



TIFFIN
UNIVERSITY

ONLINE

BIO101L Contemporary Biological Problems Lab
(1 credit hour)
Course Syllabus

Course Description

This is the mandatory lab component of BIO101, an introductory course that stresses the principles of biology and pertinent applications to increase appreciation and to demonstrate that biology is a science relevant to everyday life.

Course Learning Outcomes

By the end of this course, you will be able to:

1. Have an overall understanding of the living world.
2. Have an understanding of biological problems and processes as experienced by all living organisms.
3. Understand the processes and patterns of biological evolution, and the role of evolution in speciation and biodiversity.
4. Will be familiar with different areas of biology, including the chemistry and energetics of life, cell anatomy, cellular reproduction and cell cycle.
5. To understand the basics of heredity and how it affects our wellbeing.
6. Have an understanding of our environment and the ecosystem.
7. To relate the structures of living organisms, and their function.
8. To hypothesize, design, analyze and interpret scientific experiments.
9. To present a technically correct and scientifically sound report.

Required Textbook(s) and Resources

Mader, S. & Windelspecht, M. (2021). *Essentials of Biology*, 6th Edition McGraw-Hill.

Be sure to also review the weekly **Explore** sections for additional library or web resources. For access to databases, research help, and writing tips, visit the [Tiffin University Library](#).

Time Commitment

Effective time management is possibly the single most critical element to your academic success. To do well in this online class you should plan your time wisely to maximize your learning through the completion of readings, discussions, and assignments. Because of our accelerated, seven-week term, TU online courses are designed with the expectation that you dedicate a little over **six (6)** hours per credit hour to course activities and preparation **each week**. For example, for successful completion of a three-credit, seven-week online course you should reserve roughly **twenty (20) hours per week**.

To help plan your time and keep on track toward successful course completion, note the distinctive rhythm of assignment due dates:

1. All times assume Eastern Time (GMT-4).
2. Weeks begin at 12:00 a.m. ET on Monday and end at 11:55 p.m. ET on Sunday.
3. Unless otherwise noted, initial assignments or discussion posts are due by **11:55 p.m. ET on Wednesdays**.
4. Additional assignments or follow-up discussion posts are due by **11:55 p.m. ET on Saturdays, and**
5. Major assignments and reflections are typically due by **11:55 p.m. ET on Sundays**.

Learning Activities

This lab is composed of multiple activities designed to complement BIO101 by assisting you in conducting experiments and analyzing data related to your coursework over the next seven weeks. You will participate in interactive simulations which will help you to develop and test your own hypotheses about osmosis, genetics and heredity, and natural selection. All lab activities will be linked to a grading rubric.

Grading

The chart below identifies the individual contributions from each type of activity, per week.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Total
Assignments Activity 1.1	Assignments Activity 2.1	Assignments Activity 3.1	Assignments Activity 4.1	Assignments Activity 5.1	Assignments Activity 6.1	Assignments Activity 7.1	1000

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Total
(100) Assignments Activity 1.2 (100)	(150)	(150)	(150)	(150)	(100)	(100)	
200	150	150	150	150	100	100	1000

Grading Scale

A: 90-100% | B: 80-89% | C: 70-79% | D: 60-69% | F: <60%

Course Schedule and Weekly Checklist

Topic	Learning Activities (Due by 11:55 p.m. ET on day designated)
Start Here	<input type="checkbox"/> MON: Activity 1.1: Check-In Post
Week 1: The Scientific Method	<input type="checkbox"/> SUN: Activity 1.2: The Scientific Method Lab <input type="checkbox"/> SUN: Activity 1.3: Investigating Plant vs. Animal Cells
Week 2: Photosynthesis	<input type="checkbox"/> SUN: Activity 2.1: Photosynthesis Lab
Week 3: Mendel's Laws	<input type="checkbox"/> SUN: Activity 3.1: Heredity Lab Simulation
Week 4: Darwin and Evolution	<input type="checkbox"/> SUN: Activity 4.1: Natural Selection Lab
Week 5: Plant Organization and Reproduction	<input type="checkbox"/> SUN: Activity 5.1 Report: Osmosis Investigation
Week 6: Animal Structure and Function	<input type="checkbox"/> SUN: Activity 6.1: Homeostasis Scenario
Week 7:	<input type="checkbox"/> THU: Activity 7.1: Ecological Footprint Lab

Topic	Learning Activities (Due by 11:55 p.m. ET on day designated)
Human Impact on the Biosphere	

Tips for Success

Successful online learning requires a good deal of self-discipline and self-direction. As seekers of the truth, we should be willing to challenge and review one another's academic work in a spirit of respectful comradery and constructiveness. Your course is a place for you to stretch and grow as you benefit from the expertise, knowledge, experience and diverse perspectives of your instructor and peers. Constructive feedback will challenge you to stretch your own thinking, thereby expanding your knowledge, understanding and application.

To get the most out of your learning experience, you should actively engage (participate) in **ALL** course activities. Course elements are arranged chronologically. To complete a week, simply work your way "down the page" through all of the course materials and activities.

For More Information:

Be sure to review the [Support, Policies, and Procedures](#)