



Introduction

The Canadian Federation of Professional Foresters Associations (CFPFA) is a national organization founded in 1982 to act as an advocate for matters identified by its member agencies as having national importance or consequence for forest practitioners. The member agencies are the professional forester/ingénieur forestier regulatory associations (“regulatory members” or “regulatory bodies”) established through provincial legislation, or similar means, as well as the Canadian Institute of Forestry (CIF), representing provinces without a recognized professional regulatory presence, and the Canadian Forestry Accreditation Board (CFAB), a body created by the CFPFA member organizations for review of university level forestry programs in Canada.

Whether in a “right-to-title” or a “right-to-practice” jurisdiction, entrance into professional forest practice (certification) in Canada is governed by a number of well-defined criteria central to the statutory mandate of each of the regulatory members of the Federation. Although they may have various modes of implementation, these entrance criteria have common component groupings, as follows:

- Educational requirements;
- Practical experience requirements (in forestry);
- Sponsorship by Registered Professional Foresters in good standing; and
- In most provinces, one or more registration examinations (often called a “professional” or “jurisprudence” exam, depending on the provincial jurisdiction).

This standards document sets out the academic and experiential requirements that are common to, and have been adopted by, all CFPFA regulatory members with the exception of the Ordre des ingénieurs forestiers du Québec (OIFQ).¹ While the “normal” circumstance is described herein, equivalence for various parts of the requirements may be established by a ruling of the appropriate committee of a CFPFA regulatory body.

The formal adoption of these Certification Standards by the CFPFA in 2008 facilitated inter-jurisdictional mobility for certified professionals and has enabled the CFPFA member agencies to be in compliance with the labour mobility requirements of Chapter 7 of the Canadian Agreement on Internal Trade (AIT) under which the credentials of a Registered Professional Forester/ingénieur forestier (RPF/ing.f.) in any Canadian jurisdiction are recognized by, and accepted for professional practice in, any other CFPFA jurisdiction, OIFQ included.

In focusing on the four essential elements for certification described later in this document, the CFPFA member agencies provide a blueprint for professional certification and, as a consequence, accreditation practices that they expect will:

¹ *L'Ordre des ingénieurs forestiers du Québec has adopted complementary entrance requirements accepted by its fellow CFPFA member agencies for labour mobility purposes.*

- allow for greater inclusivity which recognizes a broader range of professional forestry practitioners;
- provide increased fairness, standardization and consistency for entry into the profession;
- make the most of greater labour mobility potentials; and
- encourage innovation in education and training of forestry professionals as well as in the practice of professional forestry itself.

Because of differences in regulatory formats across Canada, the CFPFA regulatory members have adopted the standards in a variety of forms. Notwithstanding, all have equivalent effect in implementation.

Important Definitions

Throughout this document words and terms are used that have specific meaning. Some of these are found in the section titled “the Right Words”, others are defined within the text of the document itself. In particular, it is important to know, at the outset, what we mean by “certification”, “registration”, “accreditation”, and “science-based degree”. They are therefore defined separately below.

Accreditation is a process of quality assurance through which an education program is assessed by an authorized authority for compliance with the academic requirements for entrance into practice in a regulated profession. In professional forestry in Canada, the Canadian Forestry Accreditation Board has been mandated by the CFPFA to assess university level forestry programs on its behalf. The CFPFA member agencies have agreed, collectively, to abide by the accreditation determinations of the CFAB.

Certification is the documented recognition by a governing body that a person has attained occupational proficiency for practice within its jurisdiction. In the professional forestry context, certification is granted by the provincial regulatory members of the CFPFA.

Registration is the act of acceptance into a governing body an individual who is in compliance with its entrance requirements. While the definition is consistent across the CFPFA jurisdictions, the point at which registration occurs may differ.

A **science-based degree** is a program of study, in which the majority of time is spent exploring the natural, physical, or social sciences.

Essential Elements for Certification

In forestry, there are four essential elements for certification required by, and common to, all CFPFA regulatory members. The four, as follows, are described below.

- (I) *Academic credentials;*
- (II) *Core competency standards (of which there are 7);*
- (III) *Experience; and*
- (IV) *Commitment to professionalism.*

Although the breadth of content of the elements present at application may vary from one candidate to another, all elements must be demonstrably in evidence such that, in combination, the whole satisfies fully the requirements for professional practice at the entrance level.

