ICE 1100 : 2010(E) -

Standard for Assessment-Based Certificate Programs

Established in 1977, the Institute for Credentialing Excellence (ICE, formerly the National Organization for Competency Assurance) is the leader in setting quality standards for credentialing organizations. Through its annual conference, webinars, and publications, ICE serves its membership as a clearinghouse for information on the latest trends and issues of concern to practitioners and organizations focused on certification, licensure, and human resource development.

ICE's MISSION

ICE promotes excellence in credentialing worldwide. We accomplish our mission through services such as:

- *Education*
- *Research*
- *Advocacy*
- *Accreditation*
- *Standards*

ICE 1100 : 2010 (E) -----

Standard for Assessment-Based Certificate Programs

An American National Standard

Standards Developer

Institute for Credentialing Excellence

Date of Adoption:
January 2009
March 2009 (E)
January 2010 (E)

Approved by the American National Standards Institute on March 25, 2009

Notes on March 2009 Editorial Revisions

Following the initial publication of the ICE Standard, concern was expressed by an interested party that the January 2009 publication of the ICE Standard contained variations to the draft standard that had been approved by affirmative vote of the ICE Main Committee. The changes made were considered editorial in nature; however, since a concern was raised by an interested party, this publication of the Standard contains the following editorial changes:

- The term "quality" was removed from the title of the Standard. Although it is clearly the intent of the Standard to provide quality requirements, the term "quality" was not included in the original draft standard.

- Annex 1: Definitions
    - The definition of "reliability" has been revised to reflect the original wording in the balloted draft standard.
    - The definitions for "criterion-reference" and "validity" have been re-inserted in the definition section, although the terms are not used in the requirements of the standard.

Notes on January 2010 Editorial Revisions

Edits to the Standard reflect the standards developer's name change which occurred in late 2009. The organization name prior to the change was the National Organization for Competency Assurance (NOCA).

Content

INTRODUCTION

The information contained in this Introduction is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Introduction may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the standard.

Scope, Purpose, and Structure of the Standard

Scope

This standard pertains to assessment-based certificate programs. An assessment-based certificate program is a non-degree granting program that:

   a)   provides instruction and training to aid participants in acquiring specific knowledge, skills, and/or competencies associated with intended learning outcomes;
   b)   evaluates participants' accomplishment of the intended learning outcomes; and
   c)   awards a certificate only to those participants who meet the performance, proficiency, or passing standard for the assessment(s) (hence the term, "assessment-based certificate program").

This standard is NOT intended to cover classes, courses, programs, or events that award only a certificate of attendance or participation; nor is it intended to apply to professional or personnel certification programs.

Distinctions Between Assessment-Based Certificates and Certificates of Attendance or Participation

Certificates of attendance or participation are provided to individuals (participants) who have attended or participated in classes, courses, or other education/training programs or events. The certificate awarded at the completion of the program or event signifies that the participant was present and in some cases that the participant actively participated in the program or event. Demonstrating accomplishment of the intended learning outcomes by participants is NOT a requirement for receiving the certificate; thus, possession of a certificate of attendance or participation does not indicate that the intended learning outcomes have been accomplished by the participant. These are key distinctions between a certificate of attendance or participation and an assessment-based certificate program.

Distinctions Between Assessment-Based Certificates and Professional or Personnel Certification Programs

Professional or personnel certification is a voluntary process by which a non-governmental body grants time-limited recognition and use of a credential to individuals who have demonstrated that they have met predetermined and standardized criteria for required knowledge, skills, or competencies. To retain the credential, certificants must meet requirements for renewal. The credential awarded by the certifier denotes that the participant possesses particular knowledge, skills, or competencies.

Whereas the primary focus of an assessment-based certificate program is on the provision of education/training, with assessment(s) being used to confirm that participants have achieved the intended learning outcomes, the primary focus of professional or personnel certification is on assessment. Moreover, the assessment conducted by a certification

program is independent of a specific class, course, or other education/training program and also independent of any provider of classes, courses, or programs. The assessments are NOT designed to evaluate accomplishment of the intended learning outcomes of a specific class, course, or other education/training program or event, and the certifier is NOT the sole provider of any education or training that may be required for certification. Defining features of professional/personnel certification programs which differentiate them from assessment-based certificate programs are the:

a) primary focus on assessment (as opposed to providing education/training);
b) independence of the assessment process from any education/training program or provider; and
c) linkage of the assessment to predetermined standards for knowledge, skills, or competencies, rather than to the learning outcomes of a particular education/training program.

In addition, this standard is not intended to cover quality guidelines for the issuance of continuing education units or other similar type programs; these types of programs are already covered under standards and guidelines such as ANSI/IACET 1 – 2007[1] or the International Learning Unit Guidelines[2].

