

Biology 378 – Field Biology Techniques Syllabus – Fall, 2009

Course Goals:

1. Give you experience in common field techniques including observation, plotting, GIS/GPS, trapping, aquatic sampling, use of field instruments. Your success will be evident in your data (or lack thereof!)
2. To develop mathematical skills in relation to biology.
3. To develop critical thinking skills, particularly in the areas of experimental design and analysis. You will demonstrate how well you've done in your lab reports.
4. To improve communication skills both in reading and writing scientific papers. This will also be evaluated in your lab reports.
5. To learn how to effectively use computers to analyze, assemble, and format information in a professional fashion. Your mastery of these skills will again be reflected in your lab reports.
6. To improve your ability to work in teams by collaborating on the data collection and analysis.

Instructor Information:

Dave McShaffrey
Professor of Biology
Biology Department
Marietta College
Marietta, OH 45750
Room 242

Phone numbers: Try to reach me at these numbers (in this order):

Office: 376-4743

Home: (up till 10 p.m.) - 374-8687

E-Mail: mcshaffd@marietta.edu web pages: <http://mcnet.marietta.edu/~mcshaffd/>

Office Hours: I welcome you to simply drop by my office! I post a copy of my schedule (outside my door and on the web); you can use it to see when I am most likely to be free, sign up for a time, and stop by at that time. If the door is open, come on in! If, for some reason, I am busy, I will set up an appointment with you for later.

Grading:

There are 850 points available in this class, tentatively distributed as follows:

Worksheets:	3 x 50	= 150
Reports:	1 @ 100, 2@ 200	= 500
Map	1 x 100	= 100
Quizzes	2 x 25	= 50
Final Exam:	1 x 100	= 100
Totals:		= 850

Grading Scale

97 - 100% = A+
93 - 96% = A
90 - 92% = A-
87 - 89% = B+
83 - 86% = B
80 - 82% = B-
77 - 79% = C+
73 - 76% = C
70 - 72% = C-
67 - 69% = D+
63 - 66% = D
60 - 62% = D-
< 60% = F

Bonus Points (extra credit):

Marietta Natural History Society Programs	5 points each
Nature Walks	5 points each
(Maximum of 25 points)	

Your final grade will be determined as follows:

A+ 97%	B+ 87%	C+ 77%	D+ 67%	F < 60%
A 93%	B 83%	C 73%	D 63%	
A- 90%	B- 80%	C- 70%	D- 60%	

Attendance:

Attendance will be taken at all class meetings. This helps me in counseling students who are having trouble in the class, and allows me to report attendance to the Academic Standing Committee, athletic coaches, etc. Be aware that missing class will have repercussions in terms of your grade, whether or not the absence is excused.

Late Assignments will be given a grade of 5 points.

I reserve the right to give an "F" for the course to any student who engages in academic dishonesty or who does not complete any assignment to my satisfaction.¹

Lab reports should be in the format specified for Biology 105 lab reports.

You will often be working in teams, but don't cheat yourself by depending on others to do your work for you - and don't constantly do work for someone else. All members of a team must contribute.

For **independent** assignments, **final preparation of what you will turn in must be done independently**. I will accept photocopies of computer printouts from members of a team, but not photocopies of the answers, analysis, working equations, etc. If you have any questions at all about what is expected in terms of independent work, please consult me; at a minimum, document any and all work in your project that was not done entirely by you (i.e. citations, footnotes).

¹ Always read the fine print!!!

Plagiarism: Plagiarism is the misrepresentation of work done by others as your own. This can come in a variety of forms, including:

1. Copying another student's work.
2. Copying from a source without quotes or attribution.
3. Paraphrasing from a source without attribution.
4. Including photos or other images made by someone else without attribution.

Plagiarism is one of many forms of academic dishonesty – Academic dishonesty is not allowed at Marietta College and will be dealt with appropriately. Sanctions may include a lowered grade (including a 0) for an assignment, failing the course, or even expulsion from the college. (Marietta College Undergraduate Programs, 2009-2010 Catalog, p. 117)

Any student needing additional help should consult one of the many sources of support available to you. These include me (the instructor), the Academic Resource Center, the Writing Center, your classmates, the textbook's online resources, the college counseling center, your advisor, and Jedi master Yoda. Anyone with documented learning disabilities (or anyone who suspects they may have such a disability) should consult me and the ARC as to appropriate accommodations.

We will be working around water and in fields and forests. You may have noticed that the local terrain is hilly. If you have physical disabilities or injuries please let me know as soon as possible so I can plan trips to maximize your ability to participate.

Class format: 1, 3-hour meeting per week (most weeks, not all sessions will run the full 3 hours). These meetings will be a combination of lecture and lab. There will be an additional morning lab and you will need to spend additional time in the lab and the field to complete some of the assignments.

Week	Date	Topic	Assignments	
1	Aug. 26	Introduction Sampling Design		
2	Sept. 2	Field – Water Safety, Insect collecting		
3	Sept. 9	Terrestrial Sampling Field – transects, point/quarter, plots		
4	Sept. 16	Aquatic Sampling I - Streams Field – Surber Sampling, GPS	Transect Worksheet	
5	Sept. 23	Aquatic Sampling II – Large Rivers Field –Nets, Dredges, Probes		
6	Sept. 30 QUIZ!!	Mealworm Lab Mark/Recapture – Statistics – <i>t</i> -test	Transect Lab Report	
	QUIZ!!	QUIZ!!	QUIZ!!	QUIZ!!
7	Oct. 7	Trapping Techniques Field: small mammal trapping, insect pitfall traps	Mealworm Worksheet	
8	Oct. 14	Open		
9	Oct. 21	Taxonomy I Lecture/Lab – Aquatic Insects Observation/Optics/Keys/EPT Taxa		
10	Oct. 28	Life Tables		
11	Nov. 4	Observation I Field: Birds by eye and ear	Life Table Worksheet	
12	Nov. 11	Lab: ID Aquatic Insects, Plankton	Mealworm Report	
13	Nov. 18 QUIZ!!	Open QUIZ!!	QUIZ!!	QUIZ!!
14	Nov. 25	Thanksgiving		
15	Dec. 2	Lecture/Lab Cartography I	Independent Lab Report	
			Dec. 10→	Map

Final: Thursday December 10th - 12:00-2:30 PM