**Mitchell Community College**

Biology 110: Principles of Biology

**Credit Hours:** 4 **Contact Hours:** 6 (Lecture 3, Laboratory 3)

**Prerequisites:** ENG 090, MAT 060, RED 090  **Corequisites:** None

**Instructor:** Matthew Mason

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**Office location:** n/a **Office hours: n/a**

**Catalog Course Description:**

This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, taxonomy, evolution, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life.

**Course Objectives:**

This course is designed to give each student a fundamental grasp of the fundamental principles of biology. These principles will then be used as a thread on which to build other biological information and knowledge. These principles will then be recognized in their relationships to members of all the living kingdoms. The course will also include coverage, of some of the living organisms and agents in our environment.

1. Relate the study of biology to many different areas of life.
2. Apply fundamental taxonomical principles to the study of biology.
3. Connect basic principles of chemistry to living organisms and non-living matter.
4. Identify, recognize and relate the basic components of plant, animal, and bacterial cells.
5. Relate meiosis to reproduction and distinguish mitosis and meiosis.
6. Identify, relate and discuss how cells metabolize food and create energy.
7. Discuss the role of photosynthesis in the balance of nature.
8. Identify and discuss the fundamentals of genetics. Relate genetics principles to current events including the human genome project, genetic cloning, and the role genetics plays in human diseases.
9. Define and relate ecology to the everyday environment.
10. Analyze the various theories related to the establishment of diverse forms of life throughout time.

**Grading:**

***Materials used for evaluation of students:***

In evaluating your final grade, the following will all be taken into account.

1. Promptness, attitude, participation in group activities, and behavior in lecture and lab
2. Attendance
3. Lecture tests, quizzes, and final project
4. Laboratory exercises
5. Laboratory practicals
6. Homework and projects

Grading in this course will be based on the accumulation of the student's grades at the end of the semester.

**Tests –** There will be several major lecture exams given over materials covered by the text, in lecture, and in lab.

* There will not be a cumulative final exam
* There will be a final project
* **Absences on exam days will result in the student not being able to take the test and will count toward your dropped test grade.**
* **You cannot drop the final exam grade**
* If you are caught cheating on an exam you will not be able to drop that exam and it will be figured into your final grade. You will also be reported to the department director and academic dean. At that point MCC will proceed with academic misconduct actions.

**Other grades -** occasional short pop quizzes, short research papers on given topics, group discussions/debates, and group lecture exercises done in and out of class. In order to evaluate the lab work, there will lab practicals and a grade on the written lab work. All of these grades will be included in the final total.

***Late homework for lecture or lab will not be accepted after 5 classes pass the due date! In addition, a total of 50 % will be deducted from the homework grade the first day it’s late.***

**Reading Quizzes –** There will be reading quizzes given at the **BEGINNING** of each chapter based on reading of the notes and chapter. Questions could appear in the form of multiple choice, matching, fill-in-the-blank, true/false, short answers (listing), or labeling. You must be present on the day of the quiz. **NO MAKE-UP QUIZZES WILL BE GIVEN!!!**

A point system will be utilized to determine your grade. This means that all work including tests will be given a certain point value. Each test may be worth 80, 92, 53, 185 etc. points as predetermined by the instructor. You will need to keep a total of these points in your notebook as the semester progresses. In this way, you can check your grade at any time.

You need to keep up with how many points you earn as well as how many points could have been earned. To calculate your grade divide the number of points you have by the number of points that were possible. Then multiple your answer by 100 to obtain your percentage. **The grading scale is as follows:**

 90-100% = A 70-79% = C below 60% = F

 80- 89% = B 60-69% = D

**Example:** if you had accumulated 405 points out of 450 possible points than your grade is 90%, a B based on this classes grading scale (listed above). (405/450 = .90 x 100 = 90%)

**Teaching and Learning Strategies:**

 How to pass this course:

1. Scan the chapter before you come to the class especially looking over the diagrams and the outline of the chapter. The words are foreign to you as I speak them. The more you can prepare for the lectures, the easier they will be for you to follow.
2. Come to class and lab. If you do miss, phone me and find out the assignment and what was covered. I will not phone you, so the responsibility is yours!
3. Study with one or more partners. I highly recommend starting a study group to meet regularly. Numerous studies have shown that everyone benefits from group studying. You may find other people see and hear what is going on differently than you and their perspective on the course may turn out to be a valuable resource. I have also found that in order to teach something you must understand it, in other words helping somebody else results in helping yourself.
4. Get help from the MIND Lab. This lab is in the library and offers free tutoring.

**Attendance Policy:**

Regular attendance is essential to gain the most from this course. Test absences have already been addressed (see grading policy). If class absences are unavoidable on days when there is no scheduled exam or practical it will be factored into the students’ grade (see materials used for student evaluation). Absences from any labs will result in a 0 for that day's activity. **Lab practicals will not be made up.** Excessive absences will affect your final grade in a negative manner so do not risk it! **A total of two consecutive weeks of absences will result in dismissal from the course; or a total of 4 lecture absences will result in dismissal from the course.**

**Tardiness/Early Departures:**

Habitual tardiness (at either the beginning of class or after break) or early departures disrupts the class and the instructor. Two tardies will count as one absence. You can get two tardies in one day if you are late to class and late returning from break. Because classes may be longer than 50 minutes and tests are usually given at the beginning of class, ***on days of lecture tests or lab practicals, no extra time will be given to you if you arrive late – once the last person who was on time finishes, you must turn in your test!***

**Missed Tests/Quizzes/Laboratory exercises:**

**You cannot make up missed tests or quizzes.** You are allowed to drop ONE test during the semester (but not the final exam). I will automatically drop your lowest score before calculating final grades. If you are caught cheating, you will receive a zero for the test, quiz, homework, project, etc. and that grade CANNOT be dropped from your final grade.

