I. INTRODUCTION

A. This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology.

B. This course may satisfy the Biology requirement in most curricula. Please check your degree plan to determine the status of this course in your program of study.

C. In support of the objectives of the Texas core curriculum, the course provides significant exercise of a student’s critical thinking skills, communication skills, teamwork, and empirical and quantitative skills. These objectives form a foundation of intellectual and practical skills that are essential for all learning.
   * Critical thinking skills include creative thinking, analysis, evaluation, and synthesis of information.
   * Communication skills include effective development, interpretation, and expression of ideas through written, oral, and visual means.
   * Teamwork includes the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.
   * Empirical and quantitative skills include the ability to manipulate and analyze numerical data or observable facts to reach informed conclusions.

D. Prerequisite: None

II. LEARNING OUTCOMES

Upon successful completion of the lab component of Biology for Non-Science Majors II, the student will:

A. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.

B. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.

C. Communicate effectively the results of scientific investigations.

D. Define modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.

E. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

F. Describe phylogenetic relationships and classification schemes.
G. Compare different sexual and asexual life cycles noting their adaptive advantages.
H. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
I. Describe basic animal physiology and homeostasis as maintained by organ systems.

III. INSTRUCTIONAL MATERIALS

The instructional materials identified for this course are viewable through www.ctcd.edu/books

IV. COURSE REQUIREMENTS:

A. Lots of Reading:
Specific chapters from the textbook will be required reading. There will also be reading and preparation or homework assignments in the lab manual. How to read and when to read will be discussed in the handout: Studying for biology.

B. Completion of lab manual:
As we perform labs in this course, you should fill out the lab manual and use it as a study tool. At the end of the semester this manual and other lab-related handouts will be submitted for an extra credit grade of up to 50 points.

C. Attendance in both lecture and lab:
It is the responsibility of the student to sign in to class at the beginning of class, and, when directed, to sign out at the end of class. You will sign in for lecture and for lab.

D. Tardiness, leaving early and other disruptions
When you come to class late, leave the classroom to go to the restroom, or leave or enter the class for any other reason, you disrupt the classroom environment. You distract other students, you distract your instructor, and you interfere with your ability to be successful in the class. Three “tardy” or “left early” is equivalent to one absence. If you leave the lecture room during class, do not expect to re-enter the room. You may leave the lab for brief periods when I am not addressing the class. If the door to the lecture room is closed (and thus locked), do not knock on the door. If the door to the lab room is closed and you are late, do not knock while I am addressing the class. I will close the lecture room door 15 minutes into class after attendance and possibly after a quiz that you will not be allowed to make up. If you come in late during a quiz, you will turn in your quiz at the same time as the last student who came in on time.
E. Class Participation:
Students are expected to attend lecture and lab during their scheduled time. When you enroll in a face-to-face class, the expectation is that you will ATTEND class and PARTICIPATE in class. When final grades are averaged, those who regularly and positively contributed in class may get a “bump” at the end of the term. Others will not. This decision is entirely up to the judgment of the instructor.

G. What do I do if I must be absent?
First, look at your schedule! This tells you what material was covered. Read the appropriate material in the referenced resources. If you must be absent from any class meeting, it is your responsibility to find out what happened in class while you were gone. Exchange contact information with one or more other students in class so that you can ask them what happened, secure class notes, or notifications which were given during your absence. **Absenteeism is no excuse for not being ready for future classes.** I do not provide class notes if you are absent. After you have obtained and reviewed the class notes you get from other students, you are welcome to see me during office hours and I will be happy to answer any questions you might have. Please don’t come to me and say “I missed class, what do I need to do?” You have a schedule and it is your responsibility to use it, and ask classmates for notes and information before you come to me for help with the specific subject matter you are having difficulty understanding.

H. Review of exams after grading
This course, like most science courses, builds on itself. Concepts presented at the beginning of the course will be expanded on and will provide the foundation for later material. If you do poorly on any exam, it is important that you go back and review the material until you achieve an appropriate level of understanding. Under no circumstances are you allowed to copy the exam, copy questions from the exam, photograph the exam or reproduce the exam in any other way; to do so constitutes cheating and will lead to you being dropped from the course with a grade of “F for scholastic dishonesty”. You will be given about 15 minutes in class to review your graded exam. During this time, check the questions you missed and note the topics these questions covered. It is very unlikely you will ever see any of these specific questions again even on the final. If you missed several questions on the same topic, it is an indication that you lack a full understanding of the topic. Go back and review this material prior to the next day of class.

If you wish to review your exam for more than the allotted class time, you are welcome to come into the office and spend as long as you like with the exam and the key. If your grade was lower than a B, I strongly encourage you to do this. You may also ask me for clarification regarding exam questions. If I make a mistake when grading your exam, please bring the mistake, or what you believe is a mistake, to my attention when you return the exam. I will make a note on your exam and determine if a mistake was made and will correct your grade if necessary. The exams are my property. If you take the exam out of the classroom or office area, you will get a zero on the exam.
I. Integrity and scholarship
All students are required to maintain the highest standards of scholastic honesty in the preparation of all coursework and examinations. Examples of scholastic dishonesty include plagiarism, collusion, and cheating, copying homework or lab work. This is not a comprehensive list. Students guilty of scholastic dishonesty will be administratively dropped from the course with a grade of “F” and subject to disciplinary action, which may include suspension or expulsion from the school.

