Rule 3
Baseline Requirements for Post-Licensure Board Certifications

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Rule applicability: Post-licensure Board Certifications

The baseline requirements apply to all specialty areas of civil engineering. When justified by a specialty area body of knowledge, the administrative unit (AU) responsible for that specialty area may determine whether additional requirements are needed or that a requirement is not needed. If the former, that AU must develop a justification for the additional requirement specifically linked to the specialty area body of knowledge (SABOK) demonstrating how the additional requirement is the only means for an applicant to achieve the SABOK. If the latter, that AU must develop a justification for removing the requirement. The justification must be submitted to the CEC Board consideration and approval or rejection is final. The CEC Board may consult organizations with expertise in the specialty area including, but not limited to, the appropriate ASCE Institute. Approved variations are provided as addenda to this rule.

Preamble for Board-Certification: The baseline requirements serve as the minimum levels of achievement for application to post-licensure board certification in any one of the civil engineering specialty areas for which board certification is available. Board certification in civil engineering represents attainment of the knowledge, skills, and attitudes needed for competent practice at the levels defined in the Civil Engineering Body of Knowledge (CEBOK3)[1] and further developed in the respective Specialty Area Bodies of Knowledge (SABOK).

1. Professional characteristics.
   - 1.1. Adherence to the ASCE Code of Ethics.
   - 1.2. Good communications skills.
   - 1.3. Demonstrated project management and/or leadership skills.
   - 1.4. Commitment to continuing education.
   - 1.5. Commitment to advancing the profession.
2. Education. Formal education in engineering and the specialty area supports achievement of the CE-BOK3 and specialty area body of knowledge.
   - 2.1. Applicants must have earned a baccalaureate degree in engineering or another related field from a program accredited by ABET. For candidates that have not earned a suitable baccalaureate degree, a post-graduate degree (master's or PhD) in engineering or other relevant field from educational institutions of

[1] Achievement in CEBOK3 outcomes for board certification are indicated in the attached tables F-5 and F-6.

recognized standing can satisfy the education requirement.

2.2. Post-graduate education in engineering or other relevant fields from educational institutions of recognized standing is the typical pathway for demonstrating fulfillment of specific elements of the specialty area body of knowledge. Post-graduate education may include completion of a post-graduate degree (master's or PhD), not less than 30 relevant post-graduate credit hours,[2] or an advanced certificate program recognized by the specialty certification board. Alternatively, this requirement may be satisfied by additional applicable work experience (see item 4.3).

3. Current PE license or approved equivalent relevant to the specialty area.[3,4] If working - and with permanent residence - in a country without a PE license or approved equivalent, this requirement may be satisfied by additional applicable work experience (see item 4.4).

4. Work experience. Work experience may include planning, design, analysis, operations, management, governance, research, and/or teaching. The applicant must be currently actively engaged in the specialty area of civil engineering and have:

   4.1. A minimum of 10 years of progressively responsible post-BS work experience in civil engineering.[5]

   4.2. A minimum of 8 of the 10 years of progressively responsible post-BS work experience must be in the specialty area of civil engineering.

   4.3. If the applicant does not have post-graduate education per requirement 2.2, the applicant must have a minimum of 15 years of progressively responsible post-BS work experience within civil engineering and a minimum of 13 of the 15 years in the specialty area of civil engineering.

   4.4. If an applicant is working - and with permanent residence - in a country without a PE license or approved equivalent per requirement 3, the applicant must have a minimum of 15 years of progressively responsible post-BS work experience within civil engineering and a minimum of 13 of the 15 years in the specialty area of civil engineering.

5. Validation. The applicable specialty board of trustees validates achievement of the requisite CEBOK3 and SABOK outcomes in a manner appropriate for the certification. Validation applies to all applicants and follows a uniform process for each certification developed and administered by the applicable specialty board.

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[2] Continuing education units are not equivalent to post-graduate credit hours.

[3] Practicing in a different jurisdiction after earning and maintaining a PE license or equivalent in another jurisdiction is acceptable as long as compliance with relevant laws and licensing requirements are met.

[4] CEC will develop and maintain a list of approved equivalents. An initial list could build on work by AAWRE and include Australia (Pending), Canada, India, Korea (Pending), New Zealand (Pending), Philippines (Pending), Taiwan (Pending), United Kingdom (Pending), and the United States. The list can be in matrix form clearly showing which approved equivalents are accepted for which board certification.

[5] Completion of an MS or PhD degree in engineering or other relevant fields from educational institutions of recognized standing counts for 1 or 3 years of work experience, respectively.

The following two tables taken from the Civil Engineering BOK (version 3) represent levels of achievement in several outcomes. Those in white cells represent the levels needed for the professional practice of civil engineering (also referred to as “responsible charge”) as well as the typical pathways of achievement. The levels indicated in green cells represent the levels of achievement required for board certification. These levels would typically be obtained through experience or self-development.

