

**Instructor:** Dr. David P. Smith [da.smith@moreheadstate.edu](mailto:da.smith@moreheadstate.edu)  
 Department of Biology & Chemistry College of Science  
 301H Lappin Hall 606.783.2322  
 Office hours: MWF 12:00–12:50, TTh 9:30–10:45, or by appointment

**Text:** Botkin, D.B., and E.A. Keller. 2014. *Environmental Science: Earth As a Living Planet, 9th Edition*. John Wiley & Sons, Inc., New York. ISBN 978-1-118-42732-3. Refer to lecture schedule for sequence of reading assignments.

**Where & When:** Lappin 307 Tuesday, Thursday 8:00am - 9:15am

**Catalog Course Description:** Human ecology with special emphasis on the interactions between humans, required resources (physical, chemical, geological and biological), and their regional and global environments. Information is presented from an analytical and interdisciplinary perspective.

**Course Objectives:** You will learn that humans are part of a complex interaction of physical, chemical, biological, and social forces on our planet. Intelligent decisions regarding environmental issues are becoming more important. Human population growth places more demands upon resources while problems of depleted resources and generated wastes increase. This course provides a fundamental understanding of scientific principles, population growth, ecology, energy and resource dynamics, biological diversity, sustainability, and environmental health issues. Basic air, water, and soil process and pollution dynamics will be introduced. You should learn that complex problems must be approached in a logical and interdisciplinary manner, yet are heavily influenced by political, economic, social, and ethical considerations. This course provides students with an introduction to methods of scientific inquiry, as they apply to environmental issues, to assist them in making informed decisions in their futures. Progress towards meeting these objectives will be assessed through tests, quizzes and assignments.

#### General Education Student Learner Outcomes

BIOL 155 satisfies the NSC1 General Education Student Learner Outcomes (SLO): 4d, 5a, and 5b.

- SLO 4d. Demonstrate the knowledge necessary to make choices that promote sustained health & well being.  
Assessed through quizzes, tests, and/or assignments.
- SLO 5a. Classify statements as scientific or nonscientific.  
Assessed through quizzes, tests, and/or assignments.
- SLO 5b. Apply scientific or technological concepts to solving problems of natural systems.  
Assessed through quizzes, tests, and/or assignments.

**Course Policies:** Prompt and regular attendance is the responsibility of all students. If you miss class, you will have given up an opportunity to gain knowledge (often useful for assessment performance). Quizzes and assignments will occur unannounced throughout the semester and you must be present to participate. Should you have a **legitimate** and **documented** reason for missing a test, quiz, or assignment you **must** communicate with me (office, phone, or email) before the absence or **within 24 hours** after the absence and we will discuss your options. Refer to University Administrative Regulation 131.02 for the official excused absence policy (I will post a copy on Blackboard). Legitimate absences do not excuse the student from class responsibilities.

All discussions during class will pertain to the course material. I strongly encourage relevant questions and discussion. Disruptive behavior such as talking to your neighbor or on your cell phone, text messaging, social networking, or playing electronic games will not be tolerated and you may be asked to stop and/or leave. Continued disruptive behavior will result in referral to the Dean of Students and possible administrative removal from class. Food, weapons, alcoholic beverages, and tobacco products (including e-cigarettes) are considered disruptive and not allowed during class.

Reading the textbook **before** the lecture is essential to your understanding of the material. Test and quiz questions will consist of information from the textbook, lecture, and supplemental material. Merely reading the textbook shortly before a test will not guarantee a good grade. The final examination will be comprehensive.

<b>Grading Policy:</b> Tests (4)	80% (20% each)		90-100 = A	60-69 = D
Quizzes	10%		80-89 = B	0-59 = E
Assignments	10%		70-79 = C	

**Campus Safety Statement:** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at <http://www.moreheadstate.edu/emergency>

**Disability Statement:** Students with disabilities are entitled to academic accommodations and services to support their access and safety. The Office for Disability Services in 109-J Enrollment Services Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, or [e.day@moreheadstate.edu](mailto:e.day@moreheadstate.edu) or visit their website at <http://www.moreheadstate.edu/disability>.

**Academic Honesty:** All students are required to follow accepted rules of academic honesty (see MSU Student Handbook at <http://www.moreheadstate.edu/units/studentlife/handbook> for more information). Academic honesty includes doing one's own work (e.g., assignments, tests, quizzes), giving credit for the work of others (citing published information), and using resources appropriately (paraphrasing in own words rather than copying). Failure to do so may result in zero credit for the assignment, dismissal from the class, and/or expulsion from MSU.

### Approximate Schedule:

Jan 17	Introduction	
Jan 19	Environmental Issues - Why be concerned?	Chap 1
Jan 24	Critical Thinking & Science	Chap 2
Jan 26	Systems Theory & Feedback – Structure & function	Chap 4
Jan 31	Human Population Growth - Too many people, or not enough?	Chap 5
Feb 2	Biogeochemical Cycles – Life support	Chap 7
Feb 7	Ecosystems	Chap 6
<b>Feb 9</b>	<b>Test 1</b>	
Feb 14	Biodiversity - Why are there so many different living organisms?	Chap 9
Feb 16	Ecological Restoration – Repairing broken systems	Chap 10
Feb 21	Agricultural and its Effects – Food does not come from the store!	Chap 11
Feb 23	Forests, Parks, and Wilderness	Chap 12
Feb 28	Conservation Biology - How we threaten and protect living resources	Chap 13
Mar 2	Environmental Toxicology – The dose makes the poison	Chap 8
<b>Mar 7</b>	<b>Test 2</b>	
Mar 9	Energy - You can't get something for nothing	Chap 14
Mar 14	Fossil Fuels - Burning buried sunshine	Chap 15
Mar 16	Alternate Energy Sources - Green is better, right?	Chap 16
Mar 28	Nuclear Energy	Chap 17
Mar 30	Water Supply, Use, Management “Water, water, everywhere...”	Chap 18
Apr 4	Water Pollution & Treatment “...nor any drop to drink.”	Chap 19
Apr 6	Atmosphere, Climate, and Climate Change	Chap 20
<b>Apr 11</b>	<b>Test 3</b>	
Apr 13	Biological Effects of Climate Change	Chap 20
Apr 18	Air Pollution	Chap 21
Apr 20	Ozone Depletion	Chap 21
Apr 25	Indoor Air Pollution	Chap 21
Apr 27	Materials & Waste Management	Chap 23
May 2	Environmental Economics	Chap 3
May 4	Environmental Law, Policy, and Planning	Chap 24
<b>May 11</b>	<b>Test 4 8:00am–10:00am</b>	