

Introduction to Ecology (PCB 1030) Internet

PCB 1030; Ref #217365

Course – Summer II, 2016

The textbook for this course has changed as of Summer II, 2015. The former textbook (Elements of Ecology) cannot be used for this course. You must obtain the new text (Essentials of Ecology, 7th edition). Please see below for details.

Special Note for Summer Students: The summer session is only 6-1/2 weeks long. The amount of material covered in this course within this brief time is the SAME as during a Fall or Spring semester (about 16 weeks each). Expect to read and learn 2-4 chapters (ranging from 20 to 30 pages each chapter) each week, AND take an exam almost every week. This is a large amount of reading and studying, mostly of unfamiliar material, in a short period of time. Be prepared to devote significant time to this course. If you fall behind, it is almost impossible to catch up.

Syllabus and Course Overview

INSTRUCTOR: Dr. Bill Tyler **PHONE:** (772) 336-6062
OFFICE: S-207 Pruitt Campus **E-MAIL:** wtyler@irsc.edu

Note: This course uses the Blackboard online course management system at IRSC. I prefer for you to contact me via the Internet Ecology course (EcoWeb) email, within the Blackboard Course Website, but if you need to contact me in another manner, please use the above contact numbers (use "Internet Ecology Student" or "EcoWeb student" as the subject for emails).

General Description

Introduction to Ecology will discuss a wide range of topics that make up the science of ecology. We will focus on how plants and animals interact with the physical environment and with each other, how populations grow and are regulated, how communities are structured and change over time, and how ecosystems function. There is a significant focus on the importance of biodiversity and how it may be sustained. We will also discuss applications of these concepts in modern society, by addressing many environmental and conservation issues. This course is designed as an introductory-level course for *non-science majors*.

Prerequisite Course

No prerequisite course is required, but students are expected to read at a college-level in English since the course requires considerable reading skills.

Course Goals and Objectives

The overall goal of the course is to give students a broad, general background in the science of ecology so they may apply it to deciding and acting upon environmental problems that face today's society. After successfully completing PCB 1030, students should be able to understand...

- various environmental problems and how they may be solved
- how scientists use the scientific method to approach ecological problems
- how different ecosystems are organized and function,
- how plants and animals evolve and are adapted to their environments,
- how interactions within and between species affect distribution and abundance of species and populations
- how human activities affect plant and animal populations,
- how plants and animals are affected by climate and other physical factors,
- the importance of biodiversity and the importance of ecosystem services
- how we can sustain biodiversity in terrestrial and aquatic ecosystems.

Student Learning Outcomes

Upon completion of Introduction to Ecology, PCB 1030 [for non-majors], students will have the ability to:

- Communicate major ecological and environmental concepts and relate how these are connected within various areas of the biological, physical and social sciences.
- Apply problem solving, analytical, and communication skills based on the scientific method that will provide the foundation for lifelong learning and career development.
- Evaluate and discuss contemporary social and ethical issues related to ecology and the environment.

Class Policies

- Register and pay for the course.
- Purchase the appropriate textbook (indicated below) in the IRCC Bookstore, directly from the publisher or from an independent online vendor. Be sure to purchase the appropriate edition of the text (see below) and have your textbook in hand before the start of the course.
- Study your weekly assignments including study of textbook chapters and chapter reviews.
- Check your course email *regularly* for messages and updates.
- Take all online exams at the scheduled times below.
- Take the second and fourth exams at the Assessment Center or Academic Services Center at the campus of your choice. You must bring your photo ID to take these proctored exams. You may NOT bring children to the center without additional supervision. You may not use notes for the midterm or final exam.
- If you are not able to take the second or fourth exam at one of the IRSC testing centers, you must contact Steven Daniello (sdaniell@irsc.edu) and the instructor as soon as possible to make arrangements at an off-campus testing center.

Assessment and Grading Procedures

Your final course grade will be determined by how well you perform on multiple choice exams (90% of your final grade), and the successful completion of an Internet project (10% of your final grade). There will be four (4) individual exams during the semester (see course schedule below). Each exam has 50 multiple choice questions and is limited to 120 minutes; each exam will be worth 100 percentage points. The first and third exams will be **online exams** (accessed through the Content link in the left margin in Blackboard) and can be taken at home or anywhere with an internet connection to make evaluation more convenient for students. The second (midterm) and fourth (final) exams must be taken at an IRSC Assessment Center, or a testing center approved by, and arranged through, Mr. Steven Daniello, department head of Assessment. See the

schedule below for material to be covered on each exam. Note that the midterm and final exams are not comprehensive in nature.

