CONSORTIUM
of Adventist Colleges & Universities

SYLLABUS

BIOL 208 Environmental Science

201841

BIOL 208 Environmental Science
Consortium of Adventist Colleges and Universities

Self-Paced Courses
This course follows a self-paced online format. You have 180 days from your selected start date to complete the course. The last day to withdraw with a full refund is 15 days after your start date.

Instructor Contact
Please refer to course in Learning Hub for the teacher contact information.

Communication with the Instructor
It is important to remember that while the Internet is available 24 hours a day, your instructor is not. You can expect that your instructor will respond to e-mail message to you within *2 business days* during the week and may not be available to respond on weekends.

Other Assistance

Username and password assistance	helpdesk@andrews.edu	(269) 471-6016
Enrollment and withdrawal questions	sderegister@andrews.edu	(269) 471-6323
Technical assistance with online courses	dlit@andrews.edu	(269) 471-3960
Exam requests and online proctoring	sdeexams@andrews.edu	(269) 471-6566
Distance Student Services - any other questions	sdestudents@andrews.edu	(269) 471-6566

Part 1: Course Information

Course Description
This course is designed to convey key principles of environmental science. Students will learn basic ecological principles, applying a systems perspective to understanding the consequences of human interactions with our natural environment. Discussions deal with contemporary environmental issues. Labs activities include applied activities of environmental concepts. Meets the life science general education requirement and certain state educational certification requirements. May apply to biology major or minor.

Course Prerequisites
None

Course Learning Outcomes
1) Defend a Seventh-Day Adventist Christian worldview that supports environmental sustainability.
2) Define terms commonly used in environmental science.
3) Critically evaluate presented data and information using scientific principles and concepts.
4) Calculate ecological footprint.
5) Summarize key principles of environmental science.
6) Appraise simple stories and their claims.

Required Text/Material

Miller and Spoolman, 2014, Living in the Environment, Cengage Learning.
ISBN- 978-1-133-94013-5

Christiansen, 2012, Planet in Distress: Environmental Deterioration and the Great Controversy, Review and Herald Pub: ISBN 978-0-8280-2660-4

NOTE: Purchase textbooks through any online bookstore, such as **amazon.com**, which can deliver within 2 days. If you need to use financial aid to purchase textbooks, email **sdestudents@andrews.edu**, cutting and pasting the textbook information from syllabi, including course title and section, your full name and student ID#.

Credit Hour and Commitment

This course is offered for 4 semester credits; therefore it is expected that you will spend 180 hours total on this course.

This course has 16 modules with 15 lessons, 7 quizzes, 6 blog discussions, 13 lab activities, 3 infographic assignments, 1 Eco-Home design, and an Environmental Worldview Paper, and a final comprehensive exam. Each module represents a week of a typical semester course.

It is recommended that you budget 12 hours for studying and completing the activities for each module. There are suggested schedules to accomplish this work included in this syllabus.

Part 2: Course Methods and Delivery

Methods of Instruction

Methods of instruction includes video lectures, assigned readings from the textbook and the course material, short essays and reflections on the reading, short open book quizzes on the readings, interactions with the instructor via discussion board posts and 1 exam. Regular participation in the course is essential to good performance.

Course/Technical Requirements

- Internet connection (DSL, LAN, or cable connection desirable).

LearningHub Access

This course is delivered online through LearningHub at http://learninghub.andrews.edu

Your username and password are your Andrews username and password. You need to activate your username and password to access LearningHub.

Please do this online here: https://vault.andrews.edu/vault/pages/activation/information.jsp if you haven't already. If you need assistance, call or email us: (296) 471-6016 or helpdesk@andrews.edu.

If you need technical assistance at any time during the course, or to report a problem with LearningHub, please email dlit@andrews.edu or call (269) 471-3960.

Part 3: Course Requirements

Important Note: Activity and assignment details will be explained in detail within each learning module. If you have any questions, please contact your instructor.

Your Schedule

In Learning Hub, you will access online lessons, course materials, and resources. This course is self-paced. You must complete the course within 180 days. This is the Consortium policy. You may have a stricter deadline imposed by graduation, financial aid, or other restrictions.

Start by creating a schedule for completion of the course.

- Determine your deadline. Do you need a transcript sent to your home institution?
- Working from your deadline, count backwards. Allow 2 weeks after you take your final exam for your final grade to be calculated. Allow another 2 weeks for the transcript to be processed and sent.
- Now use the suggested schedules to create a schedule for yourself that ensures completion 4 weeks before your deadline.

