

News from Delaware's Licensing Council for Professional Engineers

Spring 2009



PRESIDENT'S MESSAGE

By Frank A. Newton

Since our last newsletter I attended the National Council of Examiners for Engineering and Surveying biennial conference for Presidents in Atlanta. The Conference is held to provide an extensive orientation for new Presidents to all the services NCEES provides for the Member Boards and the changes they are working on for the near term and into the future.

Henn Rebane, P.E., NCEES President, has made a commitment to improving relations with ABET. ABET is the Accrediting body for college engineering and applied science programs. Until recently, there was little interaction between the leaders of NCEES and ABET beyond sending a representative to each of their respective annual meetings. One of the major issues addressed is the decision of ABET to introduce dual-level accreditation for engineering colleges to pursue accreditation for bachelor's and master's degrees in the same discipline.

Another very interesting presentation was made demonstrating Building Information Modeling (BIM) and the benefits it provides in making engineering design more understandable to a client so that they can better visualize engineering designs so that changes can be made earlier and much less expensively than changes made later in the design process.

As reported in the Executive Directors message, SB 39 is our current legislative initiative and it has passed the Senate in the General Assembly and now moves to the House.

I want to thank Past-President Guy Marcozzi who has done a yeoman's job of being the center of coordination in finalizing the lease on our new location in Corporate Commons. Guy had a lot of help from Peggy Abshagen, our Executive Director, in making decisions on the internal arrangement and decor of the new location. There were many other people who brought this together in a very tight timeline. Kudos to all.

The Northeast Zone meeting of NCEES was held in Norfolk, VA April 16-17. The Zone meetings allow discussion of issues that will come up at the National meeting in Louisville, KY in August. One of the major reports was the report of the NCEES Engineering Education Task Force. This report responds to a resolution passed by the Council last year at the Annual Meeting seeking an analysis of the potential impact of requiring additional education for engineering licensure. This report does not provide an answer to the question of whether a Masters or equivalent should be required for licensure but does provide a careful analysis of what the impacts potentially would be. This will be a major topic of discussion at the Annual Meeting. Anyone interested in looking at this report can find it on the NCEES Web site (www.ncees.org) at the News and Update section.

As a member of the NCEES Finance Committee, I made a presentation of the proposed FY 2010 NCEES budget that will be presented to the Annual Meeting. That budget shows an income of \$16.9M and expenses of \$15.2M providing a surplus of \$1.7M.

MESSAGE FROM THE EXECUTIVE
DIRECTOR
By Peggy Abshagen

Continuing my previous article on **Change**, there are actually some additional changes on the horizon, both locally and nationally.

Nationally:

NCEES, along with all State boards, is developing a system to gather examinee data which will enhance exam efficiency and improve the security of the exams. Many jurisdictions, including Delaware, limit the number of exam attempts of examinees. This new system will require all examinees across the country to obtain an identification number directly from NCEES to register for an examination. This will be effective with the **October 2010** exam administration.

In **April 2011**, NCEES will begin its administration of a new **16-hour Structural PE exam**, replacing the current Structural I and Structural II exams. Those states that require both Structural exams currently also use a state-specific exam. The new Structural PE exam can be used by any state requiring specialized structure licensure. The new Structural exam is divided into two 8-hour components, offered on successive days. The **Vertical Forces** component focuses on gravity loads and incidental lateral loads, while the **Lateral Forces** component focuses on wind and earthquake loads. To pass the exam, examinees must pass both components, but the components may be taken and passed in different exam administrations.

Locally:

The Delaware Board is pursuing legislation to reduce the years of experience required for those applicants with either a Master's or PhD degree in engineering. **Senate Bill 39** requires applicants from non-ABET accredited engineering programs, engineering technology programs or from science programs related to engineering with a **Master's degree** in engineering from institutions that offer ABET-accredited engineering programs to have **five (5) years** of engineering experience.

Those same graduates with a **doctoral degree** in engineering from institutions that offer ABET-accredited engineering programs, will be required to have **four (4) years** of engineering experience.