The Midterm and Final exams must be taken at an Assessment (Testing) Center at the campus of your choice. No books, notes or any other materials will be allowed.

Grade calculations: The overall exam grade will be calculated by taking the average of your three highest grades from the 100-point exams (i.e. we drop your lowest exam score). Since this is 90% of your final grade, then we multiple the average exam score (after dropping the lowest) by 0.9. Then the results of your Internet assignment (out of 100 points) is multiplied by 0.1 (since it is worth 10% of your final grade), then added to your exam component to calculate your final grade.

In the example below, the student scores 85, 81, 84 and 91 on the four exams. The average of the exams is calculated from the three highest exam grades (85, 84 and 91), equaling 86.7. The student also made a 90% on their internet assignment. To calculate the course grade, take the exam average (86.7) and multiply it by 0.9 since it is 90% of the course grade, and take the internet assignment grade (90) and multiply it by 0.1 since it contributes 10% of the course grade. Take these values ($86.7 \times 0.9 = 78$ and $90 \times 0.1 = 9$), and add them to determine your course grade (87 in the example below).

Assessment	Maximum Possible points	Example Grades (%)	
Online Exam 1	100	85	
Midterm Exam <i>at Assessment Center</i>	100	81 (drop)	
Online Exam 2	100	84	Exam average (after dropping lowest)
Final Exam <i>at Assessment Center</i>	100	91	$(85+84+91)/3 = \mathbf{86.7}$
Internet Assignment	100	90	90
Course grade calculation [(Exam average x 0.9) + (Internet assignment x 0.1)]			$[(86.7 \times 0.9) + (90 \times 0.1)] =$ $[78 + 9] =$ 87

Letter grades are assigned on the following basis from the course grade calculations outlined above:

- A = 100 – 90
- B = 89.9 – 80
- C = 79.9 – 70
- D = 69.9 – 60
- F = less than 59.9

Withdraw (W) – deadline is Tuesday, July 21;

Incomplete (I) – if passing but emergency prevents taking the final

NOTE: *It is important to calculate your own grades as outlined above. Do NOT use the overall grade calculated by Blackboard Grades; this is only an average of all your grades without taking into consideration of the dropped grade.*

Course Materials

REQUIRED TEXT: *Essential of Ecology, 7th edition*, by G. T. Miller and S. E Spoolman. Cengage Learning. 2015. This textbook is available directly from the publisher ([click here](#)) as an ebook, a rental or hardcopy textbook; your choice. Or you may purchase an access code through the bookstore (this may be required if you receive financial aid).

MAKE-UP POLICY: ***No make-up exams will be given after the exam deadlines.*** Students will be allowed to *drop one* exam grade during the semester. This should cover any illness, emergency, or other. You should “bank” this opportunity thereby allowing you to DROP one 100-point grade if you have taken all tests. Contact instructor **before** exam or quiz if you plan to miss it, and reasonable arrangements may be made.

EXTRA CREDIT: No extra credit is given. Students need to spend their time on required material, studying for exams.

Print out and post the following schedule

Note: The two online exams close at 11:55 PM on the closing date indicated, while the midterm and final exams are available only during regular campus hours at the on-campus Assessment Centers (*please check the times at your campus*). Please pay close attention to the dates when exams open and close, and which chapters are covered on the different exams. IRSC Assessment Centers are closed on Fridays, Saturdays and Sundays during the summer.

Schedule of Reading Assignments and Exams Summer II, 2016

Week of...	Topic	Text Chapters
1 (6/28)	Preface for Students; Environmental Problems; Reading Graphs & Maps; Environmental History	xxiii-xxvii, Ch 1, S-2 & 3 [†]

****Online EXAM 1 – July 3 (Sun.) – July 8 (Fri.)** [Covers Chapters 1-3; S-2, S-3 & S-4]

2 (7/4)	Science Basics; Ecosystems ; Online exam 1	2, 3, S-4
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3 (7/11)	Biodiversity & Evolution; Species Interactions & Population Control	4, 5
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****Midterm EXAM at Assessment Center - July 18 – 21 (Mon-Thurs.)**
[covers Chapters 4 & 5 only]

