

ENVS 10: INTRODUCTION TO ENVIRONMENTAL SCIENCE

In Workflow

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Approval Path

1. Mon, 12 Jun 2023 17:56:34 GMT
Wayne Linklater (wayne.linklater): Approved for ENVS Committee Chair
2. Wed, 06 Sep 2023 16:52:54 GMT
Wayne Linklater (wayne.linklater): Approved for ENVS Chair
3. Thu, 21 Sep 2023 05:40:00 GMT
Rachel Flamenbaum (flamenbaum): Rollback to Initiator
4. Tue, 24 Oct 2023 23:57:53 GMT
Wayne Linklater (wayne.linklater): Approved for ENVS Committee Chair
5. Tue, 24 Oct 2023 23:58:06 GMT
Wayne Linklater (wayne.linklater): Approved for ENVS Chair
6. Wed, 25 Oct 2023 20:55:38 GMT
Rachel Flamenbaum (flamenbaum): Approved for SSIS College Committee Chair
7. Thu, 26 Oct 2023 23:04:33 GMT
Marya Endriga (mendriga): Approved for SSIS Dean
8. Wed, 01 Nov 2023 23:14:42 GMT
Katie Hawke (katiedickson): Approved for Academic Services

Date Submitted: Tue, 24 Oct 2023 23:57:33 GMT

Viewing: ENVS 10 : Introduction to Environmental Science

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Changes proposed by: Wayne Linklater (223005380)

Contact(s):

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Catalog Title:

Introduction to Environmental Science

Class Schedule Title:

Intro to Environmental Science

Academic Group: (College)

SSIS - Social Sciences & Interdisciplinary Studies

Academic Organization: (Department)

Environmental Studies

Will this course be offered through the College of Continuing Education (CCE)?

Yes

Please specify:

CCE and Stateside

Catalog Year Effective:

Fall 2023 (2023/2024 Catalog)

Subject Area: (prefix)

ENVS - Environmental Studies

Catalog Number: (course number)

10

Course ID: (For administrative use only.)

131506

Units:

3

Is the only purpose of this change to update the term typically offered or the enforcement of existing prerequisites at registration?

No

In what term(s) will this course typically be offered?

Fall, Spring, Summer

Does this course require a room for its final exam?

Yes, final exam requires a room

This course complies with the credit hour policy:

Yes

Justification for course proposal:

ENVS 10 - Introduction to Environmental Science - is a lower division GE in Area B2 and a required course in the Department of Environmental Studies three programs: a BS, BA and Minor. It currently enrolls 1000-1200 students each academic year. The faculty in the Department of Environmental Studies have, over the last 3 years, undertaken a review and revision of this course because of its critical place in our program's curriculum and substantial contribution to GE. The goal of that review was to improve the course's learning outcomes, their alignment with assessment, and develop consistency in course learning and assessment across the numerous sections while providing a basis for ongoing adaptation.

To these ends, this Form A updates the course description, provides new learning objectives, aligns the new learning objectives with assessments, provides an outline of what is expected to be consistent between sections and what might vary, and our processes for evaluating the course and its teaching, particularly with respect to General Education goals.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)

This course introduces students to environmental science and the interdisciplinary field of environmental studies. The primary focus of the course is the earth, its ecosystems, and the influence of humans on ecosystems. Students will acquire a basic understanding of the types, structure, and function of ecosystems, the role of human activity in ecosystems, and the tools used to measure and manage human impacts.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Is this course designated as Curricular Community Engaged Learning?

No

Does this course require safety training?

No

Does this course require personal protective equipment (PPE)?

No

Does this course have prerequisites?

No

Does this course have corequisites?

No

Graded:

Letter

Approval required for enrollment?

No Approval Required

Course Component(s) and Classification(s):

Lecture

Lecture Classification

CS#02 - Lecture/Discussion (K-factor=1WTU per unit)

Lecture Units

3

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

No

Can the course be taken for credit more than once during the same term?

No

Description of the Expected Learning Outcomes and Assessment Strategies:

List the Expected Learning Outcomes and their accompanying Assessment Strategies (e.g., portfolios, examinations, performances, pre- and post-tests, conferences with students, student papers). Click the plus sign to add a new row.