Purpose

The purpose of this standard is to:

- provide guidance to organizations seeking to develop high-quality, assessment-based certificate programs;
- communicate to stakeholders the essential elements of a high-quality, assessment-based certificate program;
- establish requirements which may form the basis for an accreditation process for assessment-based certificate programs; and
- aid stakeholders in gaining a better understanding of the distinctions between assessment-based certificate programs, certificates of attendance or participation, and professional or personnel certification programs.

Structure of the Standard

The standard is organized in seven sections:

- Organizational Structure, Resources, and Responsibilities to Stakeholders;
- Conduct and Oversight of Certificate Program Activities;
- Management of Program Records, Documents, and Materials;
- Quality Assurance and Program Evaluation;
- Development, Delivery, and Maintenance of Education/Training;
- Development, Conduct, and Evaluation of Assessments; and
- Issuance and Use of Certificates.

---

[1] The ANSI/IACET 1-2007 Standard for Continuing Education and Training is a valuable document with detailed guidance for all providers of continuing education and training. It provides a descriptive framework to assist organizations in adhering to quality practices for all types of continuing education and training programs. The Standard is available from the International Association for Continuing Education and Training, 1760 Old Meadow Rd., Suite 500, McLean, VA 22102.

[2] The Learning Unit (© LERN), or International Learning Unit- ILU (© LERN) is an outcome based measurement of learning designed for lifelong learning activities. The Guidelines are available from LERN, P.O. Box 9, River Falls, WI 54022, E-mail: info@lern.org, website: http://www.learningunit.org

Types of Assessment-Based Certificate Programs and Providers

Content and Design of Program

Assessment-based certificate programs may provide education/training and assessment relevant to any type of knowledge, skills, or competencies, whether related to occupational and professional roles or to general interest or leisure (e.g., first aid, sailing). Both instructor led and non-instructor led (e.g., independent study) programs are included in this standard.

Providers of Programs

A wide variety of entities offer assessment-based certificate programs. These entities include, but are not limited to, the following:

- academic institutions;
- for-profit education and training providers;
- professional and trade associations;
- charitable organizations;
- employers; and
- governmental bodies.

Assessment Methods Used by Assessment-Based Certificate Providers

This standard recognizes the diverse methods used by assessment-based certificate providers to evaluate participants' accomplishment of intended learning outcomes. In doing so, it supports the efforts of assessment-based certificate providers to align their assessment(s) with the varied needs of their stakeholders and the wide array of potential learning outcomes which may be identified for the program.

Examples of assessment methods that may be used include:

- observation of a participant demonstrating knowledge, skills, and/or competencies (e.g., performing a hands-on demonstration, delivering a presentation);
- evaluation of a product (e.g., an assembled automobile engine, a financial report);
- evaluation of a portfolio (e.g., a collection of evidence consisting of a videotaped class, a description of teaching methods used and their purpose, and examples of student work for the purpose of demonstrating a teacher's competencies);
- conduct of an oral examination (e.g., querying a participant about a case study he/she has prepared); and
- conduct of a written examination of any type (e.g., short answer, essay, multiple choice).

Although both formative and summative assessments may be used in an assessment-based certificate program, the assessment requirements in this standard pertain only to summative assessments. Formative assessments are not subject to these requirements.

Provisions for High-Stakes, Assessment-Based Certificate Programs

Some assessment-based certificate programs may be high stakes in nature (i.e., they may be required for regulatory purposes or for hiring, promotion, and other key employment-related outcomes, such as hospital privileging for physicians). In one instance, the requirements of this standard differ for high-stakes vs. mid- or low-stakes certificate programs. It is important to note that for purposes of this standard, the level of stakes for

an assessment-based certificate program is defined by the statements made by the provider about the purpose of the program and the claims it makes about the uses of the certificate.

It is conceivable that although a provider may not have designed or promoted its assessment-based certificate program as appropriate for high stakes use, the market or a particular stakeholder group may treat it as such. Under this standard, such a program would NOT be considered high stakes, as the certificate is being used for purposes other than those defined by the provider, and it would not be appropriate to hold the provider responsible for uses it has not sanctioned.

Development of the Standard

Established in 1977, the Institute for Credentialing Excellence (ICE) is dedicated to promoting excellence in credentialing worldwide. It is the leader in setting quality standards for credentialing organizations and through its division, the National Commission for Certifying Agencies (NCCA), has provided more than 30 years of accrediting services to the credentialing industry. ICE is accredited by the American National Standards Institute (ANSI) as a developer of American National Standards.

The ICE Board of Directors recognized that assessment-based certificate programs, through the instruction and training they provide, play a valuable role in helping individuals to attain occupational or professional competence and thus, relate to ICE's mission of promoting excellence in credentialing. Furthermore, the Board noted that assessment-based certificate programs have some functions in common with professional or personnel certification, namely, identifying and evaluating the knowledge, skills, and competencies requisite to effectively performing occupational and professional roles. In January 2007, it established a Certificate Task Force, comprising ICE members and other key parties, to:

- identify characteristics of quality certification and assessment-based certificate programs;
- outline the distinguishing features of each; and
- explore what ICE's future role might be with respect to assessment-based certificate programs.

