

AC 1: Academic Courses

14 points available

A. Credit Rationale

This credit recognizes institutions that offer sustainability courses and that include sustainability in courses across the curriculum. Sustainability courses can provide valuable grounding in the concepts and principles of sustainability, help build knowledge about a component of sustainability, or introduce students to sustainability concepts. Institutions that integrate sustainability concepts throughout the curriculum prepare students to apply sustainability principles in their professional fields. Having sustainability courses and content offered by numerous departments helps ensure that the institution's approach to sustainability education is comprehensive and includes diverse topics. This will help students develop a broad understanding of the field. Likewise, offering sustainability courses and content in numerous departments can increase student exposure to sustainability topics and themes.

Conducting an inventory of academic offerings provides an important foundation for advancing sustainability curriculum. It provides a baseline for understanding current offerings and can help institutions identify strengths and opportunities for growth. In addition, a list and description of sustainability courses and other courses that include sustainability helps current and prospective students find and understand sustainability course offerings, which can assist them in organizing their academic studies.

B. Criteria

Institution has conducted an inventory during the previous three years to identify its [sustainability course offerings](#) for current and prospective students. Sustainability course offerings include:

- Courses that have been formally designated as sustainability course offerings in the institution's standard course listings or catalog; and/or
- Courses that have been identified as "sustainability courses" and "courses that include sustainability" using the definitions provided in G. Standards and Terms.

For each course, the inventory provides:

- The title, department (or equivalent), and level of the course (e.g., undergraduate or graduate).
- A brief description of the course.
- An indication of whether the course is a "sustainability course" or a "course that includes sustainability" (or equivalent terminology).

A course may be a sustainability course or it may include sustainability; no course should be identified as both. Courses for which partial or incomplete information is provided may not be counted toward earning points for this credit. This credit does not include continuing education and extension courses, which are covered by the *Continuing Education* credit in Public Engagement.

For guidance on conducting a course inventory and distinguishing between sustainability courses and courses that include sustainability, see F. Measurement, G. Standards and Terms, and the Credit Example, below. An institution that has developed a more refined approach to course classification may use that approach as long as it is consistent with the definitions and guidance provided.

Part 1

Institution offers sustainability course content as measured by the percentage of courses offered that are sustainability course offerings.

The total number of courses offered and the number of sustainability course offerings must be counted in the same manner; see F. Measurement.

Part 2

Institution offers sustainability course content as measured by the percentage of [academic departments](#) (or the equivalent) with sustainability course offerings.

C. Applicability

This credit applies to all institutions.

D. Scoring

An institution must identify its sustainability course offerings per the minimum criteria outlined above to earn points for this credit. Each part is scored independently.

Part 1

Institutions earn the maximum of 8 points for Part 1 of this credit if 20 percent or more of all courses offered by the institution are sustainability courses and/or courses that include sustainability. Incremental points are awarded based on the percentage of course offerings that are sustainability courses and/or courses that include sustainability. For example, an institution where 4 percent of all courses offered are sustainability courses and 6 percent are courses that include sustainability would earn 4 points (half of the points available for Part 1 of this credit).

Points for Part 1 of this credit are calculated automatically in the STARS Reporting Tool as follows:

Course type	Factor		Number of courses offered of each type		Total number of courses offered by the institution		Points earned
Sustainability courses	40	×	_____	÷	_____	=	
Courses that include sustainability	40		_____				
Total points earned →							Up to 8

Part 2

Institutions earn the maximum of 6 points for Part 2 of this credit when 90 percent or more of academic departments or their equivalent offer at least one sustainability course or one course that includes sustainability. Incremental points are available based on the percentage of academic departments that have sustainability course offerings. For example, if 45 percent of the departments at an institution offered one or more sustainability courses, that institution would earn 3 points (half of the points available for Part 2 of this credit).

Points for Part 2 of this credit are calculated automatically in the STARS Reporting Tool as follows:

Factor		Number of departments with sustainability course offerings		Total number of departments		Points earned
6%	×	_____	÷	_____	=	Up to 6

E. Reporting Fields

Required

- ☐ Total number of [undergraduate courses](#) offered by the institution
- ☐ Number of undergraduate sustainability courses offered (i.e., courses for which the primary and explicit focus is on sustainability and/or understanding or solving one or more major sustainability challenge)
- ☐ Number of undergraduate courses offered that include sustainability (i.e., courses that are focused on a topic other than sustainability, but incorporate a unit or module on sustainability or a sustainability challenge, include one or more sustainability-focused activities, or integrate sustainability issues throughout the course)
- ☐ Total number of [graduate courses](#) offered by the institution
- ☐ Number of graduate sustainability courses offered
- ☐ Number of graduate courses offered that include sustainability
- ☐ Total number of academic departments (or the equivalent) that offer courses (at any level)
- ☐ Number of academic departments (or the equivalent) that offer at least one sustainability course and/or course that includes sustainability (at any level)
- ☐ A copy of the institution's inventory of its sustainability course offerings and descriptions (upload)
- ☐ Do the figures reported above cover one, two, or three academic years?
- ☐ A brief description of the methodology used to determine the total number of courses offered and to identify sustainability course offerings, including the definitions used and the process for reviewing and/or validating the course inventory
- ☐ How were courses with multiple offerings or sections counted for the figures reported above?
 - ☐ Each offering or section of a course was counted as an individual course
 - ☐ Each course was counted as a single course regardless of the number of offerings or sections
 - ☐ Not applicable; no courses with multiple offerings or sections were included
 - ☐ Other (please describe below)

- ❑ A brief description of how courses with multiple offerings or sections were counted (if different from the options outlined above)
- ❑ Are the following course types included in the inventory?
 - Internships
 - Practicums
 - Independent study
 - Special topics
 - Thesis / dissertation
 - Clinical
 - Physical education
 - Performance arts

Optional

- ❑ The website URL where information about the programs or initiatives is available
- ❑ Additional documentation to support the submission (upload)
- ❑ Data source(s) and notes about the submission
- ❑ Contact information for a responsible party (a staff member, faculty member, or administrator who can respond to questions regarding the data once it is submitted and available to the public)

F. Measurement

Timeframe

Report the most data available from within the three years prior to the anticipated date of submission. Institutions may choose to inventory and report course offerings from one, two, or three academic years, as long as both the total number of courses offered and the number of sustainability course offerings are measured during the same period.

Sampling and Data Standards

Each institution is free to choose a methodology to identify sustainability courses that is most appropriate given its unique circumstances. Asking faculty and departments to self-identify sustainability courses and courses that include sustainability using the definitions outlined in G. Standards and Terms or looking at the stated learning outcomes and course objectives associated with each course may provide a richer view of sustainability course offerings than simply reviewing course descriptions, but it is not required.

To best reflect the number of opportunities students have to learn about sustainability, it is recommended that institutions count each time a course is offered as a separate course (e.g., a course with two sections taught in the fall term and two sections taught during spring term would count as four courses). To streamline the data gathering process, however, institutions may elect to count a course with multiple offerings as a single course as long as sustainability course offerings are counted in the same way as total course offerings. For example, a course that is held twice (or if there are two sections) in the fall term and once in the spring term may be counted as 3 courses or 1 course, as long as the institution's course counting methodology is consistent. An institution that elects not to count each time a course is offered as a separate course should verify that 50 percent or more of the sections or offerings of a course include sustainability to count the course as inclusive of sustainability.

Likewise, institutions may choose whether or not to count courses listed in multiple departments or academic divisions as separate courses. For example, a course that is cross-listed in two departments or that is listed as both an undergraduate and a graduate course may be counted as one or two courses, as long as the institution's methodology is consistent.

Each department with one or more sustainability course offering may be counted toward Part 2 of this credit, even if the courses are offered or administered jointly with other departments. Courses that are offered independently of any department are not considered in Part 2.

The following course types may be excluded, as long as they are excluded from both the count of sustainability course offerings and the count of total courses:

- Individually-directed courses (e.g., thesis, independent study, practicum);
- Courses of four or fewer students;
- Special topics courses;
- Physical education courses;
- Performance arts courses; and
- Clinical courses offered exclusively to [doctor's degree-professional practice students](#).

