

**BIOL 107/ENVR 112:
Environmental Science
Fall 2012**

<u>Instructor</u>	<u>Phone</u>	<u>E-mail</u>	<u>Office</u>
Dr. Husic	610-625-7100	medwh03@moravian.edu	Collier Science – Room 311B

<u>Office Hours:</u>	Mondays	10:00 – 11:00 AM; 2:00 – 3:00 PM
	Wednesdays	11:00 AM - noon
	Thursdays	2:00 – 3:00 PM

I can also meet with you at other times, but please make an appointment ahead of time.

Class Meeting Times:

Tues/Thurs 10:20 AM-11:30 AM
117 PPHAC
Lab: Tuesdays, 12:45 – 3:45

Scheduled Final Period:

Friday, December 14, 1:30PM

Required books:

- Wright, R.T. and Boorse, D.F. *Environmental Science: Toward a Sustainable Future*, 11th ed. Boston: Benjamin Cummings, 2011.
- Laboratory notebook for laboratory portion of the course. The notebook should be bound with numbered pages and the pages should contain grids (i.e. look like graph paper).

Additional Required Reading:

You will have other readings from various sources throughout the semester. These reading assignments will be described in weekly or biweekly course outlines.

Course description:

I realize that those of you who are enrolled in this class have a variety of interests and that different students signed up for this course for different reasons. The main focus of this course is to introduce you to the broad topic of environmental science. Environmental issues are quite complex and typically, environmental problems are best studied and addressed through multidisciplinary approaches. Environmental issues are also often controversial -- usually because of conflicting values of those involved in the decision-making processes that will solve problems or lead to policy related to the environment. My job will be to provide you with a scientific framework related to environmental topics and help you to explore the various perspectives involved in addressing environmental problems on the personal, local, state, national, and global levels. Besides analyzing the scientific aspects of contemporary environmental issues, we will also consider risk, the concept of an environmental ethic, the role of the media in influencing public opinion, economic and social issues, politics, and public policy related to science and the environment.

We will examine the various components of the world in which we live: the biosphere, atmosphere, geosphere and hydrosphere; and we will discuss the natural cycles that interconnect these spheres to understand how they function and what services they provide. More than any other living organism, humans have the ability to impact the environment and disrupt these natural cycles through population growth, industry, policy decisions, and applications of technology which can sometimes have unforeseen consequences. Individuals can profoundly affect change through public sentiment and voting, and, in turn, impact public funding and policy decisions. Thus, you have the power to affect the direction of science research, the applications and regulation of technology, and the status of our environment. Because of this, I strongly believe that every individual should be a responsible, informed, and active participant in the governing processes.

I provide lecture outlines typically on a weekly or biweekly basis to help keep us all organized. These outlines will be posted on the Blackboard site for the course and will highlight key topics covered in lecture and our discussions, list the assigned readings, and include suggested study problems and assignments. I expect each of you to complete these assigned readings and assignments, and be ready and willing to participate in class discussions. You should get in the habit of checking this site a couple times each week as I routinely post announcements, reminders, schedule changes, etc. In addition, you should routinely skim news reports to learn about current events related to the environment.

Course objectives – lecture portion of the course: By the end of the semester, students should:

- Have an understanding both of some fundamental scientific concepts that underlie key environmental topics and of the environmental challenges facing us today;
- Have an appreciation for the complexity and value of ecosystems, biodiversity, and the relationship between humans and their environment;
- Realize the wide range of values, risk assessment, and social, economic, historical, and political factors that influence the development of public policy – especially as it pertains to environmental regulations, conservation, and stewardship;
- To be able to identify the critical environmental issues facing humanity today and consider the type of writing or communication forms needed to inform the public of these issues in the 21st century;
- Understand the global nature of many environmental issues and appreciate the wide range of world views on the value and priority of the environment;
- Be able to assess scientific and other forms of data, along with other information found in the literature for validity and relevance to environmental issues being considered; and
- Gain further experience in critical thinking, oral and written communication skills, and using technology to access important information.

Course policies, procedures, and expectations:

Exams: Exams will cover material from lectures, lab, class discussions, and the assigned readings and sample problems from the text or other assignments. A review sheet will be distributed approximately one week prior to each exam. You should expect at least a portion of these exams to be essay format. **No make-up exams** will be administered without an official medical or university excuse.

