BSR/ICE 1100-201x, ICE 1100-201x - Standard for Assessment-Based Certificate Programs (revision and redesignation of ANSI/NOCA 1100-2009)

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) issues 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.

As used within this Standard, the terms "program" or “certificate program” refer to an assessment-based certificate program.

2 Organizational Structure, Responsibilities, and Resources

The certificate provider shall have the appropriate expertise, resources, and organizational structure to offer and maintain a program that meets or exceeds the requirements of this Standard.

Structure and Responsibilities

2.1 The certificate provider shall be a recognized legal entity or part of a legal entity.

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

a) purpose and scope of the program;

b) prerequisites required to participate; and

c) criteria for successful completion of the program (e.g., completion of the education/training; meeting the performance, proficiency, or passing standard).

2.3 The certificate provider shall have sole authority to issue a certificate based only on information supplied by the participant and his or her achievement (i.e., application, education/training, assessment[s]).

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

Resources

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

2.6 The certificate provider shall contract with or employ a sufficient number of individuals necessary for the operational management of the program. The required qualifications, credentials, skills, and competencies for such individuals and their responsibilities relating to the program shall be specific and documented by the certificate provider.
2.7 The certificate provider shall use subject-matter experts (SMEs) and qualified individuals for the design, development, delivery, and maintenance of the certificate program content and assessment(s). The required qualifications, credentials, skills, and/or competencies for these individuals and their responsibilities relating to the program shall be specified and documented by the certificate provider.

2.8 The certificate provider is responsible for monitoring, assessing, and assuring the quality of all activities performed on its behalf in accordance with documented procedures. This responsibility includes evaluation of activities performed by employees, committees, contractors, and/or other individuals. The certificate provider shall conduct periodic evaluations to assess the quality and effectiveness of its certificate program and to inform future improvements.

3 Policies and Procedures

The certificate provider is responsible for defining, documenting, and maintaining policies and procedures that conform to this Standard and that are made accessible to program participants and other stakeholders, as required for the specific program.

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

a) qualifications required of all employees, committees, contractors, and/or individuals involved in the development, delivery, and ongoing maintenance of the education/training and assessment(s);

b) procedures used to develop and maintain the education/training;

c) methods used to deliver the education/training;

d) procedures used to develop and maintain assessment(s);

e) methods used to conduct assessment(s);

f) types of assessment(s) and procedures used to evaluate or score participants' performance on the assessment(s);

g) types of feedback provided to participants; and

h) documented quality assurance procedures, to include processes to correct identified deficiencies.

3.2 The certificate provider shall make publicly available:

a) the purpose and scope of the program;

b) the target audience for the program;

c) eligibility requirements and prerequisites;

d) a description of the education/training provided and the intended learning outcomes;

e) a brief description of the assessment(s), including an overview of how they are developed and validated, the process for developing and gathering validity evidence for the assessment(s); how a participant’s performance on the assessment(s) is evaluated/scored; the valid uses of the assessment(s) results; and the percentage of participants who meet the performance, proficiency, and/or passing standard for the assessment(s) on an annual basis;

f) the qualifications of the facilitators/instructors and SMEs involved in content development;

g) the rationale for certificate expiration date and the specific time period for which the certificate is valid (if applicable);

h) any changes in program requirements and the effective date of the changes;

i) 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 any other information the certificate provider makes public about the certificate and the assessment(s). The certificate provider shall not claim, state, or imply that the program is a professional certification; and
j) policies and procedures for the resolution of complaints or appeals received from participants or
other parties.

3.3 The certificate provider shall establish procedures and make publicly available policies to be
followed in the event that a participant:
a) misrepresents his/her identity or eligibility status;
b) gives or receives unauthorized assistance on the assessment(s);
c) claims, states, or implies that the certificate is a professional certification or that its purpose
and scope are beyond that specified by the certificate provider; or
d) engages in other violations of established policies.

3.4 The certificate provider's policies and procedures of the certificate provider, including their
implementation, shall be fair and equitable to eligible applicants and participants, in both
substance and implementation. The certificate provider must comply in compliance with all
applicable legal requirements, including in providing access. The certificate provider shall not
deny access to applicants and participants who meet the eligibility criteria.

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.

4.1 The certificate provider shall delineate the process for identifying the title(s) of the individuals
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 the scope and stakes
of its program and in compliance with legal requirements. 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 education/training and/or assessment(s), including status and
requirements met to date;
b) a listing of all participants who have been issued a certificate; the date that the certificate
was issued, and (if applicable) for how long the certificate is valid;
c) the individual 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 [e.g., difficulty and reliability] as appropriate to the assessment type and
nature).

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

4.4 The certificate provider shall identify, manage, and dispose of records, documents, and/or other
materials in a manner that ensures the integrity of the program and the confidentiality of its
information. The records, documents, and/or other materials shall be kept for a reasonable period
of time, as stated in program policy; as required by relevant bodies; or as required by contractual,
legal, or other obligations.

