



BIOL 1308.001.002

Course Syllabus: Fall 2019

"To provide personal, dynamic learning experiences empowering student to succeed."

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Office Hours

Monday	Tuesday	Wednesday	Thursday	Friday	Online
1:30-4:30 PM	9:30 AM-10:30 AM 3:30-4:30 PM	none	9:30 AM-10:30 AM 3:30-4:30 PM		via NTCC email

The information contained in this syllabus is subject to change without notice.

Students are expected to be aware of any additional course policies presented by the instructor during the course.

Course Description:

3 Credit Hours. A survey course designed to meet the needs of the non-science major. This course is an introduction to the science of biology including scientific method, physical and chemical properties of life, cell biology, genetics, and evolution.

Required Textbook:

Concepts of Biology from OpenStax, Print ISBN 1938168119, Digital ISBN 1947172034,
www.openstax.org/details/concepts-biology

Good news: your textbook for this class is available for free online! If you prefer, you can also get a print version at a very low cost.

Your book is available in web view and PDF for free. You can also choose to purchase on iBooks or get a print version via the campus bookstore or from OpenStax on Amazon.com.

You can use whichever formats you want. Web view is recommended -- the responsive design works seamlessly on any device. If you buy on Amazon, make sure you use the link on your book page on openstax.org so you get the official OpenStax print version. (Simple printouts sold by third parties on Amazon are not verifiable and not as high-quality.)

Recommended Reading: Chapters 1-11 in Concepts of Biology

Core Curriculum Purpose and Objectives:

Through the core curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world; develop principles of personal and social responsibility for living in a diverse world; and advance intellectual and practical skills that are essential for all learning.

Courses in the foundation area of **life and physical sciences** focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

College Student Learning Outcomes:

Critical Thinking Skills

CT.1

Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

Communication Skills

CS.1

Students will effectively develop, interpret and express ideas through written communication.

Empirical and Quantitative Skills

EQS.1

Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form.

EQS.2

Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

Team Work

TW2. Students will work with others to support and accomplish a shared goal.

Student Learning Outcomes:

1. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
2. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
3. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
4. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results. Be able to communicate to others the results of various genetic crosses.
5. Identify the importance of karyotypes, pedigrees, and biotechnology. Working within a team or with a partner, investigate and report on a current topic in biotechnology (GMO's, recombinant DNA, stem cells, cloning and/or transgenic bacteria, plants or animals).
6. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
7. Apply scientific reasoning to analyze evidence for evolution and natural selection.

Attendance Policy:

Regular and punctual attendance is expected. In-class quizzes or assignments that are completed as a result of attendance will be recorded as zeros if a student is not present for the entire class period. There are no exceptions for make-up work on daily attendance grades.

Evaluation/Grading Policy:

Overall course grade is determined as follows:

Tests/Exams: 60%

5 unit exams: 12% each

Quizzes/Group Project 15%

Comprehensive final exam: 25%

Grading Scale

A =	100 – 90%
B =	89 – 80%
C =	79 – 70%
D =	69 – 60%
F =	<59

Assignments:

Students may complete a variety of in-class assignments or quizzes for which grades will be recorded. There is no make-up for work missed as a result of absence from class. Participation in class is an important component of this course work. Additionally, students will be assigned to a group and asked to investigate and report on a current topic in biotechnology. Multiple points of view exist among the general population on the uses of biotechnology and so students will be required to integrate those points of view as they work together to complete the assignment. It will be assessed based on contributions to the team or group effort, appropriateness to the topic of biotechnology, style and evidence of critical thinking. The final product will be a PowerPoint presentation or paper. The due date for this project is December 2, 2019.

Exams:

The lecture exams may include both objective (multiple choice, true-false, matching) as well as subjective questions over all covered and assigned reading and exercises. All students will need a #2 pencil, a scantron and possibly a bluebook for each exam. Exams are not to be missed. The only acceptable reason for missing an exam is either you are seriously ill or the hospitalization/death of a close family member. Proof (a doctor's note) of illness or death may be necessary for you to take a make-up exam. You must contact me at mhearron@ntcc.edu **before** the exam informing me of why you cannot take the exam on time. Otherwise, you may receive a zero for that exam. See *Academic Ethics* below.

Student Responsibilities/Expectations

Like all colleges, Northeast Texas Community College strives to be a "community of scholars." Please remember that you and all of the students in this class are pursuing very important goals in your lives. As human beings and as scholars, I expect every student to be courteous and considerate toward other individuals.

As your instructor, I will attend all classes on time and prepared to teach what you are expected to learn each day. I will make a conscientious effort each class period to teach to the best of my ability and to provide you with clear, well-organized explanations of class material. I care deeply about your learning experience and your success in this course. However, that ultimate success does depend largely on you. Your success can be maximized and your potential achieved by making a commitment to meet the following classroom expectations:

- a) Attend ALL classes – physically and mentally. Wherever you are, be all there.
- b) Be on time for class. Attitude is not everything but it is very important. Remain in class for the entire instructional period.
- c) Be an active learner – participate in class. Be attentive, answer questions, and ask questions. Smile, be interested, and act as if you care. (OK, I'll admit that occasionally things get a little boring; work through that boredom by participating!)
- d) Read ahead. This will help make the next lecture much more effective.
- e) A good student acts like a good student, which includes not sleeping in class, not talking in class, and not reading unrelated material or doing other work in class. All cellular phones must be turned off during class time.
- f) Realize that I do not GIVE grades. You EARN grades based upon your performance. That performance includes turning all assignments in on time. You shouldn't expect less of me because of my other commitments. I don't expect less of you because of your other commitments.
- g) Be respectful of yourself, your classmates, and your instructor.
- h) Learning is hard work but it is also invigorating and fun. Work hard and have fun doing so.

Lectures & Discussions:

- Week 1- Chapter 1 Introduction to Biology
- Week 2- Chapter 2 Chemistry of Life
- Week 3- Chapter 3 Cell Structure and Function
- Week 4- continue Chp 3; **Exam 1**
- Week 5- Chapter 4 How Cells Obtain Energy
- Week 6- Chapter 5 Photosynthesis
- Week 7- continue 4 & 5; **Exam 2**

Week 8- Chapter 6 Reproduction at the Cellular Level
Week 9- Chapter 7 The Cellular Basis of Inheritance
Week 10- **Exam 3**; Chapter 8 Patterns of Inheritance
Week 11- Chapter 8 Patterns of Inheritance
Week 12- Chapter 9 Molecular Biology
Week 13- **Exam 4**; Chapter 10 Biotechnology
Week 14- Chapter 11 Evolution and its Processes
Week 15- continue Chp. 11; **Exam 5**

Final (Comprehensive) Exam: Thursday, May 16th at 9:30 am

Tuesday, November 19, 2019 is the last day to withdraw from the course with a grade of “W”. If circumstances require you to withdraw from this course, you must do so by that date. It is the **student’s responsibility** to initiate the withdrawal with the registrar’s office. **Failure to officially withdraw will result in your receiving a grade of F.**

NTCC Academic Honesty Statement:

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student’s responsibility to request accommodations. An appointment can be made with the Academic Advisor/Coordinator of Special Populations located in the College Connection. The advisor can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the [NTCC website - Special Populations](#).

Family Educational Rights and Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children’s educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered “eligible students.” In essence, a parent has no legal right to obtain information concerning the child’s college records without the written consent of the student. In compliance with FERPA, information classified as “directory information” may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student’s name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.