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FLORIDA BOARD OF
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JANUARY 2018

From the Executive Director: The Future of Engineering

BY ZANA RAYBON, FBPE EXECUTIVE DIRECTOR & FEMC PRESIDENT

This article is reprinted with permission from NCEES' [Licensure Exchange](#) December 2017 issue. As many states are moving to make changes to their occupational and professional licensing boards, Ms. Mamola's article is worthy of consideration:

The Future of Engineering

BY PATTY MAMOLA, PE, NEVADA BOARD EXECUTIVE DIRECTOR

Last August, 48 people attended the Future of Engineering Summit in Omaha, Neb. Hosted by a group of concerned engineering consulting businesses, the event included attendees from all parts of the United States as well as a variety of national professional society representatives. Attendees were required to commit to having an open mind, being willing to think big, and, most importantly, getting out of their own way while participating.

Prior to attending the summit, attendees were encouraged to read four books:

- *The Future of the Professions*, Richard Susskind and Daniel Susskind, Oxford University Press
- *The Fourth Industrial Revolution*, Klaus Schwab, Crown Business
- *A Whole New Engineer: The Coming Revolution in Engineering Education*, David E. Goldberg and Mark Somerville, Threejoy Associates
- *Leaders Make the Future*, Bob Johansen, Berrett-Kohler Publishers

The books were thought-provoking, fueling discussions during the two-day meeting.

Despite the demand for engineers, the United States is not currently producing enough of them. One reason that *A Whole New Engineer* cites for this lack of engineers is that not enough students succeed in getting engineering degrees. Preparation and encouragement of high school students is a major cause of the lack of interest and success in the engineering-related careers. This is especially true for women and minorities.

New Approaches to Education

Olin College has piloted a new approach to engineering education. Teachers collaborate with students to create innovative ideas. Students build and make things prior to being taught the math and science. Creativity is encouraged, successes are celebrated, and failures are valued as opportunities for improving the engineering process.



The University of Illinois was unable to toss out its engineering education to create a new program but knew changes were needed to improve engineering education. It, therefore, adopted much of the Olin model on a voluntary basis and has seen 100 percent participation by staff and students.

Instead of asking students to look to the right and left to see who won't make it, these programs encourage them to look around at the classmates who will be helping them succeed. With this optimistic approach, both programs have diverse student populations and impressive retention rates.

As engineers, we often talk about concerns with engineering education. We may agree that changes are needed, but we passionately disagree on the fix. It is exciting to watch Olin College lead the way in radically changing engineering education. Rather than working within the confines of current engineering education delivery systems, Olin has transformed delivery. It has no departments or tenured staff. Staff lead classes and collaborate with students to explore the boundaries of knowledge and innovation by working on research projects, in addition to pursuing new ideas born by each student's passionate pursuits. Olin has caught the attention of others and is collaborating with them, serving as a beacon for the future of engineering education in the world.

Challenges to Licensure

Technology is rapidly changing our world. *The Future of the Professions* describes how a number of professions have already been irrevocably changed by technology. Rather than seeking a certified public accountant for tax preparation, taxpayers can simply use TurboTax, an online tax preparation software program. The June issue of *Builder* magazine, which is the magazine for the National Association of Home Builders, included an article on artificial intelligence-based design. The article stated, "Currently, only professional designers know design rules and techniques. Our vision is to empower everyone to become interior designers with an app that combines AI with virtual reality." It's not a stretch to imagine that artificial intelligence will eventually percolate into engineering design practice. The market will no doubt demand it. A business owner of a major engineering firm attending the Future of Engineering Summit commented that there is no reason why engineering designs cannot live in the public domain. Owners currently demand ownership of engineered drawings, wanting the ability to reuse them. When the demand exists, it becomes only a matter of time before the competitive free market meets the demand.

Uber is a great example of the market meeting demand. There are cars on roads everywhere, and people ride in cars to get places. By employing new technologies and innovative business models, Uber became a ride-sharing service, sidestepping the regulation of the taxi industry. Uber is thriving as an unregulated service, while the highly regulated taxi industry is steadily declining. This very well could be the beginning of the end for the taxi industry. When considering the future of engineering and that just 20 percent of graduate engineers become licensed, regulators and licensed professional engineers could easily find themselves in a similar position to that of the taxi industry.

As board members and executive directors of engineering regulatory boards, we should not be naïve or arrogant to believe that the status quo will continue to be acceptable. This past year, we have experienced increased challenges to licensure. And these challenges do not appear to be abating. Recently, the National Conference of State Legislatures commissioned an occupational licensing study in 11 states to identify current regulatory policies that create unnecessary barriers. Similar to the Future of Engineering Summit attendees, NCEES and its members must be willing to commit to having an open

mind, be willing to think big, and — most importantly — get out of our own way to meet the future of engineering licensure.

Patty Mamola is the executive director and a past member of the Nevada State Board of Professional Engineers and Land Surveyors, and a member of the 2017-18 NCEES Committee on Member Board Administrators. She is also a past president of NCEES.

Chair's Corner: The Past Year, The Year Ahead

BY ANTHONY J. FIORILLO, PE, SI, CGC, FBPE CHAIR (2017)

Welcome to 2018! I hope everyone enjoyed the holiday season!

It was an honor and a pleasure to serve as the 2017 Florida Board of Professional Engineers' Chair. I enjoyed my time as Chair, but the distance from Northern Virginia and the demands of a booming economy, made it difficult to allocate sufficient time to serve the position diligently. Therefore, it is time for me to step aside and make way for the new Chair. Mr. Kenneth Todd is that guy!

