

Welcome to the Biology 181 Laboratory!

Laboratory investigations are the core of scientific endeavors. In this laboratory course, you will have the opportunity to learn about concepts central to biology through hands-on experience. You will be examining many living organisms and their interactions as you learn about ecology, evolution, and biodiversity. The laboratory experiences will help you develop an appreciation for the processes involved in scientific inquiry as they apply to biology and everyday life.

Our faculty and staff will make every effort to provide you with quality opportunities to help you become part of the culture of scientific investigations. We hope that you enjoy your time in lab. We certainly enjoy teaching you!

Sincerely,

The Biological Sciences Faculty and Staff

Acknowledgments

The development team, who designed and authored the lab manual: Patty Aune, Jenny Campbell, Miriam Ferzli, and Marianne Niedzlek-Feaver.

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For her artistry with words and endurance during countless revisions, we are indebted to Theresa Johansson for editing this manual.

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Getting Oriented

Each laboratory unit supplements or expands the concepts from the lecture component of the course. The units begin with an introduction section followed by the activities you will be conducting in the laboratory. Each activity may also have additional background information to aid your understanding as you follow the procedures. Throughout the laboratory units, you may find questions that you will have to complete either during or after the lab session. Your laboratory instructor will provide guidance with respect to all laboratory assignments that will be due during the semester.

In the laboratory manual, you will also find appendices that provide a wealth of information and guidance to help you throughout the semester.

To ensure success in the course, you should read through each lab unit before coming to class. This will allow you to gain familiarity with the scientific concepts that you will be learning about in the laboratory and to be efficient with the procedures. The following sections will help you become acquainted with basic laboratory policies and safety guidelines. Please read them carefully. If you fail to respect these policies and guidelines, you may be removed from lab.

Laboratory Policies

1. Attendance in your scheduled laboratory period is mandatory. There will be **no make-ups**. In order for you to obtain the maximum number of points, it is in your best interest to attend all laboratory sessions.
2. If you have a legitimate excuse (e.g., a doctor's appointment) for missing an upcoming laboratory period, you must notify your lab instructor as soon as possible in order to make the proper arrangements.
3. If you have a documented excuse for having missed a laboratory that has already passed (e.g., car accident), you must notify your lab instructor within 24 hours of your regularly scheduled laboratory period. In this event, you will be able to make up any of the points that you missed.
4. If you have an unexcused absence from lab, you are **not** allowed to make up any of the points that were given out that day. You are encouraged to get materials or assignments that were distributed in lab from the Lab Web site; you are responsible for the material pertaining to that lab for lecture exams. You cannot, however, turn in these assignments for credit.
5. In order to be eligible for credit on assignments, you must be in the laboratory to receive them, **and** be present for the full laboratory in which they are due. In other words, you cannot have a friend pick up or turn in assignments for you and you cannot arrive late or leave early.
6. If you have **more than one (1) unexcused absence** from the laboratory, you will receive **no credit** for the laboratory portion of your entire BIO 181 course grade.
7. Note the due dates on all assignments. **No late work will be accepted** (this includes coming late to the laboratory).

8. While group work is encouraged, all final efforts on individually assigned work must reflect independent work and must be original work. Remember, as students of this university you are always bound by the honor code. When you are assigned group work, be sure that you participate. Individuals who are not contributing equally to an assignment will receive either a portion of the grade or a zero, depending on their level of effort.
9. Being on time to the laboratory is essential for proper learning and safety. During the first five (5) minutes of the laboratory, assignments will be collected and safety precautions will be introduced. Therefore, no one will be admitted into the laboratory after these first 5 minutes. Persons not admitted into the laboratory due to **tardiness** will receive an **unexcused absence**.
10. **The use of cell phones for phone calls or texting is not permitted** during the laboratory period.
11. **Conduct yourself in a professional manner at all times** in order to avoid unnecessary disruptions in lab. Professional behavior ensures a safe lab environment and maximizes learning opportunities.

Safety Guidelines

1. **You must wear shoes that cover and protect your entire foot.** NO sandals or open-toed shoes are permitted in the laboratory.
2. **Wear clothing that provides protection for your skin from chemical exposure.** Shirts should provide coverage for the upper arms. Short-shorts and short-shirts are not permitted in the laboratory. Your legs must be covered at least down to your knees. Long pants should be worn in the laboratory to provide the best protection against chemical exposure.
3. **No eating food or candy, drinking, or chewing gum or tobacco is permitted in the laboratory at any time.** Be sure to wash your hands thoroughly after leaving the laboratory before handling any food or drink.
4. Do not wear your best clothes to the laboratory. Many of the activities involve the use of chemicals and stains that can permanently stain and damage clothing. You are responsible for any damage to your clothes.
5. In the event of a fire alarm, you must stay with your laboratory instructor and class until your laboratory instructor or the Fire Marshal excuses you. Follow the evacuation procedure outlined by your instructor at the beginning of the semester.
6. Report all accidents promptly to your laboratory instructor. Failure to do so may result in further accidents and/or injury to other classmates.
7. Pay careful attention to all directions given by your laboratory instructor concerning laboratory procedures, and follow all safety precautions as directed by your instructor.

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8. Always leave your laboratory working area in a clean and neat condition. Spilled chemicals must always be cleaned up as soon as the spill is noticed. A cluttered work area increases the chance of accidents.
9. Be aware of the location of safety equipment such as the fire extinguisher, eye-wash, safety shower, first aid kit, and Material Safety Data Sheets (MSDS) in your laboratory. Material Safety Data Sheets describe the potential hazards of any chemical that you may use in the laboratory.

NOTE: Failure to follow the **underlined policies and guidelines** on the previous page will result in your being removed from the laboratory. This will count as an **unexcused absence** and can affect your grade.

Safety Statement

(Student's Copy)

I have read and understand the safety and general policies associated with the biology laboratory. I will abide by these rules that will ensure my safety as well as the safety of others in the laboratory.

Print Name

Signature

Date

Student ID Number

Laboratory Section Number

Laboratory Instructor's Name

Laboratory Instructor's Email/Phone Number

Office Hours

Safety Statement

(Instructor's Copy)

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I have read and understand the safety and general policies associated with the biology laboratory. I will abide by these rules that will ensure my safety as well as the safety of others in the laboratory.

Print Name

Signature

Date

Student ID Number

Laboratory Section Number

Laboratory Instructor's Name

Lecture Section Number

Lecture Professor's Name

Please indicate any medical condition your instructor should be aware of or that may be an issue with your performance in the laboratory:

