



A SunCam online continuing education course

Florida Engineering Laws & Rules

Online for 2021

by

William C. Dunn, P.E.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

Introduction

This is our sixteenth Florida Laws & Rules course since 2001.

This course will help you know and understand the laws and rules that affect you as a licensed professional engineer. You are already licensed so, as is our custom, we will NOT cover any of the rules on qualifying for, applying for, or taking the PE exam. Nor will we test you on the organization and administrative functioning of the Florida Board of Professional Engineers or the Florida Engineering Management Corporation. Instead, we will concentrate on the topics that are relevant to the everyday practice of engineering.

The questions used in this course will be updated when necessary to reflect changes in Florida Law, changes in the rules of the board and changes brought about by case law from the courts. All the examples used in this course are fictitious, but the questions are taken directly from the Laws and Rules that govern our profession. The names are taken from the author's family tree.

Question 1 & 2 Reference Material

471.003 Qualifications for practice; exemptions.—

(1) No person other than a duly licensed engineer shall practice engineering or use the name or title of “licensed engineer,” “professional engineer,” or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer in this state.

(2) The following persons are not required to be licensed under the provisions of this chapter as a licensed engineer:

(a) Any person practicing engineering for the improvement of, or otherwise affecting, property legally owned by her or him, unless such practice involves a public utility or the public health, safety, or welfare or the safety or health of employees. This paragraph shall not be construed as authorizing the practice of engineering through an agent or employee who is not duly licensed under the provisions of this chapter.

(b)1. A person acting as a public officer employed by any state, county, municipal, or other governmental unit of this state when working on any project the total estimated cost of which is \$10,000 or less.

2. Persons who are employees of any state, county, municipal, or other governmental unit of this state and who are the subordinates of a person in responsible charge licensed under this chapter, to the extent that the supervision meets standards adopted by rule of the board.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

- (c) Regular full-time employees of a corporation not engaged in the practice of engineering as such, whose practice of engineering for such corporation is limited to the design or fabrication of manufactured products and servicing of such products.
- (d) Regular full-time employees of a public utility or other entity subject to regulation by the Florida Public Service Commission, Federal Energy Regulatory Commission, or Federal Communications Commission.
- (e) Employees of a firm, corporation, or partnership who are the subordinates of a person in responsible charge, licensed under this chapter.
- (f) Any person as contractor in the execution of work designed by a professional engineer or in the supervision of the construction of work as a foreman or superintendent.
- (g) A licensed surveyor and mapper who takes, or contracts for, professional engineering services incidental to her or his practice of surveying and mapping and who delegates such engineering services to a licensed professional engineer qualified within her or his firm or contracts for such professional engineering services to be performed by others who are licensed professional engineers under the provisions of this chapter.
- (h) Any electrical, plumbing, air-conditioning, or mechanical contractor whose practice includes the design and fabrication of electrical, plumbing, air-conditioning, or mechanical systems, respectively, which she or he installs by virtue of a license issued under chapter 489, under part I of chapter 553, or under any special act or ordinance when working on any construction project which:
 - 1. Requires an electrical or plumbing or air-conditioning and refrigeration system with a value of \$125,000 or less; and
 - 2.a. Requires an aggregate service capacity of 600 amperes (240 volts) or less on a residential electrical system or 800 amperes (240 volts) or less on a commercial or industrial electrical system;
 - b. Requires a plumbing system with fewer than 250 fixture units; or
 - c. Requires a heating, ventilation, and air-conditioning system not to exceed a 15-ton-per-system capacity, or if the project is designed to accommodate 100 or fewer persons.
- (i) Any general contractor, certified or registered pursuant to the provisions of chapter 489, when negotiating or performing services under a design-build contract as long as the engineering services offered or rendered in connection with the contract are offered and rendered by an engineer licensed in accordance with this chapter.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

(j) Any defense, space, or aerospace company, whether a sole proprietorship, firm, limited liability company, partnership, joint venture, joint stock association, corporation, or other business entity, subsidiary, or affiliate, or any employee, contract worker, subcontractor, or independent contractor of the defense, space, or aerospace company who provides engineering for aircraft, space launch vehicles, launch services, satellites, satellite services, or other defense, space, or aerospace-related product or services, or components thereof.

