



Designation: D8403 – 21

Standard Practice for Certificate Programs within the Cannabis and Hemp Industries¹

This standard is issued under the fixed designation D8403; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice provides protocols to certificate issuers for developing and administering certificate programs for stakeholders within the cannabis and hemp industries for determining best practices for administering professional or procedural certificate programs within the industries.

1.2 This practice includes requirements for both the certificate issuer and requirements for the specific certificate programs issuing certificates.

1.3 This practice provides the foundation for recognizing or certificate issuers to issue certificates to individuals after completing a certificate program.

1.4 This practice addresses certificate programs for entities seeking certificates and inclusive of individuals, groups, or organizations and is applicable to training-based certificates for personal development and organizational-related certificates to existing standards or guidelines.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

[D8229 Guide for Corrective Action and Preventive Action](#)

¹ This practice is under the jurisdiction of ASTM Committee D37 on Cannabis and is the direct responsibility of Subcommittee D37.06 on Personnel Training, Assessment, Credentialing.

Current edition approved Nov. 15, 2021. Published December 2021. DOI: 10.1520/D8403-21.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[\(CAPA\) for the Cannabis Industry](#)

[D8308 Practice for Cannabis/Hemp Operation Compliance Audits](#)

[D8270 Terminology Relating to Cannabis](#)

[E2659 Practice for Certificate Programs](#)

2.2 Other Standards:

[ANSI/IACET 1-2019 Standard for Continuing Education and Training](#)

[ANSI/ISO/IEC 17024:2017 Conformity Assessment— General Requirements for Bodies Operating Certification of Person](#)

3. Terminology

3.1 *Definitions*—For definitions relating to cannabis, see Terminology [D8270](#).

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *advisory group, n*—a group responsible for advising certificate program management on creating and maintaining a certificate program that is current, relevant, and valued.

3.2.2 *appeal, n*—a written request made to the certificate issuer for reconsideration of an adverse decision made by the certificate issuer related to the certificate program.

3.2.3 *assessment, n*—an instrument or method used to measure learner attainment of intended learning outcomes (including but not limited to oral or written tests, skill demonstrations, portfolios, or work products).

3.2.4 *body of knowledge (BoK), n*—the prescribed aggregation of knowledge in a particular area an individual is expected to have mastered to be considered or certified as a practitioner.

3.2.5 *certificate, n*—a document (letter, card, or other media) awarded to certificate holders designating the successful completion of a certificate program's requisites.

3.2.6 *certificate holder, n*—an individual issued a certificate after successfully meeting a certificate program's requisites.

3.2.7 *certificate issuer, n*—a legal business entity or government agency, or operating unit thereof that has ultimate responsibility for administering a certificate program and issuing certificates to individuals successfully meeting certificate program requisites.

3.2.8 *certificate program, n*—a non-degree-granting education or training program consisting of (1) a learning event or series of events designed to educate or train entities seeking certificates to achieve specified learning outcomes within a defined scope, and (2) a system designed to ensure entities seeking certificates receive the certificate only after verification of successful completion of all program’s requisites, including but not limited to an assessment of learner attainment of intended learning outcomes.

3.2.9 *certificate program instructional design plan, n*—a document that outlines the certificate issuer’s instructional design model, processes, and implementation plan.

3.2.10 *certificate program management, n*—the individual(s) who establish and review the certificate program activities’ management system.

3.2.11 *certificate program process, n*—all activities by which the certificate issuer establishes that a person fulfills specified requisites to earn the certificate, including but not limited to prerequisites (if applicable), completion of learning events, the learner assessment(s), and the certificate decision.

3.2.12 *certificate program requisites, n*—the certificate program’s specific requirements that certificate holders shall meet before being issued the certificate, including but not limited to the essential elements of the assessment of learner attainment of intended learning outcomes.

3.2.13 *certificate program scope, n*—the specific range of competencies, procedures, actions, or processes covered by a certificate program.

3.2.14 *certificate term, n*—the length of time for which the issued certificate program’s content is considered current and relevant.

