

Course Prefix/Number/Title: BIOL 150 General Biology I

Number of Credits: 4

Course Description:

The first semester of a two-semester sequenced study of the fundamental topics of biology at the level of the cell including: bioenergetics, cell structure, physiology principles, genetic function and inheritance.

Pre-/Co-requisites: None

Course Objectives:

Demonstrate an understanding and proficiency in the following:

1. Understand cellular and viral structure and function.
2. Understand fundamental biochemical principles.
3. Understand rudimentary classical genetics
4. Understand rudimentary molecular genetics and have a familiarity with various DNA technologies
5. Use knowledge about mechanisms of cellular and molecular processes.

Instructor: Dr. Jessica Guerrero

Office: Virtual/Online

Office Hours: By Appointment

Phone: N/A

Email:

Lecture/Lab Schedule:

Lecture MWF 1:00pm-1:50pm CST

Lab:

Textbook(s):

- Biology. Raven, et al. 2019. 12th Edition. ISBN: 9781259188138
- Student lecture slides may be available on the course page. If you would like to print them off that will be your responsibility to do so prior to class.

Course Requirements:

A = 100-90%

B = 89.5-80%

C = 79.5-70%

D = 69.5-60%

F = below 59.5%

*Please do not request bonus points, rounding of a grade, or a grade change. If there is an opportunity for extra points you will be notified. If you have an 89.49 in Blackboard that does not constitute an 89.5.

Below is a table of course requirements. This is subject to slight modification based on the discretion of the instructor.

Lecture Requirements	Points each	Total
4 Unit Exams	100	400
40 Blackboard *Simulations/Assignments/Quizzes	10	400
1 Small Group Project Presentation	50	50
4 Discussion Boards	15	60
3 In-class Activities *	20	60
13 Quizzes	10	130

Lab Requirements	Points each	Total
2 Exams (Midterm/Final)	75	150
2 Formal Lab Reports	45	90
11 Lab Handouts	10	110
13 Lab Participation	5	65

Tentative Course Outline:**Lecture Outline:**

- **Exam 1:** Introduction to Biology, Chemistry, Biomolecule
- **Exam 2:** Energy, Cells, Membranes
- **Exam 3:** Photosynthesis, Cellular Respiration, Mitosis, Meiosis
- **Exam 4:** DNA, Protein Synthesis, Genetics

Lab Outline:

Week 1	Syllabus/Lab Safety Contract/Sci Method
Week 2	Online Simulation Sci Method/Microscopy
Week 3	Microscopy
Week 4	Diffusion and Osmosis
Week 5	Chemistry of Life
Week 6	Eukaryotic Cell Structure and Function
Week 7	Prokaryotic Cells/Streak Plating/ Midterm
Week 8	Enzymes
Week 9	Photosynthesis
Week 10	Respiration
Week 11	Mitosis and Meiosis
Week 12	Inheritance and Probability
Week 13	Protein Synthesis
Week 14	Human Genetic Disorders
Week 15 Finals Week	Finals Exam

*For a schedule of academic deadlines please reference the academic calendar on the DCB Website at: <https://www.dakotacollege.edu/academics/academic-calendar>.

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s):

- Competency 1: Identifies the interrelationships between humans and their environment.
 - o Learning Outcome 1: Applies scientific methods of inquiry.
 - o Learning Outcome 3: Applies scientific information in everyday life.

Relationship to Campus Focus:

- Class announcement/discussion on news items about technological developments in biology and how that influences the discipline as well as the societal aspects.
- Covers DNA analysis, genetic engineering, and DNA fingerprinting.
- Knowledge of cell structure and function related to microscope development discussed.
- Interject technological developments and how they influence scientific development and societal issues.

Classroom Policies:

- Participation is required in class.
- Any lecture printout you want will need to be printed from Blackboard prior to the start of class. These have blanks so if you miss lecture **you** will have to fill them in using your textbook.

- Excused absences will be for only the following reasons and still need to be discussed with me via email, text, or phone call: sickness with a doctor's note must be emailed to me, passing of a close family member, if you're an athlete and need to miss class for a game.
- All requests for absences need to be reported to me immediately. If you do not let me know why you have missed a class or discuss with me in advance your participation for that day will result in a ZERO. You need to make advanced arrangements with me—the SOONER THE BETTER. You need to speak with me if you know you will be gone so we can schedule make up assignments.
- **Missing Exam/Late Policy:** If you know you will be gone during an exam day you need to let me know THREE days in advance. If you miss an exam and I am not aware that you were going to miss it then your grade for that exam will result in a ZERO. There will be no make-up exams for those who do not inform me of their absences on exam days. If you show up late for an exam you are limited to the time period of the class. You will be required to turn in your exam at the close of the course.
- **Blackboard Policy:** You are responsible for checking blackboard and doing coursework on blackboard for this class. If you do not do the assignments on blackboard you will get a ZERO for those assignments. Blackboard assignments must be completed by the time and date indicated by each assignment. No late assignments accepted. If you are going to be absent complete the assignment prior to your absence.
- **Electronic Device Policy:** Electronic devices will only be used in class for answering in-class questions and review participation. You will be instructed to use them at those times. If you are on your phone/unauthorized computer/smart watch/headphones or any other unauthorized device while not instructed by myself then I will ask you to leave my class for that day. If it is during an exam, you will lose your ability to complete the exam and a score of ZERO will be recorded. You should not be texting or on social media while in class/lecture/lab. You cannot be wearing any smart technology during ANY exam. You will be asked to remove it. If you choose to not remove it then you will be asked to leave and you will not be able to complete the exam which will result in a ZERO.

Student Email Policy:

Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the Campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity:

According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization

share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism, or other academic improprieties have occurred.

Disabilities or Special Needs:

Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

You must inform me that you have testing accommodations **THREE** days prior to each exam. It is your responsibility to schedule your exam in the testing center for proctoring.

Title IX:

Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy, and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.