

**Environment and Sustainability Comprehensive Exam
Easter Semester 2022**

Part I. Three Essays - Responses are due by Monday January 10 at midnight!

A. Question: Environmental Justice ([Submit your essay response to QA here](#))

Consider two hypotheses within the environmental justice literature stating that

- 1) Communities of color and/or low-income are disproportionately exposed to harmful pollutants, and
- 2) These communities lack access to environmental goods, such as green space, bike paths, and venues to purchase healthy foods.

Outline a research project to test one of these hypotheses (either hypothesis 1 or 2).

Your research proposal must include:

- 1) An introduction in which you discuss case studies from the literature that provide examples of and justification for the environmental justice hypothesis that you will test. The introduction should culminate with a statement of your study objectives and hypotheses, and
- 2) A description of your study design, including:
 - a) important details about the independent and dependent variables, including the population or location that will be used to test your hypothesis
 - b) your methodological approach (e.g., a correlational study using GIS, case studies, an experiment, surveys, etc.)
 - c) the kind of data you would use and/or collect, and
 - d) where you might find the data necessary to perform your analysis, and/or how you would collect the data
- 3) A description of your expected results and the potential implications of your analysis (i.e., why is this a meaningful research question to answer).
- 4) A conclusion outlining the broader significance of your study to the field of environment and sustainability

B. Question: Environmental Economics ([Submit essay response to QB here](#))

Discuss three general cases in which competitive markets fail to produce efficient (or Pareto optimal) outcomes, and as a result, the environment is degraded. Your discussion should include, **at a minimum**, the following:

- 1) An analysis of each market failure based on economic theory. One part of your analysis should include an economic model such as a graph, while the other

portion should be written. **Be thorough!** [Economic models may be drawn by hand on the paper provided]

- 2) A discussion on what connects these market failures, i.e., a common factor among them.
- 3) How do property rights play a role in each of these market failures?

Provide a policy prescription, one for each market failure. Your discussion should include, **at a minimum**, the following:

- 4) An analysis of each policy based on economic theory. One part of your analysis should include an economic model such as a graph, while the other portion should be written. **Be thorough!** [Economic models may be drawn by hand on the paper provided]
- 5) An explanation of how each policy leads to an efficient outcome, compared to the outcome with no policy prescription.
- 6) Examples of similar policies implemented throughout the world and their outcomes.

Question C: Environmental Policy ([Submit your essay response to QC here](#))

Using as an example a specific US environmental policy of your choosing, write an essay in which you:

- 1) Trace the history of the development of this policy from before its inception to its present implementation, including the environmental issue that provided compelling evidence of the need for the policy
- 2) Present different perspectives important to fully understanding the scope of the environmental issue and subsequent policy (i.e., relevant cultural resource issues, scientific information, public concerns, political context, economic trade-offs, etc.).
- 3) Outline the regulation(s) enacted by the policy, the specific US-government channels through which the policy was established and is enforced, and any factors that currently limit the effectiveness of this policy.
- 4) Summarize at least one case in which this policy was enacted to affect change in the behavior of a person, population or corporation, and what it tells you about the strengths and weaknesses of the policy

Exam instructions

There are three parts to your comprehensive exam. For Part I, there will be essay questions (link below). For Parts II and III, questions will be shared with you on Thursday Jan 13, to which you will respond directly.

Part I: [Link to Part I three essay questions](#)

Over winter break, prepare a **well written thorough** response to the three essay questions at the link above.

- Answer the three essay questions as thoroughly as possible, using class notes, textbooks, credible online sources, etc. The point is to write a very well informed, referenced and polished essay.
- In accordance with the Honor Code, you must properly cite all material referenced in your essays.
- Pledge each response by typing your name at the end of the essay.
- Save each essay separately, titled with your first and last name, as either a Word Document or PDF.
- Submit your Word Doc or PDF using the Google form link next to the title of each question (e.g., QA, QB, QC).

You may submit your three responses anytime during winter break, but they **must be submitted by midnight on Monday January 10, 2022.**

Part II Sustainability Challenges (Thursday January 13, 1:30-5:30 pm).

For each of these sustainability challenges: **biodiversity loss, climate change, food systems, energy and water**, be able to discuss the following:

- a) What are the main issues associated with each topic?
 - b) What are the root causes?
 - c) What are the consequences?
 - d) What are the solutions?
1. **True/False questions** about the sustainability challenges will be made available to you through Brightspace. Highlight in yellow T or F and respond to any follow up about the T/F statement. For example, you may be asked to explain WHY the statement is true or false.
 2. **A structured series of questions** will require you to go deeper into TWO of these challenges. Pick two challenges to know well. Save this response in your Google Folder as “Sustainability Challenge” before you end the exam.

Part III (To be written and submitted on Thursday Jan 13, 7:00-9:00 pm).

Hometown Sustainability Essay

Reflect on a place you know well (Sewanee, your hometown, or another place you have lived or traveled such as a study abroad location) and discuss three distinct sustainability issues that this community is wrestling with or has dealt with in the past. In your essay:

1. Describe the community and the issues with which it has wrestled. Include in your description important context for understanding the trade-offs the community faces in addressing (i.e., is coal mining an important industry? How has the community dealt with each issue thus far? What are some solutions that have been tried, or proposed, to address each issue)?
2. Give specific examples of the problem and potential or actual solutions, including examples of how other communities have tackled the issues and evaluate their success or lack thereof. Evaluate the strengths and weaknesses of proposed and/or implemented measures.
3. Conclude by offering concrete and well justified recommendations for your community.

Remember that sustainable development necessarily addresses three intersectional domains: environmental, economic, cultural/social, so be sure to assess your issues through each of these three important lenses.

You will be required to respond to this essay in person, without outside resources. You will be given a link to a Google Form at which to submit your response.