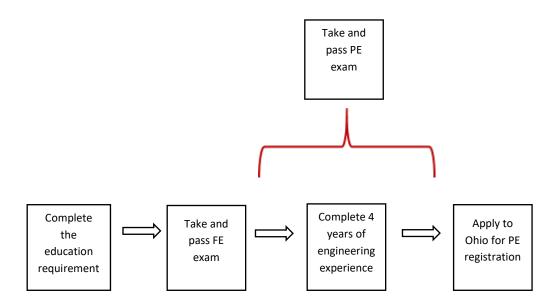
## REQUIREMENTS FOR PROFESSIONAL ENGINEER REGISTRATION

Effective October 1, 2022 the Ohio State Board of Registration for Professional Engineers and Surveyors has changed the application process to become a professional engineer in Ohio. Applicants for PE registration in Ohio will now apply <u>after</u> completing the education, experience, and exam requirements and are no longer required to complete the engineering experience requirement before taking the NCEES Principles and Practice of Engineering [PE] examination.

# Ohio's PE Application Process Effective October 1, 2022



You are eligible for registration as a professional engineer in Ohio if you meet the following requirements:

## 1. Education:

- You are a graduate of a four-year EAC ABET accredited engineering curriculum. You can find out if your engineering program is ABET accredited by contacting ABET at www.abet.org.
- You are a graduate of an EAC ABET accredited master's degree program in engineering. You can find out if your engineering program is ABET accredited by contacting ABET at <a href="https://www.abet.org">www.abet.org</a>.
- You are a graduate of a four-year ETAC ABET accredited engineering technology curriculum. You
  can find out if your engineering program is ABET accredited by contacting ABET at <a href="https://www.abet.org">www.abet.org</a>.
- You are a graduate of a four-year engineering curriculum from a college or university from
  outside of the United States AND your education has been evaluated by NCEES Credentials
  Evaluations as meeting the NCEES Education Standard. You can contact NCEES Credentials
  Evaluations at <a href="https://www.ncees.org">www.ncees.org</a>. The Board only accepts evaluations performed by NCEES
  Credentials Evaluations.

#### 2. Examinations:

• Ohio law requires that all applicants for professional engineer registration must have taken and passed BOTH the NCEES Fundamentals of Engineering [FE] and the NCEES Principles and Practice of Engineering [PE] examinations. Exams are required by Ohio law and the Ohio Board does not waive this exam requirement.

#### 3. Experience:

- Applicants that have graduated from an EAC ABET engineering curriculum or an equivalent
  engineering curriculum from outside of the U.S. [see above] are required to have completed four
  years of qualifying engineering experience. A description of qualifying experience and how to
  document experience can be found in the Board's laws and rules and the following Exam
  Guidelines.
- Applicants that have graduated from an ETAC ABET engineering technology curriculum [see above] are required to have completed eight years of engineering experience. A description of qualifying experience and how to document experience can be found in the Board's laws and rules and the following Exam Guidelines.

Note: All experience must be under the supervision of a licensed professional engineer unless the applicant is working in an exempt field of engineering as defined in Ohio Revised Code 4733.18. Applicants not working under a professional engineer should refer to the Board's Exam Guideline for directions on documenting engineering experience and providing the supervisor's credentials for consideration by the Board.

Once you have completed and met all of the requirements listed above you may apply for registration as a professional engineer in Ohio.

These requirements for registration are required by Ohio law and cannot be waived by the Board.

# 1.0 EDUCATION

#### 1.1 ENGINEERING CURRICULA ACCEPTED.

The following engineering curricula will be accepted.

- (A) Four-year Engineering Accreditation Commission/Accreditation Board for Engineering and Technology (EAC/ABET) accredited engineering degree.
- (B) Four-year Engineering Technology Accreditation Commission/Accreditation Board for Engineering and Technology (ETAC/ABET) accredited engineering technology degree.
- (C) Four-year engineering degree granted from outside of the United States that was evaluated by NCEES Credentials Evaluations as meeting the NCEES Engineering Education Standard. (See 2.2)
- (D) An engineering master's program accredited by EAC/ABET

(E) Degrees from Canadian schools accredited by the Canadian Engineering Accreditation Board (CEAB) will be considered the same as ABET degrees. Non-CEAB degrees from Canadian schools are treated the same as foreign degrees.

IMPORTANT! Graduates of a four-year engineering technology curriculum that is not accredited by ETAC/ABET are not eligible for exams or registration in Ohio.

