

BIO 497 Environmental Studies

Spring Semester 2025

11:00 - 11:50AM MWF LR 2 Nabrit-Mapp-McBay, **Friday meetings via Zoom**

Instructors: Lawrence Blumer, 302 Hope Hall, e-mail: lblumer@morehouse.edu

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Office Hours: Blumer: Tuesday 1:00-3:00 and Wednesday 3:00-5:00 and by appointment

Texts:

New Guinea Tapeworms and Jewish Grandmothers. R.S. Desowitz, Norton 1981. (JG)

Net Zero on Campus. A guide for universities and colleges to accelerate climate action. On BlackBoard (NZ)

(selected readings also will be assigned from newspaper and scientific journal articles)

SimBio SimUText Materials: There are four assignments for which you must purchase an online chapter or tutorial from SimBio. See details on page 4-5. **Responding to the graded questions in each of these four assignments will count as Quizzes, 10 points possible per assignment.**

Lecture			Subject	Reading
1	W	15-Jan (LB)	Introduction and Scope of Course	SimUText: Isle Royale
2	F	17-Jan (LB)	Limiting Condition and Resources	Due 24-Jan
	M	20-Jan	MLK Holiday – No Classes	
3	W	22-Jan (LB)	Population Growth Models	
4	F	24-Jan (LB)	View Net Zero on Campus Webinar https://www.youtube.com/watch?v=UfCtw4zYWg	NZ pp 2-28 LSB away 24-January
5	M	27-Jan (LB)	Population Trends	
6	W	29-Jan (LB)	Food Production and Population	SimUText: Nutrient
7	F	31-Jan (LB)	Discussion on Population Trends	Pollution, Due 7-Feb
8	M	3-Feb (LB)	Human Population Limits	
9	W	5-Feb (LB)	Human Population Limits	
10	F	7-Feb (LB)	Discussion Examination 1 on lectures 1-10	
11	M	10-Feb (LB)	Energy	
12	W	12-Feb (LB)	Energy	
13	F	14-Feb (LB)	Transportation	Science article MPG
14	M	17-Feb (LB)	Transportation	
15	W	19-Feb (LB)	Africa Awareness Panel	
16	F	21-Feb (LB)	Africa Awareness Panel	
17	M	24-Feb (HO)	Water Resources and Drinking Water	
18	W	26-Feb (HO)	Water Resources and Drinking Water	SimUText: How Diseases
19	F	28-Feb (HO)	Wastewater Management	Spread, Due 7-Mar
20	M	3-Mar (HO)	Ecology of Human Diseases	JG
21	W	5-Mar (HO)	Ecology of Human Diseases	
22	F	7-Mar (HO)	Discussion Examination 2 on lectures 11-22	

Lecture		Subject	Reading
	M	10-Mar	Spring Break - No Classes
	W	12-Mar	Spring Break - No Classes
	F	14-Mar	Spring Break - No Classes
23	M	17-Mar (HO)	Importance of Biodiversity
24	W	19-Mar (HO)	Solid Waste Management
25	F	21-Mar (HO)	Solid Waste Management
			Smithsonian Article
26	M	24-Mar (HO)	Climate Change Science
27	W	26-Mar (HO)	Climate Change Science
28	F	28-Mar (HO)	Climate Change Solutions
			SimUText: Climate Change, Due 4-Apr
29	M	31-Mar (HO)	Climate Change Solutions
30	W	2-Apr (HO)	Climate Change Solutions
31	F	4-Apr (HO)	Discussion Examination 3 on lectures 23-31
32	M	7-Apr (HO)	Pollution (Acid Precipitation)
33	W	9-Apr (HO)	Pollution (Acid Precipitation)
34	F	11-Apr (HO)	Pollution (Ozone Depletion)
35	M	14-Apr (HO)	Pollution (Ozone Depletion)
36	W	16-Apr (LB)	Regulatory Solution – Cap and Trade
	F	18-Apr	Good Friday Holiday – No Classes
37	M	21-Apr (LB)	Regulatory Solution – International Treaty
38	W	23-Apr (LB)	Environmental Justice
39	F	25-Apr (LB)	EJ Discussion
40	M	28-Apr (LB)	Student Presentations – Net Zero at Morehouse
41	W	30-Apr (LB)	Student Presentations – Net Zero at Morehouse

Final Examination (Part 1 on lectures 32-42, Part 2 on lectures 1-31)
Will Post Wednesday 30 April 4:00pm due Monday 5 May 10:00am.

