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# CESB ACCREDITATION GUIDELINES

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## ACCREDITATION GUIDELINES FOR ENGINEERING AND RELATED SPECIALTY CERTIFICATION PROGRAMS

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**PREAMBLE:** *To be accredited by the Council of Engineering and Scientific Specialty Boards (CESB), a certification program must be consistent with the requirements prescribed by CESB. To that end, certification programs will be evaluated against the following General Guidelines as well as specific Supplemental Guidelines for the CESB category into which they fall.*

*It is the responsibility of the Certifying Body seeking accreditation of a certification program to supply all documentation necessary to enable CESB evaluation and to establish its compliance with CESB requirements.*

*Where appropriate, "Commentary" is provided in italic typeface to more fully explain the requirements or the application*

*of the requirements by CESB. However, such Commentary is not a requirement.*

#### GENERAL GUIDELINES – APPLICABLE TO ALL PROGRAMS

##### 1. PURPOSE OF THE CERTIFICATION PROGRAM

a. The primary purpose of the certification program shall be the evaluation of individuals who practice in specialized areas within the fields of engineering and science and other areas related to engineering and the issuance of credentials to those individuals who demonstrate a specified level of knowledge and competence.

##### 2. STRUCTURE OF THE CERTIFYING BODY

The Certifying Body is that organization duly authorized to specify the certification scope, grant certification, and approve, supervise and/or administer all procedures and policies necessary to operate the certification program. It shall:

- a. Be a legal, not-for-profit non-governmental entity or part of a legal, not-for-profit non-governmental entity or a governmental entity;
- b. Be independent and impartial in all matters pertaining to granting certification. However, appointment of members to the Certifying Body may be by the sponsoring organization;

*COMMENTARY: Independence of the Certifying Body from any organization with which it is involved or of which it is a part is critical. This condition must be confirmed by the Body's legal organizing documents.*

- c. Consist of a majority of certified individuals; and
- d. Have formal procedures for the selection of the Certifying Body members specified in its bylaws. Such procedures shall prohibit the Certifying Body from selecting more than one-third of its members.

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### 3. RESOURCES OF THE CERTIFYING BODY

The Certifying Body shall:

- a. Have adequate financial resources to properly conduct the certification activities; and

*COMMENTARY: Financial sustainability is important. CESB will examine the Certifying Body's Balance Sheet and Statement of Revenue and Expense in assessing the Body's financial capability to properly operate a certification program.*

- b. Have personnel – volunteers, employees, and contractors – who possess the knowledge and skill necessary to conduct the certification program and the management system(s) to assure their effective and ethical use.

*COMMENTARY: A variety of personnel are typically involved in the operation of a certification program. The Certifying Body will provide an organization chart and other documentation to explain the roles and responsibilities of volunteers, staff, and contractors involved in program operation. Additionally, documentation of the education and experience pertinent to certification for those involved in certification decisions will be provided.*

### 4. CERTIFICATION PROGRAM OPERATION

The certification program shall:

- a. Be national or international in scope;
- b. Provide the public, consumers, and sponsoring organizations with an opportunity to contribute to the formulation of policies and decisions of the Certifying Body;

*COMMENTARY: A common approach for securing the perspectives of those served by certified persons is to appoint a public member to the Certifying Body. While this technique may be used, Certifying Bodies may demonstrate compliance by other means.*

- c. Use procedures that assure relevance of the knowledge, skills, and abilities that define the body of knowledge of the certification scope;
- d. Use a method to evaluate individual competence that is objective, fair, and based on

the knowledge, skills, and abilities needed to function in the specialty area;

*COMMENTARY: CESB has no limitations on the methods employed by the Certifying Body to assess an individual's capabilities for certification. These methods may include written examinations using objective type or free response type test items, oral examinations, portfolio reviews, direct observation of performance or other methods devised by the Certifying Body. It is also not necessary to engage persons, either as employees or contractors, who are psychometric experts. However, each Certifying Body must demonstrate by appropriate documentation that the methods it employs have been developed and are applied in accordance with accepted psychometric principles to assure that its evaluation methods are reliable and valid measures and that they are fairly and consistently applied.*

- e. Assure that any evaluations used are both reliable and valid measures of each individual's capabilities;

*COMMENTARY: Reliable evaluation methods are those that can equitably and effectively evaluate the range of candidates considered for certification vis-à-vis the body of knowledge on which the certification is based. Valid evaluation methods are those that effectively measure the candidate's capabilities relevant to the body of knowledge on which the certification is based.*

