Abilene ISD / Angelo State University
AP Biology / Dual Credit BIO 1406 - Principles of Biology II – Spring 2019

INSTRUCTOR CONTACT INFORMATION:
Mr. Ryan Owens
Room: 240
Phone: (325) 794-4140 x7552
Email: ryan.owens@abileneisd.org
Tutoring times: Mon-Fri 3rd period conference, during scheduled times at MegaLunch, or after school, when I am generally available to meet. Students are encouraged to set up an appointment but are also welcome to stop by. If I am available, I’ll be happy to meet with you.

LEARNING OBJECTIVES AND NATURE OF THE COURSE:
This course introduces the integration between structure and function of biological organization. You will be asked to use processes of science to apply principles of genetics, ecology, evolution, metabolism, cell biology, and anatomy to living systems. Observation, experimentation, and investigation are emphasized. Biology 1408 requires a conceptual understanding of the material in addition to the memorization of facts. This course will challenge you to analyze and apply information, solve problems, and make connections different from the context in which they were learned. These are critical skills in biology.

This course is intended for Biology majors and minors or those for which it is a degree requirement. It is not recommended for non-majors to fulfill a general education requirement for a laboratory course.

COURSE MATERIALS:
Lecture (required):
- 4x6 index cards, unlined on both sides
- AbileneISD email account that you check regularly
- Schoology learning platform: http://www.schoology.com

Lab (required):
Instructor will provide all necessary materials.

COURSE IDEA OBJECTIVES:
- Gain factual knowledge (terminology, classifications, methods, trends)
- Learn fundamental principles and theories
- Learn to apply course material (to improve thinking, problem solving, and decisions)
- Acquire skills in working with others as a member of a team

A successful student in Principles of Biology should be able to achieve the following course and state core related learning outcomes:
- describe, explain, and predict natural phenomena using the scientific method = CT1, EQS1, EQS2 – Assessment = In class activities, lecture exams, embedded test questions, lab quizzes, and lab activities/reports
- design an experiment and complete a written description of their design, collaboratively conduct the experiment and analyze data generated to answer some component of a given causal question and defend the reasoning for conclusions drawn in the form of a laboratory report. CS1 – Assessment = In class activities, lab quizzes, and lab activities/reports
- collect and analyze data to evaluate relevant biological/ecological scenarios/problems (i.e. apply information you have learned). EQS1 – Assessment = In class activities, lecture exams, embedded test questions, lab quizzes, and lab activities/reports
- work effectively with others to support and accomplish a shared goal = CS1, TW2 – Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports
connect what she/he is learning to her/his own field (i.e. to make biology relevant to your own academic endeavors). Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports

For State, and Accreditation purposes this course will assess your ability to:
- CT1: Gather, analyze, evaluate, and synthesize information relevant to a question or issue
- CS1: Develop, interpret, and express ideas through effective written communication.
- EQS1: Manipulate and analyze numerical data and arrive at an informed conclusion.
- EQS2: Manipulate and analyze observable facts and arrive at an informed conclusion.
- TW2: Work effectively with others to support and accomplish a shared goal.

To achieve these course objectives and help maximize your learning, it is vital that you attend class, come prepared, and study the material every day (more about this under student responsibilities).

METHODS OF ASSESSING OBJECTIVES: The student learning outcomes will be assessed by exams, tutorials, lecture activities, and the laboratory.

Grading: Grading will follow the Abilene ISD Grading Policy for Advanced Placement (AP) classes. A copy of this policy may be obtained from the district’s website under the “For Parents” section.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage of Course Grade</th>
<th>Grading Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labs / quizzes / homework / classwork</td>
<td>50%</td>
<td>A = 90 to 100%</td>
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<tr>
<td></td>
<td></td>
<td>B = 80 to 89.9%</td>
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<tr>
<td>Assessments (tests / essays / presentations / projects / research)</td>
<td>50%</td>
<td>C = 70 to 79.9%</td>
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<tr>
<td></td>
<td></td>
<td>D = 60 to 69.9%</td>
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<td></td>
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<td>F = &lt;60%</td>
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</tbody>
</table>

Lecture & Homework: Topics covered in lecture are intended to reinforce the learning taking places from reading the textbook and completing homework. Students are expected to come to class prepared and familiar with the material assigned to them. Lecture is not intended to cover every possible topic, nor is that possible given the time constraints of the course.

