



Biology 1002

Environment & People

Syllabus Fall 2021

*Then God looked over all that He had made, and it was excellent in every way...The Lord God placed the man in the Garden of Eden as its gardener, to tend and care for it.
(Genesis 1:31; 2:15 TLB)*

I brought you into a fertile land to eat its fruit and rich produce. But you came and defiled My land and made My inheritance detestable. (Jeremiah 2:7 NIV)

See, I will create new heavens and a new earth. The former things will not be remembered, nor will they come to mind. (Isaiah 65:17)

Catalog Course Description: BIO 1002 - Environment and People (GE) 4 units

A systematic overview of major topics in global ecology as experienced by people in the developing world, both the problems they face and the successful actions of communities to solve those problems. Introduces creation care and sustainable development as key concepts needed to overcome the challenges and build hope for the future. Includes such topics as population growth, food and agriculture, land degradation, urbanization, sanitation, health care, biodiversity, climate change, consumerism, and the implications for wise resource management, green economics, and governmental policy. Course approach emphasizes the process of science, critical thinking, active learning, social relevancy, and building connections between case studies and general concepts. Students engage in weekly readings, film discussions, and a term paper project.

Instructor:	Dr. Mike Mooring Rohr Science Office 128 – E-mail: mmooring@pointloma.edu Office Hours: email to set up a meeting on Zoom or in person
TAs:	Section 1: Ellie Deer: edeer022@pointloma.edu Section 2: Timmy Mooring: tbmooring555@pointloma.edu
Lecture:	<u>Tues and Thurs - Liberty Station 205A</u> Section 1: 10:00 – 11:45 AM; Section 2: 12:30 – 2:15 PM
Texts:	<u>Reading Pack</u> for BIO 1002, University Readers. Order from PLNU bookstore or Cognella Store Additional readings available on the course Canvas site
Equipment:	iClicker2 remote for class participation

Course Learning Outcomes (CLO's):

Upon completion of the course, you will be able to:

- Describe the major global environmental challenges and how they affect people.
- Explain options for how we can deal with these global environmental challenges.
- Articulate and defend a position on Biblical environmental stewardship.
- Outline, research, and write an original research paper exploring case studies specific to an environmental challenge and how it is impacting people in the developing world.
- Understand how consumerism impacts the ecological footprint of our affluent society.

Foundational Explorations Learning Objectives (FELO's):

All FE courses are required to assess FELO's as part of institutional assessment. In this course, we will assess FELO 1C: **Information Literacy** and FELO 1D: **Critical Thinking**.

- Information Literacy - Students will be able to access and cite information as well as evaluate the logic, validity, and relevance of information from a variety of sources.
- Critical Thinking - Students will be able to examine, critique and synthesize information in order to arrive at reasoned conclusions.

These FELOs will be needed to successfully complete your term paper assignments, and your mastery of them will be assessed through a few questions on the final exam.

Course Design:

The focus of our exploration will be on people interacting with their environment. Our approach will be global, with emphasis on the environmental issues affecting people in the developing (less developed, Third World) nations. We will familiarize ourselves with the fundamentals of stewardship, the concept of sustainable development, and the real life tensions that exist in the developing world between the goals of wise management of natural resources and the objectives of economic development in the urban and rural setting in the poor nations. Importantly, we will consider the Biblical mandate for human beings to be God's representatives on earth and to care for His Creation, both human and non-human.

Course Format

The "lecture" component of the course will be presented during the Tuesday meeting, but it will not be just me talking. I will introduce interactive activities (e.g., iClicker questions, small group discussions) to give you an opportunity to actively explore the topics under consideration. During the Thursday meeting, we will view a film for about the first hour, and then break into discussion teams for 20 min (teams will be formed for the semester). Each team will discuss questions based on the film and will craft a group response. Note that points for team responses will only be awarded to students who were present and participated in the group discussion. Although your group will craft the responses collaboratively, each student will submit the discussion assignment individually on Canvas in your own words. This ensures that all team members are accountable for the assignment. Enjoy this opportunity to draw from the insights of your classmates!

Canvas:

All class resources are available to you on Canvas. All reading, discussion, and small group assignments will be submitted via Canvas and graded online. The in-classroom assignments will use electronic files and be submitted on Canvas so be sure to **BRING YOUR LAPTOP TO CLASS**. Note that Canvas does not support 'PAGES' – please use Word or PDF instead. Your grader and I will often give you feedback on Canvas, so be sure to set up Canvas to alert you when you get comments.