(3) Notwithstanding the provisions of this chapter or of any other law, no licensed engineer whose principal practice is civil or structural engineering, or employee or subordinate under the responsible supervision or control of the engineer, is precluded from performing architectural services which are purely incidental to her or his engineering practice, nor is any licensed architect, or employee or subordinate under the responsible supervision or control of the architect, precluded from performing engineering services which are purely incidental to her or his architectural practice. However, no engineer shall practice architecture or use the designation “architect” or any term derived therefrom, and no architect shall practice engineering or use the designation “engineer” or any term derived therefrom.

1. When Sarah Bowles first became licensed as an engineer, her brother, Bodenic Bowles, a licensed surveyor, agreed to help her market her engineering services to his land developer clients. Sarah was expecting to contract directly with any of the clients that her brother referred, but instead, Bodenic arranged to include the engineering services in his proposal and then subcontracts the engineering to Sarah. Bodenic insisted that the arrangement is legal, but Sarah argued that only a licensed engineer can offer and contract for engineering services.

Who was right?

- Sarah is right because her brother is offering engineering services when he is not an engineer.
- Bodenic is right because he is subcontracting the engineering work to a licensed engineer.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

2: Which of the following engineering disciplines requires a professional engineer's license in Florida?

- Aircraft design engineer
- Spacecraft design engineer
- Ballistic missile design engineer
- All the above
- None of the above

Question 3 Reference Material

61G15-30.006 Delegation of Engineering Documents: Obligations of the Delegated Engineer of Record.

(1) It is the delegated engineer's responsibility to review the Engineer of Record's written engineering requirements and authorization for the delegated engineering document to determine the appropriate scope of engineering.

(2) The delegated engineering document shall comply with the written engineering requirements received from the engineer of record. They shall include the project identification and the criteria used as a basis for its preparation. If a delegated engineer determines there are details, features or unanticipated project limits which conflict with the written engineering requirements provided by the engineer of record, the delegated engineer shall timely contact the engineer of record for resolution of conflicts.

(3) The delegated engineer shall forward the delegated engineering document to the engineer of record for review. All final delegated engineering documents require the impressed seal and signature of the delegated engineer and include:

- (a) Drawings introducing engineering input such as defining the configuration and structural capacity of structural components and/or their assembly into structural systems.
- (b) Calculations.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

(c) Computer printouts which are an acceptable substitute for manual calculations provided they are accompanied by sufficient design assumptions and identified input and output information to permit their proper evaluation. Such information shall bear the impressed seal and signature of the delegated engineer as an indication that said engineer has accepted responsibility for the results.

3: Margaret Ireland is a delegated engineer who specializes in the design of thin-walled concrete dome structures. Margaret uses software for the design and the computer printouts as a substitute for manual engineering calculations. The responsibility rules require that she:

- Use only software that was produced under her responsible supervision.
- Use only software that was produced by a Florida licensed engineer.
- Verify the computer calculations with manual calculations
- Accompany the computer printouts with design assumptions and identify the input and output information and sign and seal the printouts as an indication that she accepts responsibility for the results.
- Verify results through field-testing using test loads and strain-gages to measure deflection.

Question 4 Reference Material

471.003 Qualifications for practice; exemptions.—

(1) No person other than a duly licensed engineer shall practice engineering or use the name or title of “licensed engineer,” “professional engineer,” or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer in this state.

(2) The following persons are not required to be licensed under the provisions of this chapter as a licensed engineer:

(a) Any person practicing engineering for the improvement of, or otherwise affecting, property legally owned by her or him, unless such practice involves a public utility or the public health, safety, or welfare or the safety or health of employees. This paragraph shall not be construed as authorizing the practice of engineering through an agent or employee who is not duly licensed under the provisions of this chapter.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

