

**Syllabus for Biology 360**  
**Ecology**  
**Fall 2015**

**Instructor:** Dr. Frank T. Kuserk  
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**Office Hours:** MWF 10:00-11:00 AM and by appointment

**Classrooms:** Lecture – 202 Collier; MWF 11:45 AM-12:35 PM  
Lab –303 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) a knowledge of basic concepts in ecology, including understanding the dynamic nature of ecological processes and the importance of variation in space and time
- 2) an ability to make a scientific argument & support it with appropriate examples or scientific justification
- 3) a knowledge of and ability to apply the scientific process
- 4) an ability to find, evaluate, & use published scientific information
- 5) an ability to objectively analyze and interpret data
- 6) a competence in scientific writing and oral communication
- 7) an ability to work together in teams
- 8) an ability to integrate concepts within and among scientific disciplines
- 9) the relevance of ecology to society

**Grading:** The grading system is as follows:

A = 93.0 - 100.0	C = 73.0 - 76.9
A- = 90.0 - 92.9	C- = 70.0 - 72.9
B+ = 87.0 - 89.9	D+ = 67.0 - 69.9
B = 83.0 - 86.9	D = 63.0 - 66.9
B- = 80.0 - 82.9	D- = 60.0 - 62.9
C+ = 77.0 - 79.9	F = 59.9 and below

**Text:** Molles, Manuel C. Jr. 2016. *Ecology: Concepts and Applications* (7th edition) McGraw Hill, Boston.

**McGraw-Hill Connect URL:** <http://connect.mheducation.com/class/f-kuserk-fall-2015>

**Blackboard:** This course has a site on Blackboard (<http://blackboard.moravian.edu>). Register for the course as soon as possible. The site contains information on assignments, serves as a place for data sets, and is where I will post grades.

**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 maintain lecture attendance records and if I detect that you have excessive absences or are habitually late to class I will speak with you in private.

**An absence on an examination day will require either prior permission or a suitable excuse from a physician, the Health Center or Dean of Students Office before a make-up is given.**

Laboratory and fieldwork 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. Unexcused absences from lab will result in a lowering of your lab grade by 20 points (3.3%) for each absence. Excused absences from lab beyond the first two (2) will result in a lowering of your lab grade by 20 points for each absence. You are still required to complete any assignment associated with a laboratory in order to receive the points associated with that assignment.

<b>Grading:</b>	Lecture Exam 1	100 points
	Lecture Exam 2	100 points
	Final Exam	100 points
	Laboratory and Fieldwork Assignments	<u>300 points</u>
		600 points

**Course Guidelines:** All assignments are to be handed in according to the due date on the syllabus or announced in class or lab. **Late work will be penalized.**

All students are expected to follow the principles of academic honesty as set out in the policies of Moravian College. See the Student Handbook for details. Any and all written work must be done in your own words (with the exception of direct quotations which are clearly indicated as such), and written work must include proper citations indicating the sources for any ideas, concepts, facts, or other information derived from others, whether or not you have restated it in your own words. Any cases of suspected cheating or plagiarism will be referred to the Academic Affairs Office. Academic dishonesty may result in a failing grade in the course.

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In case of any crisis or emergency, or an extended absence from class, you must inform me directly, through Learning Services or the Academic Dean's Office.

Students who wish to request accommodations in this class for a disability must contact Ms. Elaine Mara, assistant director of academic support services for academic and disability support, at the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center.

These guidelines are intended for the benefit of the students as far as clarification of my expectations for the course; however, in exceptional circumstances I reserve the right to exercise discretion in the application of these guidelines to individual cases or to refer a particular case to the Academic Dean if necessary.

**Extra Credit Policy:** It is my policy not to award extra credit to individual students who are doing poorly in the class and just want to raise their grade. From time to time I may offer extra credit to the entire class but only if everyone in the class has an equal opportunity to earn that credit.

#### **Classroom Expectations:**

Respect for others' answers and views.

Disruptive behavior during class will result in your dismissal from the class the first time, after that, disciplinary action will be taken.

Cell phones need to be turned to OFF and put away in a purse or bookbag during class. Use of cell phones in any way during class may result in dismissal from class and be counted as an absence.

Non-alcoholic drinks and non-odiferous snacks are allowed in class, other "odiferous (smelly) food" is not.

If you arrive late, be respectful by not disrupting a class already in progress.

