

## Evolution and Biodiversity Laboratory BIL 161 – Spring 2009

<u>Week of:</u>	<u>Lab Topic:</u>
January 19	<b>Martin Luther King Holiday: NO LABS</b>
January 26	<b>Lab #1: Live Exercise: Processes of Microevolution</b> assignment: Report on today's exercise due next lab period
February 2	<b>Lab #2: Symposium: Microevolution Team Presentations</b> Presentation (20 points) Quiz #1 (10 points)
February 9	<b>Lab #3. Systematics and Taxonomy</b> Quiz #2 (10 points) Cladogram (10 points)
February 16	<b>Lab #4. Inquiry: Environmental Effects on Seed Germination</b> Quiz #3 (10 points)
February 23	<b>Lab #5. Inquiry: Biodiversity Safari</b> Quiz #4 (10 points)
March 2	<b>Lab #6. Symposium: Biodiversity Safari Team Presentations</b> Presentation (30 points) <u>RECORD DATA FROM SEEDLING EXPERIMENT</u> Quiz #4 (10 points)
March 9	<b>LAB EXAM I</b> <b>(Complete Seedling Data Recording and Analysis, as necessary)</b>
March 16	<b>SPRING BREAK</b>
March 23	<b>Lab #7. Symposium: Seed Germination Team Presentations</b> Quiz #6 (10 points) Presentation (30 points)
March 30	<b>Lab #8. Inquiry: Agonistic Behavior in <i>Betta splendens</i></b> Quiz #7 (10 points)
April 6	<b>Lab #9. Symposium: <i>Betta</i> Behavior Team Presentations</b> Quiz #8 (10 points) Presentation (30 points)
April 13	<b>Lab #10. Inquiry: Water Movement in Vascular Plants</b> Quiz #9 (10 points)
April 20	<b>Lab #11: Symposium: Water Movement Team Presentations</b> Quiz #10 (10 points) Presentation (30 points)
April 27	<b>LAB EXAM II (100 points)</b>

**Required texts:** *Online Laboratory Manual* by Dana Krempels  
([www.bio.miami.edu/dana/161/evolution](http://www.bio.miami.edu/dana/161/evolution))

*Dictionary of Word Roots and Combining Forms* by Donald Borror

**Required readings:** Text readings from lecture (*Biology* by Campbell) should be considered an integral part of the lab, along with readings from the lab texts.

**[www.bio.miami.edu/dana/161](http://www.bio.miami.edu/dana/161)**

**Course web site:** [www.bio.miami.edu/dana/161](http://www.bio.miami.edu/dana/161) has links to all course information

## **LABORATORY POLICIES**

### **LAB MANUAL**

YOU MUST BRING YOUR LAB MANUAL WITH YOU TO THE FIRST LAB AND TO EVERY LAB, either on a laptop or hard copy! It will be your guide through the Wonderful World of Organismal Biology. The manual is available for downloading at [www.bio.miami.edu/dana/161/evolution](http://www.bio.miami.edu/dana/161/evolution)

### **TEAM RESEARCH PRESENTATIONS**

These are to be given as PowerPoint presentations, the final polishing of which will be done in the laboratory on the day of the Inquiry Symposia following each experimental lab. Your online lab manual has specific instructions about how to prepare your presentations, and what should be included.

### **ATTENDANCE AND MAKE UPS**

Attendance in laboratory is MANDATORY. **DO NOT MISS LABORATORY.**

Labs are completely dismantled every Friday. Therefore, if you miss a lab (even for medical or religious reasons), you must make it up in the same week. Please be sure to plan ahead! There are no make up labs after the last lab of the week is over.

If you anticipate having to miss a lab (due to a religious holiday, for example), NOTIFY YOUR TA IMMEDIATELY so that arrangements can be made for you to work with another team, if it is a research-based lab that you will miss. Missing a research lab makes it VERY difficult for you to participate with a team on the following week's lab presentation, so DO NOT MISS YOUR LAB UNLESS IT IS A TRUE EMERGENCY. Make up exams/quizzes must be arranged between you and your TA.

### **GRADING**

Lab midterm	100
Lab final	100
Quizzes	100
Lab Attendance & participation(10 points per week)	110
Cladogram Assignment	10
Population Genetics Presentation	30
Biodiversity Safari Presentation	30
Seedling Growth Presentation	30
Betta Behavior Presentation	30
Water Movement Presentation	30
<u>Discretionary points (TA's assessment of your effort)</u>	<u>30</u>
<b>TOTAL</b>	<b>600</b>

Don't wait until the night before to start writing! IT IS YOUR RESPONSIBILITY TO BACK UP YOUR WORK AND KEEP A COPY UNTIL YOU HAVE A FINAL GRADE AT THE END OF THE SEMESTER.

### **LABORATORY EQUIPMENT**

Any student found guilty of wanton negligence or abuse of lab equipment (such as leaving a microscope dirty, leaving a microscope slide on the scope stage, leaving glassware dirty, leaving a scope cord dangling and hazardous for the next student, throwing trash in the sinks etc.) will automatically be docked 5 points. THIS IS YOUR OPPORTUNITY TO LEARN HOW TO PROPERLY USE THE SKILLS AND TOOLS OF YOUR CHOSEN FUTURE PROFESSION. WE'RE HERE TO HELP YOU, BUT WE CAN'T DO IT WITHOUT YOUR COOPERATION.

### **ACADEMIC ETHICS**

Cheating, including copying on exams and plagiarism on research presentations, will not be tolerated, and is easily detected by our very experienced and jaded TAs. Any student caught cheating will automatically receive an "F" in the course *and* brought before the university's Undergraduate Honor Council for possible further penalties. Every student will be required to read and sign a document on what constitutes plagiarism. We will keep the documents as proof that each student understands the definition of cheating.

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