General Studies Gold Request Form

Consult the General Studies Request FAQ for more information and quick answers.

New permanent numbered courses must be submitted to the workflow in Kuali CM before a General Studies request is submitted here. The General Studies Council will not review requests ahead of a new course proposal being sent to the Senate.

Submission Information

College/School	Department/School
New College of Interdisciplinary Arts and Sciences (CAS)	School of Mathematical and Natural Sciences (CMATNATSCI)

Submission Type

New Request

Requested Effective Date

Spring 2025

ASU Request

Is this request for a permanent course or a topic?

Topic

Subject Code	Course Number	Units/Credit Hours
ENV	194	3

Topic Information

If your request is approved:

1. Topics on omnibus courses carry a designation for one semester (including summer). Please ensure you have requested the term you plan to offer/schedule the topic. Once expired, a new request must be submitted.
2. Topics on permanent courses require mandatory review every five years.

Topic Title	List all other undergraduate courses where this topic exists and the sections will be combined in the schedule.
Environmental Sustainability	

Topic Description

An introduction to the ecological concepts underlying environmental sustainability, a natural resource management strategy that seeks to restore and maintain the composition, structure, and function of Earth's systems so that future generations can derive the same ecosystem services that current generations enjoy.

Has this topic been scheduled in the past with a GS Gold designation? If so, list which semester(s).	Omnibus topics cannot hold a GS Gold designation for more than three semesters total. If this topic has already been offered twice with a GS Gold designation, you must attach examples of student work in the next field confirming the measurement of all category learning outcomes. The proposal will not be reviewed without these files. If this topic has been offered three times with a GS Gold designation, you must request a new permanent course, then request the General Studies designation under the permanent course number.	Student Work Examples
No		No Response

If this course or topic already carries a different General Studies Gold (not Maroon) designation than the one being requested, please check this box.

General Studies Gold Designation Request

Requested Designation

Sustainability (SUST)

Attach a representative syllabus for the course, including course learning outcomes and descriptions of assignments and assessments.

Env Sustainability Syllabus.pdf

Sustainability (SUST)
The Sustainability requirement will provide students with an interdisciplinary understanding of socio-ecological systems in relation to global challenges and opportunities. The learning objectives emphasize systems thinking, where human and non-human systems are understood as intimately connected, with human actions affecting all life on a planet with limits and boundaries. Students should also become familiar with how cultural, political, economic, social, and ethical beliefs, practices and systems are related to and impact planetary systems. Students will use course concepts and systems and futures thinking to address contemporary questions or challenges.

Instructions: In the fields below, state the assignment, project, or assessment that will measure each learning outcome, and provide a description. The description should provide

enough detail to show how it measures the learning outcome. If needed, more than one can be identified.

The proposal does not need to include all course assessments that measure a given learning outcome. The provided assessment should include sufficient detail to allow the subcommittee to make their evaluation. When appropriate, the same assessment can be listed for more than one learning outcome (e.g., a culminating project).

You may provide links to a document (Google Drive or Dropbox) that includes the relevant details for the assessment. Do not provide links to Canvas shells.

SUST Learning Outcome 1: Demonstrate an understanding of the earth and its ecosphere, including the measures that indicate their capacities and limits.

Students will be introduced to the concepts of Environmental Sustainability using pre-class concept overviews. Concepts will be further developed during lecture, focusing on the areas students found most challenging. Mastery of concepts will be assessed using multiple-choice questions on unit exams. For course assessment, I will embed 10 questions within each unit exam that specially addresses the learning outcomes that directly relate to the SUST core requirements as outlined in the course syllabus. I expect to see at least 75% of students to get at least 80% of the embedded questions correct. The course specific learning outcomes for SUST LO1 include:

A. Discuss how climate, organisms, topography, parent material, and time can influence the structure and development of soils and which organisms can survive.

B. Diagram the movement of salts and water between the surrounding environment and aquatic organisms that are isosmotic, hyperosmotic, and hypoosmotic.

C. Explain how the effects of disturbance by humans on biodiversity are consistent with the predictions of the intermediate disturbance hypothesis.

D. Outline the major nutrient sources and sinks involved in the phosphorus, nitrogen, and carbon cycles.

SUST Learning Outcome 2: Trace historical impacts of a range of socio-economic, political or cultural choices on integrated human-environmental wellbeing.

Students will be introduced to the concepts of Environmental Sustainability using pre-class concept overviews. Concepts will be further developed during lecture, focusing on the areas students found most challenging. Mastery of concepts will be assessed using multiple-choice questions on unit exams. For course assessment, I will embed 10 questions within each unit exam that specially addresses the learning outcomes that directly relate to the SUST core requirements as outlined in the course syllabus. I expect to see at least 75% of students to get at least 80% of the embedded questions correct. The course specific learning outcomes for SUST LO2 include:

A. Explain why human impacts on the oceans, which lagged behind our impact on terrestrial biomes for thousands of years, have rapidly increased in recent years.

B. Describe the purposes of the Convention in International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the U.S. Endangered Species Act.

C. Describe how farmers have used ants a s a keystone species to reduce pest populations in agricultural ecosystems.

D. Summarize the history of human migration from rural areas to cities and the underlying reasons for this population shift.

SUST Learning Outcome 3: Envision pathways toward futures characterized by integrated human-environmental wellbeing.