This effort resulted in the publication of a document entitled, *Defining Features of Quality Certification and Assessment-Based Certificate Programs*, which highlights the similarities and differences between the two types of programs.

Based on the recommendations of the Certificate Task Force, the ICE Board established the Main Committee for Assessment-Based Certificate Programs in January 2008. The charge of this committee was to develop a national standard for assessment-based certificate programs.

The 41-member Main Committee included representatives from the following key stakeholder groups:

- providers (organizations that provide assessment-based certificates);
- users (individuals or organizations that use assessment-based certificate programs in some capacity, such as individuals who participate in such programs, employers, public advocacy organizations, accrediting bodies, and organizations that award continuing education credit);

- government (any government agency having jurisdiction over assessment-based certificate programs or which uses assessment-based certificate programs in some capacity); and
- general interest (an individual or organization directly impacted by certificate programs, e.g., consultants or vendors who provide services to the certificate industry, but do not fall under any other category).

Thanks to the following organizations for helping to support this project by providing staff to serve on the Main Committee:

Alberta College of Paramedics
The American College
American Academy of Personal Training
American Hospital Association Certification Center
American Institutes for Research
American Nurses Credentialing Center
APICS – The Association for Operations Management
ASAE & The Center for Association Leadership
CASTLE Worldwide, Inc.
Cisco Systems, Inc.
Competency and Credentialing Institute
Consulting Measurement Group
Defense Acquisition University
Dental Assisting National Board
Global Skills X-change
Hale Associates
Healthcare Information and Management Systems Society
HumRRO
International Society for Performance Improvement
J. Garza Consulting & Associates
Knapp & Associates International, Inc.
Learning Resources Network
Lamaze International
LERN
Microsoft Corporation
Motorola
National Board for Certification in Occupational Therapy
National Strength and Conditioning Association Certification Commission
NSF International, The Public Health and Safety Company
Oncology Nursing Society
Practice Transformation Institute
PSI Services, LLC
Seacrest Company
Security University
Society for Human Resource Management
Society of Manufacturing Engineers
Training Education Management
U.S. Department of Defense
U.S. Department of Homeland Security, Federal Emergency Management Agency
U.S. Green Building Council
U.S. Office of Personnel Management
The Wharton School of the University of Pennsylvania

The Main Committee met in February 2008 to identify the essential elements of quality for assessment-based certificate programs. Three working groups were subsequently formed to discuss the essential elements further and develop specific requirements pertaining to these elements. These groups were: the Administration Working Group, focusing on program administration, quality management, and program evaluation; the Educational/Training Working Group, focusing on the content, design, and delivery of the education/training; and the Assessment Working Group, focusing on the design, conduct, and evaluation/scoring of assessment methods. Each working group consisted of 10 to 13 individuals from the Main Committee, as well as stakeholder representatives not serving on the committee. The groups were convened on an ongoing basis from March through June 2008 to develop the draft standard.

In July 2008, the preliminary draft standard was published on the ICE website, along with an invitation to all interested parties to participate in a series of web conferences with the Main Committee to review and discuss the standard. Participating in the web conferences were the Main Committee members and other stakeholder representatives. This open review process was completed on July 29, 2008. A second open review period for the standard was initiated on September 11, 2008 and completed on October 10, 2008. On September 26, 2008, the Main Committee approved the draft standard by affirmative ballot. The ANSI public review period was completed on December 29, 2008 and the Standard was approved as an American National Standard on March 25, 2009.

The following is a normative part of the Standard

1 Scope

This standard pertains to assessment-based certificate programs. An assessment-based certificate program is a non-degree granting program that:

a) provides instruction and training to aid participants in acquiring specific knowledge, skills, and/or competencies associated with intended learning outcomes;
b) evaluates participants' accomplishment of the intended learning outcomes; and
c) awards a certificate only to those participants who meet the performance, proficiency, or passing standard for the assessment(s) (hence the term, "assessment-based certificate program").

This standard is NOT intended to cover classes, courses, programs, or events that award only a certificate of attendance or participation; nor is it intended to apply to professional or personnel certification programs.

2 Organizational Structure, Resources, and Responsibilities to Stakeholders

The certificate provider shall be structured so as to give stakeholders confidence in its competence and integrity and shall publish all essential information related to the assessment-based certificate program (hereinafter referred to as certificate program) to ensure that stakeholders understand its purpose, scope, and requirements.

Structure and Resources

2.1   The certificate provider shall be a recognized legal entity.

2.2   The certificate provider shall have the financial resources necessary to carry out its operations capably and support an effective certificate program.

