

# AC 2: Undergraduate Programs

## Rationale

This credit recognizes institutions that have formal sustainability education programs and learning requirements for undergraduate students. Institutional sustainability learning outcomes establish high level expectations for both students and the employees that design and implement educational offerings. Academic programs provide a path for students to study sustainability topics in depth, which better prepares them to address sustainability challenges. Learning requirements, which may include sustainability-focused courses or learning outcomes, help provide students with a grounding in the concepts and principles of sustainability so that they are able to apply them in their professional fields. Formal education programs also provide a home for sustainability scholars within the institution.

## Applicability

This credit is applicable to institutions that offer **qualifications** at the post-secondary, short-cycle tertiary (e.g., Associate), Bachelor's, or equivalent level (**ISCED levels 4-6**), however indicator 2.1 is only applicable to institutions that have established institutional **learning outcomes** for **undergraduate** students.

## Points available

A maximum of either 15 or 11 points are available for this credit, as outlined in Table I.

Table I. Points available for undergraduate programs

Has the institution established institutional learning outcomes for its undergraduate students?	Points available for indicator 2.1	Points available for indicator 2.2	Points available for indicator 2.3	Total points available
Yes	4	4	7	15
No	0	4	7	11

## Criteria

### 2.1 Institutional sustainability learning outcomes for undergraduate students

An institution earns 4 points when it has established institutional learning outcomes for undergraduate students that include A) at least one **sustainability-focused learning outcome** and B)

at least one **sustainability-supportive learning outcome**. Partial points are available and earned as outlined in Table II.

Table II. Points earned for indicator 2.1

Criterion	Points available	Points earned
A. Institution has established institutional learning outcomes for undergraduate students that include at least one sustainability-focused learning outcome.	2	
B. Institution has established institutional learning outcomes for undergraduate students that include at least one sustainability-supportive learning outcome.	2	
Total points earned →		

## Measurement

Report on the current status of the institution's undergraduate learning outcomes.

To qualify as sustainability-focused, a learning outcome must explicitly address the integrated concept of sustainability or the interdependence of ecological and social/cultural/economic systems.

To qualify as sustainability-supportive, a learning outcome must address one or more specific intellectual skills, practical skills, competencies, or attitudes/values that are critical for addressing sustainability challenges. Examples include systems and holistic thinking, change agent skills, interdisciplinary capacities, and social and ethical responsibility.

## Documentation

Report the following information in the online Reporting Tool.

- Has the institution established institutional learning outcomes for its undergraduate students? (required). Institutional learning outcomes are high level statements outlining what the institution's students are expected to know, understand, and be able to demonstrate after completion of their undergraduate programs (irrespective of their elective subject areas or specializations).

*If No, this indicator is not applicable and is excluded from scoring. If Yes, at least one form of evidence (website URL or document) and the two questions that follow are also required:*

- Online resource detailing the institutional learning outcomes for undergraduate students. Website URL.
- Publication detailing the institutional learning outcomes for undergraduate students. Upload.
- Are one or more of the institutional learning outcomes for undergraduate students sustainability-focused?

*If Yes, the following field is also required:*

- Text of each institutional learning outcome for undergraduate students that qualifies as sustainability-focused
- Are one or more of the institutional learning outcomes for undergraduate students sustainability-supportive?

*If Yes, the following field is also required:*

- Text of each institutional learning outcome for undergraduate students that qualifies as sustainability-supportive

## 2.2 Undergraduate programs with sustainability-focused learning requirements

An institution earns 4 points when it offers at least one sustainability-focused **degree, certificate, or major** for undergraduate students. Partial points are available. An institution that offers at least one sustainability-focused **concentration or minor** for undergraduate students AND/OR at least one undergraduate qualification focused on a subject other than sustainability that has a **sustainability-focused learning requirement** earns 2 points.

### Measurement

Report on the current status of the formal **education programs** offered by the institution to undergraduate students, including training and workforce development programs that award qualifications and transfer programs that provide a direct pathway to four-year sustainability programs.

To qualify as sustainability-focused, the primary focus of a program must be on the integrated concept of sustainability or the interdependence of ecological and social/cultural/economic systems. This focus must be evidenced by the published title and/or description of the program, either explicitly (e.g., “Sustainability Studies”) or implicitly, by addressing a sustainability challenge using a systems approach (e.g., “Climate Change, Agriculture and Food Security”).