Mr. Todd (Kenny T. as we like to call him on the Board) is an exceptional person and engineer. He has served on and chaired many of the Board's committees, lectured on numerous occasions, authored countless articles and published two books, *The Making of a Disciple* and *The Making of a Mature Disciple*. If you are so inclined, I highly recommend adding them to your reading list. You won't be disappointed! Kenny T. is a rock star and is someone for whom I have the utmost respect.



Anthony Fiorillo,
outgoing Chair

Mr. Kevin Fleming will serve once again as Vice Chair. He also has served on and chaired numerous Board committees, even those outside his area of expertise. He was appointed to chair the Structural Rules committee, despite being an electrical engineer, primarily due to his diligence, sense of fairness, calmness, and ability to bring resolution to spirited conversations. Mr. Fleming has filled in quite admirably for me on those occasions where I was not able to be present. I am grateful for his service as Vice Chair this year and last. The Board is in good hands under the leadership of Mr. Todd and Mr. Fleming.

I would like to recognize my other fellow Board members: Ms. Vivian Boza; Mr. Bill Bracken, PE; Ms. Elizabeth Ferguson, Esq.; Mr. Warren Hahn, PE; Dr. Michelle Roddenberry, PE; Mr. PJ Shah, PE; and Mr. Babu Varghese, PE. These fine people volunteer endless hours in support of FBPE's mission of protecting the health and safety of the public by properly regulating the practice of engineering while serving its licensees and guarding against the unlicensed practice of engineering. Thank you for your dedication and service! I would also like to recognize two others that served on the Board in 2017, Mr. Roland Dove, PE, and Mr. John Pepper, PE. We miss you both!

I would be remiss if I did not acknowledge the outstanding Board staff, and express my gratitude for their service to our industry. They are the remarkable Ms. Zana Raybon, FPBE Executive Director and FEMC President; Ms. Rebecca Sammons, FBPE Assistant Executive Director, FEMC Secretary, and Glue of the Organization; Mr. John Rimes, Esq., FEMC Vice President and Chief Prosecuting Attorney; Michele Morris, FPBE Controller and Treasurer; Mr. William Lampkin, Public Information Officer; Brooklyn

Phillips, Customer Service Representative and Scanning Technician; Ms. Lisa Simmons, Lead License Analyst; Mr. Brendan Henricks, Licensure Analyst; Ms. Angie Henricks, Licensure Analyst; Ms. Nancy Wilkins, Licensure Analyst; Ms. Katherine Anderson, Scanning and Records Supervisor; Ms. Pam Lowery, Licensure Analyst; Ms. Rebecca Valentine, Paralegal; Ms. Wendy Anderson, Investigator II; Ms. Jeannie Jones, Investigator I; and Mr. Alan Levin, Systems Project Analyst. I would like to also acknowledge my good friend, Mr. Larry Harris, Esq., General Counsel to FBPE. Thanks to all of you for everything you do. I am grateful for your service!

Lastly, I would like to thank you, my fellow licensees, for doing your part in maintaining our noble profession.

I wish you a healthy and prosperous 2018!

Chair's Corner: The Next 100 Years

BY **KENNETH TODD**, PE, CFM, FBPE CHAIR (2018)

The Florida Board of Professional Engineers celebrated 100 years of existence this past year. In my first order of business as the Board's new Chair, I would like to thank the previous Chair, Anthony Fiorillo, for the outstanding job he did in leading FBPE through its 100th year of existence.

Tony and I were both appointed to FBPE at the same time in January 2012, and he has shown great dedication throughout his time on the Board, having chaired and served on numerous committees addressing important issues that engineers face daily. His dedication and managerial skills were very apparent as he executed the duties of Board Chair for the good of the engineering profession.

Thank you, Tony, for a job well done.

FBPE has come a long way since it first met in 1917. In its first century, FBPE had numerous accomplishments. However, its most noted accomplishment is that it established rules that regulate the practice of engineering to protect the public health and safety as set forth by the Legislature in Chapter 471, Florida Statutes. As part of these rules, it also set up a licensing procedure to ensure engineers are qualified to practice engineering as defined in the rules, and developed an examination to establish an applicant for licensure is competent to practice engineering with Florida.

So, what will the next 100 years bring for engineers and FBPE?

Well, we have seen many technological advances within just the past 30 years or so that change the way engineers practice engineering. Our profession has seen the development of software that generates construction drawings via computer, the development of computer modeling software that shortens the time needed to accomplish laborious engineering calculations, and new products due to engineering research that make it easier for a constructed project to accomplish the goals of the engineering design. We will continue to see many more technological advances throughout the remainder of this century, and I have no doubt the engineering community will continue to keep up with these advances.

One of the challenges for all licensed engineers, with all of the coming technological advances, is to make sure they have the necessary amount of engineering training. One way is to take appropriate



Kenneth Todd,
incoming Chair

continuing education courses that will allow them to use these technological advances to provide engineering services that protect the public health and safety. FBPE is committed to doing its part in developing rules that provide an environment for licensed engineers to do just that.

Together, FBPE and Florida licensees can ensure our profession keeps up with coming technological advances.

Best wishes for 2018.

The New Florida Building Code and CE Requirements

BY WILLIAM C. BRACKEN, PE, SI, CFM

As of Jan. 1, 2018, the 6th edition of the Florida Building Code went into effect throughout Florida. The updated Code editions that have changed include:

- Florida Building Code: Building
- Florida Building Code: Residential
- Florida Building Code: Existing Building
- Florida Building Code: Accessibility
- Florida Building Code: Plumbing
- Florida Building Code: Mechanical
- Florida Building Code: Fuel Gas
- Florida Building Code: Energy Conservation
- Florida Building Code: Test Protocols for High Velocity Hurricanes



Given that Florida’s legislature saw fit to stop automatically adopting the latest version of the International Building Code, it is critical that design professionals whose practice includes items regulated by the Florida Building Code, stay abreast of each new version. In fact, for engineers licensed in Florida there is a statutory and an administrative requirement to do just that.

