

## Appendix 3

### CEAC ACCREDITATION REQUIREMENTS

#### **REQUIREMENT 1: MISSION AND OBJECTIVES**

##### **1.1 Mission Statement and/or Program Goals/Program Plan**

- 1.1.1 An environmental program must have a current mission statement and/or a formal statement of overall program goals/program plan which is in alignment with the Institution's current mission statement and strategic plan.
- 1.1.2 The current mission statement and/or formal statement of overall program goals/program plan must demonstrate that the program's purposes are appropriate as an environmentally focused academic program or one focusing on the preparation and training of environmental practitioners/professionals.

##### **1.2 Development, Re-evaluation and Revision of the Mission Statement and Program Goals/Plan**

- 1.2.1 The current mission statement and/or formal statement of overall program goals/program plan are the starting point or foundation for all of the program's activities, services and policies. They give direction for strategic planning, curriculum and allocation of resources.
- 1.2.2 The current mission statement and/or formal statement of overall program goals/program plan are developed -and when necessary, revised- in a collaborative process with representatives from the program's administration, faculty, students and/or industry. They are adopted or accepted by the institution's governing board and/or approved by an external credential validation service or government agency.

#### **REQUIREMENT 2: FACULTY**

##### **2.1 Faculty Complement and Leadership**

- 2.1.1 The development and recruitment of the environmental program's faculty should take into account its mission/program objectives, the communities it serves and the need to support and ensure the continuing relevance and viability of the program and its curriculum.
- 2.1.2 Faculty members must have appropriate education, professional credentials, work, field and/or research experience, skills in teaching and learning methodologies including assessment methodologies, communication skills and technologically current knowledge for their teaching positions in the environmental program.

- 2.1.3 The overall composition and the combined experience of faculty members must adequately reflect the environmental orientation of the academic program and field experiences. This should contribute to the program's ability to produce graduates capable of integrating environmental principles, philosophy and theory into environmental practice.
- 2.1.4 The program must have effective leadership and a full-time faculty member with defined leadership responsibilities must be in charge. Reasonable efforts should also be made to develop leadership skills in others to ensure that the program's survival does not become critically dependent on one individual.
- 2.1.5 Faculty performance evaluation procedures must be in place. When deficiencies are identified during the review process, professional development opportunities are available to address them.
- 2.1.6 Opportunities for professional development and faculty renewal must be provided to enhance faculty members' skills and leadership abilities and their effectiveness in meeting the mission and/or program goals/program plan. There must be evidence of reasonable support for such efforts such as funding of some professional development activities, study leave, facilitation of secondments, sabbaticals etc.

## **2.2 Faculty Sufficiency**

- 2.2.1 There must be a sufficient number and appropriate balance of faculty members (full-time and non full-time) and technical support to meet the needs of the academic program. The faculty members must cover by experience and interest all areas of the institution's environmental curriculum. There must be enough faculty members to provide program and course continuity, appropriate lab/field experiences and appropriate levels of student-faculty interactions. Measures should be in place to determine the impact of non full-time faculty on the program and the students.
- 2.2.2 A reasonably stable core group of full-time or near full-time faculty with a primary commitment to the program and/or institution is required to provide for coherent academic planning, coordination of instruction and curriculum development.

## **2.3 Faculty Participation in Professional Development and Academic Administration**

- 2.3.1 The faculty, within the administrative and financial limits of the institution, must have an appropriate role in the development of the program's curriculum and academic policies including the opportunity to define, implement, revise and achieve program and/or course educational objectives and outcomes.

- 2.3.2 Faculty meetings must be scheduled on a regular basis and include opportunities to discuss program, curriculum and current environmental issues. Structures and mechanisms must be in place to facilitate communication among the faculty and between the faculty and administration.

### **REQUIRMENT 3: STUDENTS**

#### **3.1 General Provisions**

- 3.1.1 The institution/administration delivering the program shall provide student services and support activities that promote student success, engagement and retention as well as professional growth and the transition to the workplace or further education. **All student services** must promote equitable treatment of individuals, regardless of race, gender, age, ethnicity, sexual orientation, socio-economic status or physical challenges.
- 3.1.2 The institution/administration delivering the program shall provide a means for systematically obtaining student views and input into institutional and programmatic planning, which shall include but not be limited to provision for student evaluations of courses and faculty and for representation on student councils and advisory committees.

#### **3.2 Admissions**

- 3.2.1 Admissions must be based on specific approved selection criteria, which shall be published prior to consideration of applicants. The criteria must reflect the program's mission/goals and clearly specify the educational pre-requisites, and minimum qualifications of applicants that the program considers necessary for academic and professional success.
- 3.2.2 The admissions policies and procedures must involve planning and periodic review to determine whether the policy is adequately serving the needs and interests of the students, faculty, program and the environmental sector.
- 3.2.3 The number of students accepted in the program must be consistent with the resources available (i.e. physical facilities, laboratories, opportunities for co-op and field placement, faculty members and technical support staff).
- 3.2.4 The program must adhere to its published admissions policies. The content of marketing and of any representations made to prospective students must be clear and accurate.

