



FBPE
FLORIDA BOARD OF
PROFESSIONAL ENGINEERS

Connection

Linking You With the Florida Board's Latest Engineering News and Information

April 2023

From the Executive Director: AI Is Here

By **Zana Raybon**, FBPE Executive Director & FEMC President

Most of you have probably been hearing a lot of chatter about AI (artificial intelligence) and how it is taking over our world. That might be an exaggeration but, in reality, it has been at the forefront of the news for the past few months.

I decided to give it a try. It is truly a wonderful tool for so many web users. In fact, one of our staffers came across an article about 20 entertaining uses of ChatGPT you never knew were possible. Things like writing a novel, creating games, dealing with loneliness and anxiety, and even gift ideas. You can ask ChatGPT anything.

I asked it: "How do I explain ChatGPT to engineers?" Here is what it told me:

As an AI language model, ChatGPT is a system that uses natural language processing and machine learning to generate human-like responses to user inputs. It is trained on a large corpus of text data and is designed to respond to a wide range of prompts and questions.

To explain ChatGPT to engineers, you could describe the underlying technology and architecture of the system. This might include discussing how the model was trained, what data was used to train it, and what algorithms and techniques were employed to optimize its performance.

You could also explain the different components of the system, such as the input and output layers, the hidden layers, and the activation functions. Additionally, you could discuss the ways in which ChatGPT is used in various applications, such as chatbots, customer service, and virtual assistants.

Overall, the key to explaining ChatGPT to engineers is to focus on the technical details of how the system works and the different ways in which it can be applied to solve various problems.

I also tried DALL-E 2, which is an AI system that can create images and art from a description in natural language.

The image at right is one created for me when I asked DALL-E to "explain engineering to kids using a cartoon."

Next, I asked ChatGPT: "How can AI change engineering?" This is the response I got:



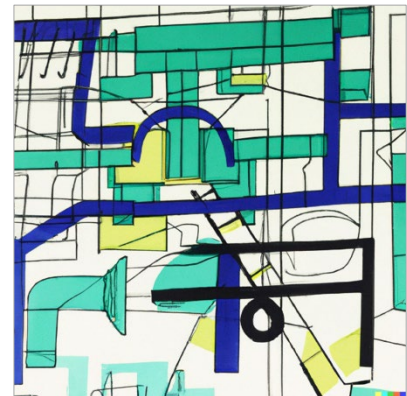
Artificial intelligence (AI) has the potential to revolutionize many aspects of engineering, including design, analysis, manufacturing, and maintenance. Here are some ways that AI can change engineering:

- 1. Design optimization: AI can be used to optimize designs, taking into account multiple factors such as performance, weight, and cost. By using machine learning algorithms to analyze vast amounts of data, engineers can identify the most efficient designs and reduce the time and resources required for testing.*
- 2. Predictive maintenance: AI can be used to monitor the health of equipment and predict when maintenance is needed. This can help to reduce downtime and prevent costly equipment failures.*
- 3. Quality control: AI can be used to detect defects in products and identify the root causes of quality issues. This can help to improve the reliability and consistency of manufactured products.*
- 4. Energy efficiency: AI can be used to optimize energy consumption in manufacturing processes, as well as in building systems. This can help to reduce energy costs and improve sustainability.*
- 5. Autonomous systems: AI can be used to develop autonomous systems, such as self-driving cars and drones, that can operate without human intervention. This has the potential to revolutionize transportation and logistics.*

Overall, AI has the potential to improve efficiency, reduce costs, and enhance the performance and reliability of engineering systems. However, it is important for engineers to understand the capabilities and limitations of AI and to work collaboratively with AI systems to ensure safe and effective operation.

Finally, I asked DALL-E to produce a “Matisse-style painting of engineering plans” and the image at right is one of four it created.

Like it or not, AI is here. We might as well find some good uses for it. Try it for yourself and see what you think!



Chair's Corner: Clarifying the SE Recognition Program

By **Dylan Albergo**, PE, FBPE Chair (2023)

There has been some confusion about Florida's Structural Engineering Recognition Program for Professional Engineers since it went into effect on July 1, 2022.

To be clear, it is not a credential like Florida's Professional Engineer (PE) license, nor a certification such as the Special Inspector of Threshold Buildings (which is required to perform specific engineering services) or the Special Inspector (Limited).

Also, Florida does not license Professional Engineers by discipline. Any Florida PE may offer structural engineering services (or any engineering service) in areas which they are competent.



