

Biology 131-Introduction to Biology I Laboratory

Fall 2009

Instructors: P. Lemay
O'Neil 314

C. Dumas
O'Neil 214

J. Rymer
O'Neil 337

LABORATORY SCHEDULE

Week	Topics	Reading Assignment
1 9/7-9/110	Introduction. Descriptive statistics & Microsoft Excel. Use of Macintosh computers (finally leave the dark side). Microscopy. Start plant interaction exercise. Start <i>Brassica</i> genetics & physiology exercises.	1-3 5-17, 109-114 25-27 19-23 151-157 159-169
Observation and Qualitative Exercises		
2 9/14-9/17	Dissection and histology of the gastrointestinal tract and associated viscera. Descriptive Statistics worksheet due at start of lab.	29-39
3 9/21-9/24	Laboratory Quiz #1. Dissection and histology of the respiratory and vascular systems.	41-55
4 9/28-10/1	Function and morphology of the heart; electrocardiogram.	57-69
5 10/5-10/8	Laboratory Quiz #2. The skeletal-muscular system - anatomy and histology.	71-77
6 10/12-10/15	No labs- Columbus Day Break	
7 10/19-10/22	Physiology & biophysics of the skeletal-muscular system. GI tract, circulatory, & heart worksheet due in lab.	79-104
8 10/26-10/29	Laboratory Quiz #3. Science library tour- How to get proper reference articles. Hypothesis testing & inferential statistics. Complete plant interaction exercise. Complete <i>Brassica</i> genetics & physiology exercise. Select topic for lab report.	105-114 151-157 159-169

Introduction to Biology I Laboratory Schedule (continued)

Week	Topics	Reading Assignment
Quantitative Exercises and reporting of scientific work		
9 11/2-11/5	Regulation of a physiologically controlled variable- plasma glucose. Hypothesis testing-Plant Interaction & <i>Brassica</i> worksheet due.	115-122
10 11/9-11/12	Resting metabolism in animals- the effect of size	123-140
11 11/16-11/19	Enzyme function and kinetics.	141-150
12 11/23,11/24	Thanksgiving week; No scheduled laboratories. Brief meetings beginning at 2:00 for questions regarding preparation of lab reports. Individuals from any lab section may attend either Monday or Tuesday afternoon.	
13 11/30-12/3	Presentation of Oral reports in regular lab schedule. Lab report, drafts and peer review sheets due.	

Laboratory grading

The laboratory contributes part of your overall grade for Introductory Biology I. You will be told the specific proportion by the lecture instructor. You receive one grade for lecture and laboratory. All worksheets are always due at the start of the laboratory on the due date. The graded components, and their value, for the laboratory section of the course are as follows:

First lab quiz	10%
Second lab quiz	10%
Third lab quiz	10%
Descriptive statistics worksheet	10%
GI tract, circulatory, & heart worksheet	10%
Hypothesis testing-Plant Interaction & <i>Brassica</i> worksheet	10%
Presentation & paper on selected lab exercise	20%
Peer review sheets	10%
Participation - includes additional quizzes, dissection, participation in discussions, lab clean up, lab effort lab safety, etc.	10%

Statement on Academic Honesty.

We have seldom encountered dishonest behavior by students at Holy Cross. Honesty is the foundation of the academic and scientific enterprise. If we all are assured of an honest environment, class morale tends to be high and the trust that is established allows for a greater degree of respect. Therefore dishonesty in the form of plagiarizing other students laboratory worksheets or reports, failure to properly cite references and other supporting material, cheating on quizzes (taking, receiving or intentionally giving aid), or falsifying an excuse in order to miss a quiz, assignment, or laboratory session will not be tolerated. Anyone whom we have sufficient reason to believe has cheated on an assignment, lied to obtain an excuse from taking a quiz or turning in an assignment at the scheduled time, or otherwise violated this policy can receive a zero for the assignment in question. In addition, we will institute proper disciplinary action. If you have any questions regarding the above guidelines, please ask your laboratory instructor.

Laboratory Safety

The Biology Department has adopted the following general safety guidelines for students enrolled in all laboratory classes.

- 1) Wear appropriate clothing. Sandals and shirts that leave the abdomen (stomach) area exposed are not allowed. **Open-toed footwear** is not allowed in the lab.
- 2) Place coats and backpacks in the storage area near the sink or under lab benches. Keep the aisles clear.
- 3) Do not eat or drink anything at the lab benches.
- 4) Immediately inform the lab instructor of spills, injuries or any unsafe equipment.
- 5) Dispose of all glass waste, such as broken or chipped glass, disposable pipettes, and glass slides, in a special container labeled "**Glass only.**"
- 6) Before you leave the lab, make sure your lab area is clean. All reagents and glassware are to be put away as indicated by the lab instructor. Dissection instruments must be cleaned, dried, put pack in the case, and returned to the instructor or teaching assistant to be checked.
- 7) Wash your hands after any laboratory session. If your skin is exposed to any amount of chemical, immediately wash off the chemical with water for 15 minutes.
- 8) Store dissection specimens in the cooler. Use the spray bottles with Bio-Shield to keep specimens moist and reduce concentration of fumes in the lab.
- 9) Conduct all dissections with utmost care. Broken scalpel blades, needles, scissors or other sharps must be disposed of in the **red sharps** container.