Responsibilities to Stakeholders

2.3   The certificate provider shall define policies and procedures for the operation of the assessment-based certificate program and for the development and delivery of the education/training and assessment(s) that constitute(s) the certificate program. These policies and procedures shall specify the:

a) qualifications required of all individuals involved in the development and delivery of the education/training and assessment(s);
b) procedures used to develop and update the education/training;
c) methods for delivering the education/training;
d) procedures used to develop and update the assessment(s);
e) methods for conducting the assessment(s);
f) types of assessment used and procedures for evaluating or scoring participants' performance on the assessment(s); and
g) type of feedback provided to participants.

2.4   The certificate provider shall publish:

   a)   the purpose and scope of the certificate program;
   b)   the target audience for the certificate program;
   c)   prerequisites (if any);
   d)   a description of the education/training provided and the intended learning
           outcomes;
   e)   a brief description of the assessments, including an overview of how they are
           developed and validated, how participant performance on the assessment(s) is
           (are) evaluated/scored, the valid uses of the assessment results, and the
           percentage of participants who meet the performance, proficiency, or passing
           standard for the assessment;
   f)   the qualifications of the facilitators/instructors and assessment developers;
   g)   the requirements (if any) for renewing the certificate; and
   h)   any changes in program requirements and the effective date of the changes.

2.5   The certificate provider shall publish and provide to certificate holders a statement
        explaining what inferences can properly be made regarding individuals who hold the
        certificate. These inferences shall be consistent with the stated purpose of the certificate
        and the assessment(s) and also other information the certificate provider makes public
        about the certificate and the assessment(s).

2.6   The certificate provider shall define policies and procedures for the resolution of
        complaints and/or appeals received from participants and other parties.

2.7   The certificate provider shall publish policies and procedures to be followed in the event
        that a participant misrepresents his/her identity or eligibility status, gives or receives
        unauthorized assistance on the assessment, or engages in other violations of established
        policies.

2.8   The policies and procedures of the certificate provider and their implementation shall be
        fair and equitable to participants and shall comply with all applicable regulations and
        statutory requirements. The certificate provider shall not impede or inhibit access by
        participants, except as provided for in this Standard.

3   Conduct and Oversight of Certificate Program Activities

**The certificate provider is responsible for all activities performed on its behalf and shall
ensure these activities are performed properly by qualified individuals.**

3.1   The certificate provider is responsible for monitoring, assessing, and assuring the quality
        of all activities performed on its behalf in accordance with documented procedure. This
        responsibility includes activities performed by employees, committees, contractors,
        and/or other individuals.

3.2   The certificate provider shall employ or contract a sufficient number of people with the
        necessary education, training, technical knowledge, and experience to perform functions
        relating to the type, range, and volume of work performed, under a responsible
        management.

3.3   The certificate provider shall use subject matter experts and qualified individuals in the
        development, delivery, and maintenance of the certificate program. The required

qualifications, credentials, skills, and/or competencies for these individuals shall be defined and documented by the certificate provider.

3.4 The certificate provider shall retain sole responsibility for defining the:

a) purpose and scope of the certificate program; and
b) criteria (e.g., prerequisites, performance, proficiency, or passing standard) for successful completion of the certificate program.

4. Management of Program Records, Documents, and Materials

The certificate provider shall maintain orderly and accurate records, documents, and/or other materials and manage them in a responsible manner.

Record and/or Document System

4.1 The certificate provider shall identify the title(s) of the person(s) responsible for maintaining and disposing of program records, documents, and/or materials.

4.2 The certificate provider shall maintain a record system that is appropriate to its particular circumstances and in compliance with relevant regulations. The records, documents, and/or other materials maintained shall include:

a) a listing of all individuals who are currently participating in but have not yet successfully completed the program, including their status and the requirements met to date;
b) a listing of all participants who have been awarded a certificate and the date that the certificate was awarded;
c) the performance of participants on the assessment(s) and the related performance, proficiency, or passing standard for the assessment(s); and
d) the effectiveness of the assessments [e.g., information describing key measurement characteristics, such as difficulty, and reliability, as appropriate to the type and nature of the assessment(s)].

4.3 The certificate provider shall have procedures in place for reviewing, approving, updating, and ensuring the currency of records, documents, and/or other materials.

4.4 The records, documents, and/or other materials shall be identified, managed, and disposed of in such a way as to ensure the integrity of the certificate program and the confidentiality of the information, as appropriate. The records, documents, and/or other materials shall be kept for a reasonable period of time, as stated in policy and/or as required by relevant bodies, or by contractual, legal, or other obligations.

Confidentiality and Security of Records, Documents, and/or Other Materials

4.5 All personal and financial information pertaining to participants (e.g., date of birth, social security number, credit card number, assessment results) shall be maintained in a secure manner by the certificate provider and/or its contractors, as required by applicable laws.

4.6 All assessment materials, data, and results shall be maintained and handled in a secure manner by the certificate provider and/or its contractors throughout their useful life.