Section 471.0195, Florida Statutes, and Rule 61G15-22.001, Florida Administrative Code, require licensed engineers “*actively participating in the design of engineering works or systems in connection with buildings, structures, or facilities and systems covered by the Florida Building Code*” to complete at least one advanced Florida Building Code course applicable to that licensee’s area of practice. Further, the course is required to be designated as “Advanced” by the Florida Building Commission, approved by FBPE, and completed within 12 months of each edition of the Florida Building Code effective date.

Therefore, licensees only have until Dec. 31, 2018, to:

- 1) Complete at least one “Advanced” Florida Building Code course approved by the FBPE within the disciplines of civil, structural, mechanical, electrical, or general engineering; and
- 2) Provide the Board with a copy of a certificate of completion that shows course number, course hours, Code edition year, and Code or course focus.

On July 1, 2018, FBPE will begin updating FBPE’s licensure portal. If the board has not received proof of an appropriate course having been completed, the designation “Building Code Core Course Credit” listed under “Special Qualifications” will be removed as required by Section 471.0195, F.S.

Keep in mind that local jurisdictions have an obligation to notify FBPE when design documents are submitted for building construction permits by Florida licensees who are not in compliance with this section. Further, the Board is required to take those actions deemed appropriate when such noncompliance is determined to exist.

Proper Signing and Sealing of Engineering Documents

BY WILLIAM C. BRACKEN, PE, SI, CFM

Starting in 2012, the Florida Board of Professional Engineers undertook the process of reorganizing and updating its Signing and Sealing rules (Rule 61G15-23, Florida Administrative Code), which went into effect in November 2015. Then from the end of 2015 through to the end of 2017, based on input from licensees, these changes were refined and can be found on the [Statutes and Rules](#) page on the FBPE website.

While the number of improperly signed, dated, and sealed engineering documents turned over to the Board seems to be decreasing, there remain those who do not seem to have kept up with the rules. Failing to comply with these requirements is a violation of our rules. As a result, the FBPE has begun to issue *Letters of Guidance* and, soon, *Notices of Non-Compliance* for initial offenders.

This article is aimed at helping licensees avoid violating the rules by highlighting a few key points on how to properly sign, date, and seal engineering documents. This article is offered only as an introduction and to provide guidance. Licensees are required, and strongly encouraged, to read and understand all of the rules that govern the practice of engineering within Florida in their entirety.

Key Points

Three key points warranting emphasis include: what needs to be signed, dated and sealed; physical documents versus electronic documents; and, how to sign, date, and seal engineering documents.

1) What Needs to Be Signed, Dated, and Sealed?

In Florida, our laws and rules require that all final engineering documents bear the engineer's signature, date, and seal at a minimum. Specifically, Chapter 471.025(1), Florida Statutes, states, in part: "*All final drawings, specifications, plans, reports, or documents prepared or issued by the licensee... shall be signed by the licensee, dated, and sealed... .*" And Rule 61G15-23.001(1), F.A.C., states, in part: "*A professional engineer shall sign, date and seal: (a) All final plans, prints, specifications, reports, or other documents prepared or issued by the licensee... .*"

In a number of cases, licensees — much to their detriment — failed to sign, date, and seal documents simply because their client didn't require it. Even if a licensee's client doesn't require it, the licensee is required to sign, date, and seal engineering documents if the rules require it. Confusion also comes into play with the term "*filed for public record.*" In a number of other cases, licensees have failed to sign, date, and seal documents because the document was not intended to be filed for public record. Again,

PLEASE NOTE

While this article provided instructions on proper signing and sealing of engineering documents when it was first published, the rules have changed. Please refer to Chapter 61G15-23, Florida Administrative Code, posted on the [Statutes and Rules](#) page on the FBPE website for current requirements.



licensees are required to sign, date, and seal all documents required by rule, which include far more than those simply intended to be filed for public record.

2) Physical Documents Versus Electronic Documents

Simply, the issue of physical documents versus electronic documents can be summed up as:

- *Physical documents must be physically hand signed, dated, and sealed.*
- *Electronic documents must be either electronically or digitally signed, dated, and sealed, and no longer comply with the requirements of Section 471.025(1) once they have been printed because the authenticity of the signature and seal can no longer be verified.*

While an electronic (scanned) copy of a physically signed, dated, and sealed document is suitable for archival purposes, it is not considered to be an original signed, dated, and sealed document. Likewise, the printed copy of an electronic document is suitable for archival purposes but it is not considered to be an original signed, dated, and sealed document.

Rule 61G15-23.003, F.A.C., *Procedures for Physically Signing and Sealing Plans, Specifications, Reports or Other Documents*, addresses in detail how to sign, date, and seal physical documents. While, Rule 23.004, *Procedures for Digitally Signing and Sealing Electronically Transmitted Plans, Specifications, Reports or Other Documents*, addresses in detail how to digitally sign, date and seal electronic documents, and Rule 23.005, *Procedures for Electronically Signing and Sealing Electronically Transmitted Plans, Specifications, Reports or Other Documents*, addresses in detail how to electronically sign, date, and seal electronic documents.

3) How to Sign, Date, and Seal Engineering Documents

Placement of the date that the document has been sealed and signed is required regardless of whether the document is physically or electronically transmitted. The signature and seal however vary according to whether the document is physically or electronically transmitted.

Dating Documents

Both physically and electronically transmitted documents require that the date the signature and the seal are affixed be placed immediately adjacent to the signature. It is not however required to be placed beneath the seal.