What is the Structural Engineering Recognition Program?

[Section 471.055, Florida Statutes](#), required the Board to establish the Structural Engineering Recognition Program as a method for Professional Engineers licensed in Florida who specialize in structural engineering to request recognition for having “gone above and beyond the required minimum Professional Engineer licensing standards.”

The recognition does not entitle a PE to do anything beyond what any PE can do. It is strictly a voluntary and optional program.

PEs who receive the recognition may use FRSE — for Florida Recognized Structural Engineer — to market and advertise their professional practice.

To be recognized in the program, a PE must meet one of the following requirements:

- Passed the 16-hour NCEES Structural exam after Jan. 1, 2011;
- Passed both the eight-hour NCEES Structural Engineering I exam and the Structural Engineering II exam prior to Jan. 1, 2011;
- Passed the 16-hour Western States Structural Engineering exam;
- Passed the eight-hour NCEES Structural Engineering II exam and either the eight-hour PE Civil: Structural exam or the eight-hour PE Architectural Engineering exam;
- Passed the eight-hour NCEES Structural Engineering II exam and either the eight-hour California Structural Engineering Seismic III exam or the eight-hour Washington Structural Engineering III exam; or
- Have 15 years of documented experience working on significant structural engineering projects.

Professional Engineers wishing to be recognized through the program must submit [a request to the Board](#).

Engineering certifications

There are two other certifications that cover threshold building inspections and have more stringent requirements: Special Inspector and Special Inspector (Limited).

A [Special Inspector of Threshold Buildings](#) may offer threshold building inspection services under [Section 553.79, F.S.](#) PEs who are Special Inspectors have been certified by the Board to have met qualifications set forth in [Rule 61G15-35.003, Florida Administrative Code](#), *Qualification Program for Special Inspectors of Threshold Buildings*.

A [Special Inspector \(Limited\)](#) may offer inspection services for Level 1 or Level 2 Alterations, Restoration, Non-substantial Structural Repair and/or Rehabilitation of threshold buildings pursuant to [Section 553.79, F.S.](#) PEs who are Special Inspectors (Limited) have been certified by the Board to have met qualifications forth in [Rule 61G15-35.003, F.A.C.](#), *Qualification Program for Special Inspectors of Threshold Buildings and Special Inspectors of Threshold Buildings (Limited)*. Please note that Special Inspectors (Limited) cannot perform the entire range of services authorized by [Section 553.79\(5\)\(a\), F.S.](#) Also, Florida PEs who are competent in the area of practice may offer the same inspections as offered by an SI (Limited).

“

In Summary

- The FRSE program is strictly voluntary/optional and for recognition only. Recognition by the program is not required for a Professional Engineer to practice structural engineering.
- Any Florida PE may offer structural engineering services in areas in which they are competent.
- Inspections of threshold buildings require an additional certification from the Board to be qualified as a Special Inspector of Threshold Buildings.
- Special Inspectors (Limited) and Florida PEs who are competent in the area of practice may offer inspection services for Level 1 or Level 2 Alterations, Restoration, Non-substantial Structural Repair and/or Rehabilitation of threshold buildings.