- f. Assure that any examinations used are designed to test the body of knowledge of the certification;
- g. Set pass/fail scores for any examinations used with procedures that are consistent with generally accepted psychometric principles;
- h. Utilize appropriate measures to protect the security of any examinations used by the program to evaluate individuals for certification;
- i. Periodically review, at least every five years, or more often if required, the body of knowledge and methods used to measure individual capability to assure that they are keeping pace with changes in the technology and professional practices covered by the certification program;

j. Prohibit those involved in the certification of individuals to provide training for the purpose of obtaining such certification; and

*COMMENTARY: Any person who teaches a refresher course for a specific type of examination must not select, assemble, review items, or proctor that examination (a). This restriction does not preclude training conducted for continuing education activities.*

*(a) Source: National Council of Examiners for Engineering and Surveying, Manual of Policy and Position Statements, September 2006, p. 15.*

k. Define and maintain policies which describe the ethical behavior (a code of ethics) expected of Certifying Body leaders, volunteers and staff, its contractors and those it certifies.

The Certifying Body may grant certification to individuals on the basis of eminence or extensive education and/or experience without examination (i.e., by grandfathering) for a period not to exceed twelve months after the date of CESB accreditation of newly accredited certification programs. After that time, no individual shall be certified other than by the program's regular certification method.

## **5. PUBLIC DISCLOSURE OF CERTIFICATION**

The Certifying Body shall:

- a. Publish a document which clearly defines the certification responsibilities of the certifying body and describes any other activities of the certifying body which are not related to certification;
- b. Make available general descriptions of the procedures used to evaluate candidates. If examinations are used, the procedures used in their construction and validation, examination administration, and reporting of test results shall also be made available;
- c. Publish a comprehensive statement of the body of knowledge for the certification; and
- d. Publish at least annually, a summary of certification activities, including the number of applicants, number certified and number recertified.

*COMMENTARY: Transparency is vital to assuring*

*all affected by the program that the program is operated so as to impartially and objectively evaluate those granted certification and to describe the scope of the certification.*

## **6. RESPONSIBILITIES TO APPLICANTS**

The Certifying Body shall:

- a. Not discriminate among applicants as to age, sex, race, religion, national origin, disability, or marital status;
- b. Provide all applicants with complete information on the procedures governing application for and attainment of certification;
- c. Have a formal policy for the periodic review of the application and evaluation procedures to assure that they are fair and equitable;
- d. Provide competently proctored sites for any required testing that are readily accessible in all areas of the geographic area served by the certification program at least once annually. Such testing sites and examinations shall appropriately accommodate all disabled applicants who possess one or more of the disabilities defined by United States of America laws and regulations;
- e. Promptly report evaluation results to applicants;
- f. Provide applicants who fail an evaluation information on the general areas of deficiency;
- g. Maintain the confidentiality of each person's application documents, evaluation results, recertification information, and any other information on file unless authorized to release the information by the individual or if required by law;
- h. Prescribe, maintain, and publish procedures that certification candidates can use to appeal actions and decisions of the Certifying Body pertaining to the candidate's application and certification; and
- i. Not require any training offered by the Certifying Body as a prerequisite for certification.

## **7. RESPONSIBILITIES TO THE PUBLIC AND CONSUMERS**

The Certifying Body shall:

- a. Assure that any title or credential awarded by the credentialing body accurately reflects the

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certification body of knowledge.

b. Assure that the certification method employed properly measures the knowledge, skill, and abilities required for practice in the certification body of knowledge;

c. Award certification only after the knowledge, skills, and abilities of the individual have been evaluated and determined to be acceptable;

d. Maintain a publicly accessible roster of those persons certified by the Certifying Body;

e. Have formal due process policies and procedures for discipline of certificants, including revocation of the certificate.

## **8. RECERTIFICATION**

The Certifying Body shall:

a. Have a process that limits the certification granted to no more than five years;

*COMMENTARY: All technology continues to progress. By appropriate methods of the Certifying Body's choice, it must assure that the knowledge, skills, and capabilities of those it certifies keep pace with advances in the body of knowledge certified. When extenuating circumstances prevent an individual from recertifying within the prescribed time interval, the Certifying Body may grant a limited extension.*

b. Provide for recertification either by the examination method used by the Certifying Body to initially grant certification or by presenting satisfactory evidence of some combination of continuing professional experience, continuing professional development, and professional and/or technical society activity related to the body of knowledge certified. While continuing professional experience should receive primary weighting in granting recertification, the requirements must include an average of at least twenty hours per year of continuing professional development in the body of knowledge certified. Continuing professional development activities may include formal courses, technical meeting attendance, and similar activities. Professional and/or technical society volunteer activity, related professional community volunteer

service, authoring of technical papers, and similar activities may be considered by the Certifying Body in lieu of a portion of the continuing professional development or professional experience requirements. All activities for which recertification credit is granted must have been conducted during the immediately preceding period of certification. No credit may be granted for activities occurring at any prior time.