Rule 61G15-23.001(4)(d), F.A.C., *The date that the signature and seal is affixed as provided herein shall be entered on said plans, prints, specification, reports or other documents immediately adjacent to the signature of the professional engineer.*

Signing and Sealing Physically Transmitted Documents

Physically transmitted documents require that the licensee create by hand an original of the licensee's signature. A scanned, facsimile, digitally created, or copied image of the licensee's signature is not allowed on physically transmitted documents.

Rule 61G15-23.003(1), F.A.C., *The licensee shall sign by hand an original of the licensee's signature on each page required to be sealed. A scanned, facsimile, digitally created or copied image of the licensee's signature shall not be used.*

As for creating the seal, physically transmitted documents are allowed to be embossed, sealed using a wet stamp, or contain a digitally created seal (as part of the border). In each of these cases the seal is to partially overlap the licensee’s signature such that the signature is not made illegible.

Rule 61G15-23.003(2), F.A.C., *The licensee must then use a wet seal, a digitally created seal, or an embossing seal placed partially overlapping the licensee’s signature on each page required to be sealed. The placement of the seal shall not render the signature illegible.*

Physical Signing and Sealing Examples (acceptable):



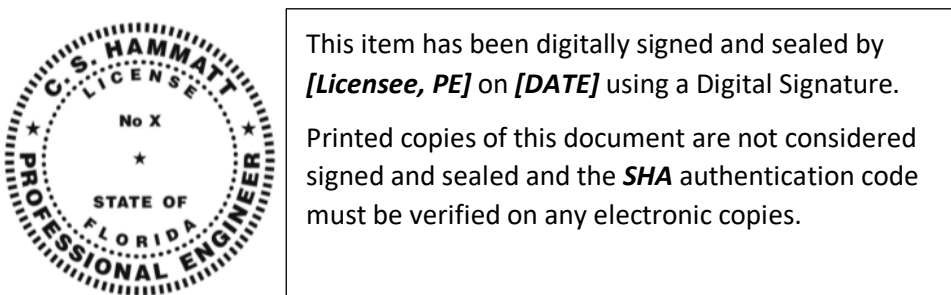
Signing and Sealing Electronically Transmitted Documents

Similar to physically transmitted documents, electronically transmitted documents are required to contain the date it was signed and sealed (located immediately adjacent to where the signature would appear), and are permitted to have a digitally created seal.

However, unlike physically transmitted documents, electronically transmitted documents are not allowed to include a scanned or digitally created image of the licensee’s signature. More importantly, electronically transmitted documents are *required* to contain a statement clearly indicating that the document has been electronically signed and sealed, and that printed copies of the document are not considered signed and sealed. This is required so that the recipient of a printed copy of an electronically transmitted document will know that the printed copy is not an original signed and sealed copy.

As for signing and sealing, electronically transmitted documents are considered to be signed and sealed by virtue of the fact that the licensee has electronically marked the document, thereby indicating that the document has been corrupted in the event any changes are made after that point. Electronically transmitted documents can be signed and sealed by one of two methods: digital signing and sealing; or electronic signing and sealing. For all of the requirements, please visit the [Statutes and Rules](#) page on the FBPE website.

Digital Signing and Sealing Examples (acceptable):



Within the document, if a digitally created seal is not used, the required text is to appear where the signature would normally appear.

[Licensee] State of Florida, Professional Engineer, License No. **X**

This item has been digitally signed and sealed by **[Licensee, PE]** on **[DATE]** using a Digital Signature.

Printed copies of this document are not considered signed and sealed and the **SHA** authentication code must be verified on any electronic copies.

Electronic Signing and Sealing Examples (acceptable):



This item has been electronically signed and sealed by **[Licensee, PE]** on **[DATE]** using a **SHA** authentication code.

Printed copies of this document are not considered signed and sealed and the **SHA** authentication code must be verified on any electronic copies.

Within the documents themselves, if a digitally created seal is not used, the required text is to appear where the signature would normally appear.

[Licensee] State of Florida, Professional Engineer, License No. **X**

This document has been electronically signed and sealed by **[Licensee, PE]** on **[DATE]** using a **SHA** authentication code.

Printed copies of this document are not considered signed and sealed and the **SHA** authentication code must be verified on any electronic copies.

For more information on proper signing and sealing please view the free [Signing and Sealing](#) webinar on the [FBPE website](#).

Records Retention – A Reminder

BY WILLIAM C. BRACKEN, PE, SI, CFM

The start of the new year is the time when businesses and individuals tend to work on organizing current records and purging old ones. Be careful, though, that you don't purge records that Florida Statutes or the Florida Administrative Code require you to keep.

For engineers, Chapter 61G15, F.A.C., contains two separate provisions that require licensees to retain records. The first provision is Rule 61G15-22.008, the retention of continuing education documentation, and the second is Rule 61G15-30.009, the retention of engineering documents.



The first of these provisions is found in Rule 61G15-22, *License Renewal, Continuing Education*. The provision reads:

Rule 61G15-22.008, Record Keeping. *It is the licensee's responsibility to maintain sufficient records to demonstrate completion of continuing education requirements for at least two licensure cycles (four years).*

This provision requires each licensee to keep sufficient records to demonstrate that the minimum number of professional development hours have been completed. These records are to be kept for no less than two renewal cycles or four years from the close of the renewal cycle that they were earned in. So, some records may actually need to be kept for up to six years for those professional development hours that were earned close to the beginning of a renewal cycle. For example, the most recent renewal cycle ended in February 2017; if you took a CE class in March 2017, you will need to keep that certificate until February 2023.