J. Checking blackboard
It is the student’s responsibility to check blackboard on a regular basis: at least 3 times per week. It would be best to check every day. If you have not used blackboard before and would like help, I will be happy to assist you during office hours. Many of your classmates will likely be familiar with it and will also be able to assist you if you ask for help. If you do not have a home computer with internet availability, there are many computer labs on campus where you may access blackboard.

K. Guns in the classroom
Please note the posted signs on campus. At this time, concealed carry is NOT allowed on this campus.

V. EXAMINATIONS:
Students will take lecture exams during their regularly scheduled lecture time unless prior arrangements have been made. If a student is late to class on exam day, the student will not be given extra time for taking the exam (see below “taking exams”). When the last student who began the test on time is finished, so are any students who were late. The exams may consist of multiple choice, matching, true/false, short answer, labeling, definitions, and essay questions. Each lecture and lab period is an explanation/review of the material students need to grasp before an exam. If a student misses an exam then the percent scored on the final exam will count in place of the unit containing the missed exam. Other missed exams will result in a zero being recorded in the grade book. Exceptions will be made only for extreme circumstances as determined by the instructor. If you have conflicts with the normal class that you are aware of IN ADVANCE of the exam, you may contact me and I will try to find a mutually convenient time for you to take the exam early.

Taking exams
Show up early. There are only 6 exam days in the course…you can do it. The classroom door will be closed and locked 15 minutes after the exam begins. If you do not arrive prior to this time, you have three potential options:

1. Wait until the first person to complete the exam exits, come in as they exit without speaking to them and begin your exam. You will end your exam when the last on-time person completes the exam.

2. There will be an opportunity during exam week, usually on Monday, for you to take a makeup exam for the exam you missed. The makeup will likely not be the same version of the exam your classmates took. It will likely have more short answer and essay questions and will likely have some more complicated multiple choice questions. If you do this, the final exam will function as it does for students who did not miss/were not late for an exam. It will replace the
lowest unit grade. It will be your responsibility to contact me and schedule a mutually convenient
time on the designated day.

3. Take a zero on the exam. This will result in a failing unit grade which may be replaced
by a better grade on the final exam.

If you completely miss an exam for any reason, illness, car trouble, family emergency, you
decided to take a cruise in the middle of the term…..etc. options 2 and 3 above are open to
you.

Exam protocol:
• Use the rest room immediately prior to class.
• Sit in alternate seats and alternate rows. If you tend to take a long time on exams, sit
toward the middle of the isle. If you tend to finish early, sit at the edge. This
will help avoid disturbance as people leave the exam room.
• Turn off all electronic devices including vibration modes. Place your cell phones in your
zippered backpack/book bag/coat pocket.
• Close all materials and be sure there is nothing near your seat that could suggest that you
might be cheating.
• Have at least two pencils. You may write with pen on the short answer questions on the
exam, so if you prefer pen on written questions, have a pen out as well. Have an
eraser out and available.
• The only things on the desk should be the scantron and your writing implements.

VI. SEMESTER GRADE COMPUTATIONS
16 week semester
Unit Evaluations: 5 unit evaluations 100 points each 500 points
Final exam may replace the lowest unit evaluation. (100) points
The final exam is comprehensive!!

COURSE GRADE Example (16 week session): 5 unit evaluations.
The total points in the course is 500.
A- 450-500
B- 400-449
C- 350–399
D- 300-349
F- 0--299

This grade scale may be changed by the instructor during the semester. If so, you
will be supplied via blackboard with the changes. This is an unlikely event, but
could occur.

It is your responsibility to keep track of your grades. You were given forms on the
first day of lab which you should fill in to keep track of your grade in the course.
There should be no need for you to ask me what your grade is. Use the form to
track your grade.
VII. NOTES AND ADDITIONAL INSTRUCTIONS FROM THE INSTRUCTOR

A. Course Withdrawal: It is the student’s responsibility to officially drop/withdraw from a class if circumstances prevent attendance or if the student decides not to continue with the course and this must be done before the withdrawal date. An instructor cannot initiate a withdrawal or drop a student based on the student’s request. GoArmyEd students should contact their ACES counselor before withdrawing and withdraw through the GoArmyEd portal. All other students who desire to or must officially withdraw from a course on or after the first scheduled class meeting must file an Application for Withdrawal with the local CTC representative by the last date to withdraw. Students enrolled in distance learning courses and who do not have access to a local CTC representative should submit a withdrawal form to EaglesOnCall@ctcd.edu or the CTC Records Office in Killeen, Texas.