(Currently the law would require these applicants to have a total of eight (8) years of experience.)

This is the only legislative initiative pursued this legislative session. Senator David B. McBride, P.E., along with Senator Sokola and Rep. Kowalko were the sponsors of this legislation.

Lastly, one thing that has not changed, is what an engineering license means to our licensees. We recently received a letter from **licensee #1927 Charles R. Eisenstein, P.E.** of our neighboring state New Jersey. Mr. Eisenstein shared his background with us indicating when licensed in 1959 after a hearing and oral examination by the Board, his license was granted. Little of his work over the years required licensure, and, even after relocating out of Delaware he maintained his Delaware license, retiring just two years ago. He ended his letter thanking us "for having me for the past fifty years."

Mr. Eisenstein, we'd like to thank you for your kind words and your representation of a true professional and gentleman. The privilege has been ours!



IS MANDATORY CPC
CREEPING UP ON US?

By Robert A. Chagnon, P.E., SECB

For the uninformed out there, CPC is the acronym for Continuing Professional Competency, or in other words, continuing education. This is but one of several articles I've written on the subject for this newsletter, most of which have primarily been critical of DAPE for not instituting mandatory CPC. In the past month or so, I've received my annual slew of phone calls from a number of my PE friends and acquaintances asking me over and over again, "**why doesn't Delaware have mandatory CPC?**" Their interest in the question is obviously being piqued by the fact that many are in the midst of having to re-certify themselves as having met the CPC requirements of the various states that they're registered in. If Delaware had mandatory CPC, their work load would have been significantly reduced by many of the states agreeing to accept a home state's CPC requirements in lieu of theirs.

Status: These phone calls also piqued my curiosity as to just where does CPC stand these days, nationwide? Fortunately, there now exists a website that tells it all. It's <PDHcenter.com>. PDH standing for "Professional Development Hour". There, one can download a state-by-state listing of all CPC requirements that involve

both PE's and/or LS's. **Officially, as of April 16, 2009, 26 states now have mandatory CPC for PE's and 32 states for LS's.** For PE's, CPC is required in Alabama, Alaska, Arkansas, Florida, Georgia, Illinois, Iowa, Kansas, Louisiana, Maine, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia and Wyoming.

General Requirements: For the most part, they all either require 15 PDH's annually or 30 PDH's biennially. The exceptions include New York that requires 36 PDH's triennially, 16 PDH's biennially for Virginia, 24 PDH's biennially for Tennessee, Alaska and Minnesota and 8 PDH's biennially for Florida. The majority of the states have renewal deadlines of either April 30 or June 30. December 31 applies to a few of the states with the remaining states spreading their renewals throughout the year based on an individual's first letter of their last name. With the exception of many of the state's "special requirements", most call for 10 of the 15 PDH's or 20 of the 30, to concentrate on technical subjects which directly safeguard the public's health, safety and welfare.

Special Requirements: There are a lot of them that vary with each state. For example, Florida and Illinois require 4 PDH's on their respective Board Law and Rules in addition to 2 PDH's in ethics every 2-years; for Kentucky, it's 4 PDH's in ethics every 4-years; only 1 PDH biennially in ethics for Louisiana but they also require 8 PDH's biennially in ADA; Mississippi calls for 2 PDH's in ethics every 3-years;; 4 PDH's biennially in ethics for New Mexico, which also calls for 10 PDH's through self-directed study; of New York's 36 PDH's triennial requirements, 18 PDH's must be from live courses.

Other States Looming: In addition to the aforementioned 26 states with mandatory CPC, 9 more have indicated that they are either in the process of developing proposed law changes that would institute mandatory CPC, have introduced such law changes to their legislature which are awaiting passage or rejection or, **like our neighboring state of Pennsylvania**, similar law changes will be introduced during this year's legislative sessions.

