Syllabus for Biology 360
Ecology

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Office Hours: MWF 10:00-11:00 AM and by appointment

Classrooms: Lecture - 101 PPHAC; MWF 11:45 AM-12:35 PM
Lab –300 Collier; F 1:15 PM-4:15 PM

Course Description: Ecology is the scientific study of the relationships of organisms to their environment and to each other. Broad in scope and evolutionary in perspective, ecology attempts to understand the reasons for the abundance and distribution of organisms, the flows and cycles of energy and matter in ecosystems, the intra- and interspecific relationships between organisms, and the structure and functions of communities.

Course Objectives: Upon completion of this course students will be able to demonstrate:

1) knowledge of basic concepts in ecology/environmental biology, including understanding the dynamic nature of ecological processes and the importance of variation in space and time
2) ability to make a scientific argument & support it with appropriate
3) knowledge of and ability to apply the scientific process
4) ability to find, evaluate, & use published scientific information
5) ability to objectively analyze and interpret data and to use other
6) competence in scientific writing and oral communication
7) ability to work together in teams
8) ability to integrate concepts within and among disciplines of science
9) understanding of the relevance of ecology to society

Text: Molles, Manuel C. Jr. 2010. *Ecology: Concepts and Applications* (5th edition), McGraw Hill, Boston (ISBN 978-0-07-338322-4).

Grading:

Lecture Exam 1	100 points
Lecture Exam 2	100 points
Final Exam	100 points
Laboratory Assignments	300 points
	600 points

Grading Scale: The grading scale is as follows:

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

Class Attendance: It has been my experience that students who do poorly in this course **g**enerally have numerous absences. I strongly suggest that you attend and participate in all lecture sessions unless you have a valid reason not to. I will not specifically maintain lecture attendance records. However, if I detect that you have excessive absences or are habitually late to class I will speak with you in private.

Laboratory sessions, because they involve hands-on experiences that cannot be mastered effectively without performing them, are especially critical if one is to become a successful scientist.

Policy on Academic Honesty: Moravian College's policies on academic honesty and disruptive course-related student behavior can be found in the Student Handbook. It is assumed that each of you has read and understands these policies and the consequences of violating them.

Ecology Lecture Schedule
Fall 2010

Day & Date			Topic	Molles Chapter
M	Aug.	30	Introduction: What is Ecology?	1
W	Sept.	01	Climate & Biogeography	2
F		03	**Field trip: Jacobsberg State Park**	
			Meet @ 11:30 AM Collier Entrance	
M		06	No class-Labor Day	
W		08	Life on Land: Terrestrial Biomes	2
F		10	Life on Land: Terrestrial Biomes	2
M		13	Life in Water	3
W		15	Life in Water	3
F		17	**Weekend Field Trip: Lake Lacawac**	
			Meet @ 11:30 AM Collier Entrance	
M		20	Population Genetics & Natural Selection	4
W		22	Temperature Relations	5
F		24	Temperature Relations	5
M		27	Water Relations	6
W		29	Water Relations	6
F	Oct.	01	**Lehigh Gap Nature Center**	
			Meet @ 11:30 AM Collier Entrance	
M		04	Energy and Nutrient Relations	7
W		06	Energy and Nutrient Relations	7
F		**08**	**Exam 1**	**1-7**
M		11	No Class-Fall Break	
W		13	Population Distribution & Abundance	9
F		15	Population Dynamics	10
M		18	Population Growth	11
W		20	Population Growth	11
F		22	**Field trip: Tannersville Bog**	
			Meet @ 11:30 AM Collier Entrance	
M		25	Life Histories	12
W		27	Competition	13
F		29	Predation, Herbivory, Parasitism & Disease	14
M	Nov.	01	Predation, Herbivory, Parasitism & Disease	14
W		03	Mutualism	15
F		**05**	**Exam 2**	**9-15**
M		08	Species Abundance and Diversity	16
W		10	Species Interactions and Community Structure	17

F		12	Primary Production and Energy Flow	18
M		15	Primary Production and Energy Flow	18
W		17	Nutrient Cycling and Retention	19
F		19	Nutrient Cycling and Retention	19
M		22	Succession and Stability	20
W		24	No Class-Thanksgiving	
F		26	No Class-Thanksgiving	
M		29	Landscape Ecology	21
W	Dec.	01	Geographic Ecology	22
F		03	Global Ecology	23
M		06	Global Ecology	23

Final Exam: Monday, December 13 @ 1:30 PM **16-23**

Laboratory & Field Schedule
Fall 2010

Date		Experiment
Fri.	Sept. 03	Patterns in Nature Field Trip-Jacobsberg State Park Meet @ 11:30 AM, Collier front entrance
Fri.	Sept. 10	Natural Selection Meet in Collier 300 @ 1:15 PM
Fri.–Sun.	Sept. 17-19	Lake Lacawac Trip Meet @ 11:30 AM, Collier front entrance on Friday 9/17 Return to Moravian @ 12:00 noon on Sunday 9/19
Fri.	Sept. 24	Leaf Angle, Light Interception & Water Relations- Jacobsberg State Park Meet @ 1:00 PM, Collier front entrance
Fri.	Oct. 01	Successional Analysis Lehigh Gap Nature Center Meet @ 11:30 AM, Collier front entrance
Fri.	Oct. 08	Quadrat Sampling Jacobsberg State Park Meet @ 1:00 PM, Collier front entrance
Fri.	Oct. 15	No lab
Fri.	Oct. 22	Tannersville Bog Trip Meet @ 11:30 AM, Collier front entrance
Fri.	Oct. 29	Stream Analysis: Aquatic Macroinvertebrate Sampling Meet in Collier 300 @ 1:00 PM to pick up waders
Fri.	Nov. 5	Aquatic Macroinvertebrate Identification and Analysis Meet in Collier 300 @ 1:15 PM
Fri.	Nov. 12	Island Biogeography, Diversity & Soil Microarthropods Jacobsberg State Park Meet @ 1:00 PM, Collier front entrance

Fri.	Nov. 19	Soil Microarthropod Identification and Analysis Meet in Collier 300 @ 1:15 PM
Fri.	Nov. 26	No lab-Thanksgiving
Fri.	Dec. 05	TBD