A qualification focused on a subject other than sustainability qualifies if it:

- Requires the successful completion of a **sustainability-focused course**,
- Has one or more specified **sustainability-focused learning outcomes** and associated assessment criteria, AND/OR
- Provides a direct pathway to a sustainability-focused job or career (e.g., a certificate in renewable energy systems).

Qualifications that are subject to sustainability-focused general education or graduation requirements may be included to the extent that the criteria are met, e.g., when all students are required to successfully complete a sustainability-focused general education course.

### Documentation

Report the following information in the online Reporting Tool.

- Does the institution offer at least one sustainability-focused degree, certificate, or major for undergraduate students? (required)

*If Yes, the following field is also required:*

- List and description of the institution’s sustainability-focused degrees, certificates, and majors for undergraduate students. Include sufficient information to make clear the sustainability focus of each program.

- Does the institution offer at least one sustainability-focused concentration or minor for undergraduate students? (required)

*If Yes, the following field is also required:*

- List and description of the institution’s sustainability-focused concentrations and minors for undergraduate students. Include sufficient information to make clear the sustainability focus of each program.

- Does the institution offer at least one undergraduate qualification focused on a subject other than sustainability that has a sustainability-focused learning requirement? (required)

*If Yes, the following field is also required:*

- List and description of the institution’s undergraduate qualifications focused on subjects other than sustainability that have sustainability-focused learning requirements. Include information justifying the inclusion of each program, i.e., the minimum sustainability-focused criteria that must be met to successfully complete the program.

## 2.3 Percentage of undergraduate qualifications awarded that have sustainability-focused learning requirements

An institution earns 7 points when 100 percent of its undergraduate **qualifications** awarded indicate successful completion of an education program with sustainability-focused learning requirements. Incremental points are available and earned as outlined in Tables III and IV.

Table III. Number of undergraduate qualifications awarded that have sustainability-focused learning requirements

Qualification type	Number of qualifications awarded
A. Sustainability-focused qualifications	
B. Qualifications focused on subjects other than sustainability that have sustainability-focused learning requirements	
<b>Total →</b>	

Table IV. Points earned for indicator 2.3

Number of undergraduate qualifications awarded that have sustainability-focused learning requirements (Table III)		Total number of undergraduate qualifications awarded		Points available		Points earned
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## Measurement

Report the most recent annual data available from within the previous three years. An institution may report on the average of the previous three years rather than a single year.

## Documentation

Report the following information in the online Reporting Tool.

- Performance year for undergraduate qualifications (required). The year the performance period ended.
- Total number of undergraduate qualifications awarded (required). Report the total number of undergraduate degrees, diplomas, certificates, and other awards conferred.
- Number of undergraduate qualifications awarded that are sustainability-focused (required). Report on the sustainability-focused degrees, certificates, majors, concentrations, and minors identified in indicator 2.2.
- Number of undergraduate qualifications awarded that are focused on subjects other than sustainability but have sustainability-focused learning requirements (required). Report on the qualifications identified in indicator 2.2 that require the successful completion of a sustainability-focused course, have specified sustainability-focused learning outcomes and assessment criteria, or provide a direct pathway to a sustainability-focused job or career.

The Reporting Tool will automatically calculate the following two figures:

- Total number of undergraduate qualifications awarded that have sustainability-focused learning requirements
- Percentage of undergraduate qualifications awarded that have sustainability-focused learning requirements

## Glossary

**Concentration or minor** – An education program, subject area, or qualification that students may formally choose to have as a secondary focus during their studies. A minor or concentration is typically not required, but allows a student to take additional courses in a subject different from, or complementary to, their major subject area of focus.

**Degree, certificate, or major** – An education program, subject area, or qualification that students may formally choose to focus on during their studies.

**Education program** – A coherent set or sequence of educational activities designed and organized to achieve predetermined learning objectives or accomplish a specific set of educational tasks over a sustained period.

**ISCED level** – The International Standard Classification of Education (ISCED) is the international reference classification for organizing education programs and related qualifications by education levels and fields.