3.2.15 *certification, n*—procedure and action by a duly authorized body of determining, verifying, and attesting in writing to the qualifications of individuals, processes, procedures, or items in accordance with applicable requirements.

3.2.16 *complaint, n*—a written request, other than an appeal, made to a certificate issuer for corrective action relating to that issuer’s activities.

3.2.17 *confidentiality, n*—the ability to ensure that information is accessible only to those authorized to have access.

3.2.18 *contractor, n*—an individual or entity external to the certificate issuer that assists in carrying out one or more certificate program activities.

3.2.19 *criterion-referenced assessment, n*—an assessment intended to measure a learner’s performance through items linked to intended learning outcomes to identify those who do, or do not meet a defined performance standard.

3.2.20 *designation, n*—the title or label that a certificate holder is granted to use.

3.2.21 *designation acronym, n*—abbreviated title; usually the acronym form of the designation, which a certificate holder is granted to use.

3.2.22 *digital badge, n*—the visual representation of a credential displayed online, according to the issuing organization’s rules.

3.2.23 *document control, n*—process addressing how documents are created, approved, revised and reapproved, and distributed and how obsolete document use is prevented.

3.2.24 *entities seeking certificates, n*—individuals, groups, or organizations seeking certificates against specific guidances, requirements, or standards.

3.2.25 *formative assessment, n*—assessment of a learner’s progress towards attaining the certificate program’s intended learning outcomes during the learning event(s).

3.2.26 *intended learning outcomes, n*—a statement of what learners are expected to know or be able to do due to the certificate program’s learning event or program (recognizing that actual learning outcomes may or may not be those intended).

3.2.27 *internal audit, n*—first-party review of the certificate issuer’s policies and procedures to ensure adherence to this practice’s requirements.

3.2.28 *learning event, n*—the combination of learning experiences designed to assess a learner’s understanding of content or his/her ability to perform a skill or set of skills that satisfy a set of learning objectives/outcomes.

3.2.28.1 *Discussion*—This event can be accomplished by any media sufficient to achieve the learning outcomes, including but not limited to classroom instruction, distance-learning course, blended-learning activities, conferences, and satellite transmissions.

3.2.29 *learning experience, n*—a single instance of learning obtained during a learning event that demonstrates a specific learning objective or learning outcome. It could include solving a problem, completing a case study, completing a quiz, or applying a skill.

3.2.30 *primary stakeholders, n*—persons, groups, or organizations, or a combination thereof, for which the certificate program is targeted or intended outcomes are directed or both.

3.2.31 *privacy, n*—ability of individuals to control access to themselves or information about themselves and thereby reveal themselves selectively.

3.2.32 *records control, n*—process addressing which and how records are kept, by whom, for how long and how they are disposed.

3.2.33 *stakeholder, n*—any person, group, or organization with interest in or who may be affected by the certificate program.

3.2.34 *summative assessment, n*—an assessment of a learner’s attainment of the certificate program’s intended learning outcomes after the learning event(s).

3.2.35 *training and education industry generally accepted practices, n*—those practices that can be referenced to existing training and education industry published professional literature or standards, or both.

3.2.35.1 *Discussion*—This standard does not prescribe any specific practices. certificate issuers can be assured their practices are generally accepted if they are referenced in

training and education industry published professional literature or standards, or both.

4. Significance and Use

4.1 Certificate programs within the cannabis/hemp industries are offered by community colleges and universities, government agencies, employers, independent for-profit training organizations, and professional and trade associations. With the growth of these industries, an increased need for certificates is expected. While quality guidelines do exist for continuing education and training providers in general (for example, ANSI/IACET 1-2019), and for entities offering personnel certification programs (for example, ANSI/ISO/IEC 17024:2017), currently, no guidelines exist specifically to aid entities offering certificate programs within the cannabis industry. This practice aims to standardize and improve the quality of certificates and has been developed to:

4.1.1 Provide certificate program developers and certificate issuers guidelines for quality program development and administration;

4.1.2 Form the foundation for a recognition or certification system, or both, that enable consumers, employers, government agencies, and others who rely upon a skilled workforce to distinguish between qualified and unqualified workers; and

4.1.3 Assist stakeholders in differentiating between certificate programs from personnel certifications.

4.2 In a certificate program, an individual participates in a learning event or series of events designed to assist him or her in achieving specified learning outcomes within a defined scope; the individual receives a certificate only after verification of successful completion of all program requisites including but not limited to an assessment of learner attainment of intended learning outcomes.