4.7 The certificate provider shall state what information must be treated as confidential and the conditions under which such information may be disclosed to parties other than the organization or individual from whom the information was obtained. Participants shall be informed of all these conditions prior to entering the certificate program. Confidentiality shall be maintained in accordance with documented guidelines and applicable laws by all individuals working for the certificate provider, including external bodies or individuals acting on its behalf.

5 Quality Assurance and Program Evaluation

The certificate provider shall set quality standards for the certificate program and shall evaluate the program using these standards.

Quality Assurance

5.1 The certificate provider shall have a documented quality assurance procedure in place for all administrative, educational/training, and assessment processes. The quality assurance procedure shall specify the:

a) quality criteria for operational procedures and the products and services offered by the certificate provider;
b) procedures used to ensure that the quality criteria are met;
c) procedures for identifying products, services, and/or processes that do not conform to quality criteria;
d) procedures for correcting identified deficiencies;
e) procedures for evaluating the effectiveness of corrective actions; and
f) title of the person responsible for managing the quality assurance procedure.

Program Evaluation

5.2 All components of the certificate program shall be reviewed periodically (at least annually) by subject matter experts and other qualified individuals to ensure that the:

a) content of the education/training and assessment(s) is current and accurate;
b) design and delivery of the education/training are consistent with generally accepted instructional design principles and appropriate for the intended learning outcomes; and
c) development of the assessment(s) and the evaluation/scoring of participant performance on the assessment(s) are consistent with generally accepted measurement principles and appropriate for assessing accomplishment of the intended learning outcomes.

5.3 The certificate provider shall conduct periodic program evaluations to assess program quality and effectiveness and implement future improvements. At a minimum, program evaluations shall include the evaluation of the:

a) participants' performance and their accomplishment of the intended learning outcomes by the certificate provider;
b) facilitators/instructors by participants and the certificate provider;
c) certificate program [content, design, delivery method, assessment(s)] by facilitators/instructors and certificate providers; and

d)   certificate program [content, design, delivery method, assessment(s)] by participants.

Evaluation of the certificate program by other stakeholders also may be included.

6   Development, Delivery, and Maintenance of Education/Training

The certificate provider shall ensure that the education/training is developed and delivered by qualified individuals and that the content, design, and delivery are suited to the intended learning outcomes and consistent with generally accepted instructional design principles.

Personnel

6.1   The certificate provider shall ensure that the education/training is developed, delivered, and reviewed by subject matter experts and qualified individuals.

6.2   The certificate provider shall document and ensure that facilitators/instructors possess the qualifications and skills to deliver the education/training as designed.

6.3   The certificate provider shall provide facilitators/instructors with feedback on their performance.

Content

6.4   The content of the education/training shall be consistent with the purpose and scope of the certificate program and the intended learning outcomes.

6.5   The intended learning outcomes, content and design of the education/training, delivery method, and assessment(s) shall all be in alignment [i.e., the content, design, and delivery of the education/training shall be appropriate for accomplishing the intended learning outcomes, and the assessment(s) shall be appropriate for assessing participants' accomplishment of the intended learning outcomes].

6.6   The intended learning outcomes and the knowledge, skills, and competencies to be addressed in the education/training shall be determined systematically based on an analysis of the needs of the:

a)   participants;
b)   industry (as appropriate);
c)   consumers (as appropriate); and
d)   other identified stakeholders (as appropriate).

The procedure used to conduct this analysis shall be consistent with the published purpose of the program. The procedure for selecting content for the education/training shall include an analysis of participant and stakeholder needs appropriate to the purpose, scope, and stakes of the certificate program.

6.7   The content of the education/training shall be reviewed periodically (at least annually) to ensure that it remains current and accurate. The certificate provider shall specify the procedures to be used for updating the content as well as the circumstances under which updating should occur.

Design

6.8 The design of the education/training shall be consistent with generally accepted instructional design principles and appropriate for the intended learning outcomes.

6.9 The design of the education/training should be modified as needed to ensure that it incorporates changes in the purpose, scope, or content of the certificate program and reflects current, generally accepted instructional design principles.

Delivery Method

6.10 The certificate provider shall specify the methods for delivery of the education/training (e.g., classroom, online synchronous, online asynchronous). These methods shall enable accomplishment of the intended learning outcomes and be consistent with the purpose and scope of the certificate program.

7   Development, Conduct, and Evaluation of Assessments

The certificate provider shall conduct an assessment of participants' accomplishment of the intended learning outcomes and shall ensure that the procedures used to develop and conduct the assessment(s) **and to evaluate/score participants' performance are consistent with accepted measurement principles and the intended use of the certificate.**

7.1 The certificate provider shall conduct one or more assessments of participants' accomplishment of the intended learning outcomes and the effectiveness of the education/training.