All students, including graduating seniors, will take the Final Examination as scheduled.

**All examinations will be administered via the course BlackBoard site.
Examination 1, 2 and 3 will be posted on Fridays at 4:00pm, due the following Monday by
10:00am.**

**All examinations will be open book and open notes, but you may not consult with anyone about
examination questions.**

Course Objectives

This course will address current environmental problems and the biological bases for these problems. Our approach will be based in the science of Ecology but environmental problems have social, political, economic and ethical implications that we cannot ignore. We will study the interactions between humans and the environment, and the significance of these interactions in human affairs. Many environmental problems are of a global nature and different societies have environmental problems that may require different solutions, so we will take an international view of environmental issues. The implications of environmental problems for local and international conflicts will also be addressed. We will also address the issue of environmental justice as it concerns minority communities locally and globally. This is the capstone course for students who seek a Minor in Environmental Studies.

Performance Objectives

Your successful completion of this course will result in the achievement of the following outcomes in knowledge and skills:

Knowledge

- Describe the dynamics of Individual-Environment Interactions
- Describe the interaction between ecology and the evolutionary process
- Describe population growth patterns and limits, including human populations
- Describe how humans manage food, water, energy and waste
- Define biological communities and diversity patterns
- Describe relationships between pollution, energy and matter flows in nature
- Describe global energy flow, pollution and climate change dynamics

Skills

- Interpreting graphs and tables of research results
- Drawing graphs to represent ecological and evolutionary processes
- Solving problems by applying knowledge to new situations
- Predicting outcomes of environmental disturbance

Course Evaluation

You will be evaluated in this course by three in-class Examinations, and a Final Examination. Examinations will be multiple choice or short answer format. This class will involve discussions more than lectures, so your regular attendance, preparation and participation in class are essential. Additional current events readings will be provided throughout the semester. There will be regular unannounced in-class quizzes and take-home quizzes.

Course Grading

Three Examinations, 100 pts. each	300 points
Final Examination	200 points
Quizzes	100 points
Student Presentations	100 points
Total =	700 points

Letter grades will be assigned as described below:

A	=	90	to	100%
A-	=	88	to	89%
B+	=	86	to	87%
B	=	80	to	85%
B-	=	78	to	79%
C+	=	76	to	77%
C	=	70	to	75%
C-	=	68	to	69%
D+	=	66	to	67%
D	=	60	to	65%
D-	=	58	to	59%
F	=	57% and less		

Attendance Policy

Absences will not be excused unless permitted in writing by the Academic Dean or the Dean of Students. No exceptions. Class will begin promptly on the hour. Students are expected to attend each class meeting. Students with more than 3 unexcused absences will be referred to the Office of Student Success and may be administratively withdrawn from the course. Failure to meet minimum attendance requirements may result in the loss of the student's financial aid in accordance with Federal financial aid requirements.

Academic Honesty (Plagiarism)

All the work that you complete in this course must be your own. Copying the work of others and submitting it as your own is dishonest and will not be tolerated. Attribution of the source of information is not sufficient, the words and phrases in your written work must be your own.

Morehouse College students are expected to conduct themselves with the highest level of ethics and academic honesty at all times and abide by the terms set forth in the Student Handbook and Code of Conduct. Instances of academic dishonesty, including, but not limited to plagiarism and cheating on examinations and assignments, are taken seriously and may result in a failing grade for the assignment or course and may be reported to the Honor and Conduct Review Board for disciplinary action.

SimBio SimUText Materials

The graded questions in each SimUText module will count as Quizzes, 10 points per module. The total cost of the four SimUText modules for our course is approximately \$34.00.