<u>Grading:</u>	<u>% of Total Grade</u>
• <i>Assignments and participation</i> ¹ in class discussions and activities and attendance at co-curricular activities	20
• <i>Exams:</i>	
Exam #1 (<i>Thursday, September 27th</i>)	15
Exam #2 (<i>Thursday, November 1st</i>)	15
Final Exam (<i>Friday, December 14, 1:30PM</i>)	20
• <i>Journal and summary</i> (Due <i>Tuesday, December 4th</i> at the beginning of class – see details below)	10
• <i>Laboratory activities and assignments</i>	20

I do look at trends in grades over the semester; improvement in test grades over the duration of the course will be favorably noticed! Participation in class discussions, review periods, etc. is expected and will be a factor in the determination of final grades. Please note that it is within the instructor's purview to apply qualitative judgment in determining grades for an assignment or for a course.

The grading system is as follows: (*+/- will be administered as professor deems appropriate*)

A = 90 – 100 %
B = 80 – 89 %
C = 70 – 79 %
D = 60 – 69 %

Please note: it is within the instructor's purview to apply qualitative judgment in determining grades for assignments or the entire course.

Journal:

Throughout the course, it is a good idea to be aware of stories in the media that relate to scientific and environmental topics. The internet can be a valuable resource, but you have to critically evaluate the content and *source* of the information that you find there. Often, timely stories break in the news that warrant our consideration in class, and your familiarity with media coverage of science and environmental issues can (and will) provide the basis for class discussions. Active participation in these discussions will be noted and will have a positive effect on your final grade for the course. For certain class assignments, I will also ask you to find an article or internet site on a specific topic. ***To this end, I would like each of you to keep a journal throughout the semester.***

I allow students to determine the specific format and style of their journals. They can be electronic including a blog format. What I do require is that you date your entries and include the source of your information (e.g. which newspaper and what date, what magazine, edition and page number, the URL of a website, etc.). Keeping a regular record of stories that catch your attention or

¹ Overall ***class participation*** in discussions, engagement, & attendance. Excessive absences will negatively impact your grade. Simply showing up at the scheduled class time does not represent engagement. For example: Are you making routine and significant contributions to discussions about the required readings and assignments and fully participating in group activities? Are you finding examples of "Environmental Issues of the Week" and sharing these with the class?

that relate to topics we are discussing in class, will allow you to reflect on what you are learning and how it applies to the “real world”, and allows you to follow trends throughout the semester. I expect that you should have at least 2 entries (news items) per week, *plus* some of your own comments, summaries or reactions to the news and topics from class. Don't simply cut out articles from a paper or magazine and stick it into a journal. It is your reaction and commentary that I most interested in. Occasionally in class, ***we will have a discussion of timely news stories related to the environment and other topics being discussed in class.*** Having your journal up-to-date will allow you to make significant contributions to these discussions. You may also decide to include entries on your personal reactions/reflections on ideas discussed in class and the readings.

Prior to your submission of the completed journal at the end of the semester, I will ask you to summarize what you have learned from keeping such a journal and what trends or major issues you noticed.

Optional Extra Credit Project:

I routinely get asked if there is any possibility of an extra credit project. For this semester, I have decided to provide such an option to students in which you can choose to read a book related to the environment. A few examples are provided below. You are free to choose other books, but please run your choice by me ahead of time. There are ***many*** contemporary and classic books to choose from.

An Inconvenient Truth – Al Gore

Silent Spring – Rachel Carson

A Sand County Almanac – Aldo Leopold

Wildbranch: An Anthology of Nature, Environmental, and Place-based Writing – Caplow and Cohen, eds.

A Voice for Earth – Corcoran and Wohlpart, eds.

Last Child in the Woods – Richard Louv

Confessions of an EcoSinner – Fred Pearce

The Future of Life – E. O. Wilson

Rewilding the World – Caroline Fraser

Anything by Scott Weidensaul (an author from PA)

Raising Elijah – Sandra Steingraber

After reading the book, summarize what you learned from the book and what you thought of it (a book review, of sorts). In addition, consider how the book related to this course. This will be due at the end of the semester (December 4th).