Reading Assignments:

I have carefully selected a reading for each topic we cover during each weekly module. The readings will be available either in the Cognella reading pack (for copyrighted texts) or on as a link in Canvas. For each reading, a set of questions will be posted in that week's Canvas module to help you focus on the points I consider most important. Your answers must be submitted on Canvas before the deadline and will be graded online. Note that you will be able to submit assignments after the due date, but they will be marked as late. In this class it is very important to keep up with the reading questions because they are a significant part of the course grade – and once you get behind it is difficult to get caught up.

Late Assignments:

The following penalties will apply for all assignments submitted after the posted deadline:

For Readings (worth 10 pts):

1-2 days late: -2 points
 3-4 days late: -4 points
 5-6 days late: -6 points
 7 days late: -8 points
 >7 days late: don't accept

For Discussions (worth 5 pts):

1-2 days late: -1 points
 3-4 days late: -2 points
 5-6 days late: -3 points
 7 days late: -4 points
 >7 days late: don't accept

There are many reasons why a late policy is desirable: (1) It sets clear guidelines for students so that you are motivated to submit your assignment on time; (2) it sets clear guidelines for the graders so they know how to handle cases of lateness; (3) it is fair insofar as students that faithfully submit their assignments on time every week benefit over those who are chronically late; (4) it enables the graders to be consistent in grading your assignments because they can grade all of them at once; (5) finally, it benefits you by promoting on-time submissions and fast turnaround in grading so that you know where you stand regarding your grade in the class. The graders and I recognize that from time to time there will be circumstances beyond your control that will result in a late submission. If this happens, please include a note of explanation in the text box in Canvas.

iClicker Remotes:

As mentioned, class meetings will consist of a combination of lecture and small group activities. To enable participation by everyone in a large class, I require you to have an iClicker2 remote registered in your name that you bring to every class meeting for use with quizzes and other activities. Your iClicker answers will be recorded and points assigned based on class participation (being engaged in class activities) and performance (getting the right answer). Weekly review quizzes will be based on the reading assignments and will usually be on Tuesdays. Your iClicker score at the end of the semester will be adjusted so that you will not be penalized if you miss a quiz or forget your clicker. Note that I have a few loaner clickers that you can borrow **BEFORE CLASS BEGINS**.

Attendance and Punctuality:

Regular and punctual attendance is important for optimal achievement, and is a minimal requirement for this course. The attendance sheet will be passed around during each class meeting; it is your responsibility to sign in, using your full signature. You are permitted three (3) absences without penalty. Excessive unexcused absences will result in points deducted from your Attendance Participation grade. Because your signature on the roster serves as evidence of your attendance in class, you may not have another student sign in for you. *Having someone else sign your name is considered forgery*, and will result in a substantial penalty.

Term Paper:

One of the high points of the course is the opportunity for you to do your own research on a topic of interest to you. The final product will be a paper of at least seven (7) printed pages based upon your independent research. You will be required to choose a tightly focused topic on some aspect of environmental biology that has been *approved by me beforehand*. For this paper, you will need to link the interrelationship between environment and people in the developing world – e.g., how does your topic impact people, and how do people impact their environment? You will illustrate your theme using ‘case histories’, detailed accounts illustrating your topic in a particular community of people. If this sounds daunting, do not worry because I will give you a lot of support and guidelines to direct you along the way!

Many students find writing a term paper a daunting and unpleasant task to be postponed as long as possible. The result tends to be a rushed paper written during the chaotic last week of class when multiple other major assignments are done. The end product is often far below what the student is capable of. To avoid this dilemma, your term paper will be prepared in 7 segments (seven is the Biblical number of completeness) due weekly over a 2-month period. Because each segment is focused and only 1 page long, the resulting final paper should be well written, nicely organized, and a lot more fun for me to read! Details on the 7 assignments and the due dates can be found in the table below. More details on the term paper segment assignments will be covered in class. Final papers are due Friday Dec 10 (but feel free to submit early).

Academic Honesty:

The PLNU policy on academic honesty is listed on the institutional policies page. You may not be aware that some common student practices are considered plagiarism. For example, teaming up with other students to write joint answers to assignments that are then turned as individual assignments is plagiarism. Another form of plagiarism would be to copy and paste information from an online resource without citing your source, in essence using someone else’s words as if they were your own. Much of the learning process involves articulating the answer in your own words, and bypassing this step will almost guarantee an inadequate understanding of the material. Plagiarizing an assignment can result in failure of the course and referral to the Dean. Furthermore, you will probably do poorly on exams if you have not have learned on your own.