3.2.5 Specific admissions policies (e.g. policies pertaining to Prior Learning Assessment recognition, transfer credit, advanced standing, re-admittance into the program) shall be clearly stated in institutional publications.

### **3.3 Student Services**

3.3.1 Students must have timely access to personal, academic and career counselling which should include services to assist students finding work experiences and employment upon graduation. Provision for academic counselling must be tied in with and reinforce the efforts of faculty members, program administration and student affairs officers.

3.3.3 Prospective and current students should receive information on the expected costs of the program including field experiences, text books, living expenses, lab fees and educational fees and opportunities and requirements for financial aid prior to admission.

3.3.4 The institution or department delivering the program shall make available to students and to the general public a catalogue, calendar and/or student handbook or comparable official publication(s) that accurately sets forth information on its current mission and educational objectives, admissions requirements and procedures, and opportunities for financial or other student services, as well as policies and procedures applicable to, or of special interest to students.

## **REQUIREMENT 4: Physical/Learning Resources**

### **4.1 General Facilities**

4.1.1 The physical facilities and equipment must be appropriate for the delivery of the program, realization of program outcomes and to support student achievement of the program goals.

4.1.2 Access to the facilities and availability of equipment by faculty and students must be sufficient in relation to student enrolment and not adversely affected by the demands of other programs using the same facilities or equipment.

4.1.3 Institutional administration must ensure that facilities providing major components of the program are securely committed to the program. External facilities must have affiliation agreements that provide for sufficient notice of termination to allow reasonable time for the program to make alternative arrangements.

4.1.4 The institution must have policies/provision for the maintenance or replacement of laboratory and field equipment, software/hardware, supplies, teaching aids and reference materials.

## 4.2 Library Services and Information Resources

- 4.2.1 A professionally administered /resource center must be available and accessible to students and faculty during and after scheduled hours of instruction.
- 4.2.2 Available learning resources must include electronic equipment, networked computers, software and supporting subscriptions adequate to support faculty scholarly activity and essential student research and learning. Quiet individual work areas should be available in convenient proximity to these resources.
- 4.2.3 The adequacy and use of the library and learning resources should be regularly evaluated.
- 4.2.4 There are sufficient staff members available with appropriate training, experience, and qualifications to carry out professional and technical operations to manage resources and services of the library that are assigned/available to students/faculty in the environmental program(s).
- 4.2.5 The library and its staff must be supportive of, and responsive to, the research and teaching activities of the program (e.g. acquisition process for books, journals; available secure and reliable remote access) and the changing roles and services in an evolving technological environment.

## **REQUIREMENT 5: Preliminary Curriculum Standard**

### 5.1 PROGRAM TYPE

- 5.1.1 A program must apply for accreditation as a **public** program that falls within one of the following categories:

#### **Type 1:**

- Programs of at least **one** academic year in length providing vocationally unified didactic/theoretical instruction and related experience in the application of practical skills, commonly producing graduates with **technician** qualifications.
- Skills are practiced and developed with guidance and feedback, and graduation requires familiarity with didactic content and ability to demonstrate the required skills.
- The cognitive ability of *typical* graduates, using terminology from Bloom's Taxonomy would encompass Knowledge, Comprehension and Application. Gifted graduates might additionally demonstrate Analysis.

### **Type 2:**

- Programs of at least **two** academic years in length that provide vocationally unified didactic/theoretical instruction and related experience in the application of practical skills, commonly producing graduates with **technologist** qualifications.
- Skills are practiced and developed with guidance and feedback, and graduation requires familiarity with didactic content and ability to demonstrate the required skills. The range of skills presented is broader and more complex, and a greater degree of independence is required of students.
- Graduates may be expected to identify and apply the appropriate skill (from a range of learned skills) as required by specific circumstances. Students should be able to complete a task with a moderate degree of complexity, utilizing a range of skills while coping with variables normally encountered in the field.
- The cognitive ability of typical graduates, using terminology from Bloom's Taxonomy, would encompass Knowledge, Comprehension, Application and Analysis. Gifted graduates might additionally demonstrate Synthesis.

### **Type 3:**

- Programs of at least **three** academic years in length providing advanced didactic/theoretical instruction and emphasizing the development of higher level skills, commonly producing graduates with **degree** qualifications.
- Graduates are expected to be able to draw on their instruction, experience and skill development and to use their skills in a variety of different circumstances and contexts without guidance.
- They are expected to be able to adapt and be creative in the ways in which they approach the context for and use of particular skills, and to cope with the unexpected.
- Reflection on performance will be a key aspect. At this level, individually or within a group, a student should be able to think like an environmental scientist or practitioner and to complete a complex task for a knowledgeable and critical audience by utilizing appropriate elements from a range of skills.
- The cognitive ability of typical graduates, using terminology from Bloom's Taxonomy, would encompass Knowledge, Comprehension, Application, Analysis, and Synthesis.