- (b)1. A person acting as a public officer employed by any state, county, municipal, or other governmental unit of this state when working on any project the total estimated cost of which is \$10,000 or less.
2. Persons who are employees of any state, county, municipal, or other governmental unit of this state and who are the subordinates of a person in responsible charge licensed under this chapter, to the extent that the supervision meets standards adopted by rule of the board.
- (c) Regular full-time employees of a corporation not engaged in the practice of engineering as such, whose practice of engineering for such corporation is limited to the design or fabrication of manufactured products and servicing of such products.
- (d) Regular full-time employees of a public utility or other entity subject to regulation by the Florida Public Service Commission, Federal Energy Regulatory Commission, or Federal Communications Commission.
- (e) Employees of a firm, corporation, or partnership who are the subordinates of a person in responsible charge, licensed under this chapter.
- (f) Any person as contractor in the execution of work designed by a professional engineer or in the supervision of the construction of work as a foreman or superintendent.
- (g) A licensed surveyor and mapper who takes, or contracts for, professional engineering services incidental to her or his practice of surveying and mapping and who delegates such engineering services to a licensed professional engineer qualified within her or his firm or contracts for such professional engineering services to be performed by others who are licensed professional engineers under the provisions of this chapter.
- (h) Any electrical, plumbing, air-conditioning, or mechanical contractor whose practice includes the design and fabrication of electrical, plumbing, air-conditioning, or mechanical systems, respectively, which she or he installs by virtue of a license issued under chapter 489, under part I of chapter 553, or under any special act or ordinance when working on any construction project which:
1. Requires an electrical or plumbing or air-conditioning and refrigeration system with a value of \$125,000 or less; and
 - 2.a. Requires an aggregate service capacity of 600 amperes (240 volts) or less on a residential electrical system or 800 amperes (240 volts) or less on a commercial or industrial electrical system;
 - b. Requires a plumbing system with fewer than 250 fixture units; or



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

c. Requires a heating, ventilation, and air-conditioning system not to exceed a 15-ton-per-system capacity, or if the project is designed to accommodate 100 or fewer persons.

(i) Any general contractor, certified or registered pursuant to the provisions of chapter 489, when negotiating or performing services under a design-build contract as long as the engineering services offered or rendered in connection with the contract are offered and rendered by an engineer licensed in accordance with this chapter.

(j) Any defense, space, or aerospace company, whether a sole proprietorship, firm, limited liability company, partnership, joint venture, joint stock association, corporation, or other business entity, subsidiary, or affiliate, or any employee, contract worker, subcontractor, or independent contractor of the defense, space, or aerospace company who provides engineering for aircraft, space launch vehicles, launch services, satellites, satellite services, or other defense, space, or aerospace-related product or services, or components thereof.

(3) Notwithstanding the provisions of this chapter or of any other law, no licensed engineer whose principal practice is civil or structural engineering, or employee or subordinate under the responsible supervision or control of the engineer, is precluded from performing architectural services which are purely incidental to her or his engineering practice, nor is any licensed architect, or employee or subordinate under the responsible supervision or control of the architect, precluded from performing engineering services which are purely incidental to her or his architectural practice. However, no engineer shall practice architecture or use the designation "architect" or any term derived therefrom, and no architect shall practice engineering or use the designation "engineer" or any term derived therefrom.

471.031 Prohibitions; penalties. —

(1) A person may not:

(a) Practice engineering unless the person is licensed or exempt from licensure under this chapter.

(b)1. Except as provided in subparagraph 2. or subparagraph 3., use the name or title "professional engineer" or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer when the person is not licensed under this chapter, including, but not limited to, the following titles: "agricultural engineer," "air-conditioning engineer," "architectural engineer," "building engineer," "chemical engineer," "civil engineer," "control systems engineer," "electrical engineer," "environmental engineer," "fire protection engineer," "industrial engineer," "manufacturing engineer," "mechanical engineer," "metallurgical engineer," "mining engineer," "minerals engineer," "marine engineer," "nuclear engineer," "petroleum engineer," "plumbing engineer," "structural



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

engineer,” “transportation engineer,” “software engineer,” “computer hardware engineer,” or “systems engineer.”

2. Any person who is exempt from licensure under s. 471.003(2)(j) may use the title or personnel classification of “engineer” in the scope of his or her work under that exemption if the title does not include or connote the term “professional engineer,” “registered engineer,” “licensed engineer,” “registered professional engineer,” or “licensed professional engineer.”

3. Any person who is exempt from licensure under s. 471.003(2)(c) or (e) may use the title or personnel classification of “engineer” in the scope of his or her work under that exemption if the title does not include or connote the term “professional engineer,” “registered engineer,” “licensed engineer,” “registered professional engineer,” or “licensed professional engineer” and if that person is a graduate from an approved engineering curriculum of 4 years or more in a school, college, or university which has been approved by the board.

(c) Present as his or her own the license of another.

(d) Give false or forged evidence to the board or a member thereof.

(e) Use or attempt to use a license that has been suspended, revoked, or placed on inactive or delinquent status.

(f) Employ nonexempt unlicensed persons to practice engineering.

(g) Conceal information relative to violations of this chapter.

