

Environmental Science and Environmental Problems
ENV 100/ENV 220
A. Linwood Holton Governor's School

Course Syllabus

Contact Information

Instructor: Mrs. Julie Reimer

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Communication Guidelines

- ❖ Email is the best way to contact me. I check and respond to email frequently during the school day.
- ❖ I will respond to any email or voicemail message within 24 hours during the week. On weekends, a response will be within 48 hours. If you do not receive a response from me within these time frames, please re-send the email.
- ❖ Students must use their @hgs.k12.va.us email account to communicate with me.

Course Description

This course explores the role of humans in the environment with an emphasis on sustainable solutions to environmental problems. During this course, students will be challenged to use their new knowledge of natural systems to create solutions for current environmental issues. Topics will include ecological systems, populations, environmental health, sustainable farming, biodiversity, climate issues, water use and pollution, conventional and sustainable energy, waste issues, and environmental economics.

Course Materials

1. Environment: The Science behind the Stories by Withgott and Laposada. Textbooks are loaned to the student and must be returned at the end of the course
2. Mastering Environmental Science, a website which contains an electronic copy of the textbook, additional study resources, and assignments. A login code will be assigned to each student at orientation.
3. Lab kit and project supplies: Supplies for certain projects will be provided for use throughout the course.

Course Objectives

Students should be able to:

- Explain the main reasons for concern about the health of the planet
- Define sustainability, sound science, and stewardship
- List trends that must be overcome in order to pursue a sustainable future
- Recognize the relationship between economics, science, politics, public perception and environmental policy
- Discuss how benefit-cost analysis is applied to environmental policy regulations

- Explain how organisms need specific conditions to survive
- List the simple laws that control the transformation of energy from one type to another
- Explain how living things need materials to build tissues and energy to carry out life processes
- Describe the biogeochemical cycles of matter
- Explain the ways populations grow and the factors that limit populations
- Define the types of interactions that can occur between species in a community
- Define and give examples of both instrumental and intrinsic value of wild species
- Explain the causes and extent of biodiversity loss
- Explain how public and private management of lands keeps habitats both protected and productive
- Describe how development, fertility, and environmental health relate to each other
- Compare options for meeting the rising demands for water
- Describe water pollution sources and best management practices to control water pollution
- Explain the ways the industrial and green revolution radically transformed farming
- Compare and contrast the pros and cons of genetically modified organisms
- Understand the differences between hunger and malnutrition
- Describe the changes necessary to feed the world's increasing human population
- Explain the serious problems with the overuse of pesticides, and the alternatives to using pesticides
- Discuss solid waste and hazardous waste sources and issues with disposal
- Describe the benefits of recycling, as well as the issues related to recycling solid waste
- Describe nonrenewable sources of energy and discuss environmental issues related to their use
- Describe renewable energy sources, and compare and contrast which sources would be best used in different situations and locations

Course delivery

This course is asynchronous, meaning there is no daily class meeting time. Assignments will be accessed and submitted through Blackboard, and students will communicate with the instructor via email. Office hours in Blackboard Collaborate may be arranged as needed.

Students will need to access these websites for course assignments and information:

1. Blackboard: The login portal for Blackboard can be accessed through the ALHGS website under the 'For Students' tab. Additional login instructions will be given during orientation.
2. Mastering Environmental Science: Instructions for accessing this website will be given during orientation.
3. Email: Important course announcements will be emailed to you. Email is accessed from www.hgs.k12.va.us. Click on the 'For Students' tab, then select 'Email' from the drop-down menu.

Method of Evaluating Student Achievement

Assessment and grading policies

Course grades will be calculated as follows:

20% Mastering Environmental Science assignments

50% Blackboard assignments

25% Tests

5% Cumulative Final Exam

Expectations for each assignment will be clearly explained throughout the course. Please ask for clarification whenever you have questions about an assignment. Information about assignment submission, class absences, and testing policies are detailed in the *Course Policies* section below.