Pennsylvania's Proposed Mandatory CPC Legislation: Identified as "House Bill No. 975, it was introduced on March 18, 2009, and referred to the Committee on Professional Licensure on that same date. It calls for each licensee to be required to obtain 24 PDH units during its biennial renewal period. As is generally the case with other states, PA's CPC

requirements will be considered as having been satisfied by non-residents when they certify that they are licensed in and have met the **mandatory** CPC requirements of any jurisdiction approved and listed by the board.

What About Mandatory CPC For Selected Areas Of Practice? I'm a structural engineer in addition to being a "Certified Structural Engineer" under the Structural Engineering Certification Board (SECB). It requires that I complete 15 PDH's every year, solely dedicated to structural engineering subject matters or activities, which I quite easily do. **As a matter of fact, the biggest problem I have with that CPC requirement is not losing out on carry-over PDH's due to having too many.** The work I do puts the public at risk for economic loss and personal safety. Keeping up with all of the technical advances that are continually developing in my field of work is mind boggling. Construction materials and their associated design code provisions are continuously evolving. Most every incident involving a serious earthquake, wind and/or snow storm, or a structural failure of some significant nature, triggers an investigation that eventually leads to new code mandates. As a result, my feelings are that Delaware should have mandatory CPC for not only engineers practicing structural engineering, but any of the engineering professions involved in the design of buildings and structures. That would pull in the MEP/HVAC mechanicals and electricals along with the structurals. By the way, that's exactly how the state of West Virginia ended up adopting mandatory CPC for all of their engineer registrants. Their Board of Architects proposed legislation that would have required all WV PE's that have anything to do with building design to be subject to mandatory CPC. Rather than fight it, the WV Engineering Board adopted mandatory CPC for all of their registrants. In Delaware, architects and surveyors are subject to mandatory CPC, but engineers are not. Figure that one out. Furthermore, if mandatory CPC is a mandate for lawyers, doctors, dentists, barbers, cosmetologists, beauticians, nurses and etc., why not engineers?

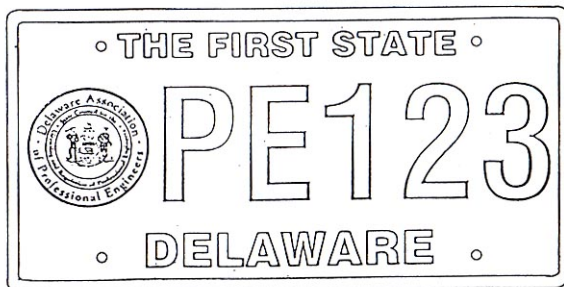
Are There Benefits To Mandatory CPC? There does not appear to be any tangible benefits to mandatory CPC. The states with mandatory CPC have not been able to distinguish any difference in the number of competency or ethics complaints against engineers after their having instituted mandatory CPC than what may have existed before its having been implemented. Many states have reported a slight reduction in their PE membership roles, following its implementation, but not severe enough to be of any lasting significance. These are not individuals that decided to give up being PE's, they're individuals that

decided that being registered in 10 states with mandatory CPC was too much of a hassle in keeping up with the CPC requirements (not to mention the paper work and the increase in renewal fees) that were particularly unique to several of the states involved.

What's The Deciding Factor? Personally, this writer is all for mandatory CPC, especially if its program is designed to provide validity in advancing one's technical knowledge in their particular engineering specialty. **The whole issue needs to be addressed by asking if we (engineers) want to be just another "licensed occupation", or do we want to be recognized as a "learned profession".** No one can argue that law and medicine are learned professions. They clearly hold a level of prestige that's much higher than engineers and are entitled to the higher compensation that they receive for their services and the trust that the public must place with them. Why should it be any different for those of us who design our bridges, our houses, the buildings we work in and the facilities that surround us? Shouldn't the public feel confident in knowing that what we designed incorporated the latest technology for ensuring a project's life-long safety? What's being expected of engineers is ever increasing with no end in sight. Shouldn't we be demanding more of ourselves in admitting that education must never stop?

UPDATE: WE NEED YOU!

