Catalog Description: This course explores the major principles of environmental science and focuses upon environmental challenges and potential solutions in the 21st century.

Course Description
Environmental Science is a course designed to provide an overview of natural systems and human activities that manipulate these systems. Unlike other science courses, environmental science is a highly integrated discipline. During the course of the semester we will examine how agriculture, policy, population growth, resource management and urbanization impact air and water quality, biological systems and geological resources. This course uses basic principles of biology, chemistry, earth science and physics as a context for considering potential policies and management practices for obtaining sustainable solutions to environmental challenges. An overview of the historical development of the environmental movement will be the starting ground for our course discussions.

Textbooks

Course Objectives
1) For students to understand the history of the environmental movement and its impact on society.
2) For students to understand the concept of sustainability.
3) Students will sharpen their critical thinking skills by carefully examining the complexity of environmental issues.
4) Students will understand how major principles of ecology and evolutionary science can be useful in formulating solutions to environmental problems.
5) Students will gain exposure to the ways environmental scientists strive to develop sustainable atmospheric, biological, energy, geological and hydrosphere resources.
6) Students will critically examine current environmental policies and the science behind the establishment of these policies.
7) Students will gain an appreciation of their place in the biosphere and the impact of our species on the natural world.

Student Learning Outcomes
By the end of this course students will be able to:
1) Characterize terrestrial, atmospheric, and marine environments
2) Explain how environments are interrelated
3) Identify natural and human environmental stressors and discuss their impact, both qualitatively and quantitatively
4) Demonstrate how environmental stewardship can be practiced
5) Identify, locate, and critically review environmental literature
6) Employ information literacy, writing concerning environmental topics of interest
7) Demonstrate critical-thinking and problem-solving skills, both individually and in groups, concerning environmental topics of interest

Course Schedule
Week 1 (Jan. 19, 20) Course Structure/ What is Environmental Science? Ch. 1
Week 2 (Jan. 24, 26, 27) The Environmental Movement
Week 3 (Jan. 31; Feb. 2, 3) Science, Matter & Energy Ch. 2
Week 4 (Feb. 7, 9, 10) Ecosystems Ch. 3
Week 5 (Feb. 14, 16, 17) Evolution & Biodiversity (First assignment due) Ch. 4
Week 6 (Feb. 23, 24) Climate & Biodiversity Ch. 7
Week 7 (Feb. 28; Mar. 2, 3) Community & Population Ecology Ch. 6
Week 8 (Mar. 7-12) SPRING BREAK
Week 9 (Mar. 14, 16, 17) Sustaining Biodiversity (1st Draft of Project Due) Ch. 8/9
Week 10 (Mar. 21, 23, 24) Midterm/ Food, Soil & Pest Management Ch. 10
Week 11 (Mar. 28, 30, 31) Water and Water Pollution (Second Assignment due) Ch. 11
Week 12 (Apr. 4, 6, 7) Water/ Geology and Non-renewable Mineral Resources Ch. 11/12
Week 13 (Apr. 11, 13, 14) Geol & Non-Renew Ch. 12
Week 14 (Apr. 18, 20, 21) Energy Ch. 13
Week 15 (Apr. 25, 27, 28) Energy/Climate Change Ch. 13/15
Week 16 (May 2) Climate Change Ch. 15
May 3 Final-1:00-3:00PM

COURSE REQUIREMENTS
Attendance: Attendance is strongly recommended. Attendance will be taken at the start of each class period. Excused absences from class will be granted only upon a written medical or sponsored university activity notification. If the student comes to class late, it is his or her responsibility to inform the instructor and sign the attendance sheet. Once the instructor leaves the classroom, any student not appearing on the attendance sheet will be counted as absent. Attendance counts towards class participation. If you are absent in 4 or more classes your grade will be lowered one letter grade. You are an adult; you are here for an education. If you are not serious about an education then do not bother being here.

Methods of Instruction: This course will employ the following pedagogic techniques:
1. Lecture and class discussion of material.
2. Visual instruction in the form of PowerPoint, specific VHS tapes and DVDs.
3. Applied problem solving skills and analysis.
4. Testing of material.
5. Short Writing assignments.