FBPE audits the continuing education reports as per Rule 61G15-22.006, F.A.C., *Demonstrating Compliance*, and rigorously enforces this requirement. Failure to comply can result in disciplinary action against the PE. Also, since PEs are required to certify compliance with CE reporting requirements when renewing their license, failure to support that certification with the required proof can result in the opening of a disciplinary case under Rule 61G15-19.001(6)(s): *"Renewing or reactivating a license without completion of Continuing Education (CE) hours and subject areas as required by Section 471.017, F.S., and Rule 61G15-22.001, F.A.C."*

The second of these provisions is found in Rule 61G15-30, *Responsibility Rules Common to All Engineers*. The provision reads:

Rule 61G15-30.009, Retention of Engineering Documents. *At least one copy of all documents displaying the licensee's signature, seal which is legible to the reader, date, and all related calculations shall be retained by the licensee or the licensee's employer for a minimum of three years from the date the documents were sealed. These documents shall be maintained in hardcopy or electronic format.*

This provision requires each licensee to keep at least one copy of every document that was signed, sealed, and dated, regardless of whether it was physical or electronic. The provision requires these records to be kept for no less than three years from the date the documents were sealed. It also allows the licensee to maintain these documents in hardcopy or in electronic format provided the signature and seal can be verified. For example, in the case of an originally physically signed, dated, and sealed (embossed) document, the embossed copy can be scanned and maintained digitally provided the embossing on the original can be seen within the copy (typically accomplished rubbing by graphite over the embossing).

The provision also requires that each licensee or their employer retain all calculations relating to the signed, sealed, and dated documents for no less than three years from the date the documents were sealed. It also allows the licensee to maintain these documents in hardcopy or in electronic format.

One final word of caution, with the ever-increasing push toward paperless files, computer back-ups and offsite storage are highly recommended. The loss of stored information resulting from the loss of a computer does not alleviate the licensee from his or her obligation to comply with any of these requirements.

Universities Plan 2018 Engineers Week, Girl Day Events

[Florida's colleges of engineering](#) will celebrate the practice of engineering and educate the public about the many ways engineers make a difference in our world during [Engineers Week](#), Feb. 18-24, 2018.

Feb. 22 brings a special focus on women. On that Thursday, [Introduce a Girl to Engineering Day](#) encourages young women to pursue careers in engineering.



The week-long celebration began in 1951. The National Society of Professional Engineers timed the event to coincide with the anniversary of the birth of President George Washington, who, in addition to being the nation's first president, is considered its first engineer. (Washington's birthday is Feb. 22.) Today, [DiscoverE](#), formerly the National Engineers Week Foundation, spearheads the annual event.

Some colleges of engineering have extensive programming planned for Engineers Week, while others may have only a few events.

It's still a bit early for many of the colleges to have finalized schedules, so check back. We will be updating this article with links and information as we receive them.

Here's a sampling of what is planned around Florida for Engineers Week and Girl Day 2018.

Florida Atlantic University

The schedule at [FAU's College of Engineering and Computer Science](#) is tentative. Here are some highlights:

Monday, Feb. 19

- The Amazing Engineering Race: Groups of students complete engineering challenges as they race around campus to the finish.
- Kick-off Event: Celebrate Engineers Week with food stations, music from a student DJ, student organization information tables, and many other displays and demonstrations.

Tuesday, Feb. 20

- Duct Tape Dynasty: Teams of students duct tape members of the College of Engineering and Computer Sciences faculty to a wall, with the team whose professor stays up the longest winning.
- Lunch and Learn: Civil Engineering & Hurricanes: Dr. Fred Bloetscher discusses hurricanes and how they related to civil engineering.
- How It's Made: Computer-aided-design puzzle competition

Wednesday, Feb. 21

- SAE Balloon-Powered Car Challenge: Prizes will be awarded for distance traveled, speed, straight line, and design.
- Lunch and Learn: Solar Energy Post-Hurricanes: Dr. Amir Abtahi discusses turning hurricane debris into energy.
- Engineering West lab tours

- FAU Career Fair
- Human Powered Submarine “Build a Boat” Competition: Student teams will race to build a boat — using gallon zip-close bags, duct tape, and a PVC pipe — that can cross a pool without the use of passengers’ hands or feet. Prizes will be awarded for speed, design, and best costume.

Thursday, Feb. 22

- A Day in the Life: Coding Blind: Dr. Shihong Huang will lead a discussion, then a blind coding competition.
- Lunch and Learn: “Coding for a Cause”: An information session about the community outreach program
- Engineering East lab tours
- Egg Drop Competition, hosted by Tau Beta Pi, the engineering honors society

Friday, Feb. 23

- Graduate Student Three-Minute Thesis Competition
- Engineers Got Talent & Engineers Week Awards: A talent show, with judges’ choice and people’s choice awards; presentation of Engineers Week awards

Florida International University

The [Engineering Expo](#) at [FIU’s College of Engineering & Computing](#) will be Friday, Feb. 23. It typically attracts more than 1,400 K-12 students from area schools.

The five-hour event features tours of the college’s labs, contests, presentations, and hands-on projects.

University of Central Florida

[UCF’s College of Engineering and Computer Science](#) has its Engineers’ Fair planned for Wednesday, Feb. 21. Student organizations host a variety of interactive activities and demonstrations throughout the college’s engineering buildings. Local schools attend, as do a variety of industry representatives.

University of North Florida

Plans for E-Week at [UNF’s College of Computing, Engineering, & Construction](#) are also still in the works.

UNF will host the presentations and judging for the first phase of the [Jacksonville 2050 High School Civil Engineering Competition](#) during Engineers Week. Students from high schools in Duval, Nassau, Clay and St. Johns counties, with support from local engineering firms and engineering societies, will be competing to design a skyscraper for downtown Jacksonville.

University of South Florida

[USF’s College of Engineering](#) kicks off Engineers Week a bit early with its annual [Engineering Expo](#) on Friday and Saturday, Feb. 16 and 17.