Laboratory exercises – you cannot make up lab exercises or the points associated with them. For example, if you are absent for the lab portion of class and there is a 50 point, in-class, exercise, you cannot make up those points or work associated with lab exercises.

**Communication:**

If you have any question, please e-mail me first, then call my work phone second, and then cell phone last. Unless it is an absolute emergency, please do not call me Saturday or Sunday.

**Learning Environment:**

It is imperative that you enter the class and lab with a positive attitude. Sleeping and small talk are not allowed. There are some very unpleasant and toxic chemicals in the lab and food and drink is prohibited for your own protection. Likewise, for your protection and for the benefit of the entire class, please do not bring your children into the classroom or lab.

I encourage questions during class and lab and I will use groups whenever possible. Teamwork benefits both slow and fast learners and helps you learn how to work together respecting each other’s gifts and abilities. I strongly believe that each person in the classroom is created uniquely and that we are all diverse in our backgrounds and beliefs. I hope that you will always feel free to express your thoughts and I expect all students in my classroom or laboratory to always show respect and appreciation for each other and our uniqueness. If at any time you feel someone is degrading your opinion, please come contact me. **This will not be tolerated in a college atmosphere where we are all learners, even the instructor.**

**All students who wish to wear any type of hat/headgear to class must remove it before entering the classroom/lab.**

***Cell Phone Policy:*** Cell phones and other electronic communication devices (such as pagers, palm pilots, etc.) should only be brought to class during emergency situations. If you bring your cell phones to class, it should remain on vibrate. **In emergency situations**, excuse yourself quietly before answering your phone. Unless it is an absolute emergency, please do not text during class. If this gets out of hand, I will talk with you about it. If the practice continues, **Absolutely NO cell phones, pagers, palm pilots, etc. are allowed in class during exams!!!!!!!!**

**Safety:**

For your safety, fire escape directions will be posted next to the door and discussed the first day of class. Should you need assistance leaving the room in the case of an emergency please inform your instructor at the end of the first class. Other safety equipment will be identified and discussed the first day of class or lab. **While in lab, please try to pull long hair back so you reduce the chance of catching your hair on fire.** Also remember **no food and drink in lab and no open toed shoes!**

If you have any health conditions that could impact you during this course please make your instructor aware of your potential needs. If you would like to volunteer to assist someone who needs help in an emergency please notify your instructor at the end of the first class.

**THERE IS NO DRINKING OR EATING IN LAB! ALSO NO OPEN TOE SHOES!!** You will lose participation points if you wear open toe shoes to lab.

**Materials:**

**Required Textbook** – Belk and Borden; Biology: Science for Life with Physiology (3rd edition)

## **Required Lab book –** Belk and Borden; Biology: Science for Life Laboratory Manual (2nd edition)

**Additional Materials needed for this class:** (in addition to the standard pen, pencil, and paper)

* ***White lined paper*** – needed to take notes.
* ***2" or 3" three* *ring binder***– This is going to be your portfolio, which I will be grading. The notebook will be graded once before the last day to drop the course and once at the end of the semester.

**Support Service:**

The Learning Resources Center/ Huskins Library services include reference assistance, book selection, group or individual library orientation, interlibrary loans, Internet access, and a coin-operated copier. Audiovisual services include equipment for viewing and listening, and video/audiocassette editing and duplication.

The MIND Center for Learning and Teaching, also found in the Huskins Library, includes tutoring and computer labs for assistance with keyboarding skills, writing assistance, math skills, and grammar support.

**Disability Services:**

Students with disabilities who believe that they need accommodations in this class are encouraged to contact the Office of Special Populations/Disability Services at 704-878-3267, Room 103 C Main Building. Please make requests as soon as possible to better ensure that accommodations are implemented in a timely fashion.

**Academic Dishonesty:**

The Student Handbook defines “Academic Dishonesty” as “taking or acquiring possession of any academic material (test information, research papers, notes, etc.) from a member of the college staff or student body without permission; receiving or giving help during tests; submitting papers or reports (that are supposed to be original work) that are not entirely the student’s own; not giving credit for others’ work (plagiarism).” **Any evidence of academic dishonesty may result in expulsion from the class and a grade of “F” for the course.**

When you sign your name to any exam or practical this indicates that you have neither given nor received information to or from another student.

**Mitchell Community College Inclement Weather Policy:**

In the event of adverse weather, MCC will announce delays, cancellation of classes, or the closing of the college on local television and radio stations and on the MCC web site at <http://www.mitchellcc.edu/>. Whenever a decision is made to cancel day classes, media announcements will be made by 6:00 a.m. if possible. A decision to cancel evening classes will be made by 3:00 p.m. and announced as soon as possible. As adults, all MCC students must assume responsibility for deciding if road conditions are too hazardous to permit safe driving. Safety and good judgment are expected in each individual case. If classes are delayed, classes will resume at the start of an instructional block. Cancelled classes will make up the work according to individual faculty plans.



**MCC’s Q.E.P.**

**Making it Real, How do we use math everyday?**