

**BIOZ 152 - Introduction to Biological  
Science II Laboratory, 1 credit  
LAB SCHEDULE – Fall 2019  
Virginia Commonwealth University**

Instructor: [Removed] e-mail: [Removed] office hours: [Removed]

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**Prerequisites/ Co-requisites:**

In order to be enrolled in BIOZ 152 you must also be currently enrolled in BIOL 152 or have taken BIOL 152 previously and passed with a grade of “C” or better.

**Reading Requirements:**

**Textbooks (Required):**

- A Student Handbook for Writing in the Biological Sciences by Karin Knisely (5<sup>th</sup> edition, Sinauer and Freeman Publishers, 2017)
- Introduction to Biological Science Laboratory II Workbook available in the Barnes and Noble VCU Bookstore. You must have the new and unused edition for this class.

**Other Requirements:**

- You must have chemical safety goggles and a lab coat for this course.
- This course requires completion of VCU's online lab safety training modules. It is required that you obtain a minimum score of 80% on the quiz. You are permitted to take the quiz multiple times if needed.
- You must complete the BioRaft Safety training quiz in blackboard with a score of 80% or higher before you are permitted in the lab classroom.
- Minimum required PPE that must be worn at all times in a laboratory or technical area is full-length pants (or equivalent).
- Minimum required PPE that must be worn at all times in a laboratory or technical area is closed toe/heel shoes to protect feet from chemical spills and sharp objects.
- Remove all additional required PPE before leaving your workplace.
- Never wear lab coats, gloves, coveralls or other potentially contaminated PPE to public locations such as cafeterias, restrooms, elevators, offices, or other off-site areas.
- Always wash your hands after removing protective equipment and before leaving the work area.
- Do not reuse disposable gloves.

**Course Overview:**

We will focus on developing skills for experimental design, data analysis, as well as both written and oral communication in the sciences. This course will also provide hands on experience in a laboratory setting covering key concepts within the biological sciences. This course is 1 credit.

**Course Objectives (what you should be able to do by the end of the semester):**

- Describe and compare the diversity of life.
- Discuss evolution as the core theme of biology.
- Search databases (online and print) for peer reviewed articles and select literature that is relevant to an experiment
- Demonstrate basic methods for collecting, graphing and analyzing data and observations
- Write the basic components of a research paper, including the introduction, methods, results and discussion sections
- Present experimental results in both written and oral formats

**Attendance:**

Attendance is mandatory. **No credit will be given in the event of an unexcused absence** for the respective quiz/assignment of the day missed. Furthermore, the quiz/assignment based on the material missed will not be accepted. Only special circumstances, such as a death in the family or illness, will warrant the opportunity to make up work (in which case you will receive an Incomplete and must complete the assignment the next semester); verification of such circumstances will be required (e.g., an obituary notice or doctor's note). Tardiness is NOT acceptable. Arriving late will result in missed opportunities to take quizzes and/or to turn in assignments. **Missing three (3) or more laboratories will automatically result in a grade of "F."** Leaving after a quiz or assignment submission without completing the lab exercise will result in a 0 for the quiz and will count as an absence. Having another student sign the attendance sheet for you is a violation of the VCU Honor Code and will count as cheating.