Students will be introduced to the concepts of Environmental Sustainability using pre-class concept overviews. Concepts will be further developed during lecture, focusing on the areas students found most challenging. Mastery of concepts will be assessed using multiple-choice questions on unit exams. For course assessment, I will embed 10 questions within each unit exam that specially addresses the learning outcomes that directly relate to the SUST core requirements as outlined in the course syllabus. I expect to see at least 75% of students to get at least 80% of the embedded questions correct. The course specific learning outcomes for SUST LO3 include:

A. Explain the environmental significance of each of the elements, such as feeding biology of species, including in the calculation of an Index of Biotic Integrity.

B. Explain how human hunting of a relatively small percentage of animal species can have a massive impact on other species in the community.

C. Explain how remote sensing has revolutionized the study of large-scale ecological processes.

D. Describe how predicted climate change would impact human populations and infrastructure.

SUST Learning Outcome 4: Articulate an approach to addressing contemporary questions or challenges that employs concepts or practices of sustainability.

Students will be introduced to the concepts of Environmental Sustainability using pre-class concept overviews. Concepts will be further developed during lecture, focusing on the areas students found most challenging. Mastery of concepts will be assessed using multiple-choice questions on unit exams. For course assessment, I will embed 10 questions within each unit exam that specially addresses the learning outcomes that directly relate to the SUST core requirements as outlined in the course syllabus. I expect to see at least 75% of students to get at least 80% of the embedded questions correct. The course specific learning outcomes for SUST LO4 include:

A. Discuss how stable isotope analysis is revealing information about trophic ecology that would be hidden to traditional sources, such as stomach analysis.

B. Summarize how various factors influencing succession can be managed to facilitate ecosystem restoration.

C. Define heat waves and describe the threat that heat waves pose to human populations.

D. Discuss the influence of fire and fire suppression on landscape structure in Mediterranean climates.

List all course-specific learning outcomes. Where appropriate, identify the associated SUST learning outcome(s) in brackets (see below for example). Note: It is expected that a majority of course-specific learning outcomes will be associated with a SUST learning outcome.

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1. Discuss how climate, organisms, topography, parent material, and time can influence the structure and development of soils and which organisms can survive. [SUST LO1]

2. Diagram the movement of salts and water between the surrounding environment and aquatic organisms that are isosmotic, hyperosmotic, and hypoosmotic. [SUST LO1]

3. Explain how the effects of disturbance by humans on biodiversity are consistent with the predictions of the intermediate disturbance hypothesis. [SUST LO1]

4. Outline the major nutrient sources and sinks involved in the phosphorus, nitrogen, and carbon cycles. [SUST LO1]

5. Explain why human impacts on the oceans, which lagged behind our impact on terrestrial biomes for thousands of years, have rapidly increased in recent years. [SUST LO2]

6. Describe the purposes of the Convention in International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the U.S. Endangered Species Act. [SUST LO2]

7. Describe how farmers have used ants a s a keystone species to reduce pest populations in agricultural ecosystems. [SUST LO2]

8. Summarize the history of human migration from rural areas to cities and the underlying reasons for this population shift. [SUST LO2]

9. Explain the environmental significance of each of the elements, such as feeding biology of species, including in the calculation of an Index of Biotic Integrity. [SUST LO3]

10. Explain how human hunting of a relatively small percentage of animal species can have a massive impact on other species in the community. [SUST LO3]

11. Explain how remote sensing has revolutionized the study of large-scale ecological processes. [SUST LO3]

12. Describe how predicted climate change would impact human populations and infrastructure. [SUST LO3]

13. Discuss how stable isotope analysis is revealing information about trophic ecology that would be hidden to traditional sources, such as stomach analysis. [SUST LO4]

14. Summarize how various factors influencing succession can be managed to facilitate ecosystem restoration. [SUST LO4]

15. Define heat waves and describe the threat that heat waves pose to human populations. [SUST LO4]

16. Discuss the influence of fire and fire suppression on landscape structure in Mediterranean climates [SUST LO4]

Provost Use Only

Backmapped Maroon Approval

No Response

Form Submission - Proposer

Submitted for Approval | Proposer

Christopher Higgins - October 6, 2024 at 3:01 PM (America/Phoenix)

Department Approval

Approved

Morgan Johnson

James Corbeille - October 7, 2024 at 9:36 AM (America/Phoenix)

GSC Coordinator Review

Approved

TJ Robedeau - October 10, 2024 at 11:14 AM (America/Phoenix)

April Randall

Assistant Vice Provost Review

Approved

Tamiko Azuma - October 10, 2024 at 11:29 AM (America/Phoenix)

All required components confirmed.

Pre-GSC Meeting

Approved

TJ Robedeau - October 10, 2024 at 1:50 PM (America/Phoenix)

April Randall

Sustainability (SUST) Committee

Acknowledgement Requested

Kevin Dooley

Jose Lobo - October 17, 2024 at 8:47 PM (America/Phoenix)

The subcommittee recommends revise and resubmit. The same assessment method (quizzes) is used for all of the Learning Outcomes and as a consequence the assessment of each of the LOs is not adequately differentiated.

Evan Berry

Treavor Boyer

General Studies Council Meeting

Waiting for Approval

TJ Robedeau

April Randall

Registrar Notification

Notification

Courses Implementation

Implementation

Approval

Rebecca Flores

Lauren Bates

Alisha Von Kampen

Proposer Notification

Notification

Christopher Higgins

College Notification

Notification

James Corbeille

Morgan Johnson

DARS Notification

Notification

Leticia Mayer

Peggy Boivin

EdPlus Notification

Notification

Sarah Shipp
Bronson Cudgel