### 1.2 FOREIGN DEGREES.

- (A) The Board requires that all graduates of engineering programs from outside of the United States must have their education evaluated by NCEES Credentials Evaluations, a division of the National Council of Examiners for Engineering and Surveying. NCEES Credentials Evaluations can be contacted at www.ncees.org.
  - (1) Degree evaluations should be completed prior to submitting an application to the Ohio Board.
  - (2) In order to meet the educational requirement of R.C. section 4733.11 (A)(2), the degree must be evaluated by NCEES as meeting the NCEES Engineering Education Standard.
  - (3) The applicant is responsible for filing the necessary paperwork and fees with NCEES in order to complete the evaluation of the curriculum.
- (B) If an applicant has had their transcripts evaluated by NCEES and the evaluation indicates that there are deficiencies in the curriculum, the deficiencies must be made up before the applicant applies for PE registration in Ohio. Coursework must be made up at a college or university that has an ABET-accredited engineering or surveying program. Coursework must be completed in accordance with ABET's Criteria for Accrediting Programs in Engineering in the United States.
- (C) Applicants may make up deficient coursework by passing College Level Examination Programs (CLEP) tests. In order to receive credit for CLEP tests the course must be shown on an official college or university transcript indicating a passing score and full credit awarded.
- (D) Degrees from Canadian schools accredited by CEAB will be considered the same as ABET degrees. Non-CEAB engineering degrees from Canadian schools are treated the same as foreign degrees and must be evaluated by NCEES.

NOTE: U.S. engineering degree programs must be accredited by a Regional Institution Accrediting Agency of the U.S. Department of Education, in addition to ABET, in order to meet the educational requirements of Ohio Revised Code (R.C.) section 4733.11 (A)(2).

# 2.0 EXPERIENCE

### 2.1 EXPERIENCE REQUIREMENTS FOR REGISTRATION AS A PROFESSIONAL ENGINEER IN OHIO.

(A) With a four-year EAC/ABET-accredited engineering degree, four years of engineering experience is required.

- (B) With a four-year foreign engineering degree evaluated by NCEES Credentials Evaluations as meeting the NCEES Education Standard, four years of engineering experience is required.
- (C) With a four-year ETAC/ABET-accredited engineering technology degree, eight years of engineering experience is required.
- (D) With an EAC/ABET-accredited M.S. in engineering, four years of engineering experience is required.

Table 2.1. Education/Experience Requirements for PE Exam			
Education	Experience		
4-year EAC/ABET accredited engineering degree	4 years of engineering experience is required		
4-year foreign engineering degree evaluated as ABET equivalent	4 years of engineering experience is required		
4-year ETAC/ABET accredited engineering technology degree	8 years of engineering experience is required		
EAC/ABET accredited master's degree	4 years of engineering experience is required		

#### 2.2 DOCUMENTING ENGINEERING EXPERIENCE

- (A) Experience must be listed consecutively and in chronological order on the Board's supplemental experience form 1011-EX starting with the earliest experience and proceeding to the most recent employment. Failure to provide adequate detail will result in an incomplete application. All engineering and non-engineering experience must be listed. Non-engineering experience will not require verification unless requested by the Board. All engineering experience must be verified by including the supervisor's signature, professional registration number, date, and contact information on the application. If verification is impossible, the applicant shall provide a notarized letter to the Board explaining the reason verification could not be secured. There is no guarantee the Board will accept experience that is not verified by a qualified supervisor.
- (B) The engineering experience section must also include the percentage of time the applicant spent in the practice of engineering and/or surveying. Experience credit will be granted based on the percentage listed by the applicant.

### 2.3 EXPERIENCE PRIOR TO GRADUATION.

(A) The Board discourages the use of experience prior to graduation that is not part of a college coop program because of problems that may occur when trying to obtain comity registration with other states.