Special License Plate For Delaware PE's



**Is Anyone Else Interested?
Show Pride in Your Profession**

Still looking for about 100 interested participants in order to meet the Division of Motor Vehicle requirement of 200 applications for our special license

plates. We have more than 1100 members that reside in Delaware and are eligible to be among this group. Contact the DAPE office today!

(Here's the background info:)

As a Delaware non-profit organization, DAPE can qualify for special registration plates for its members. To do so, DAPE must provide a minimum of 200 applications for such before the Division of Motor Vehicles can consider issuing a special license plate for Delaware Professional Engineers. A one-time fee of \$10.00 is charged for each special plate. That fee is to be paid for by the individual that will be receiving the plate. For "special" license plates, as compared to "vanity plates", yearly license renewal costs are the same as for conventional license renewals. Special plates are limited to passenger vehicles and trucks rated at 3/4-ton capacity or smaller. The vehicle must also have a current Delaware registration.

If interested, please call, e-mail or fax Peggy Abshagen at DAPE and provide her with your name, your PE license number and how to best get back to you with a follow-up application form and \$10.00 fee submittal. **We need a minimum of 200 interested applicants to pull this off so please get to Peggy ASAP, if interested.** DAPE's phone number is 302/368-6708. Fax number is 302-368-6710 and Peggy's e-mail address is peggy@dape.org.



WE'RE MOVING!!

By Gregory G. Pawlowski, P.E.

After tens years of occupying the office building adjacent to Christiana Towne Center, DAPE is moving to New Castle Corporate Commons. If you remember, efforts were being made to purchase property within the same region. Regretfully, none could be found that met the criteria set forth by the ad-hoc committee charged with locating our new space. Our present lease will expire May 31 and advance notice to our landlord had to be given of our intent to renew or depart. Initially, when our search failed to find any properties available for purchase, some thought was given to either expanding our space or moving to a larger adjacent office space. Keep in mind that part of our goal was to provide separate access to our conference room and some file storage capacity. Doing so would permit other professional engineering

organizations to hold their meetings in part of our space after hours without compromising our records. This would be a first step toward developing the Engineering Center that was written about in our Fall 2008 newsletter. Members of organizations interested in the Center should contact DAPE.

Unfortunately negotiations with our current landlord were not successful nor in the best interest of DAPE; therefore, another facility was quickly found. Those familiar with Corporate Commons know it is convenient to major access routes and has a good professional appearance and reputation; two of the ad-hoc committee's many criteria. Specifically we will be in 92 Reads Way, Suite 208. Note: our suite number is the same as our current one. The lease has been signed with an aggressive construction schedule in place to meet our May 31 deadline.

One feature of our new 3100 sf space (previously one had 2000 sf) includes a separate entrance to a file room with kitchen facilities and access to the conference room. The conference room will be larger and more conducive to disciplinary hearings held when necessary. An overhead projector and screen will be built into the ceiling for committee, Council, and professional organization presentations. Another key issue was additional record storage space and this facility will have it. Further concerns have been to increase exam security and this will be met by constructing a separate lockable storage room for exams when they arrive and before they depart.

All this good news does not mean we will not continue pursuing property ownership. Other options and avenues will be looked at, including office condo ownership, which best fits DAPE and its members needs. In the meantime, we will have a professional looking office better suited to serve DAPE's growing needs. Once the new office is opened, notice will go out to all members and include contact information. All members are welcome to stop by and see the office once it is complete.

CERTIFICATE OF AUTHORIZATION RENEWALS ARE IN THE MAIL

Delaware law requires all firms offering or providing engineering services in the State to maintain a Certificate of Authorization (C/A). Renewal notices have been mailed to the 901 firms currently holding C/A's that will be expire **June 30, 2009**.

We vigorously pursue firms that do not have current authority to practice in Delaware. And the penalty fees

for late renewals, as well as the fines for unlicensed practice, are substantial. Our roster of licensed firms is posted on our website for public information. Make sure your firm is in compliance with the law and maintains current licensure.

