

BB1002: Environmental Biology (Introductory non-majors class, 150 students)
Worcester Polytechnic Institute
Worcester, Massachusetts
Abbreviated Course Syllabus
Prof. Marja Bakermans

Instructor and Teaching Assistant Information

Required Course Materials:

Withgott, J., and M. Laposata. 2015. Essential Environment: The Science Behind the Stories, 5th Edition. Pearson Education, Inc., Hoboken, NJ

Description: This course is designed for students seeking a broad overview of ecological systems and the effect of humans on the ecosystems. It provides an introduction to natural ecosystems, population growth, and the interaction between human populations and our environment. It is conducted in an active style including the use of case studies, class discussion/participation, and classroom polling systems. The major goal of this course is to help students become more informed environmental citizens, skeptical when presented with data in the media, and knowledgeable enough to question and make informed decisions about the environment.

Objectives: After completing this course, you should be able to

- Quantify, analyze, and interpret biological data.
- Think critically about complex environmental issues.
- Apply the principles of environmental biology to current events.
- Demonstrate knowledge and skills developed in the area of expertise of your project.

Additional information on lectures, blackboard quizzes, exams, participation, expectations, attendance policy, other class policies, academic integrity, and information for students with disabilities.

Grading and Assignments: Final grades are based on the following:

<u>Evaluation criterion</u>	<u>% of Final Grade</u>
Blackboard Quizzes (out-of-class; 7 count)	25%
Unit Exams (out-of-class; 4 count)	30%
Individual Assignments (4 total)	10%
Group Project assignments (Assignments 1 - 4)	15%
Final Group Project (Assignment # 5)	10%
Participation (3 days get dropped)	10%
Total	100%



Group Project Assignments: This class has a small group project (5 people per group) that integrates climate change and phenology. This project will be broken up into several assignments throughout the term leading up to the final product from the group. You will be given some class time to work together in your group on these assignments. Detailed instructions will be given in the future for these assignments:

- 1) Go to the primary literature (i.e., peer-reviewed journal articles ONLY) to find information to explain the concept of phenology
- 2) Complete the exercise on temperature trends at 1 latitude among different emissions scenarios
- 3) Complete the exercise on January temperature trends at your given latitude
- 4) Complete the exercise on temperature trends across latitudes
- 5) Final Project:

The final project assignment will investigate climate change and phenology and develop a digital story. You will integrate graphs, images, narrative, music, or whatever you find relevant to explain your topic. Your project must be scientifically accurate, assessable, and engaging and integrate findings from previous project assignments. You can use a wide variety of mediums (e.g., powerpoint, videos, still images, animations, etc.) to teach your lesson. Full details will be available in the group project folder in the assignment section of the course. In addition, there will be a peer evaluation that will determine if your grade should be adjusted on the final project. This means that teamwork and participation will count. **The group work days and assignment due dates are in green in the assignment table.**

(Feel free to contact me for additional information: mbakermans@wpi.edu)



TENTATIVE SCHEDULE*

Week	Day	Date	Activity and Due date (time)	Topic	Reading
1	M	3-14	Introduction to course	Environmental challenges and sustainability	CH 1 & 2 ^a
	T	3-15			
	R	3-17	CH 1 & 2 BLACKBOARD QUIZ (11 AM)		
	F	3-18			
2	M	3-21	CH 5 & 6 BLACKBOARD QUIZ (11 AM) Group Work Day	Human populations, economics, and policy	CH 5 & 6
	T	3-22	Assignment 1 (11:59 PM)		
	R	3-24	1 st Group Assignment + CATME team survey		
	F	3-25	Unit Exam 1 (due 3-29 by 11:59 PM)		
3	M	3-28	CH 10 & 7 BLACKBOARD QUIZ (11 AM) Group Work Day	Environmental health and food systems	CH 7 & 10
	T	3-29			
	R	3-31			
	F	4-01	2 nd Group Assignment (11:59 PM)		
4	M	4-04	CH 3 & 8 BLACKBOARD QUIZ (11 AM) Group Work Day	Working ecosystems and evolution	CH 3 & 8
	T	4-05	Assignment 2 (11:59 PM)		
	R	4-07			
	F	4-08	Unit Exam 2 (due 4-12 by 11:59 PM)		
5	M	4-11	CH 9 & 12 BLACKBOARD QUIZ (11 AM) 3 rd Group Assignment + CATME peer survey Group Work Day	Forest & water ecosystems	CH 9 & 12
	T	4-12			
	R	4-14			
	F	4-15			
6	M	4-18	No classes – Patriots Day	Atmosphere sciences and climate change	CH 13 & 14
	T	4-19	CH 13 & 14 BLACKBOARD QUIZ (11 AM) Assignment 3 (11:59 PM)		
	R	4-21	4 th Group Assignment (11:59 PM) (No class- Univ. Project Presentation Day)		
	F	4-22	Unit Exam 3 (due 4-26 by 11:59 PM)		
7	M	4-25	CH 16 & 18 BLACKBOARD QUIZ (11 AM) Group Work Day	Renewable energy and urban environments	CH 16 & 18
	T	4-26			
	R	4-28			
	F	4-29	Assignment 4 (11:59 PM)		
8	M	5-02	Epilogue BLACKBOARD QUIZ (11 AM)	Sustainable solutions	Epilogue
	T	5-03	Unit Exam 4 (due 5-05 by 11:59 PM) Final Group Assignment + CATME survey		

*This schedule is subject to change and is at the discretion of the instructor.

^a Chapters 1 & 2 can be found on myWPI under the folder Course Materials.