- (B) The Board allows up to two years of pre-graduation co-op engineering experience provided it does not overlap with the four calendar years of education credit. Eligible pre-graduation experience must be earned after the applicant has attained junior status in ABET accredited engineering curriculum and not overlapping in time with any coursework counted toward the education requirement. In order to obtain experience credit before graduation, the applicant must have been in college for more than four calendar years. For example, a student that works in engineering for three months, and was in school for 4 years 6 months, may claim the three months of pre-graduation engineering experience. That same student could have claimed up to six months of pre-graduation experience if he or she had an additional three months of engineering work experience.
- (C) Experience credit before graduation must be documented in the same manner as described in section 3.1. (A) and (B).
- (D) Experience credit cannot overlap with education credit.
- (E) Experience credit before graduation should be listed on the official transcript as co-op experience and must full-time 40 hours per week. No credit will be granted for overtime work, or part-time work experience obtained while pursuing engineering education on a full-time basis, or for the part-time pursuit of a masters or doctorate degree while obtaining full-time work experience.
- (F) Engineering experience obtained prior to the completion of an engineering degree that is not part of a co-op program usually does not count for professional experience.
- (G) Applicants requesting engineering experience credit prior to graduation that was not earned through a co-op program will be evaluated on a case-by-case basis provided it is sufficiently documented in accordance with these guidelines.
- (H) No more than two years of experience can be obtained before graduation from a Board-approved engineering curriculum. Pre-graduation experience must be earned after completion of the second year of school and not overlapping in time with any coursework counted toward the education requirement.

### 2.4 GENERAL REQUIREMENTS.

- (A) Experience is based on a 40 hour per week full-time basis 2,080 hours per year.
- (B) Engineering experience must be obtained under the direct supervision of a professional engineer registered in the United States or its territories, for a firm licensed to offer engineering services, and working on projects requiring knowledge and use of codes and practices commonly used in the United States.

Note: For individuals working in engineering that is exempted from the registration act as defined in R.C. 4733.18 (ex. Design of manufactured products) and not working under the supervision a professional engineer, the Board may consider the experience provided that the following information is submitted: 1) an explanation demonstrating the type of work performed and why the engineering experience is exempt and should be considered acceptable. 2) a resume or curriculum vitae of the unlicensed supervisor demonstrating engineering or surveying education and experience of a nature that would demonstrate to the Board that the supervisor is qualified to certify the engineering experience.

- (C) Experience must not be obtained illegally or in violation of Ohio Revised Code Chapter 4733, the Professional Engineers and Surveyors Registration Act.
- (D) Experience may not be anticipated. The experience must have been completed by the date the application was submitted.
- (E) Applicants that knowingly provide false or forged information on the application or engage in fraud or deceit in order to obtain registration, may be subject to administrative and criminal charges pursuant to Ohio Revised Code Section 4733.22.

### 2.5 PROFESSIONAL ENGINEER.

- (A) In order to become registered as a professional engineer the applicant shall have a specific record of four years or more of practical experience in engineering work completed in addition to, and not overlapping in time, any school work completed under R.C. section 4733.11 (A)(1)(a); not more than two years of which may be before graduation but after the completion of the second year of college; indicating that the applicant is competent to be placed in responsible charge of engineering work.
- (B) In evaluating experience which indicates to the Board that the applicant may be competent to practice engineering, the following will be considered:
- (1) Satisfactory engineering work shall be of a nature such that its adequate performance requires engineering education, training, or experience and must be demonstrated through the application of the mathematical, physical, and engineering sciences. Satisfactory engineering experience shall include but not be limited to, an acceptable combination of the following types of engineering activities:
  - (a) Design or conceptual design of engineering works, products, or systems;
- (b) Development or optimization of plans and specifications for engineering works, products, or systems;
- (c) Analysis, consultation, investigation, evaluation, planning or other related services for engineering works, products, or systems;
  - (d) Planning the use or alteration of land, water, or other resources;
  - (e) Engineering for development of operating and maintenance manuals;
- (f) Engineering for construction, or inspection of construction for the purpose of assuring compliance with drawings or specifications;
  - (g) Engineering for materials testing and evaluation;
- (h) Any other work of a mechanical, electrical, chemical, hydraulic, pneumatic, geotechnical, or thermal nature that requires engineering education, training, or experience for its adequate performance;