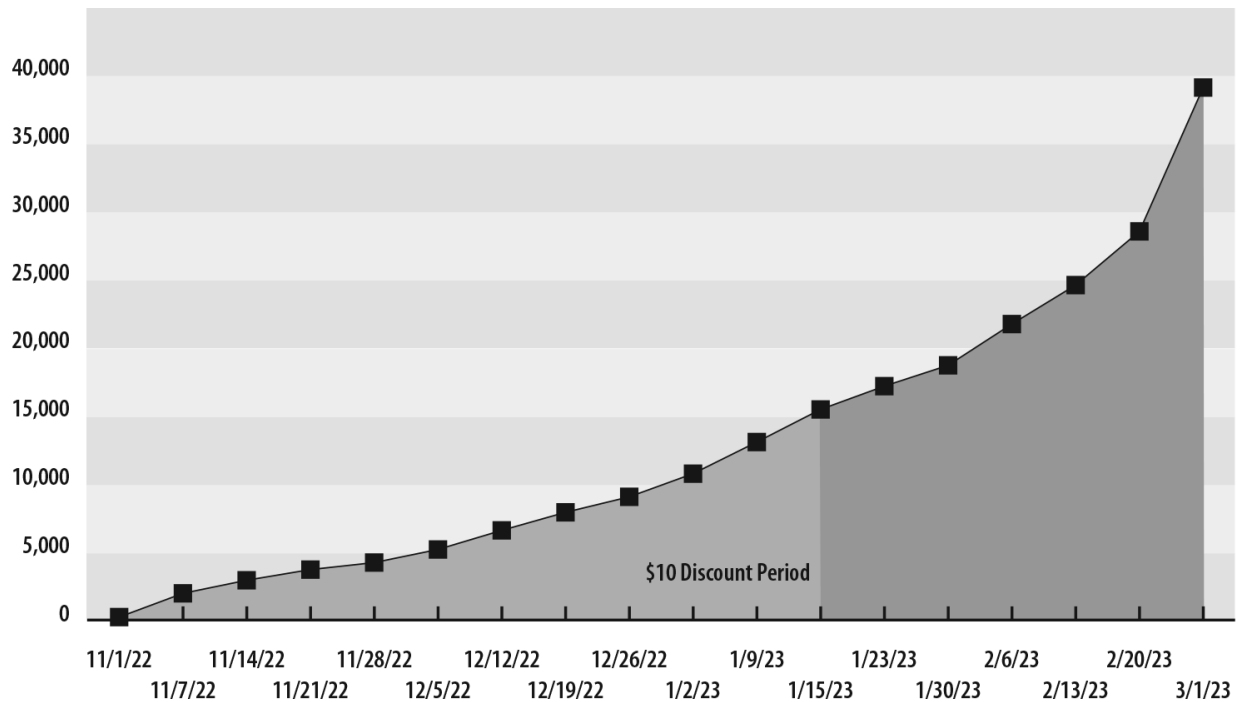
Angelina Fairchild, PE, the Florida Engineering Society's FBPE/FEMC liaison, contributed to this article.

Rush of Late PE Renewals Causes Slowdown, Delays

More than 10,500 Professional Engineers — over a quarter of licensees — delayed [renewing their Florida licenses](#) until the final eight days of the 2022-23 renewal period.

That last-minute rush caused holdups as the licensing system slowed down, delaying payment processing and preventing some PEs from logging in.

Charting 2022-23 Renewals



Just over 200 PEs renewed their Florida licenses on Nov. 1, 2022, the first day of renewal. And over 39 percent of licensees took advantage of the \$10 discount offered for those who renewed by Jan. 15, 2023.

Since the 2018-19 renewal period, FBPE has offered licensees a \$10 discount as an incentive to renew early. PEs can renew their licenses, which must include answering the required attestation questions

and paying their fees, as soon as renewal opens. While continuing education does not need to be completed at that time, PEs must have earned all 18 hours of CE by the end of the renewal period on Feb. 28.

Renewal rates slowed slightly after the discount's Jan. 15 cutoff, then surged during the final month. Over half of Florida's PEs delayed renewing their licenses until February 2023.

At the same time, FBPE's staff fielded 410 renewal calls during the last two days. That was a leap from the average 55 renewal calls they answered daily during the other weeks of February.

[Renewal opens](#) in early November every even year and closes the following Feb. 28, giving Florida PEs almost 17 full weeks to renew their licenses. FBPE strongly encourages Florida PEs to take advantage of the \$10 discount by renewing early to help prevent a last-minute rush to renew during the 2024-25 period.

Three New Members Join the Florida Board

Three new members were appointed to the Florida Board of Professional Engineers by Gov. Ron DeSantis on Dec. 14, 2022, along with the re-appointment of a current member.

Joining the Board are public members Christopher Dawson and James Gonzalez, and Sam E. Mousa, PE, who will assume the electrical engineering seat. Mr. Dawson and Mr. Mousa were appointed through Oct. 31, 2026, while Mr. Gonzalez was appointed through Oct. 31, 2023.

Yassi Myers, PE, was reappointed to the Board through Oct. 31, 2026.

Mr. Dawson is an attorney and professional lobbyist in Gray Robinson's Orlando office and is licensed to practice law in Florida and Alabama. He primarily focuses on lobbying and government relations for public and private sector clients at the executive and legislative levels of state government, as well as counties, cities, airport authorities, transportation authorities, port authorities, school districts, and water management districts. Mr. Dawson also holds two degrees in civil engineering and has experience in construction litigation and design professional malpractice defense.

Mr. Dawson is a sixth-generation Floridian. He was born in Pensacola and raised in nearby Santa Rosa County, where his family still operates a farm today. He received his undergraduate degree in civil engineering from the University of Florida.

