

Chapter A-E 4

PROFESSIONAL ENGINEER REGISTRATION

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Note: Chapter A-E 4 as it existed on February 28, 1987 was repealed and a new chapter A-E 4 was created effective March 1, 1987.

A-E 4.01 Authority and purpose. The rules in this chapter are adopted under authority in ss. 15.08 (5) (b), 227.11, 443.04, 443.05, 443.09 and 443.10, Stats. The purpose of rules in this chapter is to interpret basic education, experience and examination requirements for registration as a professional engineer as specified in ss. 443.04, 443.05, 443.09 and 443.10, Stats.

History: Cr. Register, February, 1987, No. 374, eff. 3-1-87.

A-E 4.015 Definitions. In this chapter:

(1) "ABET" means the Accreditation Board for Engineering and Technology.

(2) "NCEES" means the National Council of Examiners for Engineering and Surveying.

History: CR 19-075: cr. Register June 2020 No. 774, eff. 7-1-20.

A-E 4.02 Applications. (1) An applicant who files an application but who does not comply with a request for information related to the application within one year from the date of the request shall file a new application and fee.

(2) A renewal applicant shall comply with s. A-E 2.05 and ch. A-E 13.

Note: Applications are available on the website at dps.wi.gov or by calling (608) 266-2112.

History: Cr. Register, February, 1987, No. 374, eff. 3-1-87; am. Register, May, 1990, No. 413, eff. 6-1-90; am. Register, January, 1999, No. 517, eff. 2-1-99; CR 19-075: cr. (2) Register June 2020 No. 774, eff. 7-1-20; correction in numbering made under 13.92 (4) (b) 7., Stats., Register June 2020 No. 774.

A-E 4.025 Application for certification as an engineer-in-training. (1) An applicant for engineer-in-training is required to submit all of the following:

(a) Evidence of a passing score of a fundamentals examination, in accordance with s. A-E 4.07 (1m) (a).

(b) Transcripts verifying the applicant's education and training, or a specific record of experience satisfactory to the professional engineer section to meet the requirements of s. 443.05, Stats.

(2) Submission of a record that is properly executed and issued with verification by NCEES may be accepted as evidence of the information that is required by the professional engineer section.

History: CR 19-075: cr. Register June 2020 No. 774, eff. 7-1-20.

A-E 4.026 Application for registration as a professional engineer. (1) FOUR YEAR COURSE OF STUDY. An applicant for professional engineer based on a four-year course of study is required to submit all of the following:

(a) A transcript verifying the applicant's bachelor of science degree in engineering from a school or college of engineering in a program accredited by the Engineering Accreditation Commission of ABET in engineering of not less than 4 years, or a diploma of graduation in engineering of not less than 4 years deemed by the professional engineer section to be equivalent to a bachelor of

science degree in engineering from a school or college of engineering in a program accredited by the Engineering Accreditation Commission of ABET.

(b) A specific record of 4 or more years of experience in accordance with s. A-E 4.03 within the 10 years preceding the application in engineering work of a character satisfactory to the professional engineer section indicating that the applicant is competent to be placed in responsible charge of engineering work. Experience gained in obtaining a master's degree in engineering and experience gained in obtaining a Ph.D. in engineering or in an engineering related program shall each be deemed equivalent to one year of qualifying experience.

(c) If an engineering degree is from an educational institution located outside the United States or its territories, the applicant shall provide an official evaluation by a transcript evaluation service acceptable to the professional engineer section which compares the degree to an engineering education standard acceptable to the professional engineer section. The professional engineer section may approve the degree if it finds equivalence.

(d) Evidence of successful completion of a fundamentals of engineering examination and a principles and practice of engineering examination, in accordance with s. A-E 4.07 (1m).

(e) References from at least 5 individuals having personal knowledge of the applicant's engineering work, 3 or more of whom are registered professional engineers, one of whom has served as supervisor in responsible charge of the applicant's engineering work.

(f) A chronological history of the applicant's employment.

(2) TWO YEAR COURSE OF STUDY. An applicant for professional engineer based on a 2-year course of study is required to submit all of the following:

(a) A transcript verifying the applicant's associate degree from a technical school or college in an engineering course of study of not less than 2 years that is accredited by the Engineering Technology Accreditation Commission of ABET. This shall be deemed equivalent to a degree from a technical school or college approved by the professional engineer section.

(b) A specific record of 6 or more years of experience in accordance with s. A-E 4.03 within the 10 years preceding the application in engineering work of a character satisfactory to the professional engineer section indicating that the applicant is competent to be placed in responsible charge of engineering work.

(c) Evidence of successful completion of a fundamentals of engineering examination and a principles and practice of engineering examination, in accordance with s. A-E 4.07 (1m).