Other Expectations:

- a) **Attendance:** Regular class attendance is expected. Make-up work will not be permitted unless you have an acceptable reason (family emergency, illness, etc) – with documentation. If an emergency should arise, please try to notify me ahead of time if possible. Notification from the Moravian College Health Center, Learning Services or the Moravian College Dean of Students' Office will be necessary if you miss more than two seminar classes. I will recognize legitimate excused absences such as when students are representing the university in an official capacity (e.g. for presentation at scientific meetings, intercollegiate athletic competition, but not practice, off-campus music performances, etc.). Such activities are scheduled ahead of time; thus, I expect you to make arrangements with me ahead of time as well. **Please note: Students**

who arrive late to class disrupt the flow of the session and distract their peers. Please be prompt!

- b) Blackboard and email: These resources and tools are an extension of the course syllabus. I use Blackboard to post the weekly class outlines, a range of resources and readings, assignments, and other notices. I will often send announcements and answers to questions via email. You must get in the habit of checking Blackboard regularly (at least twice per week) and your email.
- c) Academic Honesty: Students are responsible for adhering to the College's policy on academic honesty; Moravian College expects its students to perform their academic work honestly and fairly. A Moravian student, moreover, should neither hinder nor unfairly assist the efforts of other students to complete their work successfully. This policy of academic integrity is the foundation on which learning at Moravian is built. Students will be held to the highest standards as specified by the Moravian College Honor Code. Violations of this code will be handled in the most severe manner allowed by college policy. Please read the **Academic Honesty Policy** that is included in the student handbook **and** the Guidelines for Honesty included in this syllabus. If you have any questions about plagiarism or other forms of academic dishonesty, please ask.
- All work that you submit or present as part of course assignments or requirements must be your original work. This includes any work presented, be it in written, oral, or electronic form or in any other technical or artistic medium. When you use the specific thoughts, ideas, writings, or expressions of another person, you must accompany each instance of use with some form of attribution to the source. Direct quotes from any source (including the Internet) must be placed in quotation marks (or otherwise marked appropriately) and accompanied by proper citation, following the preferred bibliographic conventions of your department or instructor. Student ignorance of bibliographic convention and citation procedures is not a valid excuse for having committed plagiarism.
 - You may not use writing or research that is obtained from a "paper service" or that is purchased from any person or entity, unless you fully disclose such activity to the instructor and are given express permission.
 - You may not use writing or research obtained from any other student previously or currently enrolled at Moravian or elsewhere or from the files of any student organization, such as fraternity or sorority files, unless you are expressly permitted to do so by the instructor.
 - You may not collaborate during an in-class examination and you may not work with others on out-of-class assignments or projects unless expressly allowed or instructed to do so by the course instructor. If you have any reservations about your role in working on any out-of-class assignments, you must consult with your course instructor.
 - Cheating or plagiarism will not be tolerated and may result in failure of the course. A major form of academic dishonesty is plagiarism, which we define as the use, whether deliberate or not, of any outside source without proper acknowledgment; an "outside source" is defined as any work (published or unpublished), composed, written, or created by any person other than the student who submitted the work (adapted from Napolitano vs. Princeton). Instructors often encourage—and in the case of research essays, require—students to include the ideas of others in their writing. In such cases, students must take care to cite the sources of these ideas correctly (in other words, to give credit where credit

- is due). Several assignments in this class will involve the use of internet resources, and it is my experience that students often do not realize that copyright violations and plagiarism policies still apply when using materials from these resources.
- At Moravian, if an instructor suspects that plagiarism has occurred, the student will be asked to show the notes and drafts contributing to the final version of a paper or assignment. The instructor also has the right to review any books or periodicals that were used. The grade for the paper will be suspended until these materials have been reviewed. An instructor who suspects a student of violating the policy on academic honesty with regard to an assignment, requirement, examination, test, or quiz will consult with another faculty member in the department using a blind copy of the work in question, to verify the violation. If the charge is verified, the instructor will, in almost all cases, assign either a grade of zero to the academic work in question or a failing grade in the course in which the violation occurred. The student must be informed in writing of the alleged violation and penalty; a copy of this memo must be sent to the Associate Dean of Academic Affairs.
 - A student may appeal either a charge of academic dishonesty or a penalty as follows:
 - First, to the First Year Seminar course instructor.
 - Next, in the case of a First Year Seminar, to the Chair, First Year Seminar
 - Next, to the Academic Standards Committee, chaired by the Associate Dean for Academic Affairs.
- d) Appropriate Literature Sources: Students are required to understand the differences between primary and secondary literature sources. The college subscribes to many databases relevant to disciplines associated with environmental studies that you should be familiar with as they will be invaluable sources of information for your research project. Public-domain internet sources can be helpful but you must critically evaluate the information obtained from such sources – especially if they are not primary sources. **You should not typically use “Wikipedia” as a reference for assignments and material from this source is NOT acceptable for the formal research paper.**
- e) Reading Assignments: should be completed prior to each class session in which the reading(s) will be discussed.
- f) Extra Help : If any difficulties arise during this course in any area, including selecting a research topic to designing your presentation, please see me. *I will be happy to help!* The reference librarians in Reeves Library are also willing to assist you with reference materials. You may also contact the Moravian College Writing Center for further assistance in writing and revising your abstracts and research papers