In 2013, he graduated magna cum laude from the University of Alabama School of Law. He pursued a joint degree at UA, also obtaining his master's degree in civil engineering with a focus on construction methods and management.

In spring 2012, he served as a legal intern in the D.C. office of Congressman Mario Diaz-Balart. Additionally, he was a summer associate in the Legal Services Bureau of the Alabama Department of Transportation. Mr. Dawson also worked as a graduate assistant in the University of Alabama College of Engineering.



Christopher Dawson

Currently, Mr. Dawson maintains an active role in his community with organizations such as Leadership Florida and the Greater Apopka Chamber of Commerce Board of Directors. He was recently appointed to a four-year term on the Board of Directors for the University of Alabama's Capstone Engineering Society.

Mr. Gonzalez is a co-founder of Cobb & Gonzalez, P.A., and has provided guidance to businesses and professionals for over a decade. Mr. Gonzalez graduated from the University of South Florida, in Tampa, and was a member of the Business National Honor Society. He earned his juris doctor from Villanova University School of Law in 2007. That same year, James also received a Master of Business Administration degree from the Villanova University School of Business



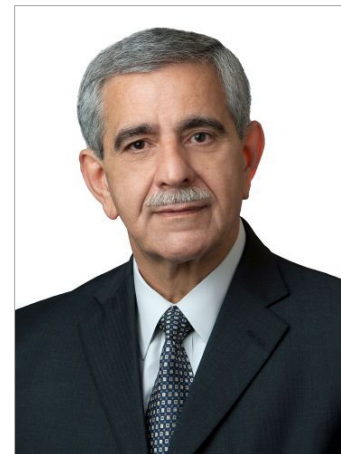
James Gonzalez

Mr. Gonzalez has represented numerous architectural, engineering, and construction firms, as well as their employees, in professional negligence, construction defect, and contractual claims. He has also provided legal counseling and representation to general contractors, subcontractors, building material manufacturers, and suppliers in areas from corporate formation to contract disputes and construction defect claims. Currently, he provides legal counseling and representation to design professionals, general contractors, subcontractors, building material manufacturers, and suppliers in areas ranging from corporate formation to contract disputes and construction defect claims and everything in between.

In 2015, Mr. Gonzalez was commissioned in the U.S. Air Force Judge Advocate General's Corps (JAG). As an assistant staff judge advocate, Capt. Gonzalez assists the staff judge advocate in providing legal advice to the wing commander (installation commander), as well as its subordinate units, including supporting the provision of military justice to thousands of airmen and reviewing and providing guidance on multi-million-dollar construction contracts.

Mr. Gonzalez moved to Jacksonville in 2009. He and his wife have two children. In his free time, Mr. Gonzalez enjoys building Jeeps, inshore fishing, woodworking, cooking, golfing, and spending time with his family.

Mr. Mousa has over 46 years of experience in both the public and private sectors. He has 23 years of experience in the private sector, working in civil engineering consulting and heavy civil construction. He also has 20 years of experience in the public sector, serving in the mayoral-appointed positions of city engineer, director of public works, deputy chief administrative officer, and chief administrative officer for the City of Jacksonville. Mr. Mousa served the City of Jacksonville during five mayoral administrations.



Sam Mousa, PE

He is president of Mousa Consulting Group Inc., established in 2019, providing various consulting services to the transportation and land development industry, as well as working with engineers and contractors on various infrastructure development projects.

Mr. Mousa holds a civil engineering degree from the University of Florida, is a life member of the American Society of Civil Engineers, and is a member of the National Society of Professional Engineers. He has also studied public administration and governmental policy.

He and his wife, Sandra, live in Jacksonville and have three children and six grandchildren.

International Education Requirements for Licensure

By Art Nordlinger, PE

In our increasingly international society, engineers who earned their engineering degrees outside of the United States will often apply for licensure in Florida. As their course of study is neither EAC/ABET nor ETAC/ABET accredited, their path to licensure is covered by Rules 61G15-20.007 or -20.008, Florida Administrative Code.

These applicants must have their college curriculum and transcript evaluated by either NCEES or Josef Silney & Associates, a consulting firm that specializes in these evaluations. This evaluation will determine whether the applicant's course of study is equivalent to that required for ABET accreditation and will identify any deficiencies.