4.3 In contrast, in a certificate program, the learning event(s) and the assessment(s) are both developed and administered by the certificate issuer. There is an essential link between them. The learning event(s) are designed to help participants achieve learning outcomes and the assessments are designed to evaluate the learners' attainment of those intended learning outcomes (Practice E2659).

4.4 Certifications have ongoing requirements for maintaining proficiency and competency and may be revoked for not meeting these ongoing requirements.

5. Requirements for Certificate Issuers

5.1 *Organizational Structure and Administration:*

5.1.1 The certificate issuer shall be structured and administered so that confidence is given to stakeholders of its authority and qualifications to issue certificates within the cannabis industry.

5.1.2 The certificate issuer shall be or reside within a legal business entity or governmental agency.

5.1.3 The certificate issuer shall be a qualified issuer of the certificate. The certificate program's purpose, scope, and intended outcomes shall be consistent with the certificate issuer's stated mission and work.

5.1.4 The certificate issuer shall have a designated authority charged to administer the certificate program and ensure compliance with the practice's provisions.

5.2 *Advisory Group:*

5.2.1 The certificate issuer shall create and sustain an advisory group composed of and representing the interests of the certificate program's primary stakeholders.

5.2.2 The advisory group shall advise certificate program management on issues integral to ensuring the certificate is current, relevant, and valuable to its primary stakeholders.

5.2.3 The advisory group shall have input into:

5.2.3.1 The certificate program,

5.2.3.2 Target audience,

5.2.3.3 Purpose,

5.2.3.4 Scope,

5.2.3.5 Requisites,

5.2.3.6 Certificate term of validity,

5.2.3.7 Intended learning outcomes, and

5.2.3.8 Instructional design plan.

5.2.4 The advisory group shall convene to advise certificate program management when:

5.2.4.1 The elements of 5.2.2 are initially created,

5.2.4.2 Changes are proposed, and

5.2.4.3 A program evaluation is conducted.

5.2.5 *Management System:* —

5.2.5.1 The certificate issuer shall have a management system capable of supporting the consistent achievement of this standard practice's requirements.

5.2.6 *Documentation:*

5.2.6.1 The certificate issuer's certificate program management shall establish and document objectives and policies for its certificate program activities.

5.2.6.2 Policies (and procedures, where applicable) of the certificate program shall be fair and equitable and comply with all applicable regulatory and statutory requirements and legal obligations.

5.2.6.3 There shall be written policies outlined to address, at a minimum, the following:

(1) Advisory group composition and responsibilities;

(2) Certificate program instructional design plan;

(3) Certificate issuance and use;

(4) Invalidating a certificate;

(5) Complaints;

(6) Appeals;

(7) Privacy, confidentiality, and security;

(8) Program commercial support and disclosure;

(9) Fees, cancellation, and refunds;

(10) Nondiscrimination;

(11) Personnel;

(12) Outsourcing;

(13) Records control;

(14) Document control;

(15) Internal audit;

(16) Management review; and

(17) Corrective and preventive action.

5.3 *Document Control:*

5.3.1 The certificate issuer shall have a process for document control that addresses the proper control of document

creation, approval, revision and reapproval, distribution, and prevention of obsolete document use.

5.4 Records Control:

5.4.1 The certificate issuer shall have a process for records control that addresses which records are kept, by whom, for how long, and how they are disposed.

5.4.2 Records of certificates issued shall be maintained for a period of time beyond the term identified on the certificates to allow stakeholders reasonable access to such records.

5.4.3 If applicable, records of academic or continuing education credits granted shall be maintained consistently with the agency's provisions administering the credit and any applicable national standards.

