam preparation system serve each assembled team very well," said Riney. Speaking of the recent April exam administration, Riney noted that preliminary item analyses of the FS and PS examinations were promising.

NCEES Staff



Andrew Ritter Spokesperson, MBA Networking Group

### MBA Networking Group links Council leadership, Member Boards

Cince the 2000 Annual Meeting in Chicago, When Member Board administrators (MBAs) voted to organize themselves as a group, the MBA Networking Group has become a valuable resource both for Member Boards and the Council as a whole. As the link between NCEES headquarters and the individual boards, the members of the MBA group offer a unique perspective, since they are responsible for implementing NCEES policies at the state level. The group has served as both a forum for the exchange of ideas across Member Boards and as a resource for Council leadership as they develop the policies that strengthen and promote licensure in the engineering and surveying professions.

The MBA group is led by zone representatives, who are elected by the group's members to two-year terms. Over the past year, the MBA group met twice as a group—at the Annual Meeting in Anchorage and at the Board Presidents' Assembly in Atlanta. Forums were also conducted at each of the zone meetings for MBAs in attendance. At the meetings, members discussed the ongoing work of the Council's committees and task forces as well as the ongoing work being done through the various NCEES programs. The goal of these meetings was to ensure that the MBAs are well-informed about the issues the Council will address at the Annual Meeting.

One of the major issues discussed at the MBA Networking Group forums was computer-based testing (CBT) for the FE and PE examinations. The group expressed an interest in pursuing CBT for future exams and stated

a desire for NCEES leadership to appoint a task force in 2007–08 to assess what needs to be done to move toward CBT. At the February meeting of the NCEES Board of Directors, the Board voted to suspend the existing 10-year CBT plan approved in 2002 and amended in 2003. This was a positive development for the MBA group and for CBT proponents as a whole, since the Board of Directors indicated support for a 2007–08 CBT task force that will be charged with assessing the possibility of CBT and potentially proposing a more immediate timetable for implementation.

Another item of interest for the MBA group was the new Board policy of funding one member of the group's leadership to attend each Board meeting. The MBA group decided to rotate attendance of these Board meetings among the four zone leaders. It also decided that the zone leader who attends a Board meeting would be responsible for preparing written reports to be distributed via the MBA listsery within 30 days of the meeting.

Elsewhere, the MBA group continues to function as a resource for the Council's committees and task forces. As it did last year, the group has made itself available to standing NCEES committees and task forces as they go about fulfilling their charges. So far this year, two of these committees have taken advantage of this offer. The MBA Networking Group looks forward to continuing to function as a resource for NCEES in the future.

Andrew Ritter Spokesperson, MBA Networking Group

## NCEES hits the road to promote licensure, professional services

When it comes to promoting licensure to engineers and engineering students, hitting the road is a necessity. That's why Professional Services Director Davy McDowell, P.E., Human Resources Director Donna Moss, and Marketing Associate Erin Carroll found themselves in Columbus, Ohio, to represent NCEES at the annual convention of the National Society of Black Engineers (NSBE), held March 28–April 1.

"A lot of people approached our table and said, "Who is NCEES?" said McDowell. "As soon as we mentioned that we are the ones who make the FE and PE exams, they knew exactly who we were." McDowell said that the team from NCEES emphasized the greater number of career options that are available to licensed engineers compared to nonlicensed engineers.

"Because most of the attendees were undergraduates, the event was very career-oriented," said McDowell, who added that the colorful, eye-catching NCEES display urging students to "finish" their college education by taking and passing the FE exam, attracted many visitors passing by on the crowded convention floor. "We met a lot of people and got a lot of names from people interested in the exams and in pursuing licensure," said McDowell.

Carroll added that many who approached NCEES were electrical engineering students, a discipline that traditionally does not produce many licensure candidates relative to such fields as civil or environmental engineering. "If we can get even a small percentage increase in electrical engineering students who take the FE exam, it would make a huge difference" in the total number of FE exam candidates, she said.

NSBE is a student-managed organization devoted to increasing the number of black professionals in the engineering fields. It consists of more than 24,000 members from more than 270 chapters at universities and colleges across the country. NCEES was one of more than 300 exhibitors at the NSBE convention. Other exhibitors included Toyota, ExxonMobil, the CIA, and Intel.

McDowell and Carroll also attended the convention of the Society of American Military Engineers (SAME), held May 1–4 in Philadelphia. The SAME convention attracted engineers from across the uniformed services as well as the private sector. McDowell noted that many of the engineers he and Carroll met at the convention were already licensed, and that they were happy to see NCEES representatives in attendance. "The military really seems to put a premium on licensure for engineers," he said.

Carroll added that the SAME convention differed from the NSBE convention in that most of the attendees were seasoned professionals. "We promoted professional services such as the Records Program and RCEPP



Lt. Gen. Carl A. Strock, P.E., visits with NCEES Marketing Associate Erin Carroll during the SAME convention in Philadelphia. Strock is SAME President as well as the Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers.

(Registered Continuing Education Providers Program) more at the SAME convention," she said.