Some applicants are denied licensure by the FBPE education review committee because their degree evaluation finds that their college courses, while adequate in terms of engineering, lack sufficient college-level mathematics, basic sciences, or general education. Some of these applicants appear before the Board to discuss their denial and attempt to convince the Board that their education does, in fact, meet the requirements. Though these appeals are often interesting to listen to, they rarely result in the Board changing its view as the Board relies on the evaluations as noted above.

The applicant whose college course of study is found to be lacking has several choices to rectify the deficiency. One is to simply take the college credit hours that they are short and resubmit their application. In some cases, the applicant can “CLEP” the course; that is, essentially take a course final exam to show mastery of the subject matter.

Recent changes to these rules change the hours accepted and expand the list of providers of eligible college exams. The changes are:

(2) Credit By Examination and College Courses.

(a) Deficiencies in Mathematics and Basic Sciences and/or General Education required by paragraphs (1)(a) and (1)(b), above, may be satisfied by passage of an examination identified on the “Articulation Coordinating Committee Credit-By-Examination Equivalencies” (Rev 09/2022) list incorporated by reference in State Board of Education paragraph 6A-10.024(8)(a), F.A.C., and which may be obtained at <https://www.flrules.org/Gateway/reference.asp?No=Ref-15005>.

- 1. Credit will only be given for exams in courses that meet the requirements of paragraph (1)(a) or (1)(b), above.*
- 2. For credit to be given, the applicant shall achieve a passing score as identified on the list.*

3. Three (3) credit hours shall be granted for each exam, unless the applicant provides evidence that a college or university with an EAC/ABET-accredited engineering program will grant more credit.

(b) College- or university-level courses can also be taken to satisfy deficiencies. Credit shall not be given for a college or university course or credit-by-examination exam if credit in a similar course or exam has already been earned.

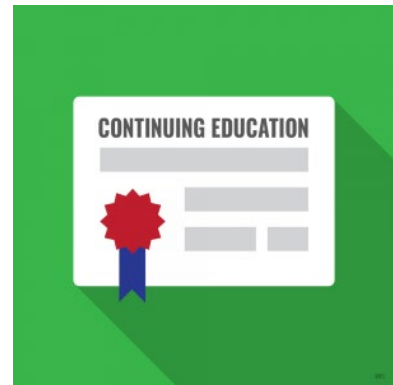
These rule changes should help clarify the steps that applicants can take to rectify educational deficiencies and obtain their license.

CE Provider Renewal Runs Through May 31

Current licenses for continuing education providers will expire on **May 31, 2023**. Beginning **March 16, 2023**, CE providers can renew their licenses and courses.

To renew your CE provider license:

- Go to myfloridalicense.com, and select “My Account.” If you already have an account, log in using your email address or user ID and password. If you don’t have an account, click “Create My Account” and follow the instructions.
- To link your license to your account, you need your provider license number and activation code, which is either the last four digits of your Social Security number or the last four of your Federal Employer Identification Number (FEIN). Your license number *is not* the provider number assigned to you upon approval. If you cannot locate your license number, you can retrieve it by selecting “Verify a License” at myfloridalicense.com or by contacting our office at [850\) 521-0500, ext. 113](tel:850-521-0500).
- If you cannot access your account, contact the Board office at [850\) 521-0500, ext. 113](tel:850-521-0500). Once you have accessed your account, you may change your contact information, if necessary, and then continue the process to renew your license.
- You will then pay your fees and renew your license.



Laws and Rules Course

For CE providers providing a Florida laws and rules course: After renewing your provider license, please complete the *Laws and Rules Application* found on the [Provider Application Process & Renewal](#) page under our website’s *Continuing Education* section. Follow the instructions, and mail it to the FBPE office.

Questions regarding the CE provider renewal process can be directed to the CE desk by calling the Board office at [850\) 521-0500, ext. 113](tel:850-521-0500), or emailing cedesk@fbpe.org.

If you did not renew during this previous renewal period, you will need to contact the Board office at [850\) 521-0500, ext. 113](tel:850-521-0500), for assistance in renewing your Florida CE provider license.

Continuing Education Provider Reporting

[Rule 61G15-22.006, Florida Administrative Code](#), *Demonstrating Compliance; Audits; Investigations*, requires Florida Professional Engineer licensees to maintain sufficient records demonstrating

completion of qualifying professional development hours for at least four years. PEs are subject to random CE audits, and will soon be required to self-report continuing education documents.