5.5 Internal Audits:

5.5.1 The internal audits shall be planned and conducted regularly (Practice **D8308**).

5.5.2 The results of the audits shall be documented and communicated to certificate program management.

5.6 Corrective and Preventive Action:

5.6.1 The certificate issuer shall have a process for identifying current or potential issues in its certificate program activities and for managing corrective and preventive actions (Guide **D8229**).

5.6.2 The certificate issuer shall identify the causes of issues/potential issues and plan for their correction/prevention.

5.6.3 Certificate program management shall approve, and the appropriate personnel shall implement corrective and preventive actions.

5.6.4 The certificate issuer shall track corrective and preventive action progress and issue resolution.

5.7 Management Review:

5.7.1 The certificate issuer shall have a process for its certificate program management to review the management system to ensure continued suitability, adequacy, and effectiveness.

5.7.2 These reviews shall be planned and conducted regularly.

5.7.3 The input to the management review shall include:

- 5.7.3.1 Results of internal audits;
- 5.7.3.2 Results of external audits, if available;
- 5.7.3.3 Status of corrective or preventive actions;
- 5.7.3.4 Results of contractor performance monitoring;
- 5.7.3.5 Results of program evaluation(s);
- 5.7.3.6 Complaints received;
- 5.7.3.7 Appeals received; and
- 5.7.3.8 Follow-up actions from previous management reviews.

5.7.4 The output of the management review shall include, at minimum, decisions and, if applicable, actions related to the following:

- 5.7.4.1 Improvement of the management system;
- 5.7.4.2 Improvement of the certificate program activities; and
- 5.7.4.3 Program and process resource needs.

5.8 Personnel:

5.8.1 Personnel shall be assigned to implement the certificate program policies (and procedures, where applicable).

5.8.2 The certificate issuer shall communicate current policies (and procedures, where applicable) to relevant personnel and provide training as needed.

5.8.3 The certificate issuer shall have sufficient personnel to conduct certificate program activities properly.

5.8.4 The certificate issuer shall define the qualifications for personnel involved in certificate program activities.

5.8.5 Personnel shall be qualified for their assigned roles based on appropriate education, training, or experience, or a combination thereof.

5.8.6 The certificate issuer shall evaluate on an ongoing basis the qualifications of personnel to perform assigned roles. Training and development plans shall be implemented where deficiencies are found.

5.9 Financial Management:

5.9.1 The certificate issuer shall demonstrate responsible financial management and have sufficient financial resources to properly conduct certificate program activities.

5.9.2 Formal financial reports shall provide evidence of financial stability.

5.9.3 Where certificate programs are one element of a certificate issuer's activities, the certificate program finances shall be a clear and an identifiable component of financial reporting.

5.9.4 The financial reports shall provide evidence that the certificate issuer can sustain the certificate program in conformance with the practice's requirements for a reasonable amount of time.

5.9.5 Written procedures shall exist for proper financial controls.

5.10 Communication to Primary Stakeholders:

5.10.1 The certificate issuer shall demonstrate reliable and timely relevant communications to primary stakeholders of the certificate program.

5.10.2 The certificate issuer shall publish (or make available to primary stakeholders) the following information in advance of the program:

- 5.10.2.1 Certificate program purpose, scope, and intended learning outcomes;
- 5.10.2.2 Description of the requisites to earn the certificate;
- 5.10.2.3 Qualifications of instructional personnel;
- 5.10.2.4 Fees, deadlines, cancellation, and refund policies;
- 5.10.2.5 Statement about what inferences can appropriately be made regarding certificate holders;
- 5.10.2.6 Information collected by the certificate issuer that is treated as confidential and the conditions for disclosure of information to parties other than the individuals providing it or the certificate issuer;
- 5.10.2.7 If applicable, academic or continuing education credit earned, specified in the terms outlined by the credit-approving entity;
- 5.10.2.8 If applicable, commercial support disclosure;
- 5.10.2.9 If applicable, any changes to the certificate program purpose, scope, intended learning outcomes, requisites, and the effective date of the changes; and
- 5.10.2.10 If applicable, special requirements for participation (such as technology equipment or skills).