## **9. TITLES**

The Certifying Body shall:

a. Limit the use of the title "engineer," or any variation, to Professional Engineer Specialty Certification Boards and Graduate Engineer Certification Boards. The Certifying Body shall make clear that any title it grants using the word "engineer" does not convey any legal right to practice engineering;

b. Limit the use of the title "Diplomate" in any title including the word "engineer" to those individuals certified by Professional Engineer Specialty Certification Boards;

c. Not inappropriately use the word "engineer" or similar wording in any title granted. The use of the phrase, "in engineering," in any title granted by a Certifying Body shall be considered equivalent to use of the title, "engineer." Using "engineering" as a modifier, e.g., "engineering technology," "engineering technologist," "engineering technician," and "engineering aspects" is acceptable use by Engineering Related Specialty Certification Boards and Engineering Technician Certification Boards; and

d. Use effective procedures to assure that any titles or trademarks granted to certified persons are properly used.

The Certifying Body may grant the title "emeritus" or "retired" or similar title to persons who are retired from practice in the specialty certified and who possessed valid, current certification at the time of retirement if they no longer engage in professional practice in the specialty certified. Retirees who subsequently reenter practice in the specialty certified as consultants or through

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reemployment must renew their certification using methods described in these Guidelines for recertification.

### **SUPPLEMENTAL GUIDELINES FOR CESB RECOGNITION OF PROFESSIONAL ENGINEER SPECIALTY CERTIFICATION PROGRAMS**

Professional Engineer Specialty Certification Programs are those programs which require candidates to possess a current, valid Professional Engineer license granted by a state or territory of the United States of America or the equivalent credential issued by another country.

To achieve CESB accreditation, Professional Engineer Specialty Certification programs will be measured against the following guidelines:

- (1) Candidates for certification must be licensed as a Professional Engineer by the lawfully constituted licensure board of any state or jurisdiction of the United States or the equivalent licensure from another country as determined by the Certifying Body, and have at least six (6) years of experience in engineering following the baccalaureate degree or have at least two (2) years of experience in engineering following licensure. This experience must be acceptable to the Certifying Body.

### **SUPPLEMENTAL GUIDELINES FOR CESB RECOGNITION OF GRADUATE ENGINEER CERTIFICATION PROGRAMS**

Graduate Engineer Certification Programs are those programs which require candidates to possess an Engineering Accreditation Commission/ABET (EAC/ABET) accredited degree (or equivalent).

To achieve CESB accreditation, Graduate Engineer Certification programs will be measured against the following guidelines:

- (1) Candidates for certification must hold an EAC/ABET accredited degree (or equivalent) and possess a minimum of four years of practical, responsible experience in the specialty certified that is acceptable to the Certifying Body.

### **SUPPLEMENTAL GUIDELINES FOR CESB RECOGNITION OF ENGINEERING-RELATED SPECIALTY CERTIFICATION PROGRAMS**

Engineering-Related Certification Programs are those programs which certify scientific specialties and/or other specialties allied to the practice of engineering.

To achieve CESB accreditation, Engineering-Related Specialty Certification programs will be measured against the following guidelines:

- (1) Candidates for certification must hold a baccalaureate degree (accredited by an accrediting body recognized by the Council on Higher Education Accreditation) in a field related to engineering (or equivalent) and possess a minimum of four years of practical, responsible experience in the specialty area acceptable to the Certifying Body. At the discretion of the Certifying Body, a supplementary examination or four years of related education and/or experience beyond the four-year minimum requirement may be accepted in lieu of an accredited degree.

### **SUPPLEMENTAL GUIDELINES FOR CESB RECOGNITION OF ENGINEERING TECHNICIAN CERTIFICATION PROGRAMS**

Technician Certification Programs are those programs which certify those who assist the practice of engineering but who do not, as a prerequisite for certification, possess a baccalaureate degree. Such programs may or may not require an accredited associate degree.

To achieve CESB accreditation, Engineering Technician Certification programs will be measured against the following guidelines:

- (1) Candidates for certification must have demonstrated a level of knowledge equivalent to that associated with an accredited engineering technology associate degree and possess a minimum of two years of relevant work experience acceptable to the Certifying Body. Related college level coursework or a related college degree may be substituted for part of the minimum of two years of relevant work experience.