I Academic credentials and assessments

This essential element describes the characteristics (rather than content) of the educational foundation a registrant **must** have upon entry into practice. The characteristics include:

- At a minimum, a four-year, science-based baccalaureate degree, or its combined academic and practice equivalent,
- Complementary studies which demonstrably and cogently broaden understanding of at least one aspect of the practice of professional forestry. These often take the form of electives or options in baccalaureate programs.
- Foundational studies which demonstrably and cogently support exploration of one or more of the core forestry studies of these standards. Such studies are generally considered to be pre-or co-requisite instruction that provides foundational knowledge for more advanced study.

As a statement of general intent, it is understood that, for graduates of programs accredited by the CFAB, a majority of academic time will have been dedicated to exploration of the subject matter set out in the CFAB's *Academic standards for the accreditation of degree forestry programs in Canada*. (The academic standards for certification and for accreditation are fully harmonized with no difference in intent or meaning.) Meeting the core competency requirements can be achieved directly, i.e., within the program itself, in the way students are granted entrance into the program from feeder institutions, or by completion of the Credential Assessment Process (CAP). In the second case, the school receiving students must be able to demonstrate that the competency requirements for which advanced standing is being granted have been covered appropriately in the time spent at feeder institutions.

These standards apply also to candidates for certification who have not graduated from an accredited program. In such cases, however, applicants are required to enter the CFPFA's Credential Assessment Process (CAP). A description of the CAP and its requirements may be found on the CFPFA website at <http://www.cfpfa-fcafp.ca>

In all cases, it is crucial to keep in mind that the knowledge and skills described in the Certification Standards will not have been obtained in a vacuum. In addition to the requirements of the seven standards, candidates for certification must be able to demonstrate that, however obtained, they have had appropriate exposure to the foundational studies elements upon which the academic standards rest and to appropriate additional, and related, complementary studies to round out the educational experience. These two elements are discussed further below.

Complementary studies of a curriculum are comprised of those academic studies offered by the subject program which are over and above foundational studies and the core forestry studies aimed at addressing the requirements of the academic standards. They may occur individually as 'electives' or in structured curriculum groupings, generally identified as options, minors and majors. Complementary sciences and studies are to be used to provide an integrated, comprehensive academic experience which allows students to enhance and advance their forestry career interests. There is no minimum exposure requirement for this component. However, exposure must have been sufficient to enable the candidate to fully complete the graduation requirements of the subject degree program, or equivalent study.

The foundational studies element of a curriculum will include aspects of the arts, sciences, the humanities and societal topics as described in Attachment 3, at a basic or introductory knowledge level. There is no minimum exposure requirement for this component. However, exposure must have been sufficient to

obtain an understanding of natural relationships and to ensure that students are able to undertake the work of the academic requirements for certification.

II Core forestry competency standards

The seven core forestry certification standards of this document were developed by the CFPFA through joint discussion with the member schools of the Association of University Forestry Schools of Canada (AUFSC) and the largest part of it is devoted to them. That said, it is crucial to keep in mind that the standards form only one part (of four) of the overall set of certification requirements and that they must be read in conjunction with each of the other three elements described.

Each standard is composed of a principle statement and a relevant components (areas of study) section as well as, hierarchically, its demonstrable competency requirements and indicators of performance arranged in a progression of understanding. For further description of these standards elements, see the section below titled *Core Competency Standards*. Standard “0”, following, provides a more detailed, contextual example of this structure.

A separate, and discrete, standard is provided for each of the following subject areas:

1. Tree and stand dynamics;
2. Forest to landscape, structure and function;
3. Forest management;
4. Economics and administration of forestry;
5. Communication, critical reasoning;
6. Information acquisition and analysis; and
7. Professionalism and ethics.

The practice of professional forestry, as defined in legislations across Canada, is far broader than may be inferred by these seven standards. It covers numerous focus areas including natural resource management; land reclamation; urban forestry; forest operations; forest management; fish and wildlife habitat conservation; water quality preservation; forest recreation; forest protection and enhancement of cultural values; forest products marketing; and forest economics, business and management, to name but a few.

III Experience requirements

Every applicant must have sufficient work experience to demonstrate competence in the practice of professional forestry at the entrance level. It is left to the registering body, and in some cases the provincial legislation, to specify how or when the requirement is demonstrated and assessed. A formal period of articling or internship before writing an examination is one model for demonstration.