Table F-5. The *Civil Engineering Body of Knowledge* Cognitive Domain Typical Pathway to Achievement.

Outcome	Cognitive Domain Level of Achievement					
	Level 1 Remember	Level 2 Comprehend	Level 3 Apply	Level 4 Analyze	Level 5 Synthesize	Level 6 Evaluate
Foundational Outcomes						
Mathematics	UG	UG	UG			
Natural Sciences	UG	UG	UG			
Social Sciences	UG	UG	UG			
Humanities	UG	UG	UG			
Engineering Fundamentals Outcomes						
Materials Science	UG	UG	UG			
Engineering Mechanics	UG	UG	UG			
Experimental Methods and Data Analysis	UG	UG	UG	PG	PG/E/ SD	E/SD
Critical Thinking and Problem Solving	UG	UG	UG	ME	ME	E/SD
Technical Outcomes						
Project Management	UG	UG	ME	E/SD	E/SD	
Engineering Economics	UG	UG	ME			
Risk and Uncertainty	UG	UG	UG	ME	E/SD	
Breadth in Civil Engineering Areas	UG	UG	UG	ME		
Design	UG	UG	UG	ME	ME	
Depth in a Civil Engineering Area	UG	UG	PG	PG	ME	E/SD
Sustainability	UG	UG	UG	ME		

Table F-5. (Continued)

Outcome	Cognitive Domain Level of Achievement					
	Level 1 Remember	Level 2 Comprehend	Level 3 Apply	Level 4 Analyze	Level 5 Synthesize	Level 6 Evaluate
Professional Outcomes						
Communication	UG	UG	UG	ME	ME	
Teamwork and Leadership	UG	UG	UG	ME	ME	E/SD
Lifelong Learning	UG	UG	UG	ME	ME	E/SD
Professional Attitudes	UG	UG	ME	ME		
Professional Responsibilities	UG	UG	ME	ME	ME	
Ethical Responsibilities	UG	UG	ME	ME	ME	E/SD

Table F-6. The *Civil Engineering Body of Knowledge* Affective Domain Typical Pathway to Achievement.

Outcome	Affective Domain Level of Achievement				
	Level 1 Receive	Level 2 Respond	Level 3 Value	Level 4 Organize	Level 5 Characterize
Technical Outcome					
Sustainability	UG	UG	ME	SD	
Professional Outcomes					
Communication	UG	UG	ME	SD	
Teamwork and Leadership	UG	UG	ME	SD	SD
Lifelong Learning	UG	UG	ME	SD	SD
Professional Attitudes	UG	UG	ME	SD	SD
Professional Responsibilities	UG	UG	ME	SD	
Ethical Responsibilities	UG	UG	ME	ME	SD

Key: Undergraduate (UG), Post-graduate (PG), Mentored Experience (ME), Experience (E), Self-Directed (SD).

Addendum 1. Eligibility Modification and Rationale for Pipeline Engineer-Water (BC.PLW) and Project Utility Engineer (BC.PUE) Board-Certifications:

The UESCB modified the eligibility requirements for the BC.PLW and BC.PUE certifications to better align the credentials with the realities of professional practice in public works and utilities engineering. Central to this change is the recognition that leadership in these fields requires not only technical depth, but also, the ability to integrate knowledge across multiple civil engineering domains. Public works and utilities engineers must synthesize considerations related to infrastructure systems, operations, risk, sustainability, and regulatory factors. These capabilities are developed through progressive professional experience rather than academic specialization alone. By clarifying eligibility expectations, the UESCB aims to ensure that candidates are prepared to demonstrate the advanced, systems-level judgment and decision-making authority expected of certified professionals. As such, the UESCB emphasized the importance of licensure, relevant work experience, and demonstrated responsibility in practice.

To accomplish this, the baseline requirements listed in the main body of this rule are modified for candidates for the BC.PLW and BC.PUE certifications with the following additions, modifications, and deletions:

- Add the requirement to demonstrate their specialty experience through detailed project documentation.
- Delete requirements 2.2, 4.2, and 4.3.
- Modify requirement 5 to specify that validation is demonstrated by a passing score on an online written examination.

The amended UESCB eligibility requirements align with the CEBOK as in Table F-5 and Table F-6 as follows:

- Modify 'Depth in a Civil Engineering Area' across three fulfillment levels. Specifically, the required pathway shifts from Post-Graduate to Undergraduate at Level 3, from Post-Graduate to Mentored-Experience at Level 4, and from Mentored-Experience to Experience and Self-Directed at Level 5.

- Modify ‘Experimental Methods and Data Analysis’ across two fulfillment levels: specifically, from Post-Graduate to Mentored-Experience at Level 4, and from Post-Graduate, Experience and Self-Directed to Experience and Self-Directed at Level 5.