



## Biology for Non-Science Majors I – BIOL 1108.088

Course Syllabus: Fall 2019

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“Northeast Texas Community College exists to provide responsible, exemplary learning opportunities.”

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*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:** One Credit Hour. This laboratory-based course accompanies BIOL 1308 , Biology for Non-Science Majors I. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

**Required Material:** eScience Lab Kit 1286. A redemption card may be purchased thru the NTCC bookstore or directly from eScience Labs at [eSciencelabs.com](http://eSciencelabs.com)

**Student Learning Outcomes:** Upon successful completion of this course, students will: 1. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data. 2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory. 3. Communicate effectively the results of scientific investigations. 4. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures. 5. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis. 6. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration. 7. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results. 8. Identify the importance of karyotypes, pedigrees, and biotechnology. 9. Identify parts of a DNA molecule, and describe replication, transcription, and translation. 10. Analyze evidence for evolution and natural selection.

**Lab Schedule:** Due dates for the following reports and lab exams are available on Blackboard

Week 1: General Lab Safety:

Week 2: Introduction to Science:

Week 3: The Chemistry of Life

Week 4: Introduction to the Microscope

Week 5: Cell Structure and Function

Week 6: Diffusion

Week 7: Enzymes

**Week 8: Lab Practical 1,**

Week 9: Energy and Photosynthesis

Week 10: Cellular Respiration

Week 11: Mitosis

Week 12: Mendelian Genetics

Week 13: DNA and RNA

Week 14: Population Genetics

**Week 14: Lab Practical 2**

**Evaluation/Grading Policy:**

Lab Reports = 50%

2 Lab Practicals = 25% each

**Grading Scale**

A = 100 – 90%

B = 89 – 80%

C = 79 – 70%

D = 69 – 60%

F = <59%

**Labs:** All lab materials are provided in the eScience Lab Kit. Lab instructions and experimental procedures are on the Blackboard site under Lab Assignments. There are mandatory due dates for the submission of the lab reports which are also on the Blackboard site. Late lab reports will result in a deduction of 5% of the grade for each day past due. DO NOT wait until the last minute to complete the labs. Some labs

require extended time. The labs are arranged to coordinate with the Biol 1308 Lectures and textbook materials.

- There are 2 Lab tests. Each unit test will be taken through Respondus Monitor. <https://download.respondus.com/lockdown/download.php?id=231117566>  
You are required to use LockDown Browser with a webcam, which will record you during an online, non-proctored exam. (The webcam feature is sometimes referred to as "Respondus Monitor." Your computer must have a functioning webcam and microphone. There is a **\$10.00 fee** to use Respondus Monitor payable to Respondus when you first download the program). Read the information in the "Start Here" folder to familiarize yourself with the process for downloading the browser and using the webcam.

**Other Course Requirements:** ENTRANCE REQUIREMENTS: • Students new to online learning must complete the online Orientation during the first week of class. • It is your responsibility to obtain a username and password to enter Blackboard, to enter the classroom the first week of class, to read the directions on the homepage, and to successfully navigate through the course. If you have taken an internet course in the past but still feel unsure of your Blackboard skills, then please take the orientation mentioned above.

**COMPUTER SKILLS:** Students taking my internet class are required to have basic computer skills, an up to date working computer with internet access, and either Microsoft WORD (.doc) or EXCEL (.xls) software. Students who do not have access to WORD or EXCEL can save documents in RICH TEXT FORMAT (.rtf). Inadequate computer skills or a malfunctioning computer system is not adequate reason for me to accept late homework assignments, homework assignments in the wrong format, missed chats, or bulletin board postings.

**TECHNICAL REQUIREMENTS:** The course content is loaded on software called Blackboard which requires Java capability. The student must have a Java-compatible Internet browser such as Netscape 4.7, Firefox, or Microsoft Internet Explorer 5.0. Firefox is preferred. To get your computer "class ready," go to the following website. <http://ntcc.blackboard.com> For assignments that will be posted, it is preferable to have the most recent versions of your browser, so please download this browser prior to the beginning of class (this is free, but time consuming, so plan ahead).

### **Student Responsibilities/Expectations:**

#### ATTENDANCE POLICY:

- Blackboard allows your instructor to monitor your participation in this course on a daily basis. While there is flexibility in the schedule, this is NOT an independent study course. Access to course materials follows the same time schedule as a traditional classroom, and students are expected to complete assignments by a specified date as indicated in the course calendar. Late lab reports will result in a deduction of 5% of the grade for each day past due.
- In case of server problems, contact me via voicemail, email or alternate email. My email address must never be abused. They are for instructional purposes only. DO NOT put me on your distribution lists!!! In case of server problems, contact me via voicemail, email or alternate email. This course covers a lot of material and moves rapidly, so do not fall behind.

At the first sign of trouble you should seek help immediately. I am happy to help you with any of your biology coursework. However, if you wait too long to seek help, there is a point where there is nothing I can do to help you

**NTCC Academic Honesty Statement:** "Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

**Academic Ethics:** 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 arrange an appointment with a college advisor to obtain a Request for Accommodations form. For more information, please refer to the NTCC Catalog or Student Handbook.

**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.

#### **SYLLABUS MAY BE MODIFIED AT ANY TIME**

#### **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.