Courses must have been taught during the specified timeframe of one, two or three academic years to count (e.g., as opposed to being listed in a course catalog, but not taught).

Courses offered by outside entities (e.g., courses offered by other colleges that are part of a consortium with the institution or courses offered through study abroad programs that are not administered by the institution) should not be counted in the reporting institution's course inventory. However, courses developed and offered jointly by multiple institutions that are listed in the reporting institution's course catalog may be counted. In such circumstances, courses should be counted consistently. This means that if sustainability courses offered jointly by the participating institution and another entity are included in the inventory, jointly offered courses without sustainability content should be included as well.

Institutions that do not have academic departments should report fields of study, programs, subject areas or the equivalent.

G. Standards and Terms

Academic departments

An academic department is an administrative division of a college, university, or school faculty that is devoted to a particular academic discipline (e.g., Economics, Environmental Science, Sociology) or a closely related set of disciplines (e.g., Asian Studies or Physics & Astronomy). Departments may exist under other nomenclature and with coarser or finer divisions, depending upon each institution's context. Fields of study, programs, subject areas or the equivalent may be considered to be "departments" in the absence of traditional administrative divisions.

Doctor's degree-professional practice students

Consistent with [IPEDS](#), doctor's degree-professional practice students include those enrolled in the following programs:

A doctor's degree that is conferred upon completion of a program providing the knowledge and skills for the recognition, credential, or license required for professional practice. The degree is awarded

after a period of study such that the total time to the degree, including both pre-professional and professional preparation, equals at least six full-time equivalent academic years. Some of these degrees... include: Chiropractic (D.C. or D.C.M.); Dentistry (D.D.S. or D.M.D.); Law (J.D.); Medicine (M.D.); Optometry (O.D.); Osteopathic Medicine (D.O); Pharmacy (Pharm.D.); Podiatry (D.P.M., Pod.D., D.P.); or, Veterinary Medicine (D.V.M.), and others, as designated by the awarding institution.

Graduate courses

Graduate courses are offered as part of the spectrum of education beyond the level of a baccalaureate, i.e. for students who hold bachelor's degrees or above and are taking courses at the graduate level.

Sustainability challenges

Consistent with [Transforming Our World: The 2030 Agenda for Sustainable Development](#) (United Nations, 2015), major sustainability challenges include (but are not limited to) climate change, global poverty and inequality, natural resource depletion, and environmental degradation. To identify courses, research, programs and initiatives that contribute towards understanding or solving sustainability challenges, it is helpful to ask:

- Does it contribute towards realizing one or more of the principles outlined in the [Earth Charter](#)? And/or
- Does it contribute towards achieving one or more of the targets embedded in the [United Nations Sustainable Development Goals](#) (SDGs)?

Sustainability course offerings

Sustainability course offerings include "sustainability courses" and "courses that include sustainability":

Sustainability Courses

Sustainability courses are courses in which the *primary and explicit* focus is on sustainability and/or on understanding or solving one or more major sustainability challenge. This includes:

- A. Foundational courses in which the primary and explicit focus is on sustainability as an integrated concept having social, economic, and environmental dimensions. Obvious examples include Introduction to Sustainability, Sustainable Development, and Sustainability Science, however courses may also count if their course descriptions indicate a primary and explicit focus on sustainability.
- B. Courses in which the primary and explicit focus is on the application of sustainability within a field. As sustainability is an interdisciplinary topic, such courses generally incorporate insights from multiple disciplines. Obvious examples include Sustainable Agriculture, Architecture for Sustainability, and Sustainable Business, however courses may also count if their course descriptions indicate a primary and explicit focus on sustainability within a field.
- C. Courses in which the primary focus is on providing skills and/or knowledge *directly* connected to understanding or solving one or more major sustainability challenges. A course might provide knowledge and understanding of the problem or tools for solving it, for example Climate Change Science, Renewable Energy Policy, Environmental Justice, or Green Chemistry. Such courses do not necessarily cover "sustainability" as a concept, but should address more than one of the three dimensions of sustainability (i.e., social wellbeing, economic prosperity, and environmental health).

