# BIO 120 Environmental Science Syllabus – Winter Intersession 2017

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| Instructor | Professor Cynthia Anderson Sanchez | E-mail | Cynthia.Sanchez@RioHondo.edu |
| Course Information | CRN 32859 3 units  Section 05W | Office Hours: | By Appointment |
| Days / Time  Dates | M T W R F 8:00 am - 10:50 am  January 3 – January 26 | Place  Duration | S 136  4 weeks |

### Text: ENVIRONMENT 9th edition Raven, Peter H.; Hassenzahl, David M.; Hager, Mary Catherine; Gift, Nancy Y.. Environment, 9th Edition (Page iv). Wiley. Kindle Edition. ISBN-13 (paperback) 978-1118-87582-7 ISBN-13 (AP Edition) 978-1119-05305-7 ISBN-13 (binder-ready version) 978-1118-978443

### Course Description:

Utilizing basic biological concepts, an interdisciplinary approach is used to address environmental challenges. Topics addressed may include ecosystem characteristics and functions, population dynamics, energy and material resource use, pollution, and alternative energy sources. Students in many disciplines will benefit from this course as the social, political, and economic implications of environmental decisions are addressed. This course fulfills the general education requirement in life sciences.

### Student Learning Outcomes (SLO):

*Definition: a behavioral change that describes what a student will be able to do or know at the conclusion of the course.*

Student Learning Outcome for Biology 120: Given a description of a human society, the student will be able to identify the environmental consequences of the growth of that society.

Assessment: Mastery of the Student Learning Outcome will be assessed by the students’ ability to answer embedded questions, perform tasks, draw conclusions and form hypotheses based on a combination of knowledge, experimental data, models and historical patterns.

### Goals:

1. Apply general biological principles to specific environmental issues.

2. Identify several biological problems resulting from human population explosion and compare and contrast proposed solutions to these problems.

3. Recognize the major environmental challenges facing societies in developed and developing countries and the proposed strategies for resolution of the challenges.

4. Analyze natural resource issues and evaluate strategies for conservation and sustainable utilization of these resources.

5. Evaluate actions with environmental consequences using cost-benefit analysis.

6. Using the concept of biodiversity contrast the ability of different habitats to support living organisms in terms of abundance and variety.

7. Identify the major types and sources of water, air, and soil pollution and discuss their effects on living organisms.

8. Compare and contrast types of alternate energy sources and their potential for meeting future energy demands.

### Resources:

On-Line games with practice problems, videos, tutorials and models @ www,ScientistCindy.com

Access to computer with internet connection

### **Evaluation:**

**200 points = 1 Midterm (200 pts each)**

**160 points = Participation Points (10 pts each day x 16 days of class)**

**140 points = Activities – In Class (10 pts each assignment)**

**200 points = Final Exam (non-cumulative)**

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**700 pts possible: 90% -100% = A; 80% - 89% = B; 70% - 79% = C; 60% - 69% = D; 0% - 59% = F**