*Applications for Withdrawal will be accepted at any time before the completion of the 12th week of classes for 16-week courses, the sixth week of classes for eight-week courses, or the fourth week of classes for six-week courses.

*For non-GoArmyEd active military students, the effective date of withdrawal is the filing date with the Education Center. For all other students, the effective date of withdrawal is the date that the withdrawal application is received by the Central Texas College representative.

*Students who used financial aid, military tuition assistance, VA benefits, or other non-personal funds may be required to repay tuition and fees to the funding agency. For specific repayment requirements, contact the Office of Student Financial Aid or Veterans Services Office before withdrawing. Military tuition assistance students should visit their military Education Center or Navy College Office.

*Students may not withdraw from a class for which the instructor has previously issued a grade of “F.”

B. Administrative Withdrawal: An administrative withdrawal may be initiated for academic dishonesty. A student may be administratively withdrawn by a designated member of the administrative staff of the College under the following conditions:

The student has been placed on Academic Suspension or Disciplinary Suspension;

The student has an outstanding financial obligation owed to the college; or

The student registered for a course without the required prerequisite or departmental permission.

The college is under no obligation to refund tuition and fees, or other costs associated with a student who is administratively withdrawn.

C. Incomplete Grade: The College catalog states, “An incomplete grade may be given in those cases where the student has completed the majority of the coursework but, because of personal illness, death in the immediate family, or military orders, the student is unable to complete the requirements for a course…” Prior approval from the instructor is required before the grade of “IP” for
incomplete is recorded. A student who merely fails to show for the final
examination will receive a zero for the final and an “F” for the course. The IP
will become an incomplete after the allotted time determined by the college. See
the student handbook for details.

D. Cellular Phones: Cellular phones (with or without associated headsets) and
beepers will be turned off while the student is in the classroom or laboratory. Any
exceptions to this rule are the instructor’s prerogative to decide if the use of
phones is appropriate to the activity. **Use of a cell phone, computer or any
electronic device during an exam will result in a zero for that exam.** Failure to
adhere to this policy may result in disciplinary action. Making and/or receiving
cell phone calls during lecture or lab is strictly forbidden. If a student’s cell phone
rings during an exam, he/she will be considered finished with the exam it is the
instructor’s prerogative at that time to require that the student submit the exam as
is. Students whose phones ring during any class may be required to leave the
room at the instructor’s discretion. The number for your family members to call in
an emergency is 254-526-1200. Appropriate personnel will immediately
communicate the message to you.

E. Americans With Disabilities Act (ADA): Disability Support Services provide
services to students who have appropriate documentation of a disability. Students
requiring accommodations for class are responsible for contacting the Office of
Disability Support Services (DSS) located on the central campus. This service is
available to all students, regardless of location. Explore the website
at [www.cted.edu/disability-support](http://www.cted.edu/disability-support) for further information. Reasonable
accommodations will be given in accordance with the federal and state laws
through the DSS office.

F. Instructor Discretion: The instructor reserves the right of final decision in all
course requirements and decisions regarding the maintenance of a proper learning
environment.

G. Civility: Individuals are expected to be cognizant of what a constructive
educational experience is and respectful of those participating in a learning
environment. Failure to do so can result a disciplinary action up to and including
expulsion.

Civil behavior includes, but is not limited to, refraining from use of cell
phones or electronic devices in an inappropriate manner, positive and friendly
interaction with other students and instructor during class. Inappropriate
language, or hostile behavior will not be tolerated. **Decisions regarding civility
are the instructor’s prerogative.**

You are neither attending nor participating if you show up for class and text, use
headphones, sleep, talk (except as part of normal classroom interactions), behave
rudely to me or your classmates (by my judgment) or zone out. Do not pull up your
hoodie and think that I won’t notice the headphones or texting or the zone-out. All of
the above behaviors are inappropriate. This is not a comprehensive list of inappropriate behaviors.

If I have to warn you once during the course regarding your classroom behavior, you may expect that future infractions will result in me telling you to leave the class for the day. If your behavior is grossly disruptive, I will ask you to leave the classroom without a prior warning. If I must ask you to leave, you will be counted absent for that day. If you argue with me or further disrupt the class, you will be required to counsel with me and/or student services personnel before you may return to class.

If you refuse to leave, I will call the campus police and have you removed from the class. If the police must come to remove you from class, or if I tell you to see me in office hours before you may return to class, you will be required to attend a counseling session with the campus student services personnel and/or with me before you may attend class again. Don’t just show up without counseling or you will be asked to leave again. Any day you are asked to leave class is considered an absence.

Lab outline:
I. Evidences of Evolution
II. Hardy Weinberg law
III. Microbiology
IV. Plant evolution: anatomy and physiology
V. Animal evolution and diversity
VI. Basic mammalian anatomy including digestive system, regulatory systems
VII. Basic mammalian anatomy including cardiovascular, respiratory, urinary systems, and reproductive systems
VIII. Nervous system and senses
IX. Ecosystem function