GRACIAS, DANKE, MERCI, . . . THANKS!

Once again we must express our sincerest appreciation to those DAPE members who recently proctored the April exam administration. For the first time in 30 years we were in a new facility requiring some extra efforts on the part of all. A special thanks to:

PE Chief Proctors: Joe Volk and Harry How

Glenn Davis
Arkan Say
Vince Cichocki
Dan Barbato
Tom Coleman
Mike Ellis
Phil Horsey
Phil Girandola
Lucie Wilkens
Shirley Johnson

FE Chief Proctors: Greg Pawlowski and John Traynor

Mike Siwek
Meghan Lester
Joe Serbu
Dave Chandlee
Bob Leitsch
Paul Gerard
George Nagase
Charlie McAllister
Jim Cloonan
Ken Quesenberry
Joshua Schwartz
Annette Shine
Ken Monroe

A special shout-out to Joe Volk, Phil Girandola and Bob Leitsch who did double duty and stayed for two sessions of proctoring. And, of course to the new proctors Tom Coleman, Mike Ellis, Phil Horsey, Shirley Johnson, Josh Schwartz and Annette Shine!

We applaud your efforts and thank you for a job well done!



IS IT BROKE?
By Annette Shine, P.E.

Along with other members of the American Institute of Chemical Engineers, I recently received an email from AICHE informing me that National Council of Examiners for Engineering and Surveying (NCEES) has increased the minimum education needed to become a Model Law Engineer to a Master's degree or equivalent. AICHE urged me to tell my state licensing board (i.e., DAPE) about my opinion of this change. AICHE, along with eight other professional societies representing Mechanical, Industrial, Mining and Metallurgical Engineers (293,000 members total) opposes the change. The American Society of Civil Engineers and the National Society of Professional Engineers (183,000 combined members) are strong proponents of the Master's or equivalent (MorE) requirement, while the Institute of Electrical and Electronics Engineers - USA (220,000 members) has issued an official statement saying it neither endorses nor opposes the additional education requirement for licensure. Delaware sided with the 41% minority of state boards that voted against the MorE motion, which was passed at the August, 2006 NCEES meeting, but is not scheduled to take effect until 2020. Clearly, engineers are rather polarized on this issue!

Proponents of the change to require a Master's or equivalent for licensure generally believe that engineers in the 21st century will require more education to practice their profession. Supporters of this belief often cite the following arguments: (1) The number of credit hours required for a bachelor's degree in engineering has decreased over the years, so these "lost" curricular items should be reinstated; (2) The National Academy of Engineering, in its 2005 report, "Educating the Engineer of 2020," recommends that the baccalaureate degree should become a "pre-engineering" degree, analogous to a liberal arts degree; (3) Most other professions, including physicians, lawyers, architects and accountants, require an advanced degree to practice; (4) An advanced degree as a minimum requirement will enhance the status of the profession, possibly enhancing salaries.

Opposition to the new MorE requirement is based loosely on the adage "If it ain't broke, don't fix it," coupled with the Law of Unintended Consequences. Opponents stress that the paramount purpose of

licensure is to protect the public, and that no evidence even hints that a bachelor's degree is insufficient to do this. They argue that licensure has always relied on the three-legged stool of Education, Experience and Examination to insure competency to practice, and that raising the bar to sit for the Examination (which only NCEES administers) will *de facto* reduce the supply of engineers licensed to practice. Since most disciplinary actions taken by licensing boards involve ethical violations, rather than technical incompetency, reducing the number of engineers who officially subscribe to the PE's code of ethics, and can supervise non-PEs' work, might actually result in an increase in violations.

Since I hold the Education seat on the DAPE Council, I'm particularly interested in this issue. I thought I would use the newsletter venue to share with DAPE members some opinions I've formed on the subject. As a disclaimer, I hasten to point out that these opinions are my own, and do not necessarily represent those of the DAPE Council or of my employer, the University of Delaware. In this article, I'd like to discuss the inherent assumption by MorE proponents that, all other things being equal, an engineer with a master's degree or equivalent is better qualified to practice the profession than one without.