Evaluation Components and Grading Scale

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<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Tests- Midterm &amp; Final</td>
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<td>Quizzes</td>
<td>15%</td>
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<td>Class Participation</td>
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<td>Annotated Bibliography</td>
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<td>Homework Assignments (7% each)</td>
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<td><strong>Total</strong></td>
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Grading Scale

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Tests: There will be 2 tests. Make-up tests will NOT be given under any circumstance. Tests will consist of the following types of questions- multiple choice, true or false, fill in the blanks, short answer, and diagrams to label. All tests will contain an extra-credit question for bonus points.

Quizzes: There will be 12 short quizzes during the semester. The grades on the top 10 will be counted for your grade. These are on-line quizzes taken through Blackboard.

Assignments: You will have 2 writing assignments and a quantitative assignment using excel. You have to submit these assignments using blackboard and I will ONLY read the allotted number of words for each writing assignment. The first assignment consists of writing a 500-word summary of a documentary film (1:30hrs) titled HOME by Yann Arthus Bertrand (the assignment particulars are on my website). You can watch this documentary on-line at the following website (http://www.youtube.com/watch?v=jqxENMKaeCU). The second consists of watching the documentary film The Future of Food by Deborah Koons Garcia (1:28:54) at (http://www.thefutureoffood.com/) and answering a series of
questions. This website also offers many insights on genetic engineering and its consequences on our food supply. The complete assignment is also on my website. These links work best with Firefox.

**Annotated Bibliography:** A bibliography is a list of materials (books, magazines, newspaper and peer-reviewed periodical articles, etc.) on a subject. An annotation is a brief description of the material, providing enough information to let the reader know what a source covers and if it is useful for a paper. A good way to think of it is as advice to someone who is beginning research on a topic. You will pick a SPECIFIC topic of *environmental interest*. The first draft of the bibliography is due on Week 9, if you chose not to do a first draft then your final annotated bibliography will be counted as your project and I will not revise it. Any plagiarized material on the assignment will automatically receive a grade of “F” on the assignment. Remember plagiarism is also not giving credit where credit is due, so cite everything you use; always paraphrase and never copy anything verbatim. I have a zero policy on plagiarism.

**Participation:** Class participation is an important part of the learning process. Participation in class is highly encouraged and variations in points of view are welcomed. Attendance to class and engagement counts towards class participation (4%). Participation points are earned by doing all the on-line quizzes, coming to class and participating in class discussions.

**Expected Outcomes:** After completing this course the student is expected to master effective writing skills have effective oral communication skills; be able to develop quantitative literacy skills; be able to think critically and solve problems; have information and technological literacy skills; practice responsible citizenship in a culturally complex world and demonstrate knowledge of disciplinary or interdisciplinary fields.

**Assignments:** Students must submit all major assignments in on time please do so on Blackboard; failure to do so will result in failure of the course.

**Academic Dishonesty:** Students are expected to demonstrate academic integrity at all times. NJCU condemns cheating and plagiarism in any form; intentionally using the ideas, knowledge, words, and/or visual images of another individual as if those were original to the writer or speaker; and any other forms of deceit in relation to the student’s affiliation with and commitment to the university. In this course any student caught cheating on any test or plagiarizing any work will receive an ‘F’ for the entire course.

**Withdrawal:** Please note that April 15th is the last day to withdraw from a course with a grade of “W”.

**Cell Phones and Smart phones:** Please turn OFF all cell phones and smart phones. If a phone rings during class time the student will be asked to leave and counted as absent for that day. There will be NO texting allowed, anyone caught texting or accessing the internet will be asked to leave and be counted absent for the day. You are an adult; you are here for an education. If you are not serious about an education then do not bother being here.

**Use of cell phones, I Pods, MP3 players or any other electronic device is PROHIBITED during class or EXAMS. Any student using the device will be asked to LEAVE immediately and if taking an exam the exam grade will result in a zero (0).**

**Extra Credit:** You can keep a journal (bound composition notebook), a collection of CURRENT environmentally themed articles from newspapers and or magazines *collected over the length* of the semester. These articles must be summarized BY YOU in a page to a page and a half per article. The original articles must accompany the summary. For each article summarized you will get 1.5pt on the final, up to a total of 18 points (12 articles). IF YOU ARE DOING THIS ASSIGNMENT YOU MUST SHOW ME YOUR NOTEBOOK by week seven (7). The notebook should contain 6 articles by then for full credit.