IV Commitment to professionalism

Applicants must have a demonstrable understanding of, and commitment to, professionalism and ethics. While some of this essential element can be delivered through formal education (business and environmental ethics courses, lectures on professionalism and regulation of professions), much of it will be demonstrated through the following:

- articling/internship and or post-enrolment, pre-certification work experience,
- a commitment to continued competency (continuing education)
- a certification examination.

Understanding the core forestry competency standards

The seven standards are organized in a progression from Standards 1 and 2, which describe required knowledge of “how the system works”, to Standard 3 which describes an ability to use and apply acquired knowledge in order to design and implement forest interventions and to develop and exercise forest stewardship, to Standards 4, 5, 6 and 7, which describe the need to apply acquired knowledge in the delivery of a range of expected professional services.

Each standard is composed of a principle statement and relevant components (relevant knowledge areas) as well as, demonstrable competency requirements, and indicators of performance. The last two are, themselves, arranged in a progression of understanding. Each component is considered further in Standard “0” below.

The Right Words

Specific words have been employed to guide the interpretation of the requirements of the standards. When an “action verb” such as “describe,” “prepare,” “list,” “defend,” “apply” are used in the Demonstrable Competencies and Performance Indicators, it is expected that the competency will be completed to the indicated level of understanding and ability. The levels used follow Bloom (1956) (Attachment 1) who identified a set of verbs that characterize ability to demonstrate an outcome in a certain manner to a specified level of sophistication (Attachment 2).

On occasion the term “regionally specific” is used in a performance indicator. Regionally specific will mean one of two things: a) geographically represented by the provincial jurisdiction, or b) specific elements of the region that must be covered (prescriptive or permissive).

Standard 0: [Descriptive]

Principle

The principle is a self-evident and enduring statement of the context of the standard.

The relevant components, demonstrable competency requirements and performance indicators of the standard must be considered within the context of the principle statement.

Relevant Components

Relevant Components are indicative of the scope of a standard and of the range of subject matter for which an applicant may be expected to demonstrate competency in order to satisfy the full intent of the Demonstrable Competencies of the overlying Standard.

It is not expected that all the listed subject matter within the relevant components be obtained in order to satisfy the requirements of the standard.

Demonstrable Competencies

A Demonstrable Competency is an essential measurement point.

A candidate shall be able to demonstrate entry-level competence in each of the Demonstrable Competencies of a standard and shall be able to do so in a manner that corresponds accurately with the “learning outcomes” levels prescribed by a Competency’s action verb(s). (See Attachment 2.)

Competency statements are presented in sequential order from less to more complex. Each statement builds on its predecessor, until the final statement, which is seen as a “capstone” competency and which is intended to capture the completeness of the standard itself.

Each Demonstrable Competency of a standard is accompanied by a sub-set of Performance Indicators.

Performance Indicators

*Performance Indicators are measurables, based on Bloom’s Taxonomy (adapted), describing activities typical of those a candidate will be able to undertake. They provide context and guidance as to the abilities which would, *in toto*, lead to satisfying the requirements of the overlying Demonstrable Competency. They function as reference points to evaluate whether a candidate for certification has met the evidentiary tests for a competency’s requirements.*

It is not mandatory that each Performance Indicator in a sub-set be addressed. However, when a Performance Indicator is not addressed by a candidate, the candidate must then demonstrate, by means of other relevant indicators, that they have qualifications which fulfill the requirements of the Demonstrable Competency.

An Evidentiary Basis for Demonstrable Competencies

All claims for having met a Demonstrable Competency (or a Performance Indicator in support of having met a Demonstrable Competency) must be accompanied by substantiated evidence. The following lists a number of possibilities for a candidate to use as evidence that a Competency or Indicator has been adequately addressed. The list is not all-inclusive nor is it in any particular order of priority:

1. Practical field tests, written tests or lab tests (e.g. plant collection and explanation of the fundamental components of plants and communities.) Alternatively, testing can take place in a practice review that incorporates interviews of candidate and employer, field reconnaissance, etc.
2. Case examples and completion of a field examination of the result
3. For knowledge - classroom description at a simple level that is tested in an examination setting.
4. For comprehension - set a case study problem and observe solution.
5. Submission of a plan at the stand level to meet a variety of relevant objectives.
6. Course outlines
7. Portfolios of work or educational products such as field projects.

