

# Ecology: A Human Approach

BISC 1002 (3 credits)

Summer Session 1, 2019

**Instructor:** Dr. J. Alan Clark, Ph.D., J.D.; [jaclark@fordham.edu](mailto:jaclark@fordham.edu); Larkin 370B, Ext. 13678; office hours after class and as needed.

**Course Overview:** This is a course designed for non-biology majors about how the physical world around us works. Humans have a large and complex impact on Earth's systems. Science can help us understand this complexity. We will examine the theories, recent data, and methods of ecological and environmental sciences to gain a practical understanding of the physical, chemical, and biological processes of the natural world. This knowledge will help us make rational decisions about the effects that humans have on their environment.

**Text:** A Changing Planet - an **e-book** by Jason Neff, Pearson Higher Education (ISBN 978-0134081175). Purchase an access card from the Fordham bookstore or the publisher. (2016 – updated 2017). Additional handouts will also be required reading.

## Web Sites:

### (1) Neff textbook website:

<https://www.pearson.com/us/higher-education/product/Neff-REVEL-for-A-Changing-Planet-Instant-Access/9780321693907.html>

(2) **Blackboard course website:** <https://fordham.blackboard.com/>. I will post articles, urls, and other information, plus copies of lecture notes after each class.

**Policies:** Cell phones and other electronic devices must be turned off during class.

**Academic Integrity:** Failure to comply with the Fordham University Academic Integrity Statement will result, at a minimum, in an automatic "F" (with zero points) for that particular assignment. Depending on the severity of the violation, an "F" may be given for the course. Such failures may be reported to the University Administration.

## Assessment

Weekly Exams 40%

Research Project/Presentation 20%

Daily Quizzes 20%

Participation/Attendance 20%

**Exams:** Make-up exams will not be given except in the case of extremely extenuating circumstances and then only with proper documentation and pending approval by a Dean. More generally, if a missed exam occurs due to an excused absence, the full exam grade will be based on the average of other exams taken by the student. Exams will cover material from the lectures, readings, and assignments. The format is varied, and may include multiple choice, matching, short answer, and other questions designed to test your knowledge and understanding of the course topics.

**Research Projects:** Students will select an ecology-focused research project using the scientific method to address a research question/hypotheses and then present their project to the class.

**Tentative Class Schedule:**

<b>Date</b>	<b>Topic</b>	<b>Readings/Evaluations</b>
<b>Week 1</b>		
M	Course Basics/Science and the Environment	Welcome Chapter/Chapter 1
W	Science Fundamentals/Biodiversity & Evolution	Chapter 20, Chapter 4
<b>Week 2</b>		
M	Populations and Communities, Ecosystems, Biomes	Chapter 5, Chapter 6 <b>Exam 1</b>
W	Freshwater Ecosystems, Oceanic Ecosystems	Chapter 8, Chapter 10
<b>Week 3</b>		
M	Atmosphere and Air Pollution	Chapter 9 <b>Exam 2</b>
W	Climate Systems and Climate Change, Environmental Law & Policy	Chapter 11, Chapter 2
<b>Week 4</b>		
M	Human Populations and Impacts, Human Health	Chapter 12, Chapter 16 <b>Exam 3</b>
W	Land Use and Agriculture	Chapter 13, Chapter 14
<b>Week 5</b>		
T	Waste, Energy	Chapter 15, Chapter 17 <b>Exam 4</b>
W	Project Presentations, Conservation and the Future of Earth	<b>Quiz</b>