What your grade will be based on:

Points are approximate

Attendance Participation	45 pts
iClicker Participation/Performance	90 pts
Reading questions (14 @ 10 pts)	140 pts
Group responses (13 @ 5 pts)	65 pts
Classroom team exercises	35 pts
Final exam	80 pts
Term paper sections/peer review	45 pts
Final term paper	<u>100 pts</u>

Total 600 pts

Letter	Percent	Letter	Percent
A	90	C	70
A-	88	C-	68
B+	86	D+	66
B	80	D	60
B-	78	D-	58
C+	76	F	<58

Electronic Etiquette:

Recent studies have indicated that we are currently experiencing an epidemic of ‘digital distraction’ caused by multi-tasking – moving quickly between tasks on electronic devices in which only partial attention is given to each task. In the classroom setting, studies reveal that the use of laptops for non-course related tasks (checking emails, texting, and social media) distracts attention from learning and results in reduced academic performance and lowered grades. The reality is that you cannot fully learn new information or master new concepts when distracted by multi-tasking. The evidence indicates that even classmates that see your screen are distracted and their performance reduced.

To ensure the best learning environment possible, classroom policy is that...

- **All electronic devices will be powered off and put away if not in use for classwork.**
- **If electronic devices are in use, they shall be used only for class work.**
- **Consider taking notes by hand, as the act of writing improves learning.**

Numerous studies have confirmed that classroom laptop use can be an impediment to learning, interfere with your education, and serve as a distraction for your neighbors. Four specific reasons follow, with live links to the articles (more studies are on Canvas Modules):

1. Laptops and other electronic devices enable more than just note-taking, and they introduce numerous distractions (web-surfing, homework for other classes, social media, etc.) for you and your neighbors. You may think that you can multitask, but studies show that you cannot.
[‘You’ll Never Learn!’](#)
2. As mentioned, using your laptop in class can be less than neighborly. Your classmates’ grades can also suffer due to the distracting pull of the laptop.
[‘Laptop Multitasking Hinders Classroom Learning for Both Users and Nearby Peers’](#)
3. Hand-writing is a more effective way of learning material than is typing. With typing, each letter is pretty much the same thing for the brain. Writing, however, uses different muscle groups with each word and encourages the brain to integrate material during the writing process. Typing may be easy and fast, but by making the brain passive, it discourages learning.
[‘Attention, Students: Put Your Laptops Away’](#)
4. Using electronic devices in class also impairs long-term retention, with one study suggesting that smartphone use in class can lower one’s grade by half a letter grade.
[‘The Myth of Multitasking’](#)

PLNU INSTITUTIONAL POLICIES

PLNU Mission: To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Foundational Explorations Mission: PLNU provides a foundational course of study in the liberal arts informed by the life, death, and resurrection of Jesus Christ. In keeping with the Wesleyan tradition, the curriculum equips students with a broad range of knowledge and skills within and across disciplines to enrich major study, lifelong learning, and vocational service as Christ-like participants in the world's diverse societies and culture.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester. PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course. Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith. If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the [Office of Spiritual Development](#).

Environment & People Reading Schedule – FALL 2021

- reading pack
- online resource

WEEK	LECTURE TOPIC	READINGS DUE THE NEXT TUES	PAGES (TOTAL)
Sept 2	Ecological collapse	(1) ●What's an education for? ●Collapse ch. 2: Twilight at Easter	5 (46) 41
Sept 7-9	Christian stewardship of the earth	(2) ●Between Heaven & Earth ch. 3	23
Sept 14-16	Sustainable development	(3) ●Ecology of Commerce ch. 2 ●Ecology of Commerce ch. 12	16 (36) 20
Sept 21-23	Population growth	(4) ○Habitable Planet ch. 5	32
Sept 28-30	Agriculture and food supplies	(5) ● Ecological Conscience: Challenges ○Habitable Planet ch. 7: Agriculture	16 (43) 27
Oct 5-7	Land degradation	(6) ○World on the Edge ch. 3, 10	26
Oct 12-14	Water Shortages	(7) ○Plan B 3.0 ch. 4: Water shortages	18
Oct 19-21	Poverty and health	(8) ○Urban poverty and health	20
Oct 26-28	Biodiversity	(9) ○Habitable Planet ch. 9	32
Nov 2-4	Global climate change	(10) ○Plan B 3.0 ch. 3	20
Nov 9-11	Wildlife versus people	(11) ●People and Wildlife ch. 14, 15, 17	33
Nov 16-18	Sustainable Business	(13) ○Ecotourism in the Savegre Valley	46
Nov 23	Plant with Purpose	(12) ●Tending to Eden: Intro, ch. 2, 3	32
Nov 30-Dec 2	Pastoralism and hunting	(14) ○Pastoralism and nature conservation	34
Dec 7-9	How can we save the Creation?	No reading!	
Final Exam (in classroom 205A)		Section 1: Tuesday Dec 14: 10:30-1:00 Section 2: Thursday Dec 16: 1:30-4:00	