Confidentiality and Security of Records, Documents, Data and/or Other Materials
4.5 The certificate provider and/or its contractors shall maintain all personal and financial information pertaining to participants (e.g., date of birth, social security number, credit card number, assessment(s) results) in a manner that is secure and, at a minimum, complies with applicable laws.

4.6 The certificate provider and/or its contractors shall maintain all learning and assessment(s) materials, data, and results in a secure manner throughout their useful life. Measures shall be in place to ensure the ongoing confidentiality, integrity, availability, and resilience of the processing systems used to store such materials, data, and results. The certificate provider shall have policies and procedures in place to notify stakeholders promptly in the event of a data breach.

4.7 The certificate provider shall state which program and/or participant 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 conditions for information disclosure prior to entering the program. Confidentiality shall be maintained in accordance with documented guidelines and applicable laws by all individuals working for or on behalf of the certificate provider.

5 Development, Delivery, and Maintenance of Education/Training

The certificate provider shall ensure that the education/training is designed, developed, delivered, and evaluated by qualified individuals in a manner that is appropriate to the intended learning outcomes, consistent with generally accepted instructional design principles, and based on a needs analysis.

Needs Analysis

5.1 The certificate provider shall have a process for conducting a structured needs analysis that guides the development of learning outcomes and learning design.

5.2 The procedure used to conduct the needs analysis shall be consistent with the stated purpose and scope of the program. The procedure should include qualified participants and stakeholders knowledgeable about the intention, use, purpose, scope, and stakes of the certificate program.

5.3 The educational/training content, intended learning outcomes, and assessment(s) shall be based on the needs analysis of stakeholders.

Design

5.4 The certificate provider shall ensure that the intended learning outcomes, content, delivery, and assessment(s) methods align with the needs analysis and the program’s scope and intended use of the certificate.

5.5 The education/training shall employ generally accepted instructional design methods that are relevant to the content, audience, and delivery method.

Development

5.6 The creation and/or selection of educational/training content and materials shall effectively address the results of the needs analysis.

5.7 The certificate provider shall ensure that the education/training follows instructional design principles and is developed by qualified individuals, which should include SMEs, and follows instructional design principles.
Implementation

5.8 The certificate provider shall deliver the education/training as designed. The delivery shall enable participants to accomplish the intended learning outcomes and shall be consistent with the purpose and scope of the program.

5.9 For instructor-led courses, the certificate provider shall ensure that the education/training is delivered by qualified facilitators/instructors using materials appropriate for delivering the education/training as designed.

Evaluation

5.10 The content of the education/training shall be reviewed periodically (at least annually) by SMEs and qualified individuals to ensure that it remains current and accurate. The intended learning outcomes and content of the education/training shall be modified as needed to ensure that any changes in purpose, scope, or content are incorporated. The certificate provider shall specify the procedures used for updating the content as well as the circumstances under which updating should occur.

5.11 The design and delivery of the education/training should be evaluated periodically (at least annually) by SMEs and qualified individuals. Modifications made shall be based on collected data/feedback to ensure that any changes in the purpose, scope, or content of the program are incorporated and that the current, generally accepted instructional design principles are reflected.

5.12 The certificate provider and program participants shall evaluate and provide feedback on the performance of facilitators/instructors, if applicable.

6 Development, Conduct, and Evaluation of Assessments

The certificate provider shall conduct summative assessment(s) 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 the intended use of the certificate.

Validation of the Content of the Assessment(s)

6.1 The certificate provider shall employ a procedure to demonstrate that the assessment(s) is valid for its intended purpose and shall choose a validation methodology that is appropriate for the stakes of the program and assessment(s). A job or practice analysis that is appropriate for the scope of the program shall be conducted for high stakes programs.

6.2 The certificate provider shall employ a methodology to link the assessment(s) to the intended learning outcomes. The intended learning outcomes—or the knowledge, skills, and/or competencies needed for participants to achieve the intended learning outcomes—must be represented in appropriate proportions on the assessment(s) (i.e., the number of assessment items or points allotted to each intended learning outcome shall be proportional to the depth, breadth, and complexity of each intended learning outcome). Documentation may include a table or document 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(s).
The type of assessment(s), including item types, shall be appropriate for measuring participants’ accomplishment of the intended learning outcomes and consistent with the stated purpose of the program.

The content of the assessment(s) shall be appropriate for measuring participants’ accomplishment of the intended learning outcomes and consistent with the published purpose of the program.

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

Conducting the Assessment(s)

The method for conducting the assessment(s) shall be consistent with the stakes of the program and its stated purpose. The certificate provider shall ensure comparability in the environments in which the assessment(s) occurs. Documentation shall address the following:

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) materials and equipment needed to conduct the assessment(s),
d) instructions to participants,
e) time allotted for conducting the assessment(s), and
f) level of security required to be consistent with the intended purpose of the certificate.

Evaluation and Scoring of Participant Performance

The certificate provider shall identify a performance, proficiency, or passing standard for the assessment(s) that participants must achieve in order to be issued the certificate. The method used for setting the performance, proficiency, or passing standard shall be consistent with the stakes and stated purpose of the certificate. This method shall demonstrate that the performance, proficiency, or passing standard reflects the expected performance of a participant who has achieved the intended learning outcomes. Documentation should identify the number of participants, provide a rationale for the method, and describe any other resources considered.