The expo is free, and while it targets kindergarten through 12th-grade students, all ages are welcome. Its goal is to highlight the importance of STEM and give attendees an opportunity to talk with Tampa Bay

engineers and USF engineering student organizations. The expo features interactive, educational shows and hands-on exhibits.

FBPE Board Appoints Chair, Vice Chair for 2018

At its Dec. 7, 2017, meeting, the Florida Board of Professional Engineers appointed **Kenneth Todd, PE**, as its chair for the 2018 term, and re-appointed **C. Kevin Fleming, PE**, as vice chair for 2018. Mr. Todd replaces **Anthony J. Fiorillo, PE, SI, CGC**, who served as Board chair for 2017. Mr. Fiorillo will remain an active member of the FBPE Board.

Kenneth Todd, PE, was born and reared in West Palm Beach, Fla., and has over 40 years engineering experience. He works with Palm Beach County as water resource manager, and is responsible for coordinating all water-resource efforts with county departments and other government agencies. Prior to working for Palm Beach, he spent 11 years with the South Florida Water Management District, serving as a senior supervising engineer in the Regulatory Department, worked as a design engineer and project manager for several engineering consulting firms, and spent two years as the assistant county engineer for Martin County.



Kenneth Todd

He received a bachelor of science degree in civil engineering from the University of Florida, where he also completed graduate coursework in public works engineering. He is a licensed Professional Engineer in Florida, as well as a Certified Floodplain Manager by the Board of Regents of the Association of State Floodplain Managers. Mr. Todd is a Fellow in the Florida Engineering Society, and a Fellow and Life Member in the American Society of Civil Engineers. As an FBPE member, he has been guest lecturer at both the Florida Atlantic University and the Florida International University colleges of engineering. Each semester for the past five years, Mr. Todd's lectures to the engineering students have included discussions on the laws and rules of Professional Engineers, the practice of engineering, and engineering ethics. He has been on the FBPE Board since 2012.

C. Kevin Fleming, PE, is vice president and principal electrical engineer for McGinniss & Fleming Engineering Inc., located in Tallahassee, Fla. He has been a Professional Engineer since 1994, and his engineering career has focused primarily on the institutional and commercial construction industry.

Mr. Fleming received a bachelor of science in electrical engineering degree from Florida State University, and has been an FBPE Board member since 2015. He is the current chair for FBPE's Structural Rules Committee. Mr. Fleming also served as vice chair in 2017.



C. Kevin Fleming

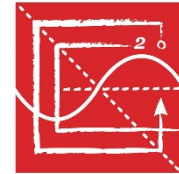
We are pleased to have these seasoned and talented professionals participating as members of the FBPE Board, and are grateful for their dedication and commitment to FBPE. For a full listing of FBPE

and Florida Engineers Management Corporation board members, visit the [About FBPE](#) or [About FEMC](#) pages of our website.

NCEES Records Program Facilitates Licensure Process

BY JERRY CARTER, NCEES CHIEF EXECUTIVE OFFICER

NCEES staff worked for more than two years to combine many of its online services into one interface that now allows member boards to access exam approvals, license and exam verifications, Records and Credentials Evaluations transmittals, the Enforcement Exchange database, and member board profiles in one place. While that transition was not without difficulties, the new E3 system has made it easier for member boards to access information, and it has significantly enhanced the [NCEES Records](#) program by moving it from a system that relied on paper forms and the U.S. mail to a system that is totally electronic.



NCEES

In addition to taking advantage of current technology, NCEES has implemented new measures to ensure that the information contained in NCEES Records are valid and pertinent. As the former executive director of the North Carolina board, I know the arduous process that member boards and their staff go through to verify that an applicant has experience that is both progressive and relevant to the practice of engineering or surveying. To ensure the quality and consistency of the information provided to member boards in a Record, NCEES has employed independent, licensed professional engineers and professional surveyors who have previously served on a member board or an NCEES exam development committee to conduct preliminary reviews of experience submitted by Records applicants. These individuals perform initial reviews of the experience as described by applicants and request additional information or explanation as needed. Once it passes this vetting, the experience is reviewed by a licensed NCEES staff member, who must also endorse the experience as both adequate and progressive before an applicant can proceed. This entire process is done at no charge to the applicant.

With these new measures in place, NCEES now offers licensure candidates the ability to document their requirements for licensure as they satisfy each requirement. Candidates can upload their educational transcripts to their [MyNCEES](#) profile, detail experience as it is gained, and then request a final review by NCEES. Once completed, the candidate's Record can be transmitted to one of several member boards for initial licensure consideration by paying the review/transmittal fee of \$175. After obtaining initial licensure, the Records holder can request that his or her Records be transmitted to other member boards for comity consideration for a fee of \$75 for each transmittal.

This new procedure has been endorsed by many member boards, and now is accepted for initial licensure application by 10 boards, including Florida.

NCEES is committed to using its resources to continuously develop and offer options that aid member boards in the vital job of regulating the engineering and surveying professions. When these enhancements also provide for an improved experience for licensure candidates, we are motivated to work even harder to offer new solutions and options that make the licensure process as seamless as possible.

(Reprinted with permission from NCEES [Licensure Exchange](#), October 2017 issue.)

NCEES Reducing Fee for FE Exam in 2018

Beginning Jan. 1, 2018, [NCEES](#) cut the cost of registering for the [Fundamentals of Engineering \(FE\) exam](#) by \$50, from \$225 to \$175.