**Ecology Lecture Schedule  
Fall 2015  
TENTATIVE**

Day & Date	Topic	Molles Chapter
M Aug. 31	Introduction to Ecology: Historical Foundations and Developing Frontiers	1
W Sept. 02	Climate & Biogeography	2
F 04	<b>Field trip: Jacobsberg State Park Meet @ 11:45 AM Collier Entrance; Return by 4:15 PM</b>	
M 07	Life on Land: Terrestrial Biomes	2
W 09	Life on Land: Terrestrial Biomes	2
F 11	Population Genetics & Natural Selection	4
M 14	Population Genetics & Natural Selection	4
W 16	Population Distribution & Abundance	9
F 18	<b>Field Trip: Lehigh Gap Nature Center Meet @ 11:45 AM, Collier front entrance; Return by 4:15 PM</b>	
S 18	<b>Field Trip: Lehigh Gap Nature Center (optional) Met @ TBD, Collier front entrance</b>	
M 21	Population Distribution & Abundance	9
W 23	Population Dynamics	10
F 25	Campus Tree Inventory: Bartlett Tree Experts	
M 28	Population Dynamics	10
W 30	Population Growth	11
F Oct. 02	Population Growth	
M 05	Population Growth	
W 07	<b>Exam 1</b>	<b>1, 2, 4, 9, 10,11</b>
F 09	<b>Field trip: Tannersville Bog Meet @ 11:45 AM Collier Entrance; Return by 4:15 PM</b>	
M 12	<b>NO CLASS-Fall Break</b>	12
W 14	Life Histories	12
F 16	<b>Field trip: Deputy Field Center Meet @ 11:45 AM Collier Entrance; Return by 4:15 PM</b>	
M 19	Life Histories	12
W 21	Competition	13
F 23	<b>Field trip: Deputy Field Center Meet @ 11:45 AM Collier Entrance; Return by 4:15 PM</b>	
M 26	Competition	13
W 28	Competition	13
F 30	<b>Field Trip: Cedar Creek Meet @ 11:45 AM Collier Entrance; Return by 4:15 PM</b>	
M Nov. 02	Predation, Herbivory, Parasitism & Disease	14
W 04	Predation, Herbivory, Parasitism & Disease	14

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F		06	Predation, Herbivory, Parasitism & Disease	14
<b>M</b>	Nov.	<b>09</b>	<b>Exam 2</b>	<b>12-14</b>
W		11	Species Abundance and Diversity	16
F		13	Species Abundance and Diversity	16
M		16	Species Interactions and Community Structure	17
W		18	Species Interactions and Community Structure	17
F		20	Species Interactions and Community Structure	17
M		23	Primary Production and Energy Flow	18
W		25	NO CLASS-Thanksgiving Break	
F		27	NO CLASS-Thanksgiving Break	
M		30	Primary Production and Energy Flow	18
W	Dec.	02	Primary Production and Energy Flow	18
F		04	Succession and Stability	20
M		07	Succession and Stability	20
W		09	Global Ecology	23
F		11	Global Ecology	23

**Final Exam: Tuesday, December 15@ 1:30 PM**

**16-18, 20, 23**

**Laboratory & Field Schedule**  
**Fall 2014**  
**TENTATIVE**

Date	Experiment	
Fri.	Sept. 04	Patterns in Nature Field Trip-Jacobsberg State Park Meet @ 11:45 AM, Collier front entrance; Return by 4:15 PM
Fri.	Sept. 11	Leaf Angle, Light Interception & Water Relations- Jacobsberg State Park Meet @ 1:15 PM, Collier front entrance; Return by 4:15 PM
Fri.	Sept. 18	TurtlePop Project-LGNC Meet @ 11:45 AM, Collier front entrance; Return by 4:15 PM
Sat.	Sept. 19	TurtlePop Project-LGNC (optional) Meet @ TBD, Collier front entrance
Fri.	Sept. 25	Campus Tree Inventory Meet @ TBD, Location TBD
Fri.	Oct. 02	Life Tables & Survivorship Curves Meet at 1:15 PM in Collier 300
Fri.	Oct. 09	Tannersville Bog Trip Meet @ 11:45 AM, Collier front entrance; Return by 4:15 PM
Fri.	Oct. 16	Quadrat Sampling Deputy Field Center Meet @ 11:45 AM, Collier front entrance; Return by 4:15 PM
Fri.	Oct. 23	Quadrat Sampling Deputy Field Center Meet @ 11:45 AM, Collier front entrance; Return by 4:15 PM

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Fri.	Oct. 30	Aquatic Ecosystem Assessment Meet @ 11:45 AM in Collier front entrance
Fri.	Nov. 06	Aquatic Macroinvertebrate Identification and Analysis Meet in Collier 303 @ 1:15 PM
Fri.	Nov. 13	Species Diversity & Soil Microarthropods Jacobsberg State Park Meet @ 1:15 PM, Collier front entrance; Return by 4:15 PM
Fri.	Nov. 20	Soil Microarthropod Identification and Analysis Meet in Collier 303 @ 1:15 PM
Fri.	Nov. 27	NO LAB-Thanksgiving Break
Fri.	Dec. 04	Poster Preparation Workshop Meet in Collier 303 @ 1:15 PM
Fri.	Dec. 11	Poster Presentations Collier Lobby @ 1:15 PM