The visits signify the Council's increased attention to promoting engineering and surveying licensure in recent years, a trend that is all but certain to continue in the future. Professional Services is scheduled to attend similar events throughout 2007, including visits to the structures conference of the American Society of Civil Engineers and the conventions of Tau Beta Pi, the Society of Women Engineers, and the Society of Hispanic Professional Engineers.

Doug McGuirt NCEES Editor

#### Member Board

### NEWS

#### Florida PE

• Carrie A. Flynn (cflynn@fbpe.org) has been named interim executive director for the board.

#### Georgia

• E. Charles Vickery, P.E., is the new board chair. James W. Butler is a new appointee to the board.

#### Indiana PE

 Mark Downey, P.E., is a new appointee to the board. The term of William J. Fehribach, P.E., has expired.

#### Iowa

 Craig Johnstone, P.E., P.L.S., is a new appointee to the board. The term of Dennis Osipowicz, P.E., L.S., has expired.

#### Louisiana

 Norma Jean Mattei, Ph.D., P.E., and Richard L. Savoie, P.E., are new appointees to the board. The terms of Kenneth McManis, Ph.D., P.E., P.L.S., and Richard Durrett, P.E., P.L.S., have expired.

#### Maine PE

• The term of Paula M. Hamilton has expired.

#### Maryland PE

• Steven A. Arndt, P.E. is a new appointee to the board. The term of Alison Hunt, P.S.M., P.E., has expired.

#### Michigan PE

 Mahmoud E. El-Gamal, P.E., George Karmo, P.E., John Krauss, P.E., Robert Stempien, and Kevin Prihod are new appointees to the board. The terms of Gregory Bovid, P.E., and Stephen S. Miller, P.E., have expired. Ronald Quackenbush is no longer on the board.

#### **Montana**

• David Elias, P.E., P.L.S., is a new appointee to the board. The terms of Denis Applebury, P.L.S., and Janet Markle have expired.

#### **New Hampshire LS**

• Richard Bond is a new appointee to the board. The term of Linda M. Capuchino has expired.

#### **New Jersey**

• Barry S. Jones, P.L.S, and Perry Schwartz, Ph.D., P.E., are new appointees to the board. The terms of James D. Kelly, P.E., and Louis A. Raimondi, P.E., P.L.S., have expired.

#### Oklahoma

• Glen W. Smith, P.E., P.L.S., is a new appointee to the board. He will replace Jon Nelson, P.E., whose term expires in June.

#### South Dakota

• Jeff A. Hazard and Thomas D. Geraets are new appointees to the board. The terms of Raymond Henzel and David M. St. Pierre have expired.

#### Texas PE

• Edward L. Summers, Ph.D., is a new appointee to the board. The term of Vicki Ravenburg, C.P.A., has expired.

#### Virginia

 Lorri B. Finn is a new appointee to the board. The term of Carole Ridings Renmark has expired.

#### Wisconsin

• Steven J. Hook is a new appointee to the board. The term of Lynda Farrar has expired.

**Wyoming** 

• Scott R. Pierson, P.L.S., is a new appointee to the board. The term of Martin A. Pedersen, P.L.S., has expired.

### Celebrating licensure's centennial

Be on the lookout for the June issue of *PE* magazine, which should arrive in mailboxes soon. NCEES and the National Society of Professional Engineers have partnered to publish a special issue celebrating the 100th anniversary of engineering licensure. In this issue, you'll have the opportunity to read about the many accomplishments of professional engineers over the past century. You can also read about how the engineering profession—and the licensure process—came to be what it is today and how the profession is likely to change over the course of the next century. Because NCEES has co-published this issue, everyone who receives *Licensure Exchange* will also be receiving a copy of this issue of *PE*.

Exchange editor at NCEES, PO Box 1686, Clemson, SC 29633 or dmcguirt@ncees.org.

Please include your nam

Send letters to Licensure

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## Corley presented with National Engineering Award

President-Elect Gene Corley, Ph.D., P.E., S.E., was awarded the National Engineering Award from the American Association of Engineering Societies (AAES) at its awards ceremony and banquet held May 7 in Washington, D.C. According to AAES, the award is presented for "inspirational"

leadership and tireless devotion to the improvement of engineering education and to the advancement of the engineering profession, as well as to the development of sound public policies as an engineer-statesman."

2006-2007 NCEES

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F. Elizabeth "Betsy" Browne Secretary/Executive Director Clemson, South Carolina

### Upcoming

### **EVENTS**

DATE	EVENT	LOCATION
July 6–7	.Board of Directors' Strategy Planning Session	. Chicago, III.
August 21	.Board of Directors' Meeting	. Philadelphia, Pa.
August 22–25	.Annual Meeting	. Philadelphia, Pa.
August 25	.Board of Directors' Meeting	. Philadelphia, Pa.
September 28–29	.Board of Directors' Orientation	. Clemson, S.C.
October 26–27	.Exam Administrations	
October 28	.JPEC Exam Administrations	. Tokyo, Japan
November 2–3	.Board of Directors' Meeting	. Palm Springs, Calif.



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