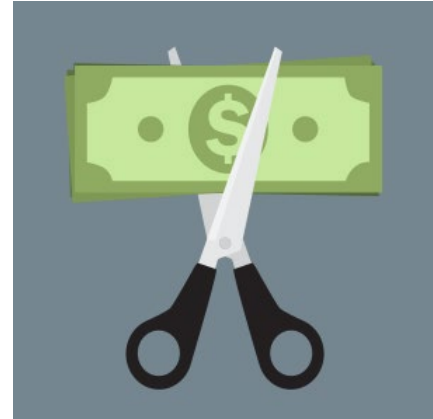
The new fee applies only to registrations completed on or after Jan. 1.

The [reduction in the exam fee](#) was approved by the NCEES board at the organization's 2016 annual meeting.

The FE exam is the first of two exams required for professional engineering licensure. It is designed to test students' knowledge of concepts learned while earning an accredited bachelor's degree in an engineering discipline. Around 2,000 take the exam in Florida each year, and there are more than 43,000 examinees throughout the United States and 15 foreign locations that test annually.

It is a [computer-based exam](#) administered throughout the year at [Pearson VUE test centers](#).

"NCEES and its member boards are committed to reducing barriers to licensure," NCEES Chief Executive Officer Jerry Carter said. "Moving to year-round computer-based testing for these exams, which gives candidates greater scheduling flexibility, was an important part of those measures. The organization is taking the additional step of lowering the price of the fundamentals exam to ensure that cost is not a prohibitive factor in starting on the path to licensure."



NCEES Making Changes to PE Exam Specifications

[NCEES](#) is making changes to the specifications for the Principles & Practice of Engineering (PE) exams for [Fire Protection](#) and [Nuclear](#) beginning with the October 2018 exams.

The new specifications for both exams will be available on the [NCEES PE exam information pages](#).

In addition to the specifications, another change is planned for the Nuclear exam. Unlike the exams transitioned to computer-based testing to date, where examinees may schedule their exam on any available day, the Nuclear exam will be a single-day testing event similar to what is currently done with paper-based exams. The test date is Oct. 19, 2018. Registration with NCEES for this exam will begin Feb. 1, 2018. Examinees may reserve their seat at a Pearson VUE test center once they are registered with NCEES and approved by FBPE.

Other previously announced changes to PE exams begin with the April 2018 exam administration. Those include:

- [PE Architectural Engineering](#): New specifications.
- [PE Civil](#): Revised design standards for the Construction, Geotechnical, and Structural modules.
- [PE Electrical and Computer](#): New specifications, and the name of the PE Electrical and Computer: Electrical and Electronics exam will become PE Electrical and Computer: Electronics, Controls, and Communications exam.
- [PE Environmental](#): New specifications, and a reduction from 100 questions to 80 questions to match other PE exams.

- [Structural 16-hour](#): New specifications and design standards.

NCEES Engineering Education Award Revamps Categories, Increases Prizes

Last summer, Dordt College Engineering Department took the \$25,000 grand prize in the 2017 NCEES Engineering Education Award for its Liberia Farm Bridge project. Undergraduate civil engineering students at the college in Clemson, S.C., worked closely with professional engineers, construction management professionals, and others to design and construct a bridge near Harbel, Liberia, to connect a farm and three communities to the market and civilization.



The [NCEES Engineering Education Award](#) recognizes college engineering programs for engaging their students in collaborative projects with licensed professional engineers. It was established to promote understanding of the value of licensure and to encourage partnerships between the engineering profession and education.

For the 2018 competition, NCEES has introduced new award categories and new award amounts to encourage a broad spectrum of engineering programs to enter and compete for a prize.

The 2018 NCEES Engineering Education Award categories are:

- International projects
- Community enhancement projects
- Public welfare and health services/care projects
- Energy and sustainability projects
- Device/design/prototype projects
- Freshman/sophomore design projects
- Innovation projects.

Programs entering the competition will be able to select which category best fits the intent and spirit of their project. In addition to launching new award categories, NCEES is introducing new award amounts and an increased number of possible winners.

Eight cash awards — the \$25,000 grand prize and seven \$10,000 awards — will be presented and can be used at the discretion of the winning engineering departments/colleges. NCEES encourages the winners to use the funds for the advancement of projects connecting professional practice and education.

All EAC/ABET-accredited programs from all engineering disciplines are eligible to participate. Projects must be in progress or completed by March 12, 2018. All projects must be received electronically by May 1, 2018.

Visit the [NCEES Engineering Education Award page](#) for complete information.

Are You Keeping Your Licensure Records Updated?

With each newsletter email distribution, new license mailing, or renewal reminder campaign, FBPE receives a number of returned communications due to bad email addresses, invalid mailing addresses, lack of forwarding information, etc.

If you aren't keeping [your contact information updated](#), you jeopardize receiving important information regarding policy/law changes, deadline notifications, receipt of certificate replacements, and much more.



Licensure renewal opens in November 2018, so there is no time like the present to remind Professional Engineers and Certificate of Authorization holders about the importance of keeping their licensure records current.

As a Professional Engineer or a Certificate of Authorization holder, it is *your* responsibility to keep your licensure records updated. This includes information such as name, mailing address, email address, or name of the PE in responsible charge for a firm.

This information should be provided within 30 days of when the change occurs to ensure proper delivery of licensure correspondence and uninterrupted Board service. We also encourage licensees to provide the most current email address since we routinely provide special notices, information, and the quarterly newsletter electronically.

For Engineers

A licensee can make changes to their licensure records via two methods: by submitting changes through DBPR's online portal, or by submitting a request to FBPE to have your records updated.

You can access your account by going to myfloridalicense.com and selecting *Licensee Login* (on the left side of the page). Should you receive a message, such as "this account is linked to another email" or "enter an activation code," while trying to access your account and you need assistance, please contact the Board office at (850) 521-0500 and select the option to speak to someone in FBPE's Licensure department.