You will regularly be assigned homework and chapters to read from the textbook. Much of the homework will occur through the online program Mastering Biology. This online program will allow you to work on the homework at your convenience and get immediate feedback on your learning. Though you will not directly receive a grade for reading, it is much more difficult to complete the homework without having read the chapter. You will learn more and likely be more successful if you read the material first instead of working through the homework and then trying to find answers in the book.

Exams:

Each six weeks will have at least one major exam that covers the material from lectures, homework, and labs. This exam will be styled in the form of the AP Biology test and will include multiple choice and free response questions. Exams must be finished in class. After exams have been graded, students will be shown their exams and the class will review the questions and answers together. All exam material, including questions and student answers, must be returned to your instructor before leaving class. You are not allowed to take exams with you. Exams will be kept on file by your instructor. You may, at any time agreed to by your instructor, ask to see your past exams.

Exam Re-grading Procedure:
1. If you believe your score is in error and it is strictly an addition and/or division error:
   - Write a note to your instructor which reads “math only”.
   - Give this note to your instructor to recalculate your grade.
2. If you believe you have found a grading error (i.e. your answer, although counted wrong, is correct because of biological facts or principles);
   ● In a neatly written note, clearly state your reasons(s) for thinking the question has been graded incorrectly. (“Question X is graded wrong” or “I deserve more points on question Y” are not reasons. I expect a clearly delineated and thoughtful reason based on factual information that is verifiable. Your misunderstanding of the wording of a question is NOT an acceptable reason).
   ● Give this note to your instructor for consideration.

3. Be sure you have carefully listened to the review after an exam before you request that your exam be re-graded.

4. The deadline for requesting a recalculation or re-grading is 4pm 72 hours from the time exam grades are given back to the class.

Remember that the exams are photocopied before being returned to you. (I will know if an answer has been changed after it was graded.)

What do you do if you fail an exam?

If you fail an exam, you may come in and take an alternative exam to raise your grade to a maximum of a 70. In accordance with the district grading policy, you must complete your corrections within 3 days from the time that you receive your failing grade.

Re-do and Make-up Policy:

Make-up work will follow the district grading policy under the section “Re-do and Make-up Work” which states:

Students shall be expected to make up assignments and tests after absences. Students shall receive a zero for any assignment or test not made up within the allotted time.

The District shall not impose a grade penalty for make up work after an unexcused absence or an absence due to suspension.

In accordance with grading guidelines, a student shall be permitted a reasonable opportunity to redo an assignment or retake a test for which the student received a failing grade. [EIA (LEGAL)]

- **Time allowed to make up work after an absence**
  Students shall have at least two days to make up for one day absent.

- **Points to be deducted for late work**
  An assignment is considered late if it is turned in after the due date. Late assignments will receive a maximum grade of 70 and will be accepted up to three (3) days late. Extenuating circumstances will be addressed by each individual teacher.
  **Clarification:** A student turns in an assignment late and scores an 80; the grade to be recorded is a 70. If the student makes a 60, then a 60 is recorded.

- **Policy for retaking or redoing failed assignments (classwork or assessments)**
  Students who fail classwork or assessments will be given one opportunity to redo the work with a maximum grade of 70 allowed. Long term projects such as research papers are exempt from this requirement. The student will have five (5) school days after receiving the failing grade to complete the retake of the assignment or test. Extenuating circumstances will be addressed by each individual teacher. Pre-AP and Advanced Placement students will only have three (3) days to re-do work due to the “weighted” grade for the course and being a college readiness class.
  **Clarification:** If a student makes a 50 on an assignment and is re-assessed and makes an 80, the student will receive a 70. If a student fails the reassessment the student will receive the higher of the two grades made.
• NOTE: A student may be given a replacement assignment when retaking or redoing failed assignments / tests at the discretion of the individual teachers.

