Syllabus for Biology 360
Ecology

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

Classrooms: Lecture - 335 Pricilla Payne Hurd Academic Complex
Lab – Collier 300

Course Description: Ecology is the scientific study of the relationships of organisms to 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

Grading: The grading system is as follows:

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

Texts: Molles, Manuel C. Jr. 2005. *Ecology: Concepts and Applications* (3rd edition), McGraw Hill, Boston.

Student Online Resource Website for Molles Ecology text (www.mhhe.com/ecology)

Class Attendance: It has been my experience that students who do poorly in this course generally 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 tardy 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.

Grading:

Lecture Exam 1	15%
Lecture Exam 2	15%
Final Exam	15%
Laboratory Data Sheets	15%
Laboratory Report 1	15%
Laboratory Report 2	15%
Laboratory Attendance	10%
	100%

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 2006

Day & Date			Topic	Molles Chapter
M	Aug.	28	What is Ecology?	1
W		30	Terrestrial Biomes	2
F	Sept.	01	Field trip: Jacobsberg State Park Meet @ 11:30 AM Collier Entrance	
M		04	Terrestrial Biomes	2
W		06	Aquatic Habitats	3
F		08	Field Trip: Tannersville Bog Meet @ 11:30 AM Collier Entrance	
M		11	Temperature Relations	4
W		13	Temperature Relations	4
F		15	Water Relations	5
M		18	Water Relations	5
W		20	Energy & Nutrients	6
F		22	Weekend Fielf Trip: Lake Lacawac Meet @ 11:30 AM Collier Entrance	
M		25	Primary Production & Energy Flow	18
W		27	Primary Production & Energy Flow	18
F		**29**	**Exam 1**	**1,2,3,4,5,6,18**
M		02	Nutrient Cycling & Retention	19
W		04	Nutrient Cycling & Retention	19
F		06	Species Abundance & Diversity	16
M		09	No Class-Fall Break	
W		11	Species Abundance & Diversity	16
F		13	Community Structure	17
M		16	Community Structure	17
W		18	Succession & Stability	20
F		20	Succession & Stability	20
M		23	Landscape Ecology	21
W		25	Landscape Ecology	21
F		27	Geographic Ecology	22
M		30	Geographic Ecology	22
W	Nov.	01	Global Ecology	23
F		03	Global Ecology	23
M		**06**	**Exam 2**	**16,17,19,20, 21,22,23**
W		08	Population Genetics & Natural Selection	8
F		10	Population Genetics & Natural Selection	8
M		13	Population Distribution & Abundance	9
W		15	Population Distribution & Abundance	9
F		17	Population Dynamics	10

M		20	Population Growth	11
W		22	No Class-Thanksgiving	
F		24	No Class-Thanksgiving	
M		27	Population Growth	11
W		29	Life Histories	12
F	Dec.	01	Competition	13
M		04	Competition	13
W		06	Predation, Herbivory, Parasitism & Disease	14
F		08	Predation, Herbivory, Parasitism & Disease	14
M		11	Mutualism	15

Final Exam: Date, place & time to be announced **8,9,10,11 12,13,14,15**

Laboratory & Field Schedule
Fall 2006

Date		Experiment
Fri.	Sept. 01	Patterns in Nature Field Trip-Jacobsberg State Park Meet @ 11:30 AM, Collier front entrance
Fri.	Sept. 08	Tannersville Bog Field Trip Meet @ 11:30 AM, Collier front entrance
Fri.	Sept. 15	Leaf Angle, Light Interception & Water Relations- Jacobsberg State Park Meet @ 12:45 PM, Collier front entrance
Fri.-Sun	Sept 22-24	Lake Lacawac Trip Meet @ 11:30 AM, Collier front entrance Return to Moravian @ 12:00 noon
Fri.	Sept. 29	Aquatic Benthic Macroinvertebrate Sampling Black River Meet in Lab @ 12:45 PM
Fri.	Oct. 06	Benthic Macroinvertebrate Identification & Enumeration Meet in Lab @ 12:45 PM
Fri.	Oct. 13	Quadrat Sampling Jacobsberg State Park Meet @ 12:45 PM, Collier front entrance
Fri.	Oct. 27	Set up: Nutrient Limitation Experiment Set up: Competition in Plants Experiment Meet in Lab @ 12:45 PM
Fri.	Nov. 03	Stream Analysis: Discharge & Flux Measurements Monocacy Creek Meet in Lab @ 12:45 PM
Fri.	Nov. 10	Island Biogeography, Diversity & Soil Microarthropod Jacobsberg State Park Meet @ 12:45 PM, Collier front entrance
Fri.	Nov. 17	Soil Microarthropod Identification & Enumeration Meet in Lab @ 12:45 PM
Fri.	Nov. 24	No Lab-Thanksgiving Break

Fri.	Dec. 01	Determining Mean Life Expectancy Population Ecology Problem Set
Fri.	Dec. 08	Competition in Plants Experiment Reports