7.2 The assessment(s) shall be appropriate for measuring participants' accomplishment of the intended learning outcomes and consistent with the published purpose of the certificate.

7.3 The certificate provider shall adhere to generally accepted measurement principles in the development of the assessment(s) and the evaluation/scoring of participants' performance.

7.4 Individuals who develop or conduct the assessment(s) or who evaluate/score participants' performance shall have the required knowledge and skills for their role.

Validation of the Assessment(s)

7.5 The certificate provider shall employ a procedure to demonstrate that the assessment is valid for its intended purpose. At a minimum, this procedure shall include documentation of the linkage between the assessment and the intended learning outcomes (e.g., a table listing the knowledge, skills, and/or competencies needed for participants to achieve the intended learning outcomes and identifying how the specified knowledge, skills, and/or competencies are covered by the assessment). A job/practice analysis shall be conducted for high-stakes certificate programs when their scope is sufficiently broad to support such a study.

7.6 The certificate provider shall ensure that the assessment is revised as necessary to reflect changes in the scope or purpose of the program (e.g., changes in the intended learning outcomes, changes in the education/training).

Conducting the Assessment(s)

7.7   The certificate provider shall specify how the assessment(s) shall be conducted. These specifications shall ensure comparability in the environments in which the assessment occurs and permit participants to exert their best effort. Specifications shall address the:

   a)   conditions of the environments in which the assessment(s) take(s) place (e.g., type of setting);
   b)   method(s) of conducting the assessment(s) (e.g., face to face, computer, paper and pencil);
   c)   qualifications required of individuals conducting the assessment(s) (e.g., facilitators/instructors, proctors, raters);
   d)   materials and equipment needed to conduct the assessment(s);
   e)   instructions to participants;
   f)   time allotted for conducting the assessment(s); and
   g)   level of security required to be consistent with the intended purpose of the certificate.

Evaluation/Scoring of Participant Performance

7.8   The certificate provider shall identify a performance, proficiency, or passing standard for the assessment(s) which participants must achieve in order to be awarded the certificate. The certificate provider shall use a generally accepted method for setting the performance, proficiency, or passing standard. This method shall:

   a)   link the performance, proficiency, or passing standard to the expected performance of a participant who has achieved the intended learning outcomes; and
   b)   be consistent with the nature and intended use of the assessment.

7.9   The certificate provider shall document the rules, methods, and/or rubrics for evaluating and/or scoring participant performance on all types of assessment (both objectively and subjectively evaluated/scored assessments).

7.10   For subjectively evaluated/scored assessment(s) (e.g., essays, work products, portfolios, demonstrations, presentations), the certificate provider shall:

   a)   supply raters with rating or scoring scales, performance evaluation checklists, rubrics, and/or other appropriate guidelines to be used to evaluate participant performance;
   b)   train raters in the use of the rating or scoring scales, performance evaluation checklists, rubrics, and/or other appropriate guidelines;
   c)   establish procedure(s) by which raters can be calibrated periodically (if multiple raters are used);
   d)   conduct analyses of the consistency and/or agreement in the raters' evaluation/scoring as appropriate for the type of assessment and its intended use; and
   e)   establish procedure(s) by which significant differences between raters can be discussed and/or remedied (if applicable).

7.11   The certificate provider shall ensure the comparability of different forms (versions) of the same assessment with respect to content coverage and overall difficulty (e.g., the questions on two comparable versions of a written examination should cover the same knowledge areas and be of the same overall difficulty).

<u>Reporting and Interpretation of Assessment Results</u>

7.12   The certificate provider shall report the results of the assessment(s) to participants in a consistent format that is appropriate to the type of assessment. At a minimum, participants shall be informed as to whether they have accomplished the intended learning outcomes. A report of participants' relative strengths and weaknesses also may be provided.

7.13   The certificate provider shall prepare reports of assessment results in aggregate form (e.g., results based on the performance of an entire class) to support program evaluation and address other stakeholder interests.

7.14   The certificate provider shall supply participants and stakeholders with guidance on interpreting and using the results of the assessment(s), including what inferences can appropriately be drawn from the results.

<u>Evaluation of the Effectiveness of the Assessment(s)</u>

7.15   The certificate provider shall assess the effectiveness of the assessment(s) on a regular basis to ensure ongoing utility for measuring participants' accomplishment of the intended learning outcomes. This procedure may include the collection of data pertaining to the:

a)   overall difficulty of the assessment(s) (e.g., the percentage of participants who achieve a satisfactory performance on a hands-on demonstration) or of individual items or components of an assessment (e.g., the percentage of participants who answer a multiple-choice question correctly); and

b)   measurement precision of the assessment(s), that is, the degree to which the results obtained are free from measurement error (e.g., a measure of inter-rater agreement on the assessment of a product produced by a participant).

8   Issuance and Use of Certificates

A certificate shall be issued only in accordance with documented requirements and procedures, and certificate holders shall be informed of the proper uses of the certificate.

