**Course Description:**
Fundamental principles of living organisms including physical and chemical properties of life, organization, and function. Concepts of reproduction, genetics and the scientific method are included. This course is suitable as a required lab science for non-biology majors and may not be substituted for BIOL 1406. Fundamental principles of living organisms including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of reproduction, genetics, ecology, and the scientific method are included. Prerequisite: TSI complete in Reading and Math.

**Core Objectives:**
Critical Thinking, Communication Skills, Empirical & Quantitative, Teamwork.

**Text, References and Supplies:**
Canvas Accessible

**Computer:** Access to a working computer throughout the course with the ability to access the internet and Canvas.

**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.

Student Contributions, Responsibilities and Class Policies:
It is the student’s responsibility to read and understand the official Midland College attendance and withdrawal policies as stated in the college catalog. Students that are tardy, take excessive break time, or leave before completion of the day's exercise (including proper clean-up), may be counted absent. This will be at the discretion of the instructor. Regular attendance is required to do well in lab. Laboratory exercises and laboratory practicals require extensive preparation and set-up. The lab instructor’s handout will outline policies pertaining to absences. It is the student’s responsibility to contact the lab instructor regarding absences.

Attendance Policy:
It is the responsibility of the students to know the policies and procedures associated with absences. These policies are set by instructors. Excused absences may include, but are not limited to, illness, severe weather, and death in the family. Instructors will determine whether or not an absence is excused. http://catalog.midland.edu/content.php?catoid=6&navoid=673

Withdrawal Policy:
Students who have enrolled in a Texas public institution of higher education as a first-time freshman in fall 2007 or later are permitted to drop no more than six courses during the entire undergraduate career. This limit includes all transfer work taken at a Texas institution of higher education and to second baccalaureate degrees. This statute was enacted by the State of Texas in spring 2007 (Texas Education Code 51.907). Any course that a student drops after Census Day is counted toward the six-course limit if “(1) the student was able to drop the course without receiving a grade or incurring an academic penalty; (2) the student’s transcript indicates or will indicate that the student was enrolled in the course; and (3) the student is not dropping the course in order to withdraw from the institution.” http://catalog.midland.edu/content.php?catoid=6&navoid=673

Scholastic Dishonesty:
Midland College does not tolerate scholastic dishonesty or academic misconduct in any form. Please read the MC Student Handbook on this subject. http://catalog.midland.edu/content.php?catoid=6&navoid=673

For safety concerns, students are not allowed to eat or drink in the laboratory, and are expected to follow all safety guidelines as instructed.

Students are strongly encouraged to seek extra help if they are having difficulty with the assigned material.
Evaluation of Students:
The lab grade constitutes 30% of the course grade. Grades will be assessed at the instructors’ discretion within the following parameters:

Daily grades (may include, but not limited to attendance, quizzes, or other lab activities) 0-40%
Assignments (may include, but not limited to, pre-lab or in-lab assignments, homework, lab reports, quizzes, or other activities) 0-40%
Exams: 1-5 exams may be given during the semester 30-100%

Course Schedule:
This class meets for 3 lecture hours per week and 3 laboratory hours per week. For a tentative schedule of the class meetings and laboratory meetings, please refer to the schedule distributed to each student on the first class meeting (See Instructor Handout).

ADA Statement:
Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must place documentation on file with the Counselor/Disability Specialist. Students with disabilities should notify Midland College prior to the beginning of each semester. Student Services will provide each student with a letter outlining any reasonable accommodations. The student must present the letter to the instructor at the beginning of the semester.

Math/Science Division Information:
Division Dean: Dr. Margaret Wade 125 AHSF 685-4615
Program Chair: Dr. Miranda Poage 155 FSB 685-6754
Division Secretary: Ms. Brenda Smith 124 AHSF 685-6413