While a foundational course such as chemistry or sociology might provide knowledge that is useful to practitioners of sustainability, it would not be considered a sustainability course. Likewise, although specific tools or practices such as GIS (Geographical Information Systems) or engineering can be applied towards sustainability, such courses would not count as sustainability courses unless their primary and explicit focus is on sustainable applications. If there is a sustainability unit, module or activity within one of these courses, but it is not the main focus, the course may be counted as a “course that includes sustainability”:

Courses That Include Sustainability

A course that includes sustainability is primarily focused on a topic other than sustainability, but incorporates a unit or module on sustainability or a sustainability challenge, includes one or more sustainability-focused activities, or integrates sustainability issues throughout the course. To count, these units/modules, activities or issues should be documented in course descriptions or syllabi.

While a foundational course such as chemistry or sociology might provide knowledge that is useful to practitioners of sustainability, it would not be considered to be inclusive of sustainability unless the concept of sustainability or a sustainability challenge is specifically integrated into the course. Likewise, although specific tools or practices such as GIS (Geographical Information Systems) or engineering can be applied towards sustainability, such courses would not count unless they incorporated a unit on sustainability or a sustainability challenge, included a sustainability-focused activity, or incorporated sustainability issues throughout the course.

Undergraduate courses

Undergraduate courses are included in courses of study leading up to the level of a baccalaureate, i.e., 4 or 5-year bachelor's degree programs, associate's degree programs, or vocational or technical programs below the baccalaureate.

Scoring Example: Academic Courses

Part 1

Example College offered 1,000 courses during the past year. Of those courses, 10 were sustainability courses and 65 were courses that included sustainability.

Course type	Factor		Number of courses offered of each type		Total number of courses offered by the institution		Points earned
Sustainability courses	40		<u>10</u>				0.4
Courses that include sustainability	40		<u>65</u>	÷	<u>1,000</u>	=	2.6
Total points earned →							3.0

Part 2

Example College has 30 academic departments. Of those, 10 offer sustainability courses and/or courses that include sustainability.

Factor		Number of departments with sustainability course offerings		Total number of departments		Points earned
6⅔	×	<u>10</u>	÷	<u>30</u>	=	2.22

Credit Example: Inventory of Sustainability Course Offerings

Example College asked faculty members representing all of its academic departments to identify sustainability course offerings using the definitions outlined in *G. Standards and Terms*. Following is an excerpt of the completed inventory:

Sustainability Courses

Title	Department	Level	Description
Introduction to Sustainability	Interdisciplinary Studies	UG	[Description is optional; sustainability focus of the course is apparent from its title.]

Sustainable Development	Geography	UG	<i>[Description is optional; sustainability focus of the course is apparent from its title.]</i>
Sustainability Science	Ecology and Evolutionary Biology	UG	<i>[Description is optional; sustainability focus of the course is apparent from its title.]</i>
Introduction to Environmental Studies	Environmental Studies	UG	This course provides an overview of environmental studies as an interdisciplinary academic field centered upon interdependent society – nature relationships. It provides an introduction to the concept of sustainability, critical thinking, the interdependency of social and ecological systems, interdisciplinary approaches, and related social engagement.
Systems Thinking and Analysis	Engineering	UG	Introduction to the systems thinking process, systems of systems, and the fundamental considerations associated with engineering and sustainable development.
Society and the Environment	Sociology	UG	This course will enable students to devise their own set of principles for understanding sustainability issues which should be of value in decision-making in their future careers.
Resilient Societies	Interdisciplinary Studies	UG	Provides an overview of the study of social and economic development in the context of ecological limits. Studies pathways and processes that lead to positive adjustment and sustainable societies.
Ecological Economics	Economics	UG	This course studies the role of environmental amenities such as clean air and clear water in economic systems. The course analyzes the problems of market outcomes when such amenities are not priced, examines the challenges associated with estimating economic costs and benefits, and emphasizes the connection between economic understanding and improved public policy.
International Development	International Studies	UG	An interdisciplinary course based on real world problems, direct field experience and current research on the causes of global poverty, environmental degradation, and preventable disease.
Environmental Ethics	Philosophy	UG	Course examines concepts such as animal rights, the land ethic and environmental justice