CE providers *are required* to provide completion and attendance certificates to course participants/licenses, and maintain those records for a period of four years. In the event a licensee is selected during the CE audit process, the licensee will provide the appropriate certificate to FBPE. [Rule 61G15-22.012, F.A.C.](#), *Obligations of Continuing Education Providers*, states in part:

"To maintain status as a continuing education provider, the provider must:

...(c) Furnish each participant with an individual certificate of attendance. An attendance record shall be maintained by the provider for four years and shall be available for inspection by the Board and the Florida Engineers Management Corporation."

Failure to comply with this rule may result in a loss of the provider license and the ability to provide continuing education courses to Florida engineers.

The current statutes and rules relating to engineering can be found on the [Statutes and Rules](#) page under the *Legal* section on [our website](#).

CE Provider Account and Renewal FAQs

The following questions and answers can clarify some of the most common questions that arise in each biennium and how to resolve them.

- **What is the renewal fee for continuing education providers?** The renewal fee for the current biennium is \$250 for current CE providers. If you did not renew during the previous renewal period, you will need to contact the Board office at [\(850\) 521-0500, ext. 113](#), for assistance in renewing your Florida CE provider license.
- **What is the application fee to provide a Florida laws and rules course?** There is no longer a fee to register a Florida laws and rules course if you are a current Board-approved CE provider. If you are currently providing the course, you must complete the *Laws and Rules Application* after you have renewed your provider license and submitted the application to the Board. If you are not currently providing a Florida laws and rules course but would like to be approved by FBPE, you must submit a [Laws and Rules Application](#).
- **How do I access my account?** Go to [myfloridalicense.com](#). Click on "My Account" in the blue box in the upper right. Either log into your existing account with your email or user ID and password, or click "Create My Account" if you do not have one. The process is similar to that used by Professional Engineers to log into their accounts, which is [illustrated on our website](#).
- **I forgot my password to access my account. How can I retrieve that information?** If you attempt to sign into your account to renew your license and have forgotten your password, select "Forgot Your Password." You will be prompted to your email address or user ID, and then answer your security question. A temporary password will be emailed to you, which you can use to log into the system and set a new password. If you do not know the answer to your security question, please follow the instructions provided in the question below.

- **I forgot the answer to the security question associated with my account. How can I get that information?** Contact the Board office at [\(850\) 521-0500, ext. 113](tel:(850)521-0500), or cedesk@fbpe.org. Once we have retrieved the information for you, an email will be sent to you with the answer to your security question. It may take up to 24 hours to complete your request. If you are sending an email request to retrieve your answer, you must include your name, license number, and email address.
- **I am using my information to log in, but I can't access my account. What do I do?** We can help. Contact the Board office at [\(850\) 521-0500, ext. 113](tel:(850)521-0500), or cedesk@fbpe.org.
- **How do I link my license to my account?** You need your provider license number and your activation code, which is either the last four digits of either your Social Security number or your Federal Employer Identification Number (FEIN). Your license number is not the provider number assigned to you upon approval. If you cannot locate your license number, you can retrieve it by selecting "Verify a License" at myfloridalicense.com or by contacting our office at [\(850\) 521-0500, ext. 113](tel:(850)521-0500).

If you have any questions regarding your obligations as a continuing education provider after reviewing [Rule 61G15-22.012, F.A.C., Obligations of Continuing Education Providers](#), or the CE requirements for licenses covered in [Section 471.017, F.S., Renewal of License](#), please contact the Board office at [\(850\) 521-0500, ext. 113](tel:(850)521-0500), or cedesk@fbpe.org.

Special Recognition: Congratulations, Examinees

FBPE applauds everyone who passed engineering exams in the past quarter. We wish them much success as they move towards the next step in their engineering careers. [See the complete list online.](#)

Recent Updates to Florida Engineering Rules

[Chapter 61G15, Florida Administrative Code](#), contains the rules that govern the practice of engineering in Florida. The rules are adopted by the Florida Board of Professional Engineering based on [Chapter 471, Florida Statutes, Engineering](#).

The rules are regularly reviewed and updated by the Board.

The latest changes, as of Jan. 18, 2023, include:

- Rule 61G15-20.007, *Educational Requirements for Applicants without EAC/ABET Accredited Engineering Degrees.*
- Rule 61G15-20.008, *Educational Requirements for Applicants without ETAC/ABET Accredited Engineering Technology Degrees.*

Changes are highlighted in the PDF available in the *Legal* section of the Board's website, fbpe.org.

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.](#)

Mark Your Calendar

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

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