### Course Schedule (Tentative):

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| Day | Topic | Required Reading |
| Tue,  Jan 03 | Syllabus and Introductions  Introduction to Environmental Science –  History Of Life Series: A Study In Evolution  Ep - 1. Plants, Earth's Quiet Rulers | none |
| Wed,  Jan 04 | A Brief History of Earth – 4.5 Billion Years old  VIDEO - Deep Ocean: The Lost World Of The Pacific  History Of Life Series: A Study In Evolution  Ep - 2. The Story of the Feather | Chapter 1 |
| Thurs,  Jan 05 | Historical Perspective of Environmental Science  History Of Life Series: A Study In Evolution  Ep - 3. The Landing, From Sea to Land and Back | Chapter 3 |
| Fri,  Jan 06 | Food Chains, Food Webs, Ecological Pyramids  History Of Life Series: A Study In Evolution  Ep - 4. Mating – The Search for the Other Half | Chapter 4 |
| Mon,  Jan 09 | The Carbon Cycle  History Of Life Series: A Study In Evolution Ep - 5. Extinction – An End and a New Beginning | Chapter 4 |
| Tue, Jan 10 | Evolution  VIDEO - NOVA: Becoming Human Ep 1 – First Steps | Chapter 4 |
| Wed,  Jan 11 | Population Ecology  VIDEO - NOVA: Becoming Human Ep 3 – Last Man Standing | Chapter 5 |
| Thurs, Jan12 | Dr. Suess – The Lorax | Chapter 5 |
| Fri,  Jan 13 | MIDTERM | Bring Scantron and #2 Pencils |
| Mon  Jan 16 | Martin Luther King Jr Day - HOLIDAY | None |
| Tue  Jan 17 | Competition  VIDEO - Darwin: The Voyage That Shook The World | Chapter 5 |
| Wed  Jan 18 | Predation  VIDEO - Darwin and Theory of Evolution | Chapter 5 |
| Thurs,  Jan 19 | Symbiosis  VIDEO – Wildlife on the Galapagos Island | Chapter 6 |
| Fri,  Jan 20 | Symbiosis  VIDEO - Africa's Primeval Oceans | Chapter 6 |
| Mon  Jan 23 | Niches  VIDEO - Wonders of Life – What is Life? | Chapter 7 |
| Tue  Jan 24 | Diversity  VIDEO – The Wonders of Life | Chapter 7 |
| Wed  Jan 25 | An Inconvenient Truth - MOVIE | Study |
| FINAL EXAM | |  |  |  |  | | --- | --- | --- | --- | |  | Thursday | January 26, 2017 |  | | 8:00 AM  10:50 AM |

Academic Integrity:

Academic dishonesty will not be tolerated. Please familiarize yourself with all definitions of academic dishonesty to ensure compliance on the Academic Integrity Web Page located at <http://www.riohondo.edu/student-affairs/academic-integrity/> . This page includes the following important statement: “Rio Hondo College expects that you will make choices that reflect integrity and responsible behavior. No matter what level of stress you may find yourself under, the college expects you to approach your work with honesty and integrity. Academic dishonesty is defined as cheating, plagiarism, or obtaining or attempting to obtain credit for work by the use of any dishonest, deceptive, fraudulent, or unauthorized means or helping someone else to commit an act of academic dishonesty.” A student found cheating will receive a score of zero for the assignment and will be referred to Academic Affairs for further assessment.

Disabled Students Programs and Services:

Students that have a disability or who think that they may have a disability, are encouraged to contact Disabled Students Programs and Services. Students who need or think they may need accommodations are urged to contact the Disabled Students Programs and Services (DSPS) in a timely manner in order to allow time for such accommodation(s) to be met. You may contact the Disabled Students Programs and Services office in person at SS330, by phone at (562) 908-3420, or through their web contact form located at <https://www.riohondo.edu/dsps/>.

### Class Policies

* Mutual respect – you are expected to make every effort to refrain from being a distraction to your classmates, as well as your instructor. This includes the following:
  + Showing up late or leaving early
  + Use of technology that is unrelated to the material presented in class at that time
  + Cell phones are to be turned off and out of site
  + Make up activities / quizzes / exams will not be granted unless there has been a mutually agreed upon arrangement made prior to the absence. In cases in which an absence can be attributed to an unavoidable emergency or medical issue, the instructor may allow a deviation from this policy on a case-by-case basis, provided that the circumstance can be satisfactorily substantiated with proper documentation.

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| Important Dates: |
| |  |  | | --- | --- | | Start Date: 03-JAN-2017 End Date: 26-JAN-2017 Last Date to add class: 04-JAN-2017 Last Date to drop without a "W": 04-JAN-2017 | Last Date to drop with a "W": 17-JAN-2017 Census Date: 05-JAN-2017 Add Auth Begins: 03-JAN-2017 Add Auth Expiration: 04-JAN-2017 | |

# Final Exam Thursday January 26, 2017 8:00 AM – 10:50 AM