

**Ecology: A Human Approach**  
**BISC 1002** (3 credits)

**Summer Session I, 2018**

**Tuesday, Wednesday, Thursday 9 am – 12 noon**

**Dr. Jacqui Johnson**

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Larkin Hall 250A, Fordham University, Bronx, NY 10458

**Course Overview:** A biology course designed for non-majors.

Students gain a basic understanding of the physical, chemical, and biological processes of the natural world in order to make rational decisions about the effects humans have on their environment. Topics include global biodiversity, land use, ecosystem processes, water and air pollution, sustainability, conservation, and climate change. Lab exercises will provide hands-on experience in the use of the scientific method to address pressing environmental and ecological problems.

**Required Reading:**

Cunningham WP & Cunningham MA, 2016, Principles of Environmental Science: Inquiry and Applications, 8th Ed., McGraw-Hill, New York. (ISBN 1259664236). McGraw-Hill Connect subscription required; e-book option is available with “Connect Plus” subscription. <http://connect.mheducation.com/class/j-johnson-summer-2016-1>

**Course Requirements:**

Exams: There will be weekly exams based on lecture, discussion, presentation, and reading material.

Oral Presentations: A two-minute summary of a position paper (assigned randomly) and 10-minute independent project summary will be formally shared with the class.

Written Lab Reports: One formal lab report will be submitted using scientific methods and writing style, as well as worksheets and shorter assignments.

Homework: All online assignments must be completed on time. Late work will be assigned incremental penalties according to lateness.

Current Events: Students are expected to bring, present, and discuss quality media articles relevant to the course material.

Attendance and Participation Policy: Good attendance is required. Missing more than two classes may result in automatic failure in this course (Fordham University policy). Students are expected to answer questions and discuss the assigned reading.

You must produce a written excuse from your doctor or the dean’s office, in order to make up any exam or presentation. There is no extra credit option for any reason.

Grade: Exams (4x10%, 20% final) 60% + presentations 12% + lab report & worksheets 12% + online homework 10% + current events & participation 6% = 100%

Integrity: Plagiarism and cheating will not be tolerated. All written assignments must be your own original, independent work. Refer to the Fordham University Student Handbook for specifics regarding academic integrity and the sanctions that have been established.

## Tentative Schedule

Date	Class Activities	Assignments
Week 1 T  W  R	Introductions, Pre-test, Ch. 1: Overview <i>Rachel Carson's Silent Spring</i> Ch. 2: Matter and Energy Ecological footprint due <b>Discussion:</b> Environmental Heroes <b>Lab Exercise:</b> Plant Ecology <b>Forum:</b> Old Growth Forests, Their Value Chs 3-4: Evolution, Populations	-Read Chs. 1-2, online HW due by 7/8 -Environmental heroes: Who is yours? -Calculate the personal "ecological footprint" quiz at <a href="http://footprintnetwork.org">http://footprintnetwork.org</a> and print results -Prepare old growth forest position summary -Read Chs. 3-4 -Human population worksheet
Week 2 T  W  R	Population worksheet due <b>Exam 1</b> (Chs. 1-4, etc.) Ch. 5-6: Biodiversity, Conservation <i>Cane Toads: An Unnatural History</i> Project proposal & lab worksheet due <b>Current events</b> Ch. 7: Food and Agriculture <b>Lab Exercise:</b> Antibiotic Resistance, 1 <b>Forum:</b> Food Issues Ch. 8: Environmental Health and Toxicology <b>Lab Exercise:</b> Antibiotic Resistance, 2	-Read Chs. 5-8, online HW due 7/15 -Begin preparing position summary; find "current event" Write project proposal: What can we do? (One sentence) -Begin Lab Report -Complete lab worksheet -Prepare for exam
Week 3 T  W  R	<b>Exam 2</b> (Chs. 5-8, etc.) Chs. 9-10: Climate, Air Pollution <b>Current events</b> , lab worksheet due <b>Lab Exercise:</b> Antibiotic Resistance, 3 <b>Field Exercise:</b> Stream Ecology <b>Forum:</b> Global Climate Change <i>An Inconvenient Truth</i> Chs. 11-12: Water, Earth Resources	-Read Chs. 9-12, online homework due 7/22 -Prepare position summary; find "current event" -Complete lab worksheet -Prepare for exam -Continue Lab Report writing, due 7/27
Week 4 T  W  R	<b>Exam 3</b> (Chs. 9-12, etc.) Chs. 13-14: Energy, Waste <b>Current events</b> , lab report due Chs. 15-16: Economics and Sustainability <i>The Story of Stuff</i> <b>Forum:</b> Energy Sources Course Review, Exam questions due <i>Gasland</i>	-Read Chs. 13-16, online HW due Fri. 7/29 -Find "current event", Lab Report due 7/27 -Prepare position summary -Prepare for exam, write three exam questions -Prepare Independent Project presentation
Week 5 T  W  R	<b>Exam 4</b> (Chs. 13-16, etc.) <b>Presentations:</b> What can we do? <b>Presentations</b> , continued <b>FINAL EXAM</b> (cumulative) <b>9:00 am, as scheduled by registrar</b>	-Submit presentation via email as "LastName_Ecology_Pres" in both subject line and attached file name -Review course materials