

BIOL 1107K: Principles of Biology I

**Summer II Semester 2024, 3 Credit hours (weekly: 3 hr lecture)
Department of Biology, College of Science & Math, Valdosta State University**

Lecture (BC 1023): (CRN# 53257) T & R 2:20 p.m. – 5:20 p.m.

Instructor: Mr. Joshua Brown

Office: BC 2209

Office hours: **T & R** 12:00 p.m. – 2:00 p.m. (before lecture or by appointment)

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Pre-Requisites: None. Note this course is for science majors.

Co-Requisites: BIOL 1107 Laboratory. BIOL 1100, Biology Freshmen Seminar for Biology Majors.

Course Description: An introduction to the principles of biology for science majors, with an emphasis on the cellular nature of life. Concepts covered include the origin and early evolution of cellular life; cell structure, function, metabolism, and reproduction; cell signaling; and gene regulation in bacteria and eukaryotes.

Course Objectives: Upon completion of this course the student should be able to:

- 1) Exhibit a broad perspective on the principles unifying various biological disciplines from evolution to molecular biology (DBEO 2 & 5);
- 2) Understand basic biological chemistry from elements to organic compounds to macromolecules;
- 3) Comprehend basic principles of biology at the cellular level to include structure, function, metabolism, communication, reproduction, molecular biology, and gene expression (DBEO 3 & 4);
- 4) Perform, analyze, interpret, and report laboratory experiments (DBEO 1);
- 5) Develop and test a hypothesis using experimental microscopy and quantitative skills acquired in the laboratory (DBEO 1 & 5).

These objectives support the Department of Biology Educational Outcomes # 1-5 listed above (DBEO 1-5) and the University General Educational Outcomes # 5 as listed in the VSU Undergraduate Catalogue.

Required Materials:

Text: We will be using a textbook provided by OpenStax, a 501(c)(3) nonprofit charitable corporation associated with Rice University in Texas. The goal of this organization is to make higher education accessible to all students. To achieve this goal, they provide textbooks that are completely free online, or they provide low cost print versions of the textbook through the student bookstore or Amazon.com. You should choose any ONE of the options below.

A. Free version: <https://openstax.org/details/books/biology-2e>. In addition, a quick access point to the text is provided in BV through MacMillan Achieve below.

B. Hardcover version: ISBN: 978-1947172517. You can purchase a hardcover version through Amazon.com or the VSU Bookstore.

C. Paperback version: Purchase this version from Amazon.com. They use a third-party vendor to print a two-volume, shrink-wrapped bound softcover version of the textbook. The content is the same as the digital and hardcover versions. The text and graphics are printed in B&W.

Online Achieve: Assignments require a subscription to MacMillan Achieve. More information available on course BlazeView (BV) site. Access should be available through the Day 1 program or you can directly register.

information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: Maggie Viverette, Director of the Office of Social Equity, titleix@valosta.edu, 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31608, 229-333-5463.

TENTATIVE LECTURE OUTLINE:

Lecture:	Date:	Topics:	Text Readings (pgs):
1	June 11 (T)	Course Introductions & Syllabus What is science? What is Biology? Unifying Principles...	Chpt. 1