<u>Issuance of Certificate</u>

8.1   The certificate provider shall identify the requirements and procedures for granting the certificate.

8.2   The certificate provider shall confine its requirements to those matters specifically related to the purpose and scope of the certificate program.

8.3   The decision to issue a certificate shall be made by the certificate provider based solely on the information gathered by the certificate provider (i.e., application, education/training, assessment).

8.4   The certificate may take the form of a letter, card, or other medium, signed or authorized by a designated representative of the certificate provider.

8.5 The certificate document shall contain the following information:

      a)   name of the certificate holder;
      b)   name of the certificate provider;
      c)   scope of the certificate (and title of certificate, if appropriate); and
      d)   date on which the certificate was awarded.

8.6 The certificate provider shall have a confirmation procedure in place by which the status of certificate holders can be verified.

8.7 A certificate holder is generally not required to engage in activities to maintain the certificate; however, in some cases, providers may require additional education/training and/or assessment(s) for this purpose. When certificate maintenance is required, the maintenance procedure shall be fair and reasonable, and the requirements shall be confined to those matters specifically related to the purpose and scope of the certificate program.

8.8 The certificate provider shall have a policy stating that it maintains the right to recall or nullify the certificate document in the event certificate holders have violated program requirements or policies. The certificate provider shall maintain sole ownership of the certificate document.

Use of the Certificate

8.9 The certificate provider shall not award an acronym or letters to certificate holders for use after their names upon completion of the certificate program.

8.10 The certificate provider shall publish and provide to certificate holders a statement defining the appropriate ways in which to reference the certificate. This statement shall specify that certificate holders:

      a)   may state that they hold a "Certificate in …."
      b)   shall not say that they are "Certified in …"
      c)   shall not use acronyms or letters after their names to reference the certificate they hold.

8.11 The certificate provider shall publish and provide to certificate holders a statement defining the purpose and scope of the certificate. This statement shall specify that certificate holders shall not make:

      a)   claims or imply that the certificate is a professional certification or that its purpose and scope are beyond that specified by the certificate provider; or
      b)   any other statement regarding the certificate which the certificate provider may consider misleading or unauthorized.

Annex 1: Terms and Definitions
(This Annex is Normative and Part of the Standard)

appeal
A request by a participant or certificate holder for reconsideration of any a decision made by the certificate provider related to her/his status as a certificate holder.

assessment
An instrument or protocol designed to measure the knowledge, skill, and/or competencies associated with the accomplishment of the intended learning outcomes. Assessments may be written, oral, practical or observational and may be used prior to, during, and at the end of education/training.

assessment-based certificate
A non-degree granting program that provides instruction and training to aid participants in acquiring knowledge, skill, and/or competencies associated with intended learning outcomes; evaluates participants' accomplishment of the intended learning outcomes; and awards a certificate only to those participants who meet the performance, proficiency, or passing standard for the assessment(s).

certificate holder
An individual who has successfully completed an assessment-based certificate program and been awarded a certificate.

certificate of attendance (certificate of participation)
Certificates of attendance or participation are provided to individuals (participants) who have attended or participated in a class, course, or other education/training program or event. The certificate awarded at the completion of the program or event signifies that the participant was present and in some cases that the participant actively participated in the program or event.

certificate maintenance
A system of requirements and procedures with which certificate holders must comply in order to keep a certificate.

certificate provider
An entity that conducts or sponsors education/training and an end-of-program assessment for the purpose of awarding a certificate.

certification
A voluntary process by which a non-governmental body grants time-limited recognition and use of a credential to individuals who have demonstrated that they have met predetermined and standardized criteria for required knowledge, skills, or competencies. To retain the credential, certificants must meet requirements for renewal. The credential awarded by the certifier denotes that the participant possesses particular knowledge, skills, or competencies.

complaint
A request (other than an appeal) by any organization or individual to a certificate provider, for corrective action relating to the activities of that provider or to those of any of its customers.

criterion-reference
An approach to establishing the performance, proficiency, or passing standard for an assessment

in which subject matter experts first define how participants who have accomplished the intended learning outcomes would be expected to perform (e.g., the proficiency category they would achieve, the number of points they would earn) and then set a required level of performance on the assessment which is consistent with this definition.

documentation
The collection and preservation of evidence that requirements have been met. Documentation is necessary for many aspects of assessment-based certificate programs (e.g., prerequisites, qualifications of subject matter experts, measurement quality of assessments).

facilitator/instructor
A knowledgeable individual or other qualified person who articulates the intended learning outcomes and enables accomplishment of the intended learning outcomes of the certificate program.

formative assessment
An assessment that is employed as part of and during the delivery of education/training in order to inform participants and facilitators/instructors about their progress in accomplishing the intended learning outcomes.