4 (7/18)	Human Populations; Climate & Biodiversity; Midterm Exam	6, 7, S-5
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****Online EXAM 2 - July 24 (Sun.) – 29 (Fri.)** [Covers Chapters 6, 7 & 8, S-5]

5 (7/25)	Aquatic Biodiversity - Online exam 2 Sustaining Biodiversity	8 9, S-6
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****Internet Assignment due – Jul 27 (Wed)**

***** Note: July 25 (Tues) is last day to withdraw *****

6 (8/1)	Sustaining Terrestrial Biodiversity; Sustaining Aquatic Biodiversity	10, S-7 11
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7 (8/8)	**Final EXAM <u>at Assessment Center</u> – Aug 8 - 9 (Mon – Tues) [covers Chapters 9, 10 & 11, S-6 & S-7 only]	Only a 2-day window for
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[†] S indicates Supplemental material in the back sections of the textbook

GENERAL INFORMATION:

Students will take their four exams during the scheduled time “windows” indicated above. Online exams 1 and 2 may be taken anywhere with an internet connection. The midterm and final are also online exams that are proctored at an Assessment (Testing) Center or ASC lab at the campus of your choice, as scheduled above. You must bring your photo ID to take these proctored exams

I check my course messages and emails frequently however I might not be available every day due to my schedule. I usually answer emails within 24 business hours. I will post changes on the *Discussion Board* and/or email students individually – please check these frequently. Office visits need to be scheduled by appointment.

Please contact me by email at my Blackboard email account. I will be happy to help you if you are having problems with the material. In addition, the ASC, located in the Library on Main campus, may also provide tutoring if you have a problem. Other campuses may have tutoring as well. Check with the ASC for current operating hours and tutor availability. Please use it!!

For any technical problems and support, please contact *IRCC's Distance Learning Department* (contact information is available at the link [Blackboard Student Help Desk](#) on the Virtual Campus page accessed from the IRSC home page).

IRSC's **River Support** system is available if you have any difficulties during the semester, including personal, financial and academic problems. It may be accessed at <https://esweb.irsc.edu/Mariner/student/ssp/faq.jsp> or from the IRSC home page.

Indian River State College provides reasonable accommodations to students with documented disabilities through the Educational Services Division / Student Disability Services Office. The rights of students with disabilities which pertain to post-secondary education are provided under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. These laws prohibit discrimination by institutions to "otherwise qualified" students with disabilities. This enables such students to have an equal opportunity to benefit from the education offered by those institutions.

Student concerns: If you are experiencing difficulty in your course, your first obligation is to work directly with your instructor to resolve the issue. If you are unable to settle your concerns with the assistance of your instructor, you can contact the Department Chair (sbowen@irsc.edu; 772-462-7502), who will assist you or advise you about contacting the Academic Dean (phorton@irsc.edu; 772-462-7520) or Vice President (aiacono@irsc.edu; 772-462-7215).

PRACTICE GOOD STUDY HABITS

- **Start early. Set aside study time** and use it *only* for studying. Plan on studying an average of *2-3 hours per college credit* for each course per week...remember to **double this during the summer!!**
- **Read the Preface for Students**, including how you can improve your study and learning skills, and using the learning tools offered in the textbook and follow the advice as it applies to you.
- **Study often** when well rested in a quiet, comfortable location. *Don't wait to cram.*
- Look over the **Chapter Reviews** at the end of each chapter before you begin reading the chapters. There is no need to turn in your work; these are study aids for you.
- **Take notes** while reading the chapters and follow the end of chapter reviews carefully. The more you write down (repeatedly), the more you will remember. ***Recent research shows that writing by hand increases learning more than typing on a computer.***
- **Read the assigned chapters** in the text *and take notes*. To give you a broader perspective, examine and study the figures and figure legends, all case studies, *Big Ideas*, *Individuals Matter* and *Tying it all Together* sections in most of the chapters.
- **Recopy notes** by hand. Clarify confusing points using the text, publisher-provided study aids or asking instructor. The more you write, the more likely you will remember the material for the exams.
- **Make flash cards** to help learn vocabulary and definitions. Vocabulary terms are typically indicated in **bold** and *italicized* type in each chapter. It is recommended to consider any term you are not familiar with (within the context of the material) as a vocabulary term.
- **Draw and label** processes and sequences of events for better visualization.
- **Ask questions** via course email.
- **Organize study groups** to help you with answering questions and teaching each other.
- **Tutoring** in ASC is available for free!