(d) References from at least 5 individuals having personal knowledge of the applicant's engineering work, 3 or more of whom are registered professional engineers, one of whom has served as supervisor in responsible charge of the applicant's engineering work.

(e) A chronological history of the applicant's employment.

(2m) NCEES RECORD. Submission of a record that is properly executed and issued with verification by NCEES may be accepted as evidence of the information that is required by the professional engineer section.

History: CR 19-075: renum. (title), (1) (intro.), (a) to (d), (2) from A-E 4.05 (title), (1) (intro.), (a) to (d), (2) and, as renumbered, am. (title), (1) (intro.), (a), (b), (d), (e), (f), (2) (d), (e), (2m) Register June 2020 No. 774, eff. 7-1-20

A-E 4.03 Engineering experience requirements for the professional engineer application. (1g) QUALIFYING EXPERIENCE. (a) To qualify as satisfactory experience in engineering work for the purpose of meeting requirements of s. 443.04, Stats., an applicant's experience shall include the application of engineering principles and data and shall demonstrate an applicant's progressive development of competence to do engineering work.

(b) The experience shall be acquired under the supervision of a registered professional engineer and in the areas of engineering practice listed in subs. (1r) to (7), or acquired in other areas of engineering practice or academic course work which in the opinion of the professional engineer section provides the applicant with a knowledge of engineering principles and data at least equivalent to that which would be acquired by experience in the areas of practice listed. Experience gained under the technical supervision of an unregistered individual may be considered if the appropriate credentials of the unregistered supervisor are submitted to the professional engineer section.

(c) To qualify as satisfactory experience in professional engineering for purposes of ss. 443.04 (2m) (a) and (b), Stats., an applicant's experience must be obtained subsequent to completion of the educational requirements set forth in s. 443.04 (1m), Stats. This requirement may be waived, in the sole discretion of the professional engineer section, for reasons it considers sufficient.

(d) Experience in all areas listed is not required. Not more than one year of satisfactory experience credit may be granted for any calendar year.

(1r) RESEARCH AND DEVELOPMENT. (a) Problem identification, including consideration of alternative approaches to problem solving.

(b) Planning, including selecting a theoretical or experimental approach.

(c) Execution of plan, including completing design calculations.

(d) Interpreting and reporting results, including all of the following:

1. Evaluating project feasibility studies.
2. Analyzing research and development data.
3. Producing interpretive reports.
4. Formulating conclusions and recommendations.
5. Producing final reports.

(2) DESIGN. (a) Problem identification, including all of the following:

1. Identifying design objectives.
2. Identifying possible design concepts or methods.
3. Selecting methods to be employed in consideration of aesthetics, cost and reliability.
4. Defining performance, specifications, and functional requirements such as materials, energy balances, and environmental considerations.
5. Formulating conceptual design specifications.
6. Defining physical properties of all key materials.

(b) Planning, including defining safety, health and environmental constraints.

(c) Execution of plan, including all of the following:

1. Developing design concepts.

2. Conducting feasibility studies.
3. Evaluating design and design methods.
4. Solving design problems.
5. Preparing designs, layouts and models.
6. Selecting materials and components.
7. Conducting value analysis of design.
8. Producing final designs.
9. Preparing supporting technical information.
10. Preparing detailed working drawings.
11. Preparing specifications and data sheets.
12. Interacting with engineers from other areas of work such as research and development and construction.

(d) Interpreting and reporting results, including all of the following:

1. Evaluating design for conformity to specifications.
2. Evaluating design solutions for efficiency, economic and technical feasibility and economic alternatives.
3. Evaluating design impact on public health, safety and welfare.
4. Evaluating design solution for adherence to laws and codes.
5. Evaluating product liability risk.
6. Reviewing designs with clients or management.
7. Preparing final reports.

(e) Implementation of results, including interacting with engineers from other disciplines of engineering.

(3) CONSTRUCTION. (a) Problem identification, including checking working drawings and specifications.

(b) Execution of plan, including all of the following:

1. Consulting with designers.
2. Identifying and requesting design changes.

(4) MANUFACTURING, PRODUCTION AND OPERATIONS. (a) Planning, including all of the following:

1. Proposing design or methods improvement.
2. Planning operational processes and strategies.

(b) Execution of plan, including all of the following:

1. Preparing equipment, system and process specifications.
2. Determining feasibility of new or improved products, systems and processes.

(c) Interpreting and reporting results, including preparing final reports.

(5) MAINTENANCE. (a) Problem identification, including determining causes of failures in equipment, structures or schedules.

