

Syllabus

BIO 106: ENVIRONMENT and Society
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Course Description

This course is an introduction to ecological principles and their relevance to human impact on the natural environment. Issues to be covered include natural resources, legislative changes, terminology, urbanization, pollution, environmental ethics, and population dynamics.

Credit Hours: 3

Prerequisite Courses: None

Course Outcomes

Upon completion of this course you should be able to:

1. Articulate the steps used in the scientific method
2. Draw conclusions based on observations.
3. Design an experiment to test the hypothesis
4. Articulate the strengths and weaknesses of scientific inquiry.
5. Evaluate sources of information for scientific validity
6. Attain amateur expertise and hands-on experience in a sub-discipline of science
7. Articulate what is meant by a scientific world-view
8. Explain the concept of stewardship of the creation
9. Integrate a Christian world-view in the context of a scientific discovery

Course Textbook(S)

Essential Environment 5th Edition: the science behind the stories, Pearson Publishing

Course Technology

Mastering Environmental Science; [masteringenvironmentalscience.com](https://www.masteringenvironmentalscience.com)

The Habitable Planet: A Systems Approach to Environmental Science, Interactive Labs <https://www.learner.org/courses/envsci/interactives/index.php>

IWU Diversity Statement

IWU, in covenant with God's reconciling work and in accordance with the Biblical principles of our historic Wesleyan tradition, commits to building a community that reflects Kingdom diversity. We will foster an intentional environment for living, teaching, and learning, which exhibits honor, respect, and dignity. Acknowledging visible or invisible differences, our community authentically values each member's earthly and eternal worth. We refute ignorance and isolation and embrace deliberate and courageous engagement that exhibits Christ's commandment to love all humankind.

Grading Scale

Grade	Quality Points Per Credit	Percentage	Score
A	4.0	95% - 100%	665-700
A-	3.7	92% - 94.9%	644-664
B+	3.3	89% - 91.9%	623-643
B	3.0	85% - 88.9%	595-622
B-	2.7	82% - 84.9%	574-594
C+	2.3	79% - 81.9%	553-573
C	2.0	75% - 78.9%	525-552
C-	1.7	72% - 74.9%	504-524

D+	1.3	69% - 71.9%	483-503
D	1.0	65% - 68.9%	455-482
F	.0	0% - 64.9%	0 - 454

Grading Policies

Your grading policy for your course is dependent on your school and program. Your grading policies can be found in the IWU Catalog.

Letter Grade Equivalencies

Grade	Description of Work
A	Clearly stands out as excellent performance. Has unusually sharp insights into the material and initiates thoughtful questions. Sees many sides of an issue. Articulates well and writes logically and clearly. Integrates ideas previously learned from this and other disciplines. Anticipates next steps in the progression of ideas. Example "A" work should be of such nature that it could be put on reserve for all cohort members to review and emulate. The "A" cohort member is, in fact, an example for others to follow.
B	Demonstrates a solid comprehension of the subject matter and always accomplishes all course requirements. Serves as an active participant and listener. Communicates orally and in writing at an acceptable level for the degree program. Work shows intuition and creativity. Example "B" work indicates good quality of performance and is given in recognition for solid work; a "B" should be considered a good grade and awarded to those who submit assignments of quality less than the exemplary work described above.
C	Quality and quantity of work in and out of class is average. Has marginal comprehension, communication skills, or initiative. Requirements of the assignments are addressed at least minimally.
D	Quality and quantity of work is below average. Has minimal comprehension, communication skills, or initiative. Requirements of the assignments are addressed at below acceptable levels.
F	Quality and quantity of work is unacceptable and does not qualify the student to progress to a more advanced level of work.

Course Summary

Workshop	Discussion	Assignment	Test	Lab (BIO-106L)	Total Points
Workshop One	3/60	1/30	1/30	1/50	170
Workshop Two	3/60	1/30	1/30	1/50	170
Workshop Three	3/60	1/30	1/30	1/50	170
Workshop Four	3/60	1/30	1/30	1/50	170
Workshop Five	3/60	1/30	1/30	1/50	170
Workshop Six	2/50	1/30	1/20	1/50	150
Course Totals	17/350	6/180	6/170	6/300 (BIO-106L)	700

Number of Activities/Sum Point Totals

Course Assignments

Workshop One Outline

Title	Due Dates	Time	Points
1.1 Discussion: Stewardship Principles	Post your initial response by the end of the fourth day of the workshop and your one response by the end of the workshop	1 hour	10
1.2 Discussion: The Good Life	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	3 hours	20
1.3 Exercise & Discussion: Cause and Consequences	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	4 hours	30
1.4 Assignment: Current Events	Due by the end of the workshop	4 hours	30
1.5 Exercise: Lab - Ecological Footprint	Completed and due in the BIO-106L-01 course by the end of the workshop	5 hours	-
1.6 Exercise: Workshop One Quiz	Due by the end of the workshop	2 hours	30
Totals		19 hours*	120

