BIOL 106 Introductory Biology Lab II Spring 2006

Mrs. Tanya Jarrell
Meeting Time: Mondays, 2:00 – 5:00 PM in Bartlett 265
Texts: *Introductory Biology Lab II Manual*
Life, 5th Edition by Lewis, Gaffin, Hoefnagels and Parker

SCHEDULE OF LABORATORY EXERCISES

✸✸✸ Read assigned chapters in the lab manual prior to class meeting ✸✸✸

Lab Week	Lab Manual Chapter	Assignments due for that day*
January 23	Introduction	
January 30	Researching Information in the Scientific Literature	Read pages 75-77 of the "Water Quality Assessment" lab
February 6	Plant Photosynthesis 1	Information Research assignment due (pp. 13-14) Photosynthesis in-lab assignment due
February 13	Plant Photosynthesis 2	Photosynthesis week 2 table & light response curve are due at the end of lab
February 20	Plant Photosynthesis 3	Water Quality literature research assignment due
February 27	Animal Diversity 1 – Classification Lab	Animal Diversity 1 pre-lab due Animal Diversity 1 in-lab assignment due
March 6	Animal Diversity 2	Photosynthesis report due Animal Diversity 2 pre-lab due Animal Diversity 2 in-lab assignment due
March 13	Spring Break	
March 20	Diffusion, Osmosis and Enzymes	Quiz on Animal Diversity Diffusion, Osmosis and Enzymes in-lab assignment due
March 27	Water Quality Assessment 1	Annotated bibliography due
April 3	Water Quality Assessment 2	
April 10	Water Quality Assessment 3	
April 17	NO LAB	
April 24	Species-Area Curve	Water Quality report due Species-Area curve pre-lab due Species-Area curve in-lab assignment due
May 1	Reproduction of Flowering Plants: From Flowers to Fruits	Flowers to Fruit in-lab assignment due

***NOTE:** Other pre-lab and post-lab assignments may be due throughout the semester. See the individual labs for details.

To remain in this lab, you must have passed Biology 105

GRADING POLICY: Your grade will be determined on the following basis:

Quizzes (1 @ ~ 25 pts)	~25 Pts
Lab Reports (1 @ 75 pts, 1 @ 150 pts)	225 Pts
Lab Assignments	~205 Pts
	= ~455 Pts

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%		

Assignments: Failure to turn in all assignments may result in a failing grade for the semester. Late assignments will be penalized 10% per day. For example, the first day starts the minute after an assignment is due and ends 24 hours later. Unless specifically indicated otherwise, written assignments are expected to be the exclusive work of individual students. Further guidelines for writing assignments will be provided during the semester and in the lab manual. I reserve the right to reject any paper that I feel egregiously fails to meet the guidelines.

All lab reports and the annotated bibliography must be submitted to turnitin.com, as well as turning in a final hard copy to me. Failing to turn in a lab report to turnitin.com by the end of the due date in the syllabus will result in the penalty mentioned above for late assignments.

Turnitin.com Information: Class ID - Password -

Academic Dishonesty: Unless specifically indicated otherwise, written assignments are expected to be the exclusive work of individual students. As stated in the 2004-2005 MC undergraduate catalog (132), "academic dishonesty within the academic community is a very serious matter, because dishonesty destroys the basic trust necessary for a healthy education environment." "Academic dishonesty is any treatment or representation of work as if one were fully responsible for it, when it is in fact the work of another person" and "includes cheating, plagiarism, theft, or improper manipulation of laboratory or research data or theft of services." (*Marietta College Undergraduate Programs, 2004-2005 Catalog,* p. 132) Plagiarism includes copying someone else's paper, copying words from a print or electronic source without putting quotation marks around them and citing them as a source, or allowing someone else to write your paper. "A substantiated case of academic dishonesty may result in disciplinary action, including a failing grade on the project, a failing grade in the course, or expulsion from the College" (*Marietta College Undergraduate Programs, 2004-2005 Catalog,* p. 132).

ATTENDANCE POLICY

Attendance is **mandatory**. Since this course meets only once weekly, unexcused absences will result in a 5% deduction from the final semester grade. You must *personally* notify me AT LEAST ONE WEEK in advance if you expect to miss a lab due to a field trip, athletic activity, etc. **Not all such requests may be approved, and any approval will require that you attend a different lab section for that week**.