To submit your changes to FBPE, select the [Change Contact Information](#) page under the *Licensure* section and complete the online form. You can submit changes to your mailing address, phone number, or email address using this form.

If you experience problems using either of these methods, email board@fbpe.org with your change request. Note: When emailing FBPE with your request to update your records with new information, you *must* include your full name, license number, old *and* new addresses, phone number, and email address.

For those individuals needing to change their name or obtain a new copy of their license, you *must* submit a copy of a marriage certificate, divorce decree, or court order, along with the [Order Form for Duplicate Licenses and Certificates](#) and the relevant fee. The order form can be found on the [Other Forms](#) page under the *Licensure* section.

Additional forms, such as requests to change active/inactive license status, to retire a license, and to verify licensure, are located on the [Other Forms](#) page in the *Licensure* section. If you have any questions, please contact the Board's office at (850) 521-0500.

For Certificate of Authorization Holders

Per Section, 471.023, Florida Statutes, *Certification of Business Organizations*, should a company's qualifying engineer change, it is the company's responsibility to submit a [Certificate of Authorization \(Change of Engineer\) application](#), along with the relevant fee, to FBPE within 30 days to request a new qualifying engineer. If the qualifying engineer no longer wishes to qualify a company, it is the engineer's responsibility to advise FBPE in writing of his/her desire to no longer act as qualifying engineer for the company.

If a company changes its name, it is the company's responsibility to submit a [Certificate of Authorization \(Change of Company Name\) application](#), along with the relevant fee, proof of registration, and other accompanying documentation, to FBPE within 30 days.

These forms are located on this website by selecting *Application Process* under the *Licensure* section and then [Certificate of Authorization](#). Should you have any questions regarding the application forms, the process of applying for a CA, or changing the qualifier or company name, please contact the FBPE office at (850) 521-0500, ext. 110.

Unlicensed Activity Affects Everyone

Practicing engineering or offering engineering services without a license is a violation of Chapter 471.003 and 471.031(1)(a), Florida Statutes, and is a serious threat to the health, safety, and welfare of the general public and to the profession itself.

Typically, the Florida Board of Professional Engineers receives cases involving firms practicing without a Certificate of Authorization, individuals using the [protected title](#) of Professional Engineer (PE) or any variation thereof, and individuals practicing without a PE license. In most of these cases, the violations occur due to a lack of knowledge of the laws and rules associated with the practice of engineering.

Examples of Unlicensed Activity

- A firm practicing or offering to practice engineering without a Certificate of Authorization;
- Practicing engineering without a license;
- Using a name or title tending to indicate that a person holds an active license as an engineer. Examples include: Professional Engineer, Agricultural Engineer, Air-Conditioning Engineer, Architectural Engineer, Civil Engineer, etc.;
- Presenting as his or her own the license of another; and
- Practicing with a revoked, suspended, inactive, or delinquent license.



The actions taken by the Board related to unlicensed activity violations are a Notice to Cease & Desist, a Citation (which is a fine), or an Administrative Complaint (which can come with a recommended penalty of up to \$5,000, injunctive proceedings if the action continues, and criminal prosecutions).

To verify a license for an engineer or a company, use the *License Search* at myfloridalicense.com.

To file a complaint involving either licensed or unlicensed activity, download a copy of the *Uniform Complaint Form* located on [Complaints](#) page under the *Legal* section on our website, or request a form from the Board's office.

If you want to talk to someone about a potential violation, please call the Board office at **(850) 521-0500**, and ask to speak to an investigator.

FBPE Licensees Must Report Criminal Convictions

As provided in Section 455.227(1)(t), Florida Statutes, *Grounds for Discipline; Penalties; Enforcement*, all FBPE licensees are required to report in writing to the Board within 30 days after the licensee is convicted or found guilty of, or entered a plea of nolo contendere or guilty to, regardless of adjudication, a crime in any jurisdiction. Failure to timely report will result in disciplinary action being taken against the licensee.



To report this information to the Board, email FBPE/FEMC Investigator Wendy Anderson at wanderson@fbpe.org. You must include your name, license number, the date of the conviction, what you were convicted of or the charge to which you pled guilty, along with any sentencing information (if that is available upon reporting). You may also mail this information to the Board office at:

Florida Board of Professional Engineers
ATTN: FBPE/FEMC Investigator
2639 N Monroe St., Suite B-112
Tallahassee, FL 32303-5268

If you have any questions and would like to speak to someone in our Legal Department, call **(850) 521-0500, ext. 119**.

You can read the above mentioned statute in its entirety at www.leg.state.fl.us/Statutes, or to view all the laws and rules as they relate to the practice of engineering, refer to the [Statutes and Rules](#) page under the *Legal* section of our website.

Legal Department: Latest Engineer Discipline

Pursuant to Rule 61G15-37.001(11), Florida Administrative Code, the Florida Engineers Management Corporation is required to post all Final Orders involving active disciplinary cases to the website until the terms of the final order are completed, or until the licensee becomes inactive, retires, relinquishes the license or permits the license to become null and void. Included in this section are the most recent cases in which final action has been taken by the Board, a brief description of the licensee's violation and discipline as well as a link to the final order. [View actions.](#)

Special Recognition: Congratulations, Examinees

FBPE applauds all of the candidates that successfully passed the following exams. We wish them much success as they move towards the next step in their engineering careers. [See the complete list online.](#)

Mark Your Calendar

We regularly update our calendar to ensure you stay up to date with the latest events. [Check out the calendar online at our website.](#)

Annual and Quarterly Reports Available Online

[Annual Reports](#) and [Quarterly Reports](#) for the Florida Engineers Management Corporation are available in PDF form under the *Corporate* section of [our website](#).

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