(2) Any person who violates any provision of this section commits a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083.

4: William Byron graduated from the University of Florida with a Bachelor of Science degree in mechanical engineering. He lands his first job with a consulting firm doing engineering design work under the supervision of a licensed PE. William is not a licensed professional engineer yet, but he does have a degree in engineering, and he would like to use the title “Engineer” on his business cards. Does Florida law permit that?

- Yes
- No



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

Question 5 & 6 Reference Material

61G15-27.001 Procedures for a Successor Professional Engineer Adopting As His Own the Work of Another Engineer.

(1) A successor professional engineer seeking to reuse already sealed plans, prints, engineering specifications, and/or engineering calculations used for permitted works under the successor professional engineer's seal must be able to document and produce upon request evidence that he has in fact recreated all the work done by the original professional engineer. In other words, calculations, site visits, research and the like must be documented and producible upon demand. Further, the successor professional engineer must take all professional and legal responsibility for the plans, prints, engineering specifications, and/or engineering calculations used for permitted works which he sealed and signed and can in no way exempt himself from such full responsibility. Plans, prints, engineering specifications, and/or engineering calculations used for permitted works need not be redrawn by the successor professional engineer; however, justification for such action must be available through well kept and complete documentation on the part of the successor professional engineer as to his having rethought and reworked the entire design process. A successor professional engineer must use his own title block, seal and signature and must remove the title block, seal and signature of the original professional engineer before reusing any sealed, prints, engineering specifications, and/or engineering calculations used for permitted works.

(2) Prior to sealing and signing work a successor professional engineer shall be required to notify the original professional engineer, his successors, or assigns of the successor's intention to use or reuse the original professional engineer's work. Notification shall be by certified letter or other



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

verifiable communication to the last known physical or electronic address of the original professional engineer.

5: Luther Leatherwood, P.E. is the successor engineer for a regional shopping center HVAC system expansion. His assignment is to double the existing volume of ice storage by replicating the existing ice storage vault on an adjacent parcel. Luther decides to reuse the plans and specifications for the original vault which were prepared by another engineer. Luther replaces the title block on the plans and specifications with his own, recreates the calculations, site visits and research. Are these steps sufficient to meet the requirements for the adoption of another engineer's work?

- Yes, Luther has fulfilled all of the requirements for a successor engineer.
- No, Luther cannot reuse the work product of another engineer. He must redraw the plans.
- No, Luther would need to send a certified letter to the original engineer notifying him of his intention to reuse the documents.

6: (Continuing with the previous question) Who will be legally and professionally responsible for the work?

- The client
- The original engineer
- Luther Leatherwood
- Luther Leatherwood and the original engineer share the legal and professional responsibility for the work.
- Luther Leatherwood, the original engineer, and the client share the legal and professional responsibility for the work.

Question 7 Reference Material

471.027 Engineers authorized to enter lands of third parties under certain conditions. — Engineers are hereby granted permission and authority to go on, over, and upon the lands of others when necessary to make engineering surveys and, in so doing, to carry with them their agents and employees necessary for that purpose. Entry under the right hereby granted shall not constitute trespass, and engineers and their duly authorized agents or employees so entering shall



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

not be liable to arrest or a civil action by reason of such entry; however, nothing in this section shall be construed as giving authority to said licensees, agents, or employees to destroy, injure, damage, or move anything on lands of another without the written permission of the landowner.

7: Phoebe Robison, P.E. leads a field crew of surveyors, geologists, hydrologists, and cartographers. The team specializes in the valuation and assessment of unimproved real estate. These assessments often require team members to enter adjacent properties where they clear enough vegetation to create a line-of-sight for a boundary or hydrological survey. Is this activity allowed based on s. 471.027?

- Yes
- No

Question 8 & 9 Reference Material

61G15-30.002 Definitions Common to All Engineer's Responsibility Rules.

(1) Engineer of Record. A Florida professional engineer who is in responsible charge for the preparation, signing, dating, sealing and issuing of any engineering document(s) for any engineering service or creative work.

(2) Prime Professional. A Florida professional engineer or a duly qualified engineering corporation or partnership, who is engaged by the client to provide any planning, design, coordination, arrangement and permitting for the project and for construction observations in connection with any engineering project, service or creative work. The prime professional engineer may also be an engineer of record on the same project.

