

# Appendix C: Environmental Sustainability Category Course Submission Requirements and Evaluation Criteria and Rubrics

## COURSE SUBMISSION REQUIREMENTS

Minimum Required Materials for GEOC Review (per GEOC Standing Rules):

1. Cover Letter/Rationale/Justification
  - a. Rationale must include sound justification as to why this course meets the requirements for the Environmental Sustainability category. The originator must demonstrate how the course will teach to and assess the Student Learning Outcomes assigned to the Environmental Sustainability category.
    - i. Environmental Sustainability SLO: Students will describe the interconnections of natural, human, and social systems, including strategies to improve ecological integrity, human well-being, and/or social equity.
  - b. Environmental Sustainability category-specific list of criteria follow.
2. Course Syllabus
3. Example Assignment(s)
4. Example Assessment(s)

Minimum Rubric Evaluation Criteria for SLOs (per GEOC Standing Rules):

Environmental Sustainability	Communicate the concept of environmental sustainability
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Environmental Sustainability Category-Specific Materials/Responses:

Courses that meet the criteria for the Environmental Sustainability criteria examine one or more aspects of environmental sustainability (as defined in the SLO above) or explore issues using environmental sustainability thinking, methods, or theoretical lenses. Faculty submitting a course for the Environmental Sustainability category must specify how environmental sustainability is integrated into the course's student learning goals and outcomes, learning activities, and assessment of student learning.

Environmental Sustainability (ES) courses concentrate on understanding and communicating the concept of environmental sustainability and doing at least one of the following: (1) applying cultural and ethical perspectives, (2) identifying and using scientific evidence, (3) analyzing sustainability issues across multiple scales, (4) developing skills or expertise necessary to implement sustainable solutions, or (5) understanding the interconnections between multiple disciplines.

1. For course proposals in the Environmental Sustainability category, the course syllabus will include sequences of readings and course topics, ideally assignment dates, and course grade breakdowns relating to the tagged area.
2. Narrative explanations responding to the questions below (Area 1, 2, 3, and 4). Narrative responses should point to discrete elements of the syllabus, course objectives, and assignments. Narrative responses should be no longer than 2 single-spaced pages (1,000 words) each, not including syllabi or other materials.

### Area 1: Centering Environmental Sustainability

Explain how the proposed course meets the Environmental Sustainability SLO.

To determine if a course fits the sustainability criteria, the course must address the Environmental Sustainability SLO and the minimum rubric evaluation criteria: Effectively communicate the concept of environmental sustainability.

### Area 2: Supporting Second Criteria

Explain how environmental sustainability and your selected second criteria relate to the course objectives and SLOs.

Each course that meets the Environmental Sustainability category must also substantively address one or more of the following criteria (see the sustainability course criteria matrix for more detail):

- Identify and apply cultural and ethical perspectives to the study of environmental sustainability.
- Identify and apply scientific evidence and critical thinking skills to understand the study of environmental sustainability.
- Apply environmental sustainability problems and problem-solving approaches across multiple scales (e.g., “individual,” “community,” “nation-state,” or “local,” “regional,” and “global”).
- Develop the technical skills or expertise necessary to investigate sustainability problems and/or implement responses to sustainability problems.
- Use the interconnections between multiple disciplines to explain how the economy, society, cultures, energy, and the environment are interrelated.

### Area 3: Course Activities

Explain the practices, concepts, or strategies you use to teach sustainability and your selected second criteria (e.g., lectures, readings, lab activities).

### Area 4: Course Assessments

Explain how you will integrate sustainability assessments into your course (e.g., writing assignments, exams/ quizzes, timeline, deadlines).

Course Proposal Evaluation Criteria and Rubrics

GEOC Advisory Subcommittee members will use the following rubrics when reviewing and providing feedback on faculty submissions for Environmental Sustainability. Each rubric connects to the ideas of the areas above.

<b>Area 1 Rubric: To be completed by the subcommittee</b>		
<b>Centering Environmental Sustainability:</b> Explain how the proposed course meets the Environmental Sustainability SLO.		
<b>Requires Revisions</b> (Yes/No)	<b>Criteria</b>	<b>Meets Expectations</b> (Yes/No)
	<b>Course Integration</b> Clear and substantial identification of how the course connects individual actions to natural systems as they relate to environmental sustainability.	
	<b>Course Integration</b> Clear and substantial identification of how the course connects individual actions to social systems as they relate to environmental sustainability.	
	<b>Course Integration</b> Clear and substantial identification of how the course integrates environmental sustainability, aligning with the goal to improve ecological integrity, human well-being, and social equity.	

*General comments and suggestions for consideration:*

**Area 2 Rubric: To be completed by the subcommittee**

**Supporting Second Criteria:** Explain how environmental sustainability and your selected second criteria relate to the course objectives and SLOs.

Requires Revisions (Yes/No)	Criteria	Meets Expectations (Yes/No)
	<b>Course Integration</b> Clear and substantial connection between environmental sustainability and the purpose/course objectives/student outcomes.	
	<b>Theoretically Grounded</b> Environmental sustainability is based in relevant disciplinary and/or interdisciplinary approaches	

*General comments and suggestions for consideration:*

**Area 3 Rubric: To be completed by the subcommittee**

**Course Activities:** Explain the practices, concepts, or strategies you use to teach sustainability and your selected second criterion (e.g., lectures, readings, lab activities).