Submit your course plan to your instructor within Learning Hub AND discipline yourself to make regular progress.

Assessment Descriptions

Chapter Quizzes – Open book quizzes taken each week via learning hub, covers assigned reading.

Assignments – Specific written and physical activities designed to enhance concept retention, and practice concepts covered.

Blog Posts – Periodic web postings on various topics in schedule.

Infographics – Create an infographic for designated assignments that highlights specific information assigned or about the given topic. Includes both text and pictures/graphics to convey the points to the instructor and fellow students.

Lab Activities – Labs are activities that require you to work with PowerPoints, Infographics, or submit short papers based on site visits to various locations related to the course's topics. There are a total of 13 labs that you need to complete.

Eco-Home Design – Create a concept design for an ecologically friendly and efficient home based on the criteria in the assignment. Follow rubric for full points. Submit as a Prezi, SlideShare, PowerPoint, or Googleshare.

Environmental Worldview Paper – Personal environmental ethic position paper based on a Biblical worldview. Thoughts will be developed following the reading of "Planet in Distress" by Scott Christiansen.

Rubrics

BIOL 208 Environmental Worldview Paper Rubric

Criteria	Exceptional	Proficient	Satisfactory	Emerging	Unacceptable
Articulation of Personal View	Excellent explanation and rationale for viewpoint with external sources (Biblical, EG White)	Good explanation and rationale for viewpoint with external sources (Biblical, EG White)	General explanation and rationale for viewpoint with external sources (Biblical, EG White)	Little or non-specific explanation for viewpoint with external sources (Biblical, EG White)	No explanation or rationale for viewpoint and no external sources
Personal reaction	Very Detailed explication of the impact of the book on your worldview	Detailed explication of the impact of the book on your worldview	General explication of the impact of the book on your worldview	Little explication of the impact of the book on your worldview	No explication of the impact of the book on your worldview
Writing	No grammatical errors, proper APA citation, at least 3 references	2- 4 grammatical errors, proper APA citation, at least 3 references	5 – 6 grammatical errors, proper APA citation, at least 2 references	7-8 grammatical errors, proper APA citation, of references	9-10 grammatical errors, improper APA citation, of references if any

BIOL 208 Eco Home Rubric

Criteria	Exceptional	Proficient	Satisfactory	Emerging	Unsatisfactory
Energy efficiency	All appliances, lighting, electronic devices are energy efficient or not used at all	All appliances, lighting, electronic devices are energy efficient	All lighting and some electronic devices energy efficient	Only lighting is energy efficient	Energy efficiency eliminated or not addressed
House Type	Well documented Energy /Resource efficient	Well established Energy/Efficiency	Generally Energy/Resource Efficient	Some Energy/Resource efficiency	Not Energy/Resource efficient
House Size	Space and layout use extremely well justified	Space and layout use well justified	Space and layout use is generally justified	Space and layout use mentioned	No mention of space layout and use
Location	Very detailed explanation how location affects home efficiency	Detailed explanation how location affects home efficiency	General explanation of how location affects home efficiency	Brief explanation of how location affects home efficiency	No explanation of how location affects home efficiency
Materials	Very Efficient use of energy efficient materials (Materials not over used)	Efficient use of energy efficient materials (Materials not over used)	Most materials used are energy efficient Or Materials not efficient but minimally used	Low consideration for efficient use of materials and/or use of energy efficient materials	No regard for material use type or quantity
Heating & Cooling	Passive heating And Cooling (No energy inputs to heat or cool)	Very Energy efficient	Energy efficient	Trending toward. Heating and cooling efficiency	No regard for heating cooling energy needs

Exams

All exams in this course require proctoring. To ensure the registered student is taking the exam, a photo ID must be shown at the start of each exam session.

If living near Berrien Springs, exams must be taken in the School of Distance Education Testing Center, on the Andrews University main campus. If you live anywhere outside of the United States, exams are proctored online through this Center. Students living in the United States may choose online or local proctoring. Appointments for proctoring in or online through the Testing Center are set up using our online calendar, using the link provided in the exam request form.

Approved local proctors include university, college or school faculty and teachers, student service workers, advisors, counselors and librarians, as well as educational, military, and workplace testing centers. The proctor's full name, position/title, employer name, phone and email, must be filled in on the exam request form when arranging local proctoring, so gather this information before clicking into the exam request form.

The exam request form, link in your course space, should be completed two weeks before each exam deadline to allow adequate time for proctor approval and scheduling proctored exam sessions.