- (i) Teaching experience to be creditable must be in engineering or engineering-related subjects at an advanced level in a college or university offering an engineering program of four years or more that is approved by the Board. A teaching experience applicant must have one year of experience in the practice of engineering beyond classroom teaching. [See section 3.5]
- (j) Experience gained in engineering research and design projects by members of an engineering faculty where the program is approved by the Board is creditable.
  - (2) Experience shall not be obtained in violation of the licensure act.
- (3) Experience gained in the armed services, to be creditable, must be of a character equivalent to that which would have been gained in the civilian sector doing similar work. Normally, it would be expected that the applicant while in the armed services served in an engineering or engineering-related group.
- (4) Experience shall be gained under the supervision of a licensed professional engineer or, for individuals working in engineering exempted from the registration act as defined in R.C. 4733.18 (ex. Design of manufactured products), an explanation should be made showing why the experience should be considered acceptable. Experience gained under the technical supervision of an unlicensed individual may be considered by the Board if the appropriate credentials (education and experience) of the unlicensed supervisor are submitted to the Board.
- (5) For sales experience to be creditable, it must be demonstrated that engineering principles were required and used in gaining the experience.
- (6) Experience in construction, to be creditable, must demonstrate the application of engineering principles.
- (7) Successful completion of graduate study leading to the master's degree in engineering which has followed a baccalaureate degree in engineering from an ABET-accredited program may be used for credit for one year's experience.
- (a) If the Ph.D. in engineering is completed under the same conditions, two years' total experience may be credited. The two years' credit includes the one year for the master's degree. If the Ph.D. is obtained without the master's degree, the credit for experience may be two years.
- (b) Credit for work experience and for undergraduate or graduate study, occurring within the same period, shall not exceed the elapsed calendar time during which this occurs.
- (8) In the review of engineering experience, the Board shall consider whether the experience was sufficiently complex and diverse, and of an increasing standard of quality and responsibility and whether the quality of the engineering work shows technical competency.
- (C) No experience credit is given for the following:
  - (1) Maintenance and operation;
  - (2) Drafting without engineering related proof;

- (3) Engineering technology teaching;
- (4) Teaching Assistant in college;
- (5) Engineering or surveying experience earned concurrent with education time credit;
- (6) Construction supervision such as contractor, foreman or superintendent; or
- (7) For a graduate degree, if used to waive a degree evaluation.

### 2.6 TEACHING FACULTY APPLICANTS

Applicants applying for the PE examination that are former or current teaching faculty at an ABET accredited engineering curriculum must demonstrate one year of engineering practice beyond classroom teaching.

Teaching faculty may use engineering research to complete the 4-year experience requirement. To receive experience credit, research should be performed under the direction of a professional engineer. In cases where the engineering research is performed in an exempt area of practice as defined in R.C. 4733.18 and is not required by law to be performed under the direction of a professional engineer, the applicant must submit the supervisor's credentials, to include the education and work experience of the supervisor. Ordinarily a non-registered supervisor should be an engineering graduate with extensive engineering experience of a nature that would demonstrate that the supervisor can evaluate and certify the engineering experience performed by the applicant.

Research experience must meet the requirements of the exam and comity guidelines. Research must be based on full-time employment. Two thousand eighty hours constitutes full-time employment. Research experience may not overlap with teaching or education credit. Research experience must be certified by a professional engineer or qualified supervisor in accordance with Board guidelines and must be verifiable.

### A typical path to faculty registration:

After graduation from EAC/ABET accredited engineering curriculum:

- Master's degree in engineering- 1 year of experience credit
- PhD in engineering- 1 year of experience credit
- Teaching advanced level engineering courses- 1 year of experience credit
- One year of private practice experience OR one year of engineering research- 1 year of experience credit

Total - 4 years of engineering experience credit

Please note that engineering research should be described in sufficient detail to demonstrate progressive engineering experience gained that indicates the applicant can be placed in responsible charge of engineering projects.

# 3.0 EXAMINATIONS

## 3.1 EXAM REQUIREMENTS

In order to become a registered professional engineer in Ohio applicants must have taken and passed the both the NCEES Fundamentals of Engineering [FE] examination and the Principles and Practice of Engineering [PE] examination. *These exams are required by Ohio law and will not be waived by the Board.* 

# 3.2 NCEES Fundamentals of Engineering [FE] Examination

The NCEES Fundamentals of Engineering examination is a computer-based test offered year-round at Pearson Vue Select testing centers. Graduates of EAC and ETAC ABET accredited engineering curricula may apply directly to NCEES to take the FE exam.