Requires Revisions (Yes/No)	Criteria	Meets Expectations (Yes/No)
	<b>Description</b> Clear and concise statement of how sustainability will be taught.	
	<b>Methodological Approach(es)</b> Content and approaches reflect understanding of sustainability topics and methods grounded in best practices within sustainability studies.	
	<b>Student Engagement</b> Clear and substantive student engagement with sustainability topics, methods, or thinking (SLOs) via student learning activities (e.g., lectures, readings, assignments).	

*General comments and suggestions for consideration:*

**Area 4 Rubric: To be completed by the subcommittee**

**Course Assessments:** Explain how you will integrate sustainability assessments into your course (e.g., writing assignments, exams/quizzes, timeline, deadlines).

Requires Revisions (Yes/No)	Criteria	Meets Expectations (Yes/No)
	<b>Assessment Expectations</b> Clear description of how faculty will assess student learning in environmental sustainability.	
	<b>Substantial Component</b> The environmental sustainability content accounts for a substantive amount of course time or grade	

*General comments and suggestions for consideration:*

**Final remarks and decision, to be completed by the subcommittee:**

- Accept the course, as submitted, for Environmental Sustainability.
- Suggested revisions to meet Environmental Sustainability requirements:

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**ADDITIONAL RESOURCES**

**Environmental Sustainability Course Criteria Matrix**

This resource outlines the Environmental Sustainability requirements and provides examples of how these requirements can be applied in lower- and upper-level courses. Additional documents including the requirements rubric and a matrix of suggested student learning outcomes associated with the sustainability required criteria are provided to assist faculty with these submissions.

<b>1st Requirement</b>	<b>Lower Level</b>	<b>Upper Level</b>
<b>REQUIRED OF ALL:</b> Understand and be able to effectively communicate the concept of environmental sustainability.	<b>Demonstrate an understanding</b> of the meaning of environmental sustainability and how individual actions are linked to it.	<b>Explain</b> how environmental sustainability connects to, and is applied within, a given course of study.
<b>2nd Requirement: Select at Least One Option</b>	<b>Lower Level</b>	<b>Upper Level</b>
<b>OPTION 1:</b> Identify and apply cultural and ethical perspectives to the study of environmental sustainability.	<b>Recognize</b> differences in normative values between individuals, groups, and cultures, and understand how these differences guide their behavior and impact sustainability visions.  <b>Identify</b> societal impediments to solving sustainability problems and how individual and collective action can overcome these impediments.	<b>Evaluate</b> how stakeholder interests, values, needs, and influences become key drivers in problems and systems.  <b>Work collaboratively</b> and in multidisciplinary teams to develop or discuss cultural and ethical perspectives to the study of environmental sustainability.  <b>Describe</b> and key historical and cross-cultural ideas of the future of sustainability and how different groups have different ideas about the future.
<b>OPTION 2:</b> Identify and apply scientific evidence and critical thinking skills to understand the study of environmental sustainability.	<b>Evaluate</b> the role and effectiveness of a broad range of methods of inquiry and analysis.  <b>Describe</b> current scientific evidence of significant threats to environmental sustainability, including their likely causes and potential responses to these threats.	<b>Evaluate</b> scientific evidence and use critical thinking skills to assess the validity of contrasting sustainability claims.  <b>Work collaboratively</b> to develop or discuss scientific evidence related to environmental sustainability.

<p><b>OPTION 3:</b> Analyze sustainability issues across multiple scales (e.g., “individual,” “community,” “nation-state,” or “local,” “regional,” and “global”).</p>	<p><b>Demonstrate a understanding</b> of how individual activities and impacts on natural systems are imbedded within larger communities, as well as natural and social systems.</p>	<p><b>Evaluate</b> sustainability-related concepts of the future, such as short-term versus long-term trends, uncertainty, path dependency, likelihood, plausibility, consistency and desirability.</p> <p><b>Define</b> physical, social and symbolic/analytical system boundaries <b>and explain</b> different ways of bounding problems and systems for sustainability problem-solving (problem framing) across multiple scales.</p>
<p><b>OPTION 4:</b> Develop technical skills or expertise necessary to implement sustainable approaches or solutions</p>	<p><b>Identify</b> societal impediments to solving sustainability problems and how individual and collective action can overcome these impediments.</p> <p><b>Apply</b> technical or professional skills or standards to sustainability issues.</p>	<p><b>Invent or Practice</b> new technical skills or applications to promote sustainability</p> <p><b>Work collaboratively</b> to develop sustainability solutions.</p>
<p><b>OPTION 5:</b> Understand the interconnections between multiple disciplines to explain how economies, societies, cultures, energy, and the environment are interrelated.</p>	<p><b>Understand</b> the concepts and methods of different academic disciplines and the way in which these can address sustainability challenges.</p> <p><b>Explain</b> sustainability principles, including socio–ecological system integrity, livelihood sufficiency and opportunity, and social and intergenerational equity.</p>	<p><b>Explain</b> the structure, behavior and functionality of systems (e.g., water, energy, cities and ecosystems), including the interconnections among environmental, social and economic sub-systems.</p> <p><b>Discuss</b> complex features of systems relating to sustainability, including diversity, redundancy, tipping points/thresholds, non-linearity, externalities, resilience, vulnerability, social justice, emergence, and agency.</p>