Note that an exam code is never released to the student, and cannot be sent to a proctor who has the same address as the student unless the address is known to be that of a school or mission facility. All students must present photo identification at the start of each exam session.

If you cannot take your exam by the deadline date, email specific reasons and your recovery plan to your instructor before the deadline.

No exam is returned to the student. Instructor feedback on exams prior to the final exam will be provided to aid studying for future exams.

For more details on taking exams and how online proctoring works, please see www.andrews.edu/distance/students/exams.html<https://www.andrews.edu/distance/students/exams.html

The Final comprehensive exam is worth 16% of your grade. You are allowed 90 minutes to complete this exam.

Suggested schedule for completion in 8 weeks:

Modules	Lessons	Readings	Assignments	Course Objectives Met
Intro	Read "Planet in Distress" By Scott Christiansen in preparation for end of semester (week 13) Personal World View Report.		Personal Introduction	CO 1
1	Introduction to Environmental Science Chapter 1 Lecture Slides	Miller & Spoolman Chapter 1 Pg 5-10, 16-23	Introduce Yourself Blog Assignment #1: Proposed plan for site visits Quiz #1 Lab #1: Calculate Ecological Foot print	CO 2, 4, 5
	Science and Systems: Principles Chapter 2 & 3 Lecture Slides View Lesson Video #1	Miller & Spoolman Chapter 2; Pg. 31-35, 41-47 Miller & Spoolman Chapter 3; Pg. 53-54, 62-70	Assignment #2: Exploring Science and the Media (Infographic #1) Lab #2: Local Environmental Issue and site visit	CO 3, 6
2	Science and Systems: Communities Chapter 5 Lecture Slides	Miller & Spoolman Chapter 5; Pg. 109-111, 102, 105, 114, 117	Blog #1: Explore Kelp Communities Quiz #2 Lab #3: Green Space Mapping and site visit	CO 3, 5, 6
	Human Populations, Science and Systems: Biomes Chapter 6 & 7 Lecture Slides View Lesson Video#2	Miller & Spoolman Chapter 6 Pg. 126-131 Miller & Spoolman Chapter 7 Pg. 148-159	Lab #4: Managing Human Environmental Impacts and site visit	CO 2
3	Worldviews; Sustaining Biodiversity: Species Chapter 9 & 25 Lecture Slides	Miller & Spoolman Chapter 25; pg. 685-690 Miller & Spoolman Chapter 9; Pg. 194-196 208-212	Assignment #3 Sense of Place Activity (Infographic #2) Quiz #3 Lab #5: Share your place and site visit	CO 1, 2, 5
	Sustaining Biodiversity: Terrestrial Chapter 10 Lecture Slides View Lesson Video #3	Miller & Spoolman Chapter 10; Pg. 219-226	Blog#2: Conservations Lab #6: Improving Environmental Quality by Serving	CO 2, 3, 5, 6
4	Sustaining Biodiversity: Aquatic Natural Resources: Land Chapter 11 Lecture slides	Miller & Spoolman Chapter 11; Pg. 259-271	Blog #3: Resources Use Quiz #4 Lab #7: Discover your watershed and site visit	CO 2, 3, 5, 6
	Sustainable Food Chapter 12 Lecture Slides View Lesson Video #4	Miller & Spoolman Chapter 12; Pg. 280-295, 301-312	Blog #4: "The Future of Food" Lab #8: Visit a Farm/Food Source	CO 1, 3, 6
5	Natural Resources: Energy Chapter 15 & 16 Lecture Slides	Miller & Spoolman Chapter 15; Pg. 375-385, 389-396 Miller &* Spoolman Chapter 16: Pg. 403-435 Continue Reading "Planet in Distress"	Quiz #5 Project #1: Design an Eco-Home	CO 1, 2, 5
	Environmental Quality: Waste & Water Chapter 21 Lecture Slides View Lesson Video #5	Miller & Spoolman Chapter 21; Pg. 577-600	Lab #9: Ecological Footprint Analysis.	CO 1, 3, 4
6	Environmental Quality: Air Pollution (historical) Chapter 18 Lecture Slides	Miller & Spoolman Chapter 18; Pg. 475-501	Quiz #6 Lab #10: Calculating Clear Air	CO 2, 3, 5
	Environmental Quality: Water Pollution, Human Well Being Chapter 20 Lecture Slides View Lesson Video #6	Miller & Spoolman Chapter 20; Pg. 545-570	Blog #5: Environmental Quality Lab #11: Experimental Design Hypothesis (Lab due Week 15)	CO 2, 3, 5, 6
7	Environmental Quality: Climate Disruption; Human Societies: Urbanization Chapter 19 Lecture Slides	Miller & Spoolman Chapter 19; Pg 507-538	Project #2: Environmental Worldview Paper Quiz #7 Lab #12: Sound Pollution	CO 1, 2, 3, 6
	Human Societies: Design for Sustainability Chapter 22 Lecture Slides View Lesson Video #7	Miller & Spoolman Chapter 22; Pg 606-627	Blog #6: Sustainability in Home Design	CO 2, 3, 5, 6
8	Course Reflection	Miller & Spoolman Pg 540, 541	Assignment #6: Personal Ecological Footprint Analysis (Infographic #3) Lab #13: Experimental Design	CO 1, 3, 4, 5
	Course Project Wrap Up	**FINAL Comprehensive EXAM**		CO2