The levels identified in ISCED 2011 are:

0. Early childhood education
1. Primary education
2. Lower secondary education
3. Upper secondary education
4. Post-secondary non-tertiary education
5. Short-cycle tertiary education
6. Bachelor's or equivalent level
7. Master's or equivalent level
8. Doctoral or equivalent level
9. Not elsewhere classified

**Learning outcomes** – Statements of what a learner is expected to know, understand, and be able to demonstrate after completion of a process of learning as well as the specific intellectual and practical skills gained and demonstrated by the successful completion of a unit, course, or program. Learning outcomes, together with assessment criteria, specify the minimum requirements for the award of credit, while grading is based on attainment above or below the minimum requirements for the award of credit. Learning outcomes are distinct from the aims of learning in that they are concerned with the achievements of the learner rather than with the overall intentions of the teacher. [Adapted from the definitions used by the United Nations Educational, Scientific and Cultural Organization (UNESCO).]

**Qualification** – Official confirmation, usually in the form of a document, certifying the successful completion of an educational program or of a stage of a program. Examples of qualifications include degrees, certificates, diplomas, and equivalent credentials. Qualifications can be obtained through: i) successful completion of a full program; ii) successful completion of a stage of a program (intermediate qualifications); or iii) validation of acquired knowledge, skills and competencies, independent of participation in such programs. [Adapted from the International Standard Classification of Education (ISCED).]

**Sustainability challenge** – An issue or situation that threatens or undermines ecological integrity, racial equity and social justice, or the ability of future generations to meet their needs (e.g., biodiversity loss, poverty and inequality, and climate change), OR a goal or objective that contributes to the resolution of such an issue or situation (e.g., ecosystem health, universal human rights, and renewable energy generation). To identify sustainability challenges, it may be helpful to reference the [targets embedded in the Sustainable Development Goals \(SDGs\)](#), the principles outlined in the [Earth Charter](#), and/or the [Doughnut of social and planetary boundaries](#).

**Sustainability-focused learning outcome** – A learning outcome that explicitly addresses either the integrated concept of sustainability or the interdependence of ecological and social/cultural/economic systems. Examples of sustainability-focused learning outcomes include:

- Students will be able to define sustainability and identify major sustainability challenges.
- Students will use appropriate evidence and tools to evaluate the carrying capacity of ecosystems as related to providing for human needs.
- Students will be able to apply concepts of sustainable development to address sustainability challenges in a global context.
- Students will identify, act on, and evaluate their professional and personal actions with the knowledge and appreciation of interconnections among economic, environmental, and social perspectives.

**Sustainability-focused course** – A unit of instruction that has a primary and explicit focus on the integrated concept of sustainability and/or the interdependence of ecological and social/cultural/economic systems. This focus must be demonstrated in the title or high level description of the course. Sustainability-focused courses may include:

- Foundational courses with a primary and explicit focus on sustainability (e.g., Introduction to Sustainability, Sustainable Development, Sustainability Science).
- Courses with a primary and explicit focus on the application of sustainability within a field (e.g., Architecture for Sustainability, Green Chemistry, Sustainable Agriculture, Sustainable Business). As sustainability is an interdisciplinary topic, such courses generally incorporate insights from multiple disciplines.
- Courses with a primary and explicit focus on a major sustainability challenge that requires students to consider the interdependence of ecological and social/cultural/economic systems (e.g., Climate Change Science, Environmental Justice, Global Poverty and Development, Renewable Energy Policy). The focus of such courses might be on providing knowledge and understanding of the problems and/or the tools for solving them, but they should bring a systems thinking approach to the challenge.

**Sustainability-supportive learning outcomes** – Learning outcomes that address specific intellectual skills, practical skills, competencies, and/or attitudes/values that are critical for addressing sustainability challenges, but may not explicitly address the concept of sustainability (e.g., systems and holistic thinking, change agent skills, interdisciplinary capacities, social and ethical responsibility). Specific examples of sustainability-supportive learning outcomes include:

- Students will be able to demonstrate an understanding of the nature of systems.
- Students will be able to demonstrate an understanding of their social responsibility as future professionals and citizens.
- Students will be able to accommodate individual differences in their decisions and actions and be able to negotiate across these differences.
- Students will be able to analyze power, structures of inequality, and social systems that govern individual and communal life.
- Students will be able to recognize the global implications of their actions.

For further examples, see Education for Sustainable Development Goals: Learning Objectives (UNESCO).

**Undergraduate** – Depending upon the context, undergraduate may refer to students, education programs, or qualifications at the post-secondary, short-cycle tertiary (e.g., Associate), Bachelor's, or equivalent level (ISCED levels 4-6).