BIO 1002: Environment & People Detailed Lecture Schedule – FALL 2021

<u>DATE</u>	<u>TOPIC</u>	<u>LECTURE OR VIDEO</u>
Thurs Sept 2	Ecological collapse	Lecture 1
Tues Sept 7	Christian stewardship	Lecture 2
Thurs Sept 9	Christian stewardship	When Heaven Meets Earth (52 min)
Tues Sept 14	Sustainable development	Lecture 3
Thurs Sept 16	Sustainable development	In the Name of Progress (55 min)
Tues Sept 21	Population growth	Lecture 4
Thurs Sept 23	Population growth	The people paradox (60 min) from World in Balance
Tues Sept 28	Agriculture & food	Lecture 5
Thurs Sept 30	Agriculture & food	Land of plenty, land of want (45 min)
TERM PAPER TOPIC DUE		Transforming Agriculture (16 min)
Tues Oct 5	Land degradation	Lecture 6
Thurs Oct 7	Land degradation	In the name of progress (57 min)
Tues Oct 12	Water shortages	Lecture 7
Thurs Oct 14	Water shortages	Water, Water (55 min)
TERM PAPER #1		
Tues Oct 19	Poverty & health	Lecture 8
Thurs Oct 21	Poverty & health	Hot zones (57 min)
TERM PAPER #2		
Tues Oct 26	Biodiversity	Lecture 9
Thurs Oct 28	Biodiversity	Remnants of Eden (60 min)
TERM PAPER #3		
Tues Nov 2	Global Climate Change	Lecture 10
Thurs Nov 4	Global Climate Change	Global warming: signs & science (60 min)
TERM PAPER #4		
Tues Nov 9	Wildlife vs People	Lecture 11
Thurs Nov 11	Wildlife vs People	Can the elephant be saved? (60 min)
TERM PAPER #5		
Tues Nov 16	Sustainable Business	Lecture 12
Thurs Nov 18	Sustainable Business	The Story of Stuff and other videos
TERM PAPER #6		
Tues Nov 23	Plant with Purpose	Guest Speaker: Scott Sabin
Thurs Nov 25	THANKSGIVING BREAK	
Tues Nov 30	Pastoralism & hunting	Lecture 13
Thurs Dec 2	Pastoralism & hunting	A Cashmere Story; A Cashmere Future
TERM PAPER #7		
Tues Dec 7	Save the Creation	Lecture 14
Thurs Dec 9	Save the Creation	Affluenza (56 min)
FINAL TERM PAPER DUE		
Final Exam (in classroom 205A)		Section 1: Tuesday Dec 14: 10:30-1:00 Section 2: Thursday Dec 16: 1:30-4:00

Paper Description:

Your term paper is to be focused on an environmental issue in the less developed world, such as Africa, Asia, India, or South America. Most people living in the world today have a Third World lifestyle – our affluent lifestyle is in the minority. **DO NOT** use the United States or other industrialized nations. Part of the goal of this course is to get you to think about how people in very different physical, social, and economic environments see their world. Try to get into their shoes and see their perspective. What are their lives like? How do they relate to their environment? Be sure that your paper deals with the following three components: (1) people interacting with their (2) environment in the (3) developing world.

Term Paper Sequence of Assignments due on Fridays

Canvas	Assignment	Description	Due Date
	Choose topic	Your term paper topic should be chosen and approved.	Oct 1
1	Global overview	Introduction. What is the global context of this issue? Include what the impact is on the environment, how it affects people, and perhaps ways that people are trying to address the problem. (1 page)	Oct 15
2	Regional overview	What is the specific background to the issue in the part of the world you have chosen to examine? What is unique or different about how the problem is manifested in this area? (1 page)	Oct 22
3	Topic focus	What one or two specific aspects of the issue will you focus on? It is better to give in-depth coverage to one or two aspects than to give a superficial treatment of too many aspects. Give an overview of the significance of the focus area. (1 page)	Oct 29
4	Case history #1	A detailed record of a community that illustrates some aspect of your topic focus. For example, if your topic is water shortages and your focus is the impact of climate change, one case history could be the shrinking of Lake Chad. (about 1 page per case history)	Nov 5
5	Case history #2	2 nd case history illustrating another aspect of your topic focus.	Nov 12
6	Case history #3	3 rd case history illustrating another aspect of your topic focus.	Nov 19
7	Conclusions and References	What can be concluded from your case studies? What concepts are illustrated and what problems must be overcome? What can give us hope? Also include your list of references in proper format, at least 10. (1 page each)	Dec 3
	Final Paper	Make any revisions to your 7 pieces and assemble them together into your final term paper. (7 pages minimum)	Dec 10