On some level, it's impossible to argue with the contention that more education produces a better engineer. I've never yet taken a class, or sat in on a technical presentation, where the material wasn't useful to me to solve a problem at some later time. But the same can be said for Experience as well as Education. We engineers are analogical thinkers, i.e., we think by analogy. That's why we brought suitcases full of textbooks to the PE exam, and rifled through them looking for problems analogous to the ones on the exam. So, the more varied problems we are exposed to, whether in classes, or on the job, or just in daily life, the greater our storehouse of analogies to draw from when the next engineering problem confronts us.

But I'm not sure that requiring significant post-graduate education before the PE exam is the best way to beef up the quality of our profession. Numerous studies about engineering education, reported by the National Science Foundation, the National Academy of Engineering, and, earlier this year, by the Carnegie Foundation, all agree that the most effective way to improve engineering education is NOT through increasing the amount of technical course content. What is needed is better integration of that knowledge into practice, so that students can advance from being passive viewers to being active creators of engineering solutions. In the last DAPE

newsletter, Greg Pawlowski echoed these conclusions based on his own classroom observations. He urged DAPE members to hire, patiently mentor, and progressively challenge student interns, because both their education and our profession will reap the rewards of that investment.

With some exceptions, most university graduate-level coursework centers on the advanced engineering theory needed for conducting in-depth doctoral research. So, insisting on a Master's degree or equivalent education for the PE exam is simply insisting on having more of what we already know to be least effective in training creative professional practitioners. However, NCEES is still in the process of defining what type of coursework would satisfy this new education requirement, so perhaps this objection will be addressed in subsequent refinements of the MLE definition.

After all, the Model Law Engineer of NCEES is not really a law or regulation, it's simply a guideline recommended for state licensing boards to follow. State legislatures determine the statutory requirements for licensure; Delaware's current law, for example, already deviates from NCEES MLE requirements in several respects. January 1, 2020 is still a long way off, but it's never too early to be thinking about how engineers of all disciplines can advance the quality of our professional practice, thereby promoting the safety and welfare of the public we are duty-bound to hold dominant. Of course, you may also want to tell your state licensing board your own opinion on education requirements for PE licensure.

WANTED: ENGINEERING ASSESSOR

The Delaware Association of Professional Engineers defines an Engineering Practice Assessor as one who has an extensive and varied background in engineering that will be applied to the tasks of establishing and maintaining an ongoing partnering relationship with key building officials throughout the State of Delaware. The assessor's primary task will be to assist DAPE in taking a pro-active role in seeking out violators of its laws governing the practice of engineering, by assisting building officials in assessing whether an engineer is or has practiced within his or her field of competence.

This position is designated to be a part-time task that will vary from week-to-week and could involve several weeks at a time where the individual's services are not

required. Most assignments will encompass a time commitment ranging from as few as 3 to 4 hours in any given work day to as much as a whole day at a time. Some local travel within the state will be involved where the assessor will provide for his or her own transportation.

The following qualifications are deemed to be desirable but not all necessarily essential:

Extensive experience in engineering design and/or the review of plans that particularly relate to civil engineering and/or structural engineering projects.

Possess a general educational background in other related engineering disciplines, such as the understanding of basic mechanical, electrical and chemical engineering principles; and basic understanding of architectural design requirements.

Licensed in the State of Delaware and some familiarity with Delaware's Code Title 24, Chapter 28 on Licensure Law and current building codes – both IBC and IRC.

Able to speak and write clearly and concisely when needed for presenting his or her findings before DAPE's Law Enforcement & Ethics Committee (LE&E), a hearing panel, the DAPE Council and other forums as required.

An understanding as to what constitutes legal evidence and an appreciation for confidentiality in dealing with matters involving individuals that may be under investigation.

Experience as an expert witness and having provided court testimony.

If your qualifications meet our needs, send your resume to the DAPE office at www.office@dape.org.

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