The certificate provider shall document the methods for evaluating or scoring participants’ performance on all types of assessment(s), whether they are objectively or subjectively evaluated or scored.

For subjectively 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 and report analyses of the consistency and/or agreement in the raters’ evaluation/scoring as appropriate for the type of assessment(s) and its intended use; and
e) establish procedure(s) by which significant differences in scoring among raters can be discussed and/or remedied (if applicable).

The certificate provider shall ensure the comparability of different forms (versions) of the assessment(s) with respect to content coverage and overall difficulty (i.e., the questions on comparable versions of an assessment(s) should cover the same knowledge areas and have the same overall difficulty).
The certificate provider shall report the results of the summative assessment(s) to program participants in a manner that is appropriate for the type of assessment(s) and consistent with the published purpose and stakes of the assessment(s). At a minimum, participants shall be informed as to whether they have passed or failed the assessment(s). If a report of participants’ relative strengths and weaknesses related to accomplishment of the intended learning outcomes (i.e., individually or in subgroups) is provided for remediation purposes, the certificate provider must either be able to demonstrate evidence of subscore reliability or provide participants with interpretive guidance around the limitation of subscores.

The certificate provider shall provide 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.

The certificate provider shall prepare an annual report of assessment(s) results in aggregate form, summarizing the overall results of the performance of an entire class or period of time (e.g., one year) to support program evaluation and address other stakeholder interests. At a minimum, the reporting shall include:

a) the total number of participants who completed the program,
b) the summary statistics for the assessment(s) (e.g., score mean, standard deviation, minimum, and maximum),
c) the percentage of participants who passed the assessment(s), and
d) the minimum score required to pass the assessment(s).

The certificate provider shall evaluate the assessment(s) on a regular basis (at least annually) to ensure ongoing utility for measuring participants’ accomplishment of the intended learning outcomes. This evaluation shall include information related to the difficulty of individual items or components of the assessment(s) (e.g., the percentage of participants who answer an item correctly or who perform a task successfully).

A certificate is issued upon completion of the education/training and successful performance on the assessment(s). A certificate shall be issued only in accordance with documented requirements and procedures. Certificate holders shall be informed of the proper uses of the certificate.

The certificate provider shall identify the requirements and procedures for issuing the certificate. These requirements must state that the certificate provider shall not specify acronyms or letters in reference to the certificate for use after participants’ names.

The certificate may take the form of a letter, card, digital badge, or other medium, and must be signed or authorized by the certificate provider or a designated representative of the certificate provider.

The certificate shall contain the following information:

a) name of the certificate holder,
b) name of the certificate provider,
c) scope of the accomplishment,
d) title of the certificate (if appropriate),
e) date on which the certificate was issued, and
f) date of expiration of the certificate (if applicable).

An expiration date for the certificate may be used but is not mandatory; if an expiration date is used, it must be noted on the certificate.

7.4 The certificate provider shall have a verification procedure in place by which the status of certificate holders can be confirmed by employers and other stakeholders.

7.5 The certificate provider shall have a policy stating that it maintains the right to recall or nullify the certificate in the event any certificate holder has violated program requirements or policies. The certificate provider shall maintain sole ownership of the certificate in whichever format or medium it may take.

Use of Certificates

7.6 The certificate provider shall specify how certificate holders may and may not refer to the certificate. This responsibility includes making publicly available a statement that certificate holders:

a) may state that they hold a "certificate in ....";
b) shall not state that they are "certified in ..."; and
c) shall not use acronyms or letters after their names in reference to the certificate.
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 issues 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 who has been issued 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 issued 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 issuing 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. Also known as professional or personnel certification. Participants who demonstrate that they meet the standards by successfully completing the assessment process are granted a time-limited credential. To retain the credential, certificants must maintain continued competence.

Whereas the focus of an assessment-based certificate program is on education/training, the focus of professional/personnel certification is on the assessment of participants. Additionally, the certification process requires the assessment to be independent of both a specific class, course, or other education/training program and any provider of classes, courses, or programs.
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 that 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
See stakes.

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 by 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.

intrarater 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.

intrarater 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.

item
Questions and/or tasks in examinations to which candidates must respond or perform.
job analysis
Any of several methods used singly or in combination to identify the performance domains and associated tasks, knowledge, and/or skills relating to the purpose of the credential and providing the foundation for program validation. Also known as task or practice analysis, job task analysis, or role delineation study.

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 by professional literature and standards (e.g., Standards for Educational and Psychological Testing).

needs analysis
A method by which one determines the requirements for the program, including needs or expectations of learners and other stakeholders, prior to a learning experience, event, or program.

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 that must be achieved by a participant to successfully complete an assessment. Performance, proficiency, or passing standards are established using methods that are defined by 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.

publicly available
Easily available and accessible, with or without request, to all relevant stakeholders.

quality assurance process
An ongoing activity that informs the individuals responsible for managing an assessment-based certificate program in their evaluation of 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 suitable to their purpose and function.

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.