## 3.3 NCEES Principles and Practice of Engineering [PE] Examination

The Principles and Practice of Engineering exam tests for a minimum level of competency in a particular engineering discipline. It is designed for engineers who have gained a minimum of four years' post-college work experience in their chosen engineering discipline. The NCEES Principles and Practice of Engineering examinations are computer-based. The following is a list of the NCEES PE exam disciplines, the format and availability:

PE Exam	Format	Availability
Agricultural & Biological	Computer-based	1 day per year
Architectural Engineering	Paper-and-pencil	1 day per year
Chemical	Computer-based	Year-round
Civil	Paper-and-pencil	April & October
Control Systems	Paper-and-pencil	1 day per year
Electrical & Computer	Computer-based	1 day per year
Computer Engineering		
Electrical & Computer	Computer-based	1 day per year
<ul> <li>Electronics, Controls &amp; Communications</li> </ul>		
Electrical & Computer	Computer-based	Year-round
• Power		
Environmental	Computer-based	Year-round
Fire Protection	Computer-based	1 day per year

Industrial & Systems	Computer-based 1 day per year	
Mechanical	Computer-based	Year-round
Metallurgical & Materials	Paper-and-pencil	1 day per year
Mining & Mineral Processing	Computer-based	1 day per year
Naval Architecture & Marine	Paper-and-pencil	1 day per year
Nuclear	Computer-based	1 day per year
Petroleum	Computer-based	1 day per year

Note: Please understand that PE exam dates and exam information may change so you must contact NCEES at neces.org for the most updated information.

#### 3.4 NCEES STRUCTURAL EXAMS

The NCEES PE 16-hour Structural exam tests for a minimum level of competency in structural engineering. This exam uses separate vertical and lateral components to test your ability to safely design buildings or bridges, especially in areas of high seismicity and high wind.

Some states and U.S. territories considers the 16-hour Structural exam to be a Principles and Practices of Engineering exam; however, not all jurisdictions accept it as such.

The NCEES PE 16-hour Structural exam is paper-and-pencil and is administered by NCEES at regional test sites. Contact NCEES at ncees.org for more information.

## 4.0 APPLYING FOR PROFESSIONAL ENGINEER REGISTRATION

Applicants applying for registration as a professional engineer in Ohio must fill out the Board's online application through the Elicense portal accessible through the Board's website. **IMPORTANT** - It is the applicant's responsibility to ensure that all requirements for registration in Ohio have been completed in accordance with these guidelines before applying for PE registration. **Application fees are non-refundable.** 

### **NCEES RECORD HOLDERS**

Applicants that have an NCEES record may use the NCEES record as an application provided it includes all of the required information. Applicants must attach the NCEES record to the online application. Applicants with an NCEES record must make sure that all information required by the Board is included in the NCEES record, particularly that the experience is documented and verified in accordance with section 2.0 of these guidelines. The Board will pull the transcripts, exam scores, license verification and references from the NCEES record.

Applications are not considered complete unless the following items are completed.

- (A) Application fee must be paid online.
- (B) Online application form must be completely filled out.
- (C) Applicant photograph must be uploaded to the online application.
- (D) An official transcript must be received from the university showing date of graduation and degree earned. The Board does not accept unofficial copies of transcripts or transcripts provided by the applicant. A foreign-degree applicant must provide an official transcript accompanied by a certified English translation.
- (E) Applicants that have graduated from a four-year engineering program from outside of the United States that is not EAC ABET or CEAB accredited must have their education evaluated by NCEES Credentials Evaluations.
- (F) Fundamentals of engineering [FE] and principles and practice of engineering and surveying [PE] examination scores must be verified by the respective state boards or NCEES for PE exam applicants.
- (G) Applications must contain no less than five references, of whom three or more shall be professional engineers having personal knowledge of the applicant's engineering or surveying experience.
- (H) Sufficient description of work experience, including employer's name and address and supervisors' signatures and contact information, are required for PE and PS exam applicants.

## 5.0 REGISTRATION.

Once an applicant's application is approved the Board will issue a professional engineer registration number. The applicant is then required to obtain a seal that meets the Ohio Board's specifications. Specifications can be found on the Board's website and in Ohio Administrative Code Section [INSERT CODE].

#### IMPORTANT FACTS ABOUT PROFESSIONAL ENGINEER REGISTRATION IN OHIO

- Ohio-registered professional engineers are required to understand Ohio law and be knowledgeable of the laws and rules governing the practice of engineering in Ohio.
- Ohio-registered professional engineers are required to practice engineering only in their discipline of expertise based on their education, training, and examinations.
- Ohio-registered professional engineers are required to complete 30 hours of continuing professional development each biennial renewal period. Two hours must be in topics covering the Board's laws and rules or professional ethics.
- Professional engineers must renew their PE registration biennially.

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