Suggested schedule for completion in 16 weeks:

Modules	Lessons	Readings	Assignments	Course Objectives Met
Intro	Read "Planet in Distress" By Scott Christiansen in preparation for end of semester (week 13) Personal World View Report.		Personal Introduction	CO 1
1	Introduction to Environmental Science Chapter 1 Lecture Slides	Miller & Spoolman Chapter 1 Pg 5-10, 16-23	Introduce Yourself Blog Assignment #1: Proposed plan for site visits Quiz #1 Lab #1: Calculate Ecological Foot print	CO 2, 4, 5
2	Science and Systems: Principles Chapter 2 & 3 Lecture Slides View Lesson Video #1	Miller & Spoolman Chapter 2; Pg. 31-35, 41-47 Miller & Spoolman Chapter 3; Pg. 53-54, 62-70	Assignment #2: Exploring Science and the Media (Infographic #1) Lab #2: Local Environmental Issue and site visit	CO 3, 6
3	Science and Systems: Communities Chapter 5 Lecture Slides	Miller & Spoolman Chapter 5; Pg. 109-111, 102, 105, 114, 117	Blog #1: Explore Kelp Communities Quiz #2 Lab #3: Green Space Mapping and site visit	CO 3, 5, 6
4	Human Populations, Science and Systems: Biomes Chapter 6 & 7 Lecture Slides View Lesson Video#2	Miller & Spoolman Chapter 6 Pg. 126-131 Miller & Spoolman Chapter 7 Pg. 148-159	Lab #4: Managing Human Environmental Impacts and site visit	CO 2
5	Worldviews; Sustaining Biodiversity: Species Chapter 9 & 25 Lecture Slides	Miller & Spoolman Chapter 25; pg. 685-690 Miller & Spoolman Chapter 9; Pg. 194-196 208-212	Assignment #3 Sense of Place Activity (Infographic #2) Quiz #3 Lab #5: Share your place and site visit	CO 1, 2, 5
6	Sustaining Biodiversity: Terrestrial Chapter 10 Lecture Slides View Lesson Video #3	Miller & Spoolman Chapter 10; Pg. 219-226	Blog#2: Conservations Lab #6: Improving Environmental Quality by Serving	CO 2, 3, 5, 6
7	Sustaining Biodiversity: Aquatic Natural Resources: Land Chapter 11 Lecture slides	Miller & Spoolman Chapter 11; Pg. 259-271	Blog #3: Resources Use Quiz #4 Lab #7: Discover your watershed and site visit	CO 2, 3, 5, 6
8	Sustainable Food Chapter 12 Lecture Slides View Lesson Video #4	Miller & Spoolman Chapter 12; Pg. 280-295, 301-312	Blog #4: "The Future of Food" Lab #8: Visit a Farm/Food Source	CO 1, 3, 6
9	Natural Resources: Energy Chapter 15 & 16 Lecture Slides	Miller & Spoolman Chapter 15; Pg. 375-385, 389-396 Miller &* Spoolman Chapter 16: Pg. 403-435 Continue Reading "Planet in Distress"	Quiz #5 Project #1: Design an Eco-Home	CO 1, 2, 5
10	Environmental Quality: Waste & Water Chapter 21 Lecture Slides View Lesson Video #5	Miller & Spoolman Chapter 21; Pg. 577-600	Lab #9: Ecological Footprint Analysis.	CO 1, 3, 4
11	Environmental Quality: Air Pollution (historical) Chapter 18 Lecture Slides	Miller & Spoolman Chapter 18; Pg. 475-501	Quiz #6 Lab #10: Calculating Clear Air	CO 2, 3, 5
12	Environmental Quality: Water Pollution, Human Well Being Chapter 20 Lecture Slides View Lesson Video #6	Miller & Spoolman Chapter 20; Pg. 545-570	Blog #5: Environmental Quality Lab #11: Experimental Design Hypothesis (Lab due Week 15)	CO 2, 3, 5, 6
13	Environmental Quality: Climate Disruption; Human Societies: Urbanization Chapter 19 Lecture Slides	Miller & Spoolman Chapter 19; Pg 507-538	Project #2: Environmental Worldview Paper Quiz #7 Lab #12: Sound Pollution	CO 1, 2, 3, 6
14	Human Societies: Design for Sustainability Chapter 22 Lecture Slides View Lesson Video #7	Miller & Spoolman Chapter 22; Pg 606-627	Blog #6: Sustainability in Home Design	CO 2, 3, 5, 6
15	Course Reflection	Miller & Spoolman Pg 540, 541	Assignment #6: Personal Ecological Footprint Analysis (Infographic #3) Lab #13: Experimental Design	CO 1, 3, 4, 5
16	Course Project Wrap Up	**FINAL Comprehensive EXAM**		CO2