high-stakes assessment-based certificate program
An assessment-based certificate program that is promoted by the certificate provider as being appropriate for regulatory purposes or for decision making related to hiring, promotion, and other key employment-related outcomes, such as hospital privileging for physicians.

inference
The conclusion that one draws on the basis of available evidence (e.g., certificate holders are knowledgeable about a specified topic, the results of an assessment represent the level of skill a person possesses).

instructional design principles
Rules, standards, and practices pertaining to the design, delivery, and evaluation of education/training that facilitates accomplishment of intended learning outcomes related to defined knowledge, skill, competencies, and other constructs. Generally accepted instructional design principles are defined in professional literature and standards.

intended learning outcome
A statement that identifies what a learner is expected to know, understand, or do as a result of completing an assessment-based certificate program successfully.

interrater agreement
Any of several calculations that describe the degree to which there is concurrence between or among the individuals responsible for evaluating/scoring participant performance on subjectively evaluated/scored assessments.

interrater reliability
Any of several calculations that describe the consistency in evaluations/scores based on the observation(s) of raters during the evaluation/scoring of subjectively evaluated/scored assessments.

measurement principles
Rules, standards, and practices pertaining to assessing knowledge, skill, competencies, and/or other constructs in a manner that supports the inferences to be made. Generally accepted

measurement principles are defined in professional literature and standards (e.g., *Standards for Educational and Psychological Testing*).

objectively scored assessment
A type of scoring rule in which responses to questions or problems on an assessment are deemed as correct or incorrect using a pre-established answer key.

participant
An individual who is enrolled as a learner, student, trainee, etc., in an assessment-based certificate program.

performance, proficiency, or passing standard
A specific level of performance, proficiency category, or score which must be achieved by a participant to successfully complete an assessment. Performance, proficiency, or passing standards are established using methods that are defined in generally accepted measurement principles.

program evaluation
A process through which a variety of data are collected and analyzed for the purpose of determining the effectiveness of an assessment-based certificate program.

quality assurance process
An ongoing activity that informs the individuals responsible for managing an assessment-based certificate program whether a process or activity meets expectations or predefined quality standards. Quality assurance activities are executed on all development processes to help maintain an expected level of effectiveness.

quality standards
Criteria addressing the design, development, delivery, and evaluation of assessment-based certificate programs to ensure that the program components are suited for their purpose and function correctly.

rater
A subject matter expert who has been trained in the use of rubrics and rules to evaluate/score the response of participants on one or more subjectively evaluated questions, problems, demonstrations, work products, etc.

reliability
The degree to which the results of an assessment are free of measurement error.

rubric
The criteria (often called scoring rules) used to guide the evaluation or rating of responses and the emphasis each component has in determining participants' proficiency, with the desired result that responses will be determined as correct, proficient, or successful and weighted in a standardized manner. Scoring rules are part of the implementation of a standardized scoring scale.

scope of certificate
The inferences about participants' knowledge, skill, and/or competencies that can be justified based on the education/training provided and their performance on the assessment.

scoring rules
The criteria (often called a rubric) used to guide the evaluation or rating of responses and the emphasis each component has in determining participants' proficiency, with the desired result

that responses will be determined as correct, proficient, or successful and weighted in a standardized manner. Scoring rules are part of the implementation of a standardized scoring scale.

stakeholders
The various groups with an interest in the quality, governance, and operation of a certificate program, such as the public, participants, certificate holders, employers, customers, clients, and third party payers.

stakes
The degree to which inferences and/or other decisions have significant consequences for the stakeholders in an assessment-based certificate program. High stakes are associated with substantial potential for adverse consequences for the public, clients, patients, etc. Programs may also be high stakes when participants' careers hinge on their success in accomplishing the intended learning outcomes of an assessment-based certificate program.

standardized scoring scale
A clearly defined system for assigning numerical value, proficiency category, etc., to responses on an assessment in order to achieve a structure that places all evaluations/scores on the same distribution and permits comparison among evaluations/scores.

subject matter expert (SME)
An individual who, by virtue of position, education, training, and/or experience, is expected to have greater-than-normal expertise or insight relative to a particular technical or operational discipline, system, or process, and who has been selected or appointed to participate in the development, verification, validation, delivery or evaluation of a course of education/training or an assessment.

subjectively evaluated/scored assessment
A type of evaluation/scoring system in which responses to questions, problems, demonstrations, work products, etc., on an assessment are deemed as correct or incorrect, acceptable or not acceptable, etc. using pre-established rubrics or scoring rules that involve subject matter expertise.

summative assessment
An assessment that is employed as an end-of-program measure of participants' accomplishment of intended learning outcomes in an assessment-based certificate program.

validity
The degree to which accumulated evidence supports specific interpretations of all components of an assessment-based certificate program (e.g., prerequisites, assessment).

validation
The accumulation of evidence to support the argument that the results of an assessment are useful for intended inferences.