

BISC 003

Environmental Science

Sample Syllabus

Description

The purpose of BI SC 003 is to help you prepare for living in the 21st century in a sustainable way. Through the course, you will come to realize that you are dependent upon and supported by natural systems, without which life on earth could not exist. By presenting ideas and concepts about living systems and their environment, it is hoped that an understanding of these biological and ecological principles and their application towards current environmental problems will give you the confidence to be a trustworthy instrument for healthy development, a conscientious steward of nature and an agent of change towards a sustainable society.

Objectives

- Evaluate your worldview (your own personal belief system), which shapes the way you currently think about the environment and environmental issues.
- Outline important events in the history of environmentalism.
- Explain basic ecological concepts and natural laws of matter and energy and how they relate to environmental issues.
- Classify and describe biomes in the United States.
- Discuss causes, effects and solutions to these major environmental issues:
 - Overpopulation
 - Food Production
 - Habitat Destruction
 - Urbanization and Urban Sprawl
 - Energy Use and Abuse
 - Preservation of Biodiversity
 - Conservation of irreplaceable Natural Resources
 - Global Climate Change
 - Water Use and Abuse
 - Solid Waste Management

- Affluenza and Overconsumption
- Use critical thinking and evaluate environmental information sources.
- Apply information and tools necessary to minimize your environmental impact in meaningful ways if you choose to do so.

Course Materials

The following text book is required. It may be purchased from MBS Direct, or rented/purchased from other sources:

- Principles of Environmental Science: Inquiry and Applications, 8th Edition, Cunningham and Cunningham, published by McGraw-Hill, 2016. ISBN: 9780078036071
- MBS Direct: Loose-Leaf version of the same book. ISBN: 9781260722666. You can buy or rent either version.

Reading and Lectures

For each of the 12 lessons in this course you should read the assigned chapter(s) in the text book and watch/listen to a 20-25 minute lecture located on the course web-site, or read the transcript of the lecture.

Exams

There will be two proctored exams in this course, one mid-course exam covering lessons 1-6, and one final exam covering lessons 7-12. Each exam will be available in Canvas for a 7-day period as outlined in the course schedule. You will only be able to open each exam once and you will then have 2 hours to complete all the questions. The exams will be proctored with Examity and you are not permitted to use the text book or notes while taking the exams. Exam questions will assess your understanding of the course materials.

Each exam consists of 40 multiple choice questions worth 3 points each (total 120 points), and 8 short answer questions worth 10 points each (total 80 points). Each exam is 200 points total and 20% of the course grade.

Exam Late Submission Policy: If you miss the exam deadline you may contact the instructor to ask to take a make-up exam. Unless you have a

valid, documented reason for missing the exam period you will lose 10% per day taking the exam late.

Assignments

For each of the 12 lessons there will be 1-3 assignments. See course schedule for due dates for individual assignments.

Course Introduction Activities (25 points): During week 1 you will complete several course introduction activities:

- Class introduction, post in “Class Introductions” discussion forum (1 point)
- Examity Profil and Mid-course Exam scheduling (1 point)
- Syllabus quiz (2 points)
- Academic Integrity Contract (1 point)
- Complete pre-course environmental science quiz and submit comments to this quiz in drop box. The purpose is to see how much you already know about environmental issues and no worries; you can get full credit for this activity even with a low score on the quiz (10 points).
- Evaluating Information Sources (10 points).

Discussion Forums (15- 30 points)

In the discussion forums you will get a chance to discuss environmental issues with your classmates. You will write your answer to a set of questions in a short essay format and post this in the discussion forum, in addition to replying to at least two of your classmates’ posts (one in the information literacy discussion, three in climate change discussion). Participate by the deadlines outlined in the course schedule.

Grading Criteria: To obtain full credit for participation in the discussion forums you need to post well-written, reflective main response that meets all the requirements outlined in description and write at least two (three in climate change discussion) substantial replies to your classmates’ postings. A simple “I agree with you” is not enough, you should instead try to ask thought-provoking questions, add supporting information, or state your opposing views that contributes to your classmates’ learning.

Quizzes (10-30 points each)

Each quiz will consist of multiple choice and short answer questions. Quizzes are open book/notes and there is no time limit. Submit by the deadlines outlined in the course schedule.

Case Studies (20 points each)

You will research one specific example that relates to a topic covered in the required reading/lecture and summarize your findings in a 300-500 word essay.