Completing Assignments

All assignments for this course will be submitted electronically through LearningHub unless otherwise instructed. Assignments and exams must be completed **within 180 days** of course registration date. This timeframe is subject to change depending on deadlines set by your home institution.

Part 4: Grading Policy

Graded Course Activities

Percent %	Description
10%	Blog Posts (7 posts @ 20 pts each = 140 pts)
20%	Lab Activities (13 @ 10 pts each = 130 pts)
10%	Infographics (3 graphics @ 20 pts each = 60 pts)
15%	Eco-home design (1 design = 50 points)
10%	Quizzes (7 quizzes @ 20 pts = 140 pts)
15%	Environmental Worldview Paper (1 paper= 50 pts)
20%	Final Comprehensive Exam (1 Exam = 100 pts)
100%	**Total Percent Possible**

Viewing Grades in Learning Hub

- Click into the course.
- Click on the **Grades** link in the Settings Box to the left of the main course page.

Letter Grade Assignment

Letter Grade	Percentage
A	93-100%
A-	90-92%
B+	88-89%
B	83-87%
B-	80-82%
C+	78-79%
C	73-77%
C-	70-72%
D	60-69%
F	0-59%

Part 5: Course Policies

Withdrawal and Incomplete Policies

The current withdrawal policy can be found online at https://www.andrews.edu/distance/students/gradplus/withdrawal.html. The incomplete policy is found online at http://www.andrews.edu/weblmsc/moodle/public/incompletes.html.

Maintain Professional Conduct Both in the Classroom and Online

The classroom is a professional environment where academic debate and learning take place. Your instructor will make every effort to make this environment safe for you to share your opinions, ideas, and beliefs. In return, you are expected to respect the opinions, ideas, and beliefs of other students—both in the face-to-face classroom and online communication. Students have the right and privilege to learn in the class, free from harassment and disruption.

Academic Accommodations

Students who require accommodations may request an academic adjustment as follows:

1. Read the Andrews University Disability Accommodation information at https://www.andrews.edu/services/sscenter/disability/
2. Download and fill in the disability form at http://www.andrews.edu/services/sscenter/disability/accommodationsreqform.pdf . Preferably type answers. To save a digital copy, 1) print to file and save or 2) print and scan. Email the completed form and disability documentation (if any) to success@andrews.edu or fax it to (269) 471-8407.
3. Email sdestudents@andrews.edu to inform the School of Distance Education that a disability has been reported to Student Success.

Commitment to Integrity

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class, and integrity in your behavior in and out of the classroom.

Commitment to Excellence

You deserve a standing ovation based on your decision to enroll in, and effectively complete this course. Along with your pledge of "commitment to Integrity" you are expected to adhere to a "commitment to excellence." Andrews University has established high academic standards that will truly enhance your writing and communication skills across the disciplines and in diverse milieu with many discourse communities in the workplace.

Honesty

Using the work of another student or allowing work to be used by another student jeopardizes not only the teacher-student relationship but also the student's academic standing. Lessons may be discussed with other students, tutors may help to guide a student's work, and textbooks, encyclopedias and other resource materials may be used for additional assistance, but the actual response must be the student's own work.

Exams must be completed in the presence of an approved supervisor without the assistance of books, notes, devices or outside help unless otherwise specified in the exam directions. The student should have no access to the exam either before or after it is taken. A student who gives information to another student to be used in a dishonest way is equally guilty of dishonesty.

Any violation of this policy will be taken before the Higher Education Academic and Curriculum Committee for appropriate punitive action.