			within the larger context of environmental philosophy.
Corporate Social Responsibility	Business	G	This course explores how corporations design, manage and measure social strategies to generate business value. Students will learn frameworks, methodologies and tools and use these to develop CSR strategies for real-world corporations.
Global Environmental Health	Public Health	G	The public health implications, positive and negative, of society's efforts to mitigate and adapt to climate change will be elaborated, including discussions of ethical, political, economic aspects.
Environmental Journalism	Journalism	UG	In this course, students will learn the gathering and presentation of stories about environmental issues. We will also study the effect of mass media on the environmental movement and public policy debates.
Urban Planning	Planning	UG	Examination of current urban planning and policy issues and debates, such as normative theories of good urban form, metropolitan organization and governance, economic development and growth management, edge cities, spatial mismatch hypothesis, urban poverty, racial/ethnic inequality, gender and urban structure, sustainability, and the future of cities.
Organic Agriculture	Plant, Soil and Agricultural Systems	UG	This course asks students to use critical thinking skills to compare organic and industrial agricultural practices and explore food production issues including antibiotics, herbicides, hormones, GMOs, animal welfare, crop yields, nutrients, and pollution.
National Environmental Policy Act	Public Policy	UG	Learn about the philosophy and practice of ecological theory and policy and discuss contemporary challenges associated with implementation of the National Environmental Policy Act (NEPA).
Photovoltaic and Wind Turbine Installation	Electrical and Electronics	UG	The course will discuss the fundamentals of photovoltaic and wind power generation, installation and maintenance practices.

Conservation Biology	Biology	G	The focus of this course is on the science of conservation biology in the context of environmental policy, socioeconomic demands, and environmental ethics. Topics will include population biology, extinction, wildlife management, the role of science in making environmental policy, wetlands conservation, sustainable agriculture and forestry, integrated land-use management, and vegetation analysis.
Health Disparities	Public Health	UG	Students learn the nature of socioeconomic, racial and ethnic disparities in health status, and become familiar with the research literature on disparities in health care.
Infill Development	Public Policy	G	This course provides students with a comprehensive understanding of urban infill development, including the economic development thrust of urban infill and the political, environmental and community dimensions of projects.
Integrated Pest Management	Plant, Soil and Agricultural Systems	UG	Course is designed to provide an overview of IPM in agricultural situations. The course covers the fundamentals of pest management; safe use of and alternatives to pesticides; and the development, classification, and identification of insects.
Peace Studies	Peace Studies	UG	This course provides an overview of the field of peace studies and examines theories related to peace, conflict studies and non-violence. Students gain an understanding of the various tools and processes that are used internationally in working towards a more equitable, just and peaceful world.
Life Cycle Assessment	Business	G	Green supply chains are an important part of sustainable business practice. This course teaches about green product and service supply chains and compliance requirements.

Courses That Include Sustainability

Title	Department	Level	Description
Introduction to Chemistry	Chemistry	UG	Includes a module on green chemistry and chemistry's contribution to sustainability

Art and Social Change	Art and Architecture	UG	One of the course's listed objectives is to examine art's potential contribution to sustainability
Construction Management	Construction and Environmental Management	UG	Includes a unit on green building
Math in Society	Mathematics	UG	Includes practice problems that are oriented around sustainability
Business in the European Union	Business	G	Includes a unit on sustainability, corporate social responsibility (CSR) and EU policy
Applied Ethics	Philosophy	UG	Includes discussion of inter-generational equity and the sustainability ethic
HVAC II	Construction and Environmental Management	UG	Includes a unit on high-efficiency and geothermal HVAC systems
Cause Marketing	Communications	UG	Case studies include marketing around corporate social responsibility (CSR) and sustainability
Social Problems and Social Change	Sociology	UG	Includes units on sustainability, environmental movements and activism, and responses to climate change
Literature and Nature	Literary Arts	UG	Includes readings on the relationship between humans and the land and a writing assignment related to sustainability