It is important that you review the information below *before* you subscribe to the SimUText for **Environmental Studies at Morehouse College. To avoid possible problems, do not wait until the last minute.**

1. **CHECK YOUR TECH!**

Visit <https://simutext.zendesk.com/hc/en-us/categories/200170134-Check-Your-Tech> to confirm that the SimUText application will work on your computer, and/or to explore your options if there is a problem. The SimUText application will work on Windows and MacOS computers.

2. **SimUText Voucher Code (optional)**

If you purchased a SimUText Voucher from your bookstore, be sure to have it with you when subscribing, as you will need to enter your voucher code.

3. **Registration Link**

When you are ready to subscribe and download installers, follow this link to initiate the process: <https://simutext2.com/student/register.html#/key/Upbm-ZKhw-rCFZ-NkQB-5cEm>

4. **SimUText Application Installers**

After you have completed the subscription process, if you need to download the SimUText application installers again, you will be able to access them by logging into the [SimUText Student Portal](https://simutext2.com/student/) (<https://simutext2.com/student/>).

Should you encounter problems, you may need your course-specific Access Key. It is: **Upbm-ZKhw-rCFZ-NkQB-5cEm**

Problems or questions? Visit [SimUText Support](http://simbio.com/support/simutext) (<http://simbio.com/support/simutext>)

Course Meetings

Our regular lecture class meeting will be in person in LR2 Nabrit-Mapp-McBay on Mondays and Wednesdays. Friday class meetings will be held via Zoom 11:00-11:50am EST and will be recorded. Every class meeting recording will be posted on the course BlackBoard site and will be available for the entire semester. Friday meeting will typically be discussions that address questions to prepare you for examinations.

Friday Zoom Meetings

Zoom Address:

<https://morehouse.zoom.us/j/99780726403?pwd=IigLQVZrro2AbEva1dB4FszXPXBy4L.1>

Meeting ID: 997 8072 6403

Passcode: 060124

Net Zero on Campus Webinar

View this webinar at: <https://www.youtube.com/watch?v=UfCtvw4zYWg>

Net Zero at Morehouse Student Presentations

Each of you will conduct a research project during the semester to address the following question: What can (should) Morehouse College be doing to move the college to Net Zero Carbon Emissions? Prepare a practical question you would like to ask of Dr. Karen Miller, Chief Administrative Officer and Senior VP, Morehouse College. Choose one of

the 6 focus area described in the Net Zero publication and form research groups with fellow students who are working on the same area. Each of you will be making a 10-minute research presentation at the end of the semester. Visit the Net Zero on Campus website for research resources: <https://www.unsdsn.org/net-zero-on-campus#online-toolkit>

Department of Biology Mission

1. Provide students with a fundamental knowledge of Biology.
2. Prepare students for and assist them in entering graduate and professional school, and the workforce.
3. Strengthen students' reading, writing and quantitative skills.
4. Develop students' analytical reasoning and creative thinking skills.
5. Expose students to contemporary research techniques in Biology and enhance their understanding of the Scientific Method.
6. Conduct meritorious research in the field of Biology.
7. Acquaint students with the history of Biology, including the contributions of Black scientists.
8. Engender an appreciation among students of the social and economic implications of discoveries in Biology.
9. Build students' awareness of ethical and moral issues related to basic tenets in Biology.

Disability Accommodation

Morehouse College is an equal opportunity employer and educational institution. The College makes reasonable accommodations for all qualified individuals with disabilities. Any student requesting academic accommodations based on his disability is required to register with our Student Counseling & Disability Center (the "Center") at 104 Sale Hall Annex, Suite 100 every semester. A disability accommodation letter can be obtained from ODS. Students are required to provide a copy of the disability accommodation letter to each of their professors upon approval of their accommodations. Please contact our Coordinator of Disability and Counseling Services with any questions at (470) 639-0231.

Disclaimer

A syllabus is not a contract between instructor and student, but rather a guide to course procedures. The instructor reserves the right to amend the syllabus when conflicts, emergencies or circumstances dictate. Students will be duly notified.