	Expected Learning Outcome	Assessment Strategies
1	Identify examples of human influence on the earth and its ecosystems (GE-B2 Learning Outcome 1 and 4)	Periodic quizzes after each module in the curriculum, mid-term exam, and/or final exam. Written assignments I and II.
2	Recall examples of the functions and services of ecosystems (GE-B2 Learning Outcome 1)	Periodic quizzes after each module in the curriculum, mid-term exam, and/or final exam.
3	Describe how we can use scientific methods to understand the environment (GE-B2 Learning Outcome 2)	Periodic quizzes after each module in the curriculum, mid-term exam, and/or final exam. Project.
4	Explain relationships and processes within and among ecosystem components (GE-B2 Learning Outcome 1)	Periodic quizzes after each module in the curriculum, mid-term exam, and/or final exam.
5	Give examples of how science has influenced decision-making and policy (GE-B2 Learning Outcome 3 and 4)	Periodic quizzes after each module in the curriculum, mid-term exam, and/or final exam.
6	Accurately interpret scientific graphs, tables, and text about environmental issues (GE-B2 Learning Outcome 2 and 3)	Periodic quizzes after each module in the curriculum, mid-term exam, and/or final exam. Written assignments I and II

Attach a list of the required/recommended course readings and activities:

List of readings and activities.docx

Is this course required in a degree program (major, minor, graduate degree, certificate?)

Yes

Has a corresponding Program Change been submitted to Workflow?

No

Identify the program(s) in which this course is required:

Programs:

BS in Environmental Studies

BA in Environmental Studies

Minor in Environmental Studies

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Knowledge of human cultures and the physical and natural world
Intellectual and practical skills
Personal and social responsibility
Integrative learning

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?

Yes

In which GE area(s) does this apply?

B2. Life Forms

Which GE objective(s) does this course satisfy?

Gain a general understanding of current theory, concepts, knowledge, and scientific methods pertaining to the nature of the physical universe, ecosystems, and life on this planet.

Attach Course Syllabus with Detailed Outline of Weekly Topics:

template ENVS 10 Syllabus (revised post-SSIS Curriculum committee).docx

Syllabi must include: GE area outcomes listed verbatim; catalog description of the course; prerequisites, if any; student learning objectives; assignments; texts; reading lists; materials; grading system; exams and other methods of evaluation.

Will more than one section of this course be offered?

Yes

Provide a description of what would be considered common to all sections and what might typically vary between sections:

New ELOs 1-6 will be common to all sections because, consistent with an introductory/survey course, they correspond to 'knowledge' and 'comprehension' in Bloom's Taxonomy.

Curriculum in all sections of the course follow the following topics: Air and Water, Ecology, Sustainability (e.g., food and agriculture, energy, human population), Environmental hazards and risk, and Policy-making. Sections of the course vary in the minute of content in terms of the examples and case-studies explored, and the order of delivery.

Instructors choose from a variety of reading materials, the course reader and textbooks (see the 'List of Readings and Activities' document above). The discipline is well-served with a variety of equivalent textbooks for lower-division, survey courses.

Please write a statement indicating the means and methods for evaluating the extent to which the objectives of the GE Area(s) and any writing requirements are met for all course sections:

As part of the review leading to this form, faculty in the Department of Environmental Studies have developed a Canvas Master Class for ENVS 10 to which they all contribute their syllabi, assessment tools, curriculum materials, and learning data. They update old, and add new, materials annually. Teaching faculty use formative-summative assessment pairings to measure learning. Those learning data are also shared. All existing and new teaching faculty are provided access to the Canvas Master Class. Essentially, the site serves as a repository of shared resources, practice, and learning data to encourage innovation and consistency, and furnish future reviews with supporting data.

What steps does the department plan to take to ensure that instructors comply with the respective category criteria and who is responsible?

The new Canvas Master Class engages all faculty in sharing their teaching and learning practice. It facilitates best-practice by collaboration and the development of norms for the course. The Chair of the Department is responsible for maintaining curriculum consistency and standards across the multiple sections of the course. They also have access to the Master Class and utilize its materials during periodic review of faculty and programs.