(b) Interpreting and reporting results, including reporting the causes of failures in equipment, structures or schedules.

(6) ADMINISTRATION. Administration and management, including execution of plan by communicating with others.

(7) OTHER ENGINEERING TASKS. (a) Conducting systems analysis or operations research.

(b) Serving as a consultant or specialist to individual or business clients.

History: Cr. Register, February, 1987, No. 374, eff. 3-1-87; am. (1) (a) to (d) 4., (2) (a) (intro.) to 5., (b) to (c) 11., (d) (intro.) to 6., (e), (3) to (7) (a), Register, January, 1999, No. 517, eff. 2-1-99; CR 12-053: am. (2) (a) 4. Register November 2013 No. 695, eff. 12-1-13; CR 19-075: am. (title), renum. (intro.) to (1g) (a) and am., cr. (1g) (b), (d), renum. (1) to (1r) Register June 2020 No. 774, eff. 7-1-20; renum. (1g) (a) (title) to (1g) (title), r. (1g) (c) (title) Register June 2020 No. 774.

A-E 4.07 Examinations. (1m) REQUIRED EXAMINATIONS. (a) The required fundamentals examination is an NCEES Fundamentals of Engineering examination.

(b) The required principles and practice of engineering examination is an NCEES Principles and Practice of Engineering examination, or, in the alternative, the applicant may take the NCEES Structural Engineering examination in its entirety.

(6) GRADING OF WRITTEN EXAMINATIONS. The passing scores set by the professional engineer section represent the minimum competency required to protect public health and safety. Experience ratings may not be weighed as a part of the examinations.

History: Cr. Register, February, 1987, No. 374, eff. 3-1-87; am. (1) (b), Register, May, 1990, No. 413, eff. 6-1-90; r. and recr. (2), Register, June, 1993, No. 450, eff. 10-1-93; am. (1) (b) and (c), Register, December, 1993, No. 456, eff. 1-1-94; am. (3), Register, August, 1995, No. 476, eff. 9-1-95; am. (7) (b), Register, March, 1996, No. 483, eff. 4-1-96; am. (7) (a), Register, October, 1996, No. 490, eff. 11-1-96; am. (1) (a), (3) and (6), cr. (8), Register, January, 1999, No. 517, eff. 2-1-99; CR 04-119; r. (1) (c) Register December 2005 No. 600, eff. 1-1-06; correction in (4) made under s. 13.92 (4) (b) 7., Stats., Register November 2011 No. 671; CR 12-053; renum. A-E 4.07 from A-E 4.08, am. (2) (a) 1., 2., r. (2) (a) 3., am. (2) (b), r. (7), renum. (8) to (7), Register November 2013 No. 695, eff. 12-1-13; CR 15-040: r. (2), (3), (5) Register May 2016 No. 725, eff. 6-1-16; **CR 19-075: r. (1), cr. (1m), r. (4), am. (6), r. (7) Register June 2020 No. 774, eff. 7-1-20.**

A-E 4.08 Application for reciprocity. (2) An application for registration by reciprocity from another state shall include all of the following:

(a) Verification of registration submitted directly from all states, territories, or provinces of Canada where the applicant is or has been registered, including a statement regarding any disciplinary action taken.

(am) References from at least 5 individuals having personal knowledge of the applicant's engineering work 3 or more of the references shall be registered professional engineers and one of

whom has served as supervisor in responsible charge of the applicant's engineering work.

(c) Verification of meeting the continuing education requirements set forth in s. A-E 13.09.

(d) Any additional data, exhibits or references showing the extent and quality of the applicant's experience that may be required by the section.

(3) Submission of a record that is properly executed and issued with verification by NCEES may be accepted as evidence of the information that is required by the professional engineer section.

(4) Reciprocity may be granted, in accordance with s. 443.10 (1) (d), Stats., to a person who holds an unexpired registration issued by an authority in any state or territory or possession of the United States or in any country in which the requirements for registration are of a standard not lower than required by the professional engineer section.

History: Cr. Register, January, 1993, No. 445, eff. 2-1-93; am. Register, January, 1999, No. 517, eff. 2-1-99; CR 03-087; renum. (intro.) and (1) to (4) to be (1) (intro.), (a) to (d) and am. (1) (intro.) and (b), cr. (2) Register May 2005 No. 593, eff. 6-1-05; CR 12-053; renum. A-E 4.08 from A-E 4.09, am. (1) (b), cr. (2) (am), renum. (2) (b) to (d), cr. (2) (c) Register November 2013 No. 695, eff. 12-1-13; **CR 19-075: am. (title), r. (1), am. (2) (intro.), (a), cr. (3), (4) Register June 2020 No. 774, eff. 7-1-20.**