

<u>Dates</u>		<u>Topic</u>
Jan 12-14	PreLab	Moodle microscopy tutorial and quiz <u>(Must complete by 8:00 PM Sunday, January 16)</u>
Jan. 18-20	<u>LAB 1</u>	DIVERSITY – Print your own copies of the lab handout and worksheet from Moodle and bring to lab; also bring your text to lab
Jan. 25-27	<u>LAB 2</u>	FETAL PIG DISSECTION – Anatomy and Physiology (bring text to lab) <u>Diversity worksheet due at the start of lab</u>
Feb. 1-3		FETAL PIG DISSECTION continued <u>Lab Practical Quiz #1 – Diversity</u>
Feb. 8-10	<u>LAB 3</u>	MESOCOSM EXPERIMENT and TREE CARBON ASSIGNMENT <u>Lab Practical Quiz #2 – Fetal Pig Anatomy & Physiology</u> <u>Tree Carbon worksheet due by end of lab</u>
Feb. 15-17	<u>LAB 4</u>	PLANT BIOLOGY –FLOWER DIVERSITY, STOMATA DENSITY AND PHYSIOLOGY <u>Meocosm write-up & Hypothesis Testing worksheet due at start of lab</u> <u>Flower worksheet & Stomata Density write-up due by end of lab</u>
Feb. 22-24	<u>LAB 5</u>	ANIMAL EMBRYOLOGY (bring text to lab) <u>Lab Practical Quiz #3 – PowerPoint Quiz on Flower Anatomy</u> <u>Stomata Physiology write-up due at start of lab</u>
Mar. 1-3		ANIMAL EMBRYOLOGY DATA ANALYSIS AND PRESENTATION <u>Lab Practical Quiz #4 - Animal Embryology</u>
Mar. 8-10	<u>LAB 6</u>	CRAYFISH BEHAVIOR EXPERIMENT <u>Behavior worksheet and write-up due at end of lab</u>
<u>Get instructor approval for independent group experiments before Spring Break</u>		
Mar. 15-17		Spring Break
Mar. 22-24	<u>LAB 7</u>	FROG HEART PHYSIOLOGY EXPERIMENT (2 labs will meet in evenings) <u>Embryology Dose-Response write-up due at start of lab</u>
Mar. 29-31		Work on independent experiments. <u>Frog heart physiology write-up due by 1:00 PM of your lab day</u>
Apr. 5-7		Work on independent experiments.
Apr. 12-14	<u>LAB 8</u>	ECOLOGY LAB (if weather permits) <u>Write-up is due by end of lab</u>
Apr. 19-21		<u>Research posters due and printed</u> (Easter break: April 21-22) For Tues. lab sections, posters are due by noon, April 19 For Wed. and Thurs. sections, posters are due by noon, April 20. Tues. and Wed lab sections will print posters on their assigned lab days
April 26-28		ECOLOGY LAB (if not done April 12-14) <u>Write-up is due by end of lab</u> Thursday lab sections print posters on Tuesday April 26 if their Ecology lab was rained out on April 14. Otherwise, print posters on Thurs April 28.
Friday, April 29		<u>Research Symposium: poster presentations of experiments</u>

GOALS

After successfully completing this laboratory course, the student should be able to

- 1) recognize and understand some of the diversity of adaptations among living organisms
- 2) describe the basic processes and stages of vertebrate development
- 3) apply the scientific method to the study of animal and plant development, growth, and physiology, animal behavior, and ecology,
- 4) appropriately use references and statistical analyses.

GRADING (All assignments are to be done by yourself unless noted as group work)

Microscopy Tutorial and Quiz	5
Diversity Worksheet (group)	20
Diversity Quiz	10
Pig Quiz	20
Tree Carbon assignment	10
Hypothesis Testing worksheet	5
Mesocosm write-up	10
Flower worksheet	10
Stomata Density write-up	10
Flower Quiz	10
Stomata Physiology write-up	10
Embryology Quiz	10
Embryology presentation (group)	10
Behavior worksheet	10
Behavior write-up (group)	10
Embryology Dose-Response curve write-up	10
Physiology write-up	20
Ecology write-up	10
Research Presentation (group)	60
Proposal approved by deadline (4 points)	
Poster (50 points)	
Attendance and critiques (6 points)	
Total	260

Grades will be assigned according to the following scheme:

100-90% = A to A-	where	80-82% = B-
90-80% = B+ to B-		83-86% = B
80-70% = C+ to C-		87-89% = B+, etc.

All assignments are due on the dates given on the syllabus. Others assignments and due dates may be given in class. Late assignments will be accepted (resulting in mandatory point deductions) only at the discretion of the professor.

ATTENDANCE

Attendance is required. Missed work cannot be made up; a grade of zero will be recorded for missed work. If there are extenuating circumstances, students may be able to attend a different laboratory section **only with advance permission** from **both** the regular professor and the professor whose section the student wishes to attend.

You must wear closed-toe shoes and bring safety glasses to all labs