Workshop Two Outline

Title	Due Dates	Time	Points
2.1 Discussion: Unfathomable	Post your initial response by the end of the fourth day of the workshop and your one response by the end of the workshop	1 hour	10
2.2 Discussion: Theories and Origins	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	3 hours	20
2.3 Exercise & Discussion: Causes and Consequences	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	4 hours	30
2.4 Assignment: Current Events	Due by the end of the workshop	4 hours	30
2.5 Exercise: Lab - Ecology	Completed and due in the BIO-106L-01 course by the end of the workshop	5 hours	-
2.6 Exercise: Workshop Two Quiz	Due by the end of the workshop	2 hours	30
Totals		19 hours*	120

Workshop Three Outline

Title	Due Dates	Time	Points
3.1 Discussion: Caretakers	Post your initial response by the end of the fourth day of the workshop and your one response by the end of the workshop	1 hour	10
Totals		19 hours*	120

Title	Due Dates	Time	Points
3.2 Discussion: The Role of the Church in the Environmental Issues	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	3 hours	20
3.3 Exercise & Discussion: Cause and Consequences	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	4 hours	30
3.4 Assignment: Current Events	Due by the end of the workshop	4 hours	30
3.5 Exercise: Lab - Demographics	Completed and due in the BIO-106L-01 course by the end of the workshop	5 hours	-
3.6 Exercise: Workshop Three Quiz	Due by the end of the workshop	2 hours	30
Totals		19 hours*	120

Workshop Four Outline

Title	Due Dates	Time	Points
4.1 Discussion: Fearfully and Wonderfully Made	Post your initial response by the end of the fourth day of the workshop and your one response by the end of the workshop	1 hour	10
4.2 Discussion: Population	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	3 hours	20
4.3 Exercise & Discussion: Cause and Consequences	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	4 hours	30
4.4 Assignment: Current Events	Due by the end of the workshop	4 hours	30
4.5 Exercise: Lab - Disease	Completed and due in the BIO-106L-01 course by the end of the workshop	5.5 hours	-
4.6 Exercise: Workshop Four Quiz	Due by the end of the workshop	2 hours	30
Totals		19.5 hours*	120

Workshop Five Outline

Title	Due Dates	Time	Points
5.1 Discussion: Count the Cost	Post your initial response by the end of the fourth day of the workshop and your one response by the end of the workshop	1 hour	10
5.2 Discussion: Alternative Forms of Energy	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	3 hours	20
5.3 Exercise & Discussion: Cause and Consequences	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	4 hours	30
Totals		19 hours*	120

Title	Due Dates	Time	Points
5.4 Assignment: Current Events	Due by the end of the workshop	4 hours	30
5.5 Exercise: Lab - Carbon	Completed and due in the BIO-106L-01 course by the end of the workshop	5 hours	-
5.6 Exercise: Workshop Five Quiz	Due by the end of the workshop	2 hours	30
Totals		19 hours*	120

Workshop Six Outline

Title	Due Dates	Time	Points
6.1 Devotion: God's Plans	By the end of the workshop	30 minutes	0
6.2 Discussion: Streams of Flow	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	2 hours	20
6.3 Exercise & Discussion: Cause and Consequences	Post your initial response by the end of the fourth day of the workshop; post your responses to two classmates and any follow up questions from the instructor by the end of the workshop	4 hours	30
6.4 Assignment: Current Events	Due by the end of the workshop	4 hours	30
6.5 Exercise: Lab - Energy	Completed and due in the BIO-106L-01 course by the end of the workshop	5 hours	-
6.6 Exercise: Workshop Six Quiz	Due by the end of the workshop	2 hours	20
End of Course Survey	Due by the end of the workshop	30 minutes	10 extra credit
Totals		19 hours*	100

*These timings are based on estimations of average times to complete each assignment. Actual assignment completion times will vary.

Course Development Resources

Behe, M (1996) Darwin's Black Box, Free Press.

Colson, Chuck and H. Fickett (2005) The Good Life. Tyndale House Publishers.

Cain ML et al. (2001) Ecology 2nd Edition. Sinauer Associates

Coy C. and S. Conrad (2011) Lab Manual for Environment and Society, IWU in-house publication.

Denton, M (1985) Evolution: A Theory in Crisis, Adler and Adler.

Giberson, Karl and F. Collins (2011) The Language of Science and Faith. IVP.

Johnson, P (1991) Darwin On Trial, IVP.

Miller, Kenneth (1999) Finding Darwin's God. Clift Street Books, Harper Collins.

Ross, H. (1999) Beyond the Cosmos, Navpress.

Sailhammer, J (2001) Genesis Unbound. Dawson Media. Withgott J, and Laposata (2012)

Essential Environment 4th edition. Pearson Publishing.

<http://www.answersingenesis.org/media/video/ondemand/new-answers-2-dvd/best-proof-of-creation>

<http://reasons.org/explore/publications/rtb-101/read/rtb-101/2012/01/13/how-long-are-the-creation-days>

<http://biologos.org/resources/audio-visual/is-god-the-creator>

The Habitable Planet: A Systems Approach to Environmental Science, Interactive Labs <https://www.learner.org/courses/envsci/interactives/index.php>