(3) Delegated Engineer. A Florida professional engineer who undertakes a specialty service and provides services or creative work (delegated engineering document) regarding a portion of the engineering project. The delegated engineer is the engineer of record for that portion of the engineering project. A delegated engineer usually falls into one of the following categories:

- (a) An independent consultant.
- (b) An employee or officer of an entity supplying components to a fabricator or contractor, so long as the engineer acts as an independent consultant or through a duly qualified engineering corporation.
- (c) An employee or officer of a fabricator or contractor, so long as the engineer acts as an independent consultant or through a duly qualified engineering corporation.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

(4) Engineering Documents. Engineering documents are designs, plans, specifications, drawings, prints, reports, or similar instruments of service in connection with engineering services or creative work that have been prepared and issued by the professional engineer or under his responsible supervision, direction or control.

(5) Delegated Engineering Documents. Delegated engineering documents are those engineering documents that are prepared by a delegated engineer.

(6) Public Record. An engineering document is “filed for public record” when said document is presented with the engineer of record's knowledge and consent to any federal, state, county, district, authority, municipal or other governmental agency in connection with the transaction of official business with said agency.

(7) “Engineering Documents Prepared for Public Record” are those documents filed for public record with the Authority Having Jurisdiction (AHJ) to determine compliance with Codes and Standards and to be used for execution of the project. These documents are required to be signed and sealed.

(8) Shop Drawings: Drawings depicting installation means and methods, catalog information on standard products, prepared by a contractor, manufacturers, or professional engineers for incorporation into the project which are prepared based on engineering direction contained in Engineering Documents. Shop drawings do not require the signature, date and seal of a professional engineer.

(9) Record Documents: Documents that are a compiled representation of the constructed project. If the engineer is relying on information provided by others not under the direct supervision and control of the engineer, then the engineer shall not be required to sign, date and seal these Documents. If relying on information by others, as a minimum, the following shall be included on the Documents:

- (a) Statement that the documents are a compiled representation of the constructed project.
- (b) Listing of the sources and basis of information used in the preparation of the Documents.
- (c) Statement that the Documents are believed to be correct to the best of the engineer's knowledge, and that the accuracy of the information cannot be guaranteed.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

8: Amelia Darcy P.E. has a contract to design the water service for a high-rise office building. When the building permit clerk insisted that Amelia sign, seal, and date the shop drawings for the project she refused. The permit clerk filed a complaint with the Florida Board of Professional Engineers and refused to issue the permit. What is the maximum penalty that the FBPE could impose on Amelia for failing to sign and seal shop drawings?

- None, the FBPE does not have jurisdiction over building permits
- None, shop drawings are not required to be signed and sealed.
- A \$1000 fine and license suspension.
- A \$5000 fine and license suspension.
- License revocation

9: John Bagot P.E. prepared record documents (as-builts) for the Applegate bridge over Arch Creek. John designed the bridge, but his contract did not include any duties during the construction phase except for the preparation of final record documents. His record documents included his field measurements for elements that were visible. For elements that were no longer visible, the contractor supplied the as-built information. Which of the following is **NOT** required on the record documents?

- John's signature and seal.
- A statement that the documents are a compiled representation of the constructed project.
- Listing of the sources and basis of information used in the preparation of the documents.
- A statement that the documents are believed to be correct to the best of the engineer's knowledge, and that the accuracy of the information cannot be guaranteed.



Florida Engineering Laws & Rules Online for 2021
A SunCam online continuing education course

Question 10 Reference Material

Read the FBPE newsletter article titled:

Over 60 PEs Disciplined for CE Violations

<https://fbpe.org/over-60-pes-disciplined-for-ce-violations/>

10: The January 2019 newsletter of the Florida Board of Professional Engineers lists 63 Florida PEs who violated board rules by renewing their license without completing the required continuing education. That represents about 6% of the audited individuals. Read the article and see the list of names at <https://fbpe.org/over-60-pes-disciplined-for-ce-violations/>. Based on an average fine and assessed cost of over \$650, what was the total fine assessed against these individuals?

- \$5,000 - \$10,000
- \$10,000 - \$15,000
- \$15,000 - \$20,000
- \$20,000 - \$30,000
- \$30,000 - \$40,000
- More than \$40,000

You're almost done!

Complete the course and download your certificate by transferring your answers to the online test. Use the course materials link on your paid receipt email to find your green "Test Login" button. If you can't find your paid receipt email, you can always access your course materials and a complete course history by clicking the "My Courses" button at www.suncam.com.