WEEK	DATE	TOPIC	ASSIGNMENTS
1	[Removed]	Lab Safety Module and Quiz Academic Integrity Quiz Syllabus quiz	·Purchase Lab Manual ·Academic Integrity Quiz -Syllabus quiz Fundamentals of Lab Safety Quiz
2	[Removed]	Online Lab, Scientific Inquiry	Primary literature assignment
3	[Removed]	Evolution and Natural Selection	Evolution and Natural Selection Summary Bean Beetles Pre-lab
4	[Removed]	Experimental Design and Bean Beetles	Bean Beetles: Writing an Introduction
5	[Removed]	Bean Beetle Results and Writing a paper	Bean Beetle Results and Discussion, Transpiration pre lab
6	[Removed]	Transpiration	Transpiration summary Fermentation pre-lab
7	[Removed]	Fermentation	Fermentation post lab summary Bean Beetle- Final Paper Due Oct 17
8	[Removed]	Experimental Design and Fermentation Part II	Fermentation II Post lab summary Experiment II outline
9	[Removed]	Experiment II Reading day October 18	Bean Beetle Final paper due
10	[Removed]	Exploring Phylogenetic Trees	Evolution of Animals I Pre-lab quiz on Bb
11	[Removed]	Evolution of Animal Diversity I (dissections)	Study for practical quiz (in class) ·Pre lab Evol of Animals II quiz in Bb
12	[Removed]	Evolution of Animal Diversity II (Dissections)	Study for practical quiz (in class) ·Pre lab EC
13	[Removed]	Open and Closed Circulatory Systems	Open and Closed Circulatory Summary. ·Prepare Presentation of Project
14	[Removed]	Island Biogeography	Turn in data/summary
15	[Removed]	No Labs, Thanksgiving break	
16	[Removed]	Student Presentations and Evaluations	

**Note:** The order and content of these labs are subject to change due to the constraints of working with living organisms.

### **BLACKBOARD**

Blackboard is a web-based tool for students and instructors. Your grades will be posted on blackboard, which will allow you access to your grades any time via the web. The website address is [blackboard.vcu.edu](http://blackboard.vcu.edu).

### **Grades and Policies**

**Letter grades** are assigned using a 10-point scale (90–100% = A; 80–89% = B; 70–79% = C, etc.), using the following calculations:

Presentation: 7.5%

Lab Report Final paper : 7.5%

Lab assignments (85%): Each item counts equally

- Pre-Lab modules/quizzes/assignments
- Data sheets
- Experiment Summaries
- In-class quizzes
- Experiment II outline
- Post Lab modules/quizzes/assignments

<b>Letter Grade</b>	<b>Point Value</b>
A	90-100
B	80-89
C	70-79
D	60-69
F	< 60

### **Assignments:**

The majority (if not all) of the material covered on assignments and worksheets will come from the lab session(s) noted. It is important to read your lab manual in advance of the laboratory session. For worksheets, quizzes softchalk modules, peer evaluations, and all writing assignments you are expected to work **ON YOUR OWN**. Everything turned in for a grade must be in your own words. Any assignments that are unable to be evaluated by SafeAssign will not be graded.

**Late work will not be accepted.**

### **Honor Code:**

Violations of the VCU Honor Code (lying, stealing, cheating, plagiarism, etc.) will be reported. **All students must complete the Academic Integrity Quiz on Blackboard before turning in work for a grade.**

### **Non-dissection option:**

Dissections are a part of labs in BIOZ 152. Animals dissected in class include earthworm, frog, fish, crayfish and rat. One of each organism per lab table is typically dissected, so those students who do not want to dissect, are not required to do so. Additionally, to accommodate those students with strong religious or moral opposition to dissection, we offer a non-dissection alternative. Students requesting this alternative will need to submit a written request and set up a meeting with Emily Watkinson ([Removed]) immediately.

Non-dissection exercises for BIOZ 152 will include computer software, models, and diagrams for frog, fish, starfish, crayfish and fetal pig dissections. Computers are available in the lab classroom as well as in the student resource center. Students choosing the non-dissection option will be responsible for all quizzes and worksheets completed by regular students in addition to the worksheets specifically designed for the non-dissection students. Most of the computer programs require a greater time investment from the students than the actual dissection. Students choosing this option are responsible for completing both the regular class work, and the dissection alternative work within the same lab week as regular students (the student resource center is available for extra time with the computer software). All students dissection and non-dissection, will take the same quiz.

**The last date to withdraw from the course for a “W” is [Removed]**

### **VCU Syllabus Statement**

The required syllabus statements originally included here are maintained by the Office of the Provost and are regularly updated. To prevent the dissemination of information which may no longer be accurate or complete, the full text of the required syllabus statements have been removed from this document.

Students should visit <http://go.vcu.edu/syllabus> and review all syllabus statement information. The full university syllabus statement includes information on safety, registration, the VCU Honor Code, student conduct, withdrawal and more.