1. The history of the Environmental Movement - Choose one person or organization
2. Endangered or Invasive Species - choose one species
3. Deforestation - choose one country

Submit in assignment folders by the deadlines outlined in the course schedule. Note: The originality of your case study assignments will be checked through Turnitin.

Grading Criteria: Full credit will be awarded if all the requirements outlined in the description are met, all questions are answered correctly/thoroughly and assignment is submitted by the deadline. See grading rubrics for more detail.

Video Assignments (15-20 points each)

You will watch one or several short videos that relate to topics covered in the required reading/lecture and then answer a set of questions. Submit in drop box by deadlines outlined in the course schedule.

Grading Criteria: Full credit will be awarded if all questions are answered correctly/thoroughly and submitted by the deadline.

Projects (15-50 points each)

1. Biodiversity (30 points): Surveying biodiversity in your neighborhood or nearby natural ecosystem (going for a walk and web research)
2. Food (20 points): Keeping track of and evaluating the impact of the food you eat (kitchen, potentially restaurants, and web research)

3. Energy (50 points): Researching pros and cons of non-renewable and renewable energy source
4. Ecological Footprint (15 points): Calculating your ecological footprint (web-activity). Submit in drop box by deadlines outlined in the course schedule.

Grading Criteria: Full credit will be awarded if all the requirements outlined in the description are met, all questions are answered correctly/ thoroughly and assignment is submitted by the deadline. See grading rubrics for more detail.

Extra Credit – Polls/Surveys (2 points each)

Throughout the semester you will get a chance to participate in a few polls/surveys. You will get 2 extra credit points for each poll/survey you participate in if you do so by the corresponding lesson's submission deadline. Zero points for late participation in polls/surveys. There will also be a 10 extra credit point discussion forum associated with lesson 12.

Use proper English when writing assignments, participating in class discussions and completing exams; achieving competence in the use of the English language is one of the objectives of general education at Penn State. Improper use of the English language, including more than a few minor spelling and grammatical errors, will adversely affect your grade.

Grading

This course consists of 12 lessons. For each lesson you will read one (or two) chapter(s) in the text book, watch a power point lecture and complete 1-3 assignments. Assignments associated with each lesson add up to approximately 50 points. 15 points are associated with the course introductory activities. See course format for assignment descriptions and course schedule for deadlines for each assignment.

Assignment Type	Number Assigned	Points Each	Total Points	% of Course Grade
Exams	2	200	400	40%

Quizzes	9	10-35	160	16%
Discussion Forums	10	15-30	185	17.5%
Case Studies	3	20	60	6%
Projects	4	15-50	65	6.5%
Video Assignments	4	15-20	65	6.5%
Course Introduction Activities	5	1-10	25	2.5%
Total	36	N/A	1000 pts	100%

Grade Scale

Grade	Percentage	Points
A	92-100	920-1000
A-	90-91.9	900-919
B+	88-89.9	880-899
B	82-87.9	829-879
B-	80-81.9	800-819
C+	78-79.9	780-799
C	70-77.9	700-779
D	60-69.9	600-699
F	< 60	< 600

Academic Integrity

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at The Pennsylvania State University, and all

members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts.

Academic integrity includes a commitment by all members of the University community not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others.

Accommodating Disabilities

Penn State welcomes students with disabilities into the University's educational programs. Every Penn State campus has an office for students with disabilities. The [Student Disability Resources \(SDR\) website](#) provides contact information for every Penn State campus . For further information, please visit [Student Disability Resources website](#).

In order to receive consideration for reasonable accommodations, you must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: [See documentation guidelines](#) . If the documentation supports your request for reasonable accommodations, your campus disability services office will provide you with an accommodation letter. Please share this letter with your instructors and discuss the accommodations with them as early as possible. You must follow this process for every semester that you request accommodations.

Counseling and Psychological Services

Many students at Penn State face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention,

consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

- [Counseling and Psychological Services at University Park \(CAPS\)](#): 814-863-0395
- [Counseling and Psychological Services at Commonwealth Campuses](#)
- Penn State Crisis Line (Available 24 hrs, 7 days a week): 877-229-6400
- Crisis Text Line (Available 24 hrs, 7 days a week): Text LIONS to 741741

Educational Equity / Report Bias

Penn State takes great pride to foster a diverse and inclusive environment for students, faculty, and staff. Acts of intolerance, discrimination, or harassment due to age, ancestry, color, disability, gender, gender identity, national origin, race, religious belief, sexual orientation, or veteran status are not tolerated and can be reported through Educational Equity via the [Report Bias website](#).