Grading Scale and final grades:

90-100: A 80-89: B 70-79: C 60-69: D Below 60: F

The HGS submits numeric grades to your home high school. Check with your school guidance department to determine if your high school uses a different grading scale for your high school report card. The HGS letter grade based on the 10 point scale above will be submitted to community colleges for your dual enrollment grade. Your final course grade will be submitted to your community college for ENV 100 Basic Environmental Science (3 credits) and for ENV 220 Environmental Problems (3 credits).

Course Policies

Email communication: Check your @hgs.k12.va.us email *every school day*.

Attendance and make-up work: The attendance policies of your home high school are to be followed. If you have a school absence that will prevent you from submitting an assignment by the due date, it is your responsibility to contact the instructor on the day you miss class (or before if possible) to request an adjusted due date. The student is responsible for the subsequent completion of all work missed during an absence. A. Linwood Holton Governor's School is committed to academic quality and student success. Elements that support both of these values are regular attendance and participation in class.

Assignment submission: Written assignments must be submitted through Blackboard by the date and time due. Emailed assignments will not be accepted. Late assignments will be accepted, but 10 points will be deducted for each day they are late.

Test policies: Tests will be given at the end of each unit. Tests will be proctored by a facilitator at the students' home high schools and will be closed notes, closed book, closed internet search, timed tests. Test make-ups may be granted at the instructor's discretion if proper documentation is provided from the student.

Honesty and plagiarism: All assignments will be submitted under an honor pledge to show independent work. Plagiarism includes copying and pasting wording from websites without giving credit to the author of the website. Academic honesty is required; any student caught plagiarizing or cheating will receive a failing grade for that assignment and will risk expulsion from the course. For written assignments, any wording that does not belong to the student must be cited properly to show the original author. Proper citation styles will be discussed during the course.

How to succeed in this course: Resist the temptation to become sidetracked by other students, other course assignments, or other internet sites during class time. Asynchronous classes require students to work independently and keep themselves on task. The instructor has designed the course assignments so that the bulk of the course work can be completed in school during your assigned class period. Time management and attention to assignment deadlines is critical for success in this course. If you have difficulty accessing or using assigned websites, please email the instructor as soon as you have problems so that she can help you resolve the problem. If you are confused about an assignment, please email the instructor to ask for clarification. There are

unique challenges with asynchronous independent learning, and the instructor is here to help with any issues that may arise.

Course Information

This class is a dual enrollment course and college credits are offered through one of four community colleges based on the location of the high school the student attends. The four community colleges that may be awarding the credit are Mountain Empire Community College, Southwest Virginia Community College, Virginia Highlands Community College, and Wytheville Community College. To contact the A. Linwood Holton

Governor's School: A. Linwood Holton Governor's School

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Information and instructions for individuals with disabilities

Students are encouraged to discuss any special problems, needs or accommodations with your instructor. If you have a disability or other need for reasonable accommodation in order to successfully complete the requirements of this course, please contact the director of the Holton Governor's School at (276) 619-4327 to discuss this matter confidentially. Necessary and reasonable accommodations for students with disabilities will be made when needed. Individuals requiring temporary handicapped parking accommodations on the community college campus due to short-term illness should contact the Office of Student Services. All correspondence will be kept confidential.

Emergency Statement

In the event of a major interruption of technological connectivity or actual emergency affecting the student's school, the offices of ALHGS, or the community college through which a student is receiving his/her credit - course requirements, class meeting times or schedules, assignment deadlines, and grading schemes are subject to changes that may include alternative delivery methods, alternative methods of interaction with the instructor, alternate class materials, changes to class membership, a revised attendance policy; a revised semester calendar and/or grading scheme, etc. For more general information about plans for dealing with such catastrophic events or emergencies, please consult the A. Linwood Holton Governor's School Web-Page (<http://www.hgs.k12.va.us/>) and/or the college website. Should such a situation arise, ALHGS's Administrator will work closely with the appropriate school division and college personnel to resolve it as soon as possible. Students will be contacted through available forms of communication and given specific directions as to how they will proceed to complete their course work and how timelines will be adjusted.