



**Jincheng College of Sichuan University
Summer 2018
BIOL102: Environmental Biology with Lab**

Term: July 02nd – Aug 04th, 2018

Instructor: TBA

Home Institution: TBA

Email: TBA

Office Hour: By appointment

Teaching Assistant: TBA

Class Duration: Monday through Friday

Total contact hours: 60 hours (2 hours each)

Credit: 4

Course Description

This course is a general introduction to the field of biology, with an emphasis on biological processes relating to the environment. We will focus on understanding how ecosystems and the populations of organisms within them function and interact. We will also examine human dependence, interaction, and impacts on ecosystems. The course is intended for students in the Environmental Science Program and students who are fulfilling the science section of the University Common Core requirements. Concepts presented in the lectures will be developed and discussed in the laboratories, and written laboratory assignments will be used to expand and evaluate your understanding of specific concepts.

Course Material

Textbook	Author	Press
Environmental Science: toward a sustainable future, 12 th Edition	Wright, R.T. and D.F. Boorse	Pearson Education

Grading

Lab Assignments	30%
Midterm	30%
Final Exam	40%

A	93-100	B-	80-82	D+	67-69
A-	90-92	C+	77-79	D	63-66
B+	87-89	C	73-76	D-	60-62
B	83-86	C-	70-72	F	0-59



Course Objectives

During this course, you should acquire a basic understanding of the following: The use, value, and limitations of the scientific method
The concept of sustainability

Ecosystem characteristics, structure, and function

The interdependence of organisms and populations

Factors contributing to population increases and decreases
Factors influencing human population size

Impacts of the human population on organisms, ecosystems, and the biosphere
The benefits of biodiversity to natural ecosystems and humans

Current environmental issues

Choices that can reduce our impact on the biosphere

Laboratories

In the laboratory portion of the course, you will further explore and expand upon topics presented in the lectures. Reports are due at the beginning of the specified laboratory period. Reports turned in late will be penalized 10% per day, with the first 10% assessed immediately following the end of the specified laboratory period. Specific instructions for each laboratory report will be provided at the time the report is assigned. You are free to discuss the interpretation of the data and the content of the laboratory reports with other members of the class, however the reports themselves **must be written independently** by each student.

At various times during the laboratory we will be using chemical solutions, breakable glassware, and scientific instruments. If used incorrectly, these and other items in the laboratory can be hazardous. Follow all safety guidelines presented by the instructor. Be aware of activities around you, particularly when handling potentially hazardous materials, and know the locations of all safety equipment in the laboratory. Immediately inform the laboratory instructor of any accidents, injuries, or spills, even if they appear to be minor.

Course Schedule

Week	Topics	Activities
1	<ul style="list-style-type: none"> Three underlying themes (Ch. 1) Organization of ecosystems (Ch. 3) 	<ul style="list-style-type: none"> Lab: Experimental Design - Effect of Radiation on Radish



2	<ul style="list-style-type: none"> Population and community (Ch. 4) Ecosystems and energy (Ch. 5) Wild species and biodiversity (Ch. 6) 	<p>Seeds</p> <ul style="list-style-type: none"> Lab: Microcosm Lab: Population Regulation
3	<ul style="list-style-type: none"> Protecting biodiversity (Ch. 6, Ch. 7) Restoration of biodiversity (Ch. 7) Human population (Ch. 8) Population impacts and pests (Ch. 9, Ch. 13) 	<ul style="list-style-type: none"> Midterm Lab: Evolution and Genetic Drift Lab: Predator/Prey Co-evolution
4	<ul style="list-style-type: none"> Forests (Ch. 10) Geology, Minerals, and Mining (Ch. 11) Nonrenewable Energy Sources & Alternative (Ch. 15, Ch.16) Atmospheric changes (Ch. 17) Atmospheric interactions (Ch. 18) 	<ul style="list-style-type: none"> Lab: MA Mammals Lab: Massachusetts Mammals
5 Ch.21)	<ul style="list-style-type: none"> Ozone depletion and water pollution (Ch.20, Municipal solid waste(Ch. 22) Hazardous chemicals (Ch. 23) 	<ul style="list-style-type: none"> Lab: Tree ID using dichotomouskey Final Exam

Policies

Attending Policy

Regular and prompt attendance is required. Under ordinary circumstances, you may miss two times without penalty. Each absence over this number will lower your course grade by a third of a letter and missing more than five classes may lead to a failing grade in the course. Arriving late and/or leaving before the end of the class period are equivalent to absences.

Policy on “Late Withdrawals”

In accordance with university policy, appeals for late withdrawal will be approved ONLY in case of medical emergency and similar crises.

Academic Honesty

Jincheng College of Sichuan University expects all students to do their own work. Instructors will fail assignments that show evidence of plagiarism or other forms of cheating, and will also report the student's name to the University administration. A student reported to the University for cheating is placed on disciplinary probation; a student reported twice is suspended or expelled.

Special Needs or Assistance

Please contact the Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material. Our goal is to help you learn, not to penalize you for issues which mask your learning.