## **5.2 Generic Curricular Criteria**

- 5.2.1 The program curriculum reflects and implements an overall program of study with explicitly defined and measurable goals and objectives. These goals and objectives provide a basis for curriculum development and for evaluating the performance/effectiveness of the program.
- 5.2.2 A curriculum review committee or equivalent regularly reviews, evaluates and revises, as needed, the content and instructional methodology of the program including required competencies, expected outcomes and the supporting academic and lab/field experiences – taking into account findings identified by the program's or institution's

outcomes assessment processes. There is a process in place at the institution that will facilitate the professional review and see that the recommendations are received and implemented.

- 5.2.3 The program is clearly and accurately described in published materials. A syllabus must be prepared for each course or major unit of instruction, distributed to each student in the course, and maintained in the program's curriculum files. The syllabus should contain the following information, or the equivalent as defined by institutional policy:
- the purpose of the course;
  - the learning objectives of the course in outcome-based terms, and the educational competencies/learning outcomes to be attained;
  - an outline of the content of the course and laboratory instruction in enough detail to permit the student to see its full scope;
  - the method(s) of instruction and assessment;
  - the requirements of the course with important dates (e.g., papers, projects, examinations);
  - the type of grading system used; and
  - the required and recommended reading.
- 5.2.4 The program ensures that each student has access to adequate learning opportunities for each component of the program. Where applicable, academic and lab/field/work experiences are carefully coordinated, interwoven and integrated, and are mutually reinforcing.
- 5.2.5 The program ensures that each student possesses or develops the *National Occupational Standards for Environmental Employment (NOS) Transferable Competencies* necessary to support targeted learning.
- 5.2.6 For all three program types, Instructional Methodology (the approaches taken to the presentation of didactic/theoretical and experiential course components) must be congruent with, or supportive of, the targeted learning objectives or competencies.
- 5.2.7 The program utilizes formative (informally graded, not-for-credit/contributing to the student's knowledge of results of learning) and summative (formally graded, for-credit/determination of success in learning) evaluation processes for evaluating student learning. Some evaluation should take place early enough in the program to allow time for students to access remedial options open to them.

### **5.3 Environmental Relevance**

5.3.1 Program goals/objectives must include a primary objective to prepare a graduate who can function effectively as a practitioner within the environmental field and the program curriculum must illustrate adequate provision to achieve this objective.

5.3.2 When a program targets higher level skills, it must identify the higher level skills the curriculum is intended to help develop, such as:

- recognizing and using subject-specific theories, paradigms, concepts and principles;
- analyzing, synthesizing and summarizing information critically, including research;
- collecting and integrating lines of evidence to formulate and test hypotheses;
- applying knowledge and understanding to complex and multidimensional problems in familiar and unfamiliar contexts; and
- the moral and ethical issues of investigations and appreciating the need for professional codes of conduct.

5.3.3 Programs that deal with higher level knowledge and skills must map their program's treatment of any of themes and sub-themes to their own program curriculum as applicable. In addition, for those themes /sub-themes identified as covered within the program, the program must identify any performance indicators employed.

### **REQUIREMENT 6: Financial Resources**

#### **6.1 Sufficiency of Resources**

6.1.1 The institution in which the program is located must have adequate financial resources to support the program. Actions in response to financial pressures must not compromise the quality of the program or result in having more students enrolled than the program's total resources can reasonably accommodate.

#### **6.2 Financial Management**

6.2.1 The program must have sufficient input into financial and strategic planning to ensure that its current and developing needs will be met and sustained over time.

6.2.2 The program's annual budget process (including how resources are allocated) must be clearly defined and consistently implemented. The annual budget must be reviewed and ultimately approved by the institution's governing board.

6.2.3 The program must have a mechanism to review its current operating budget

## **REQUIREMENT 7: Research /Scholarly/Liaison Activity**

### **7.1 Research and Scholarly Activity Policies and Practices**

7.1.1 The program/ faculty must demonstrate an appropriate commitment to academic or applied research and/or scholarly activity including external liaison that is consistent with the mission, goals and educational objectives of the program.

### **7.2 Support for Research/Scholarly Activity**

7.2.1 The institution should provide, secure or arrange adequate funding, facilities, information technology, equipment, staff, library and other resources to accommodate the research/scholarly/liaison activity of the program.

7.2.2 Where an institution or program/faculty has a commitment to research/scholarly/liaison activity, this is reflected in such areas as the teaching load and assignment of full-time faculty responsibilities, the provision of stipends and other remuneration for research/scholarly/liaison activity, support for seeking external funding, opportunities for faculty leave to conduct and participate in appropriate research/scholarly/liaison activity programs, and professional development opportunities to increase research/scholarly/liaison activity capabilities.

7.2.3 The institute/program with active research programs should facilitate mentored opportunities for interested faculty and students to participate in research/scholarly/liaison activity.

7.2.4 Research/scholarly activity/liaison resulting from active program/faculty initiatives should be used to enhance the quality of the program and student learning experiences.