General Education Details - Area B2: Life Forms

Section 1.

Indicate in written statements how the course meets the following criteria for Category B2. Relate the statements to the course syllabus and outline. Be as succinct as possible.

General criteria:

Is an introductory or survey course with no college level prerequisites.

No pre-requisite or entry conditions are required for ENVS 10. The course is explicitly, in curriculum and pedagogy, an introductory, survey course. The curriculum is a broad-based review of leading environmental issues and practice. The pedagogy is predominantly lecture-based delivery for knowledge and comprehension learning, consistent with lower-order Bloom's taxonomy.

Emphasizes general principles and concepts having a broad range of application and is not restricted to specialized topics.

The course teaches the environment as a socio-ecological system - the interaction of ecological and societal processes. As such, it touches only briefly on many specialized topics (e.g., water, air, agriculture, energy, risk management, policy-making) in order to understand the unity of the many environmental challenges and solutions.

Introduces students to one or more of the disciplines whose purpose is to acquire knowledge of living systems and life forms.

All the courses topics pertain to socio-ecological systems. The course includes modules in ecology at all levels: ecosystems, communities, species, populations, and individuals (behavior, physiology, genetics); and the interplay between it and society (human behavior, policy-making).

Specific criteria:

A student will be able to explain and apply core ideas and models concerning living systems and life forms, citing critical observations, underlying assumptions and limitations.

See ELO 1, 2 and 4. The course teaches ecology in all its levels from biomes, ecosystems, communities, species, populations, to individuals, including the relationship between people and the environment.

A student will be able to describe how scientists create explanations of natural phenomena based on the systematic collection of empirical evidence subjected to rigorous testing and/or experimentation.

See ELO 3. The course teaches the scientific method and how it is applied to the measurement, understanding and solving of environmental challenges.

A student will be able to access and evaluate scientific information, including interpreting tables, graphs and equations.

See ELO 6 (and optional ELO 7). The course explicitly teaches the construction and interpretation of simple representations of scientific writing and data.

A student will be able to recognize evidence-based conclusions and form reasoned opinions about science-related matters of personal, public and ethical concern.

See ELOs 1, 4 and 5 (and optional ELO 8). The course builds from knowledge of socio-ecological systems towards informed opinions, and on to policy-making.

Includes a writing component described on course syllabus

1) If course is lower division, formal and/or informal writing assignments encouraging students to think through course concepts using at least one of the following: periodic lab reports, exams which include essay questions, periodic formal writing assignments, periodic journals, reading logs, other. Writing in lower division courses need not be graded, but must, at a minimum, be evaluated for clarity and proper handling of terms, phrases, and concepts related to the course.

2) If course is upper division, a minimum of 1500 words of formal, graded writing. [Preferably there should be more than one formal writing assignment and each writing assignment (e.g. periodic lab reports, exams which include essay questions, a research/term paper etc.) should be due in stages throughout the semester to allow the writer to revise after receiving feedback from the instructor. Include an indication of how writing is to be evaluated and entered into course grade determination.]

Assignments that require the summarizing and presentation of data (e.g., as tables or graphs) and their written interpretation are common to all sections.

Section 2.

If you would like, you may provide further information that might help the G.E. Course Review Committee understand how this course meets these criteria and/or the G.E. Program Objectives found in the CSUS Policy Manual, General Education Program, Section I.B.

Enrolments in ENVS 10 - Introduction to Environmental Science - have grown in the last 3 years from ~700 to ~1100 students each academic year and from 8 to 12 sections each semester. Three years ago, there was no coordination of curriculum or pedagogy across sections. Even ELOs between sections and syllabi varied somewhat. That context motivated the Department of Environmental Studies to conduct the review and implement a collaborative process in support of curriculum and pedagogy. That effort culminated in these new ELOs and the Canvas Master Class described above.

Reviewer Comments:

Rachel Flamenbaum (flamenbaum) (Thu, 21 Sep 2023 05:40:00 GMT): Rollback: see email feedback

Key: 2062