Acceptable reasons for missing a lab include the following situations:

1. Illness. If you are seriously ill, CALL ME ON THE PHONE BEFORE LAB. If I'm not available, leave a message on my voice mail (4746) or e-mail (jarrellt). It is YOUR RESPONSIBILITY to notify me unless you are deathly ill, hospitalized, or otherwise seriously incapacitated. The seriousness of the illness must be confirmed by the health center.
2. Death in the immediate family. As above, I should be notified before class if you must leave town in such a situation.
3. Extraordinary circumstances not covered in 1 & 2 will be dealt with on an individual basis.

CO-CURRICULAR PROBATION

At the end of the fall semester, any student (with the exception of first year students) on academic probation will also be placed on co-curricular probation effective for the spring semester. At the end of spring semester first year students can be placed on co-curricular probation effective for the fall semester. You should refer to p. 138 of the catalogue where it says: "A student on academic probation may enroll in no more than 14 credit hours each semester. The following co-curricular restrictions will apply to a student on academic probation:

a) They are ineligible to participate in any college athletic team or club sport;
b) They may not hold office in any campus organization or social fraternity or sorority.
c) They may not travel off campus to a meeting or trip with any college organization or club unless required to do so for an academic program.
d) They may not represent the college in any on campus or off campus public events or other co-curricular activities (e.g. plays, musical performances, student newspaper) unless required to do so for an academic course.
e) They may not register for courses that require co-curricular participation unless required by their major.

The restrictions continue in force until the student has returned to "good academic standing", with the exception that when a student on academic probation earns a semester grade point average of 2.0, or better, co-curricular restrictions will be removed for the following semester." (*Marietta College Undergraduate Programs, 2004-2005 Catalog*, p. 138).

EARLY ALERT PROGRAM

In the Fall 2003 semester, an early alert program was implemented and involves faculty indicating in the first two weeks any student who is not attending class or is showing early signs of academic failure to the early alert team. The goal is to identify students who are having trouble and to provide them with the necessary support and referral.

Because academic success is directly linked to establishing a pattern of attendance early in your academic career, attendance is required in this class. Several assignments are due early in the semester to provide early evidence of any difficulty you may be likely to have in your academic career.

WHERE DO YOU GO FOR HELP?

You are asked to make many adjustments in your transition to life at college, and the adjustment to the educational and social environment of college can be very stressful. You may at some time during this lab, or in other courses, feel overwhelmed or distraught. It is of great importance that you learn to recognize and use the support system that is available at Marietta College. Foremost is remembering that you are not alone in your anxiety; many of your classmates also are feeling the same way. The secret is not to merely commiserate about the situation, but rather to seek out those resources that can help you. I believe that you will find all of the following resources helpful.

1. **Your professor** for Biol. 106. I am always willing to devote time to helping students having difficulties with the course material. Come in and see me in **MY OFFICE, ROOM 161A, RICKEY SCIENCE CENTER (Bartlett end next to the elevator), ext 4746, e-mail: jarrellt**. Although I schedule "official" office hours (**Monday 10:30 – 11:30 AM and Thursday 9:00 – 10:00 AM**), in general I maintain an **"open door" policy** toward consultations. Feel free to see me after lab or just drop by my office; I can almost always spare some time, but if not, we will find a time when we can meet.

2. **Help sessions**. If requested I will offer help sessions during the semester. These are excellent opportunities to obtain a new explanation, or just to review material covered previously during the semester.

3. **Your advisor**. Advisors are provided to assist you and are excellent resources for solving all sorts of problems.

4. The **Student Counseling Center** is in Andrews Hall, Room 102 (ext. 4477). The college counselors have great experience in helping students that are feeling overwhelmed with their course load or other activities. The Counselors have hours posted for Monday through Friday. You can also get help after hours by contacting a Resident Assistant or Resident Director; all RAs and RDs have various phone numbers that you can call, such as a 24-hour community crisis line (373-8240), etc.

5. **The Campus Writing Center** is located in 217 Thomas Hall (ext. 4658). The Center is open to all students who desire to improve their writing confidence and solve writing difficulties. Any writer seeking help with the conception, research, drafting, or revising stages is welcome. On some occasions a professor may request that you seek help here. http://www.marietta.edu/~mcwrite

6. **The Academic Resource Center** is located in Andrews Hall, room 306 (ext. 4700). ARC offers services to help students achieve their academic potential. These services include study skills assistance and tutoring services as well as individualized support. http://www.marietta.edu/~arc

7. **Students with disabilities.** Students who believe they need accommodations due to a documented disability must contact me AND the academic resource center as soon as possible to discuss possible accommodations. Any eligibility for accommodations must be verified by the ARC staff.

ASSORTED KEYS TO SUCCESS IN BIOL 106

1) Read the assignments given in the lab exercise.
2) Read the lab exercise and understand the objectives **before the laboratory period**.
3) Ask lots of questions – **there is no such thing as a "stupid" question**. If you have a question, most likely many other students in the class are wondering about the very same thing.
4) Study with a classmate; quiz yourself and each other.

SKILLS OBJECTIVES

We believe that "understanding" science is essential to a person's ability to succeed in today's society. By "understanding" we mean more than just possessing knowledge about the physical and natural world. "Understanding" also implies comprehending how science is practiced, and how scientists employ certain intellectual skills in their pursuit of knowledge. Below are listed some of the skills that we feel you will need to truly understand science, and that we will be endeavoring to teach to you during this sequence.

1. To learn how scientists think about things. The practice of science requires curiosity, intellectual honesty, skepticism, tolerance of ambiguity, and openness to new ideas.

2. To learn application of the scientific method as a tool through which observations can yield a meaningful understanding of nature, and as a tool by which problems in various spheres of human activity can be solved. Of particular importance will be learning how to develop a testable hypothesis, make predictions based upon sound experimental technique, and draw valid conclusions from experimental results.

3. To understand the importance of critical observation, and reproducible measurements. During Biol. 106 you will learn how to apply such observations to:

a. distinguishing characteristics of a biological organism or system; eg. an examination of the structure of an organism, such as an animal, can reveal a great deal about the biology of those organisms.

b. understanding hypotheses and experimental tests of those hypotheses; eg. the skill of observation will be put to use in many of your labs, including the “Plant Photosynthesis” and animal diversity labs. The four labs on “Water Quality Assessment” will help sharpen these skills as well.

c. drawing comparisons between different biological systems or organisms. e.g. observations of various animals will lead to an understanding of what differences are being used to classify various organisms.

4. To integrate learning through experimentation and reading. Throughout this semester you will be called upon to build knowledge and understanding through readings, direct observation and experimentation.

5. To learn the importance of the precise vocabulary and expression in the conveyance of science information. Because scientists need to communicate information precisely and unambiguously, they often use ‘technical’ terms, or attach specialized meanings to everyday words. The goal of this course is not that you memorize the jargon used in technical scientific writing, but that you can understand scientific information communicated in textbooks, popular scientific magazines, and the media.

6. To develop written communication skills. Part of learning the "language" of science includes being able to communicate ideas in a concise and accurate written form. We have this objective specifically in mind when making writing assignments during the semester.

7. To understand how mathematics contributes to the understanding of the natural world. Mathematics is an essential component of scientific learning. Scientists use mathematics to manage and interpret data, to express formal relationships between ideas, and to devise mathematical models of natural systems.

8. To appreciate the role of computers in the process of science. In this course, you will apply computers to the acquisition, analysis and presentation of scientific information.

Biology 106 Assignment Values:

Lab Assignment	Point Value	Your score:
Information Research Assignment	10	
Photosynthesis In-Lab - Week 1	15	
Photosynthesis In-Lab - Week 2 (graph)	10	
Photosynthesis Lab Report	**75**	
Literature Research Assignment	30	
Animal Diversity 1 (Classification) Pre-Lab	10	
Animal Diversity 1 (Classification) In-Lab	20	
Animal Diversity 2 Pre-Lab	10	
Animal Diversity 2 In-Lab	20	
Diffusion, Osmosis and Enzymes In-Lab	15	
Animal Diversity Quiz	**25**	
Water Quality Annotated Bibliography	20	
Water Quality Assessment Lab Report	**150**	
Species-Area Curve Pre-Lab	10	
Species-Area Curve In-Lab	15	
Reproduction of Flowering Plants In-Lab	20	
Extra Credit	Up to 20	
Total Class Points	**455**	

Note: If the point value for a particular assignment changes, you will be notified by your instructor.