Learning Services Office:

Students who wish to request accommodations in this class for a disability should contact Elaine Mara, assistant director of learning services for academic and disability support at 1307 Main Street, or by calling 610-861-1510. Accommodations cannot be provided until authorization is received from the Academic Support Center.

Best wishes for a great semester!

- D. Husic

Environmental Film Series Fall 2012

Refreshments and an opportunity for discussion will follow each film.

Green Fire: Aldo Leopold and a Land Ethic for our Time **Thursday, September 20 at 7:00 PM in the UBC Room**

The first full-length documentary film ever made about legendary environmentalist Aldo Leopold, GREEN FIRE highlights Leopold's extraordinary career, tracing how he shaped and influenced the modern environmental movement. Leopold remains relevant today, inspiring projects all over the country that connect people and land. *Sponsored by the Moravian College Environmental Studies & Sciences Program through a grant from the Margaret A. Cargill Foundation.* Check out the trailer at: <http://vimeo.com/8669977>

Living Downstream **Thursday, October 11 at 7:00 PM in the UBC Room.**

(Sandra Steingraber will be our speaker for the incoming first-year students.) Based on the acclaimed book by ecologist and cancer survivor Sandra Steingraber, Ph.D., LIVING DOWNSTREAM is an eloquent and cinematic documentary film. This poetic film follows Sandra during one pivotal year as she travels across North America, working to break the silence about cancer and its environmental links. After a routine cancer screening, Sandra receives some worrying results and is thrust into a period of medical uncertainty. Thus, we begin two journeys with Sandra: her private struggles with cancer and her public quest to bring attention to the urgent human rights issue of cancer prevention. But Sandra is not the only one who is on a journey—the chemicals against which she is fighting are also on the move. We follow these invisible toxins as they migrate to some of the most beautiful places in North America. We see how these chemicals enter our bodies and how, once inside, scientists believe they may be working to cause cancer. *Sponsored by the Moravian College Environmental Studies & Sciences Program through a grant from the Margaret A. Cargill Foundation.* Check out the trailer at: <http://www.livingdownstream.com/trailer>.

Journey of the Universe (with guest speakers: M. E. Tucker and John Grim)

Wednesday, November 7 at 7:30 PM in Dana Lecture Hall

JOURNEY OF THE UNIVERSE presents for the first time the epic story of cosmic, Earth, and human transformation. Beautifully filmed on the Greek island of Samos, this engaging narrative combines scientific discoveries in astronomy, geology, biology, and ecology with humanistic insights concerning the nature of the cosmos. *These speakers and the film viewing are sponsored by the Religion Department, Seminary, and Arts & Lectures.* Check out the trailer at: <http://www.journeyoftheuniverse.org/film-trailer/>

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Dr. D. W. Husic

Academic Integrity: Absolute academic integrity and honesty is expected in all of my courses. Penalties for copying, plagiarism, data fabrication, or other types of cheating will not be tolerated and students caught violating the attached policy provisions will be dealt with severely. This can include failure for a test or assignment or a failing grade for the entire course. I have the right to report any and all violations of academic integrity to the appropriate campus administrators.

Each student enrolled in my classes is required to read and sign off on the Academic Honesty Policy information contained within the syllabus. Please read the policy and return the signed form (below) before the end of the week. I will keep these signed forms on file in my office.

I have read the “Academic Honesty Policy” included in the syllabus for Professor Husic’s Environmental Studies course (fall semester, 2012). I understand the policy and the consequences of engaging in academic dishonesty.

Name: _____

Date: _____