

ENGINEERING CREDENTIALS

Council of Engineering and Scientific Specialty Boards National Society of Professional Engineers

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Introduction

The various credentials for engineers and allied professionals and the continued increase in the number of such credentials create confusion for practitioners and consumers alike. Many have recognized that this confusion compromises the effectiveness of these credentials. Some of the confusion is due to lack of understanding about credentials, their benefits and limitations, and credentialing terminology. To address these needs, the Council of Engineering and Scientific Specialty Boards and the National Society of Professional Engineers have collaborated to prepare this tutorial on credentials for engineers and allied professionals.

Licenses

Licenses are employed by governments, usually states, to regulate the practice of many professions to protect the public from incompetence and misconduct of practitioners. Obtaining a license is a privilege. It is not an individual's right and requires a demonstration of minimum competence.

Licenses for engineers and some allied professionals are issued by specific boards appointed by states and territories of the United States. They require completion of an educational degree in a particular area of study, a sufficient period of experience acceptable to the licensing board, and successful completion of written examinations. Such licenses are state-specific, i.e., individuals must be licensed by each jurisdiction in which they wish to practice.

Also, licenses are issued for a specific period of time and must be renewed periodically. Most jurisdictions require evidence of continuing professional development and learning as a condition for license renewal.

Certifications

Certification attests to an individual's capability to perform a defined task or related series of tasks, commonly referred to as a body of knowledge. Generally, most certifications are issued by not-for-profit organizations. Obtaining a certification is a voluntary act; there is no legal requirement that a certification be obtained to practice a profession or deliver a service. However, some market conditions may operate to require or give preference to those who have a particular certification; a market requirement for certification is far more common in the medical profession than it is in engineering.

Certification requires a sufficient period of experience acceptable to the certifying body and successful completion of an examination. Many also require a collegiate degree in a particular area of study. Some certifications require professional licensure as a prerequisite. Certifications are not constrained by political boundaries.

Certifications are issued for a specific period of time and must be renewed periodically. All *accredited* certification programs require evidence of continuing professional development and learning as a condition for certification renewal.

In engineering, the word *Diplomate* used in a certification title, e.g., Diplomate Water Resources Engineer, is a protected term signifying that the certified individual is also a licensed engineer. Certification programs issuing such titles require all applicants to possess an engineering license to qualify for consideration.

Some certification programs are accredited; others are not. Accredited certification programs have been scrutinized by one or more of the three nationally-recognized certification accreditation bodies to ensure that the programs are operated consistent with recognized credentialing practices.

Certification can be easily confused with certificates. Certificates are often given to individuals for attendance or the successful completion of a course of study. Such certificates do not measure competence to perform a body of knowledge as do certifications.

The Relationship between Licenses and Certifications

Licenses and accredited certifications are granted using similar credentialing practices, i.e., they rely upon a prescribed education program, applicable experience of some duration and scope, and an examination of the individual's knowledge and judgment. Both ensure that the credentialed individual is *minimally competent* in the scope of the service regulated.

Licenses are required for a professional to offer services to the public. Certifications are not required and do not grant authority to a professional to offer services to the public.

A common perception is that licenses address minimum competency and that certifications attest to a higher competency. This perception is not correct. Generally, a license covers a broad body of knowledge and a certification is limited to a specialty more constrained in scope. For example, a person may be licensed as a professional engineer and certified as a forensic engineer or a water resources engineer. However, the body of knowledge for some certifications can be broad in scope; typically, this occurs when the certification is the only available credential for the area of practice.

Sometimes, licenses are employed in conjunction with certifications as in the preceding example. In other instances, certifications operate alone. The latter case is common in areas of practice where licenses are not issued.

Overall, licenses and accredited certifications are complementary credentials. Together, they testify to the public about an individual's general and specific capabilities. Where licenses do not exist, *accredited* certifications provide the public the only independent testimony to an individual's capabilities. However certifications do not legally regulate an individual's practice. Only licenses regulate practice with the force of law.

Appropriate Uses of Credentials

Licenses and certifications measure an individual's capabilities. The possession of one or more of these credentials indicates to the public that the holder's capabilities have been vetted using regularly accepted practices.

Credentials do not signify mastery, nor do they guarantee an intended result by the credential holder's performance.

Generally, the titles granted by licenses and certifications indicate the scope of the individual's capabilities. However, since just a few words can be misleading, to fully understand the credentialed individual's capabilities, it is necessary to examine the body of knowledge on which the credential is based. Descriptions of the body of knowledge for all credentials are readily available to the public from the credential issuing organizations.

Licenses define the individuals legally authorized to offer regulated services to the public. Certifications do not. Regrettably, some government licensing bodies use the word *certification* in the title granted to licensees; the word *registration* is also used to describe licenses.

Both licenses and *accredited* certifications can be appropriately used as one of several parameters in qualifying individuals for employment, for consulting assignments, for advancement, or for employment rewards.

Benefits of Credentials

Credentials, both licenses and *accredited* certifications, offer benefits to credentialed practitioners, their employers, and consumers of practitioners' services.

Benefits to Practitioners

Credentials provide:

- independent testimony to an individual's capabilities;
- increased credibility;
- increased rewards – advancement, compensation and responsibilities;
- satisfaction of peer recognition; and
- a mechanism assuring continuing professional development.

Benefits to Employers

Credentials provide:

- independent, objective testimony to an individual's capabilities;
- an attribute to use for qualifying applicants for employment;
- an independent benchmark to use in personnel evaluations; and
- enhanced stature of an employer's staff.

Benefits to Consumers

Credentials provide:

- independent, objective testimony to an individual's capabilities;
- identification of capability;
- technical credibility; and
- a mechanism for screening potential service providers.

NCEES Position Statement

The position statement of the National Council of Examiners for Engineering and Surveying (NCEES) regarding certification is as follows:

“NCEES does not oppose those programs wherein professional organizations and societies recognize or certify their members for any purpose, provided such certification does not imply legal licensure. NCEES opposes certification by any organization or society wherein the purpose of such certification is to substitute for legal licensure as established by the statutes of the various jurisdictions.”

Glossary of Credentialing Terms

Accreditation – process by which an entity recognizes or vouches for a program as conforming to a standard

Body of Knowledge – a detailed description of the knowledge and/or skills regulated by a credential

Certificate – a document certifying that one has fulfilled certain requirements, such as attending and/or completing a course of study

Certification – voluntary process by which an organization attests to an individual as having satisfied a standard

Credential – something that gives title to credit or confidence

Diplomate – a licensed engineer possessing certification in a specialty

License – a permission granted by a competent authority to engage in a business or occupation or in an activity otherwise unlawful