What do you do if you miss a class? In the event that you are absent for lecture, you are expected to read Schoology to see what you have missed and get any notes from a classmate. Though your instructor will be happy to discuss what you missed or clarify information, no make-up lectures will be provided. If you miss a lab, an alternative assignment will be given. Due to the time needed both on the part of the student and the instructor to setup, perform, and cleanup labs, makeup labs will be not offered.

Extenuating Circumstances: In the event that you know you will miss class due an extenuating circumstance, you are expected to email your instructor prior to missing class, not after. In the event it is not possible to contact your instructor, you are expected to email your instructor as soon as it is possible. Your courtesy in this matter will be considered when determining how to handle your absence and what, if any, alternative assignments to provide you with.

Final Exam: The final exam is cumulative and made up of questions similar to the types used for the regular exams. You will take the final exam individually.

Laboratory: This portion of the course offers you the opportunity to explore and apply concepts to answer research questions. Success in the laboratory involves teamwork in designing and conducting experiments, performing pre-lab and lab activities and report writing. In addition, you will conduct activities designed to develop and improve critical thinking and problem-solving skills related to the topics discussed in lectures.

STUDENT RESPONSIBILITIES:
Attendance: You are expected to attend all scheduled class meetings. You are expected to arrive on time and stay for the entire period. Attendance will be checked at each class meeting. Please inform me well ahead of time if you will need to be absent for any reason including religious holidays. February 20 is the last day to drop a course.

Academic Honesty and the ASU Honor Code: Both Angelo State University and Abilene ISD expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code and the ASU policies on academic dishonesty, which is contained in both print and web versions of the Student Handbook. Abilene ISD also addresses Academic Dishonesty as outlined in its grading policy which students must follow. The penalty for ANY act of dishonesty in this class, including any form of cheating or plagiarism: 1) is a grade of ZERO on the assignment and, 2) disciplinary action as warranted in accordance with university and school district guidelines. Please do NOT jeopardize your reputation in high school, college, and your future career; it’s not worth it.

Accommodations for students with disabilities: All students will have the opportunity to undertake, with reasonable assistance from the faculty and administration, the academic challenges necessary to fulfill the academic requirements of this course. Student modifications will be provided as outlined by a student’s individual education program (IEP). If you have a disability and need special accommodations of any nature, you should contact the school counselor or school principal. I will be happy to make accommodations for you based on the recommendations from the administration. Please make your request early in the semester to allow time for appropriate arrangements.

Religious Holy Day: A student who intends to observe a religious holy day during the semester should make that intention known in writing to the instructor during the first week of the semester and one week prior to the absence. If this submission is completed, a student who is absent from classes for the observance of a religious holy day shall be allowed to take make-up missed exams or assignments scheduled for that day in accordance with syllabus policy.

Schoology and Mastering Biology: Much of your learning about biology must take place outside of the formal class meetings. You should be a frequent visitor to the course Schoology site (http://www.schoology.com/). Please
check Schoology regularly. All of the material you need to prepare for class is available from the Schoology site: reading assignments for each unit, homework assignments, in-class activity handouts, and for some concepts, helpful handouts and links to outside review materials. Use your district login (usually your 6-digit ID number). In addition, much of the homework in the course will be completed with Mastering Biology (http://www.masteringbiology.com/). You will be provided with instructions for access Mastering Biology the first week of school.

**Abilene ISD email:** Since class announcements will be routinely distributed via email, you will need to regularly check your Abilene ISD email account. Please check your Abilene ISD email daily. All course correspondence will be through your Abilene ISD email only (I will not respond to email from other accounts).

**Lecture:** A typical class meeting will combine mini-lectures, discussions, group activities, multimedia presentations, and other demonstrations and activities to give you an opportunity to learn biological concepts in an active manner as possible. Each segment of the course is structured around one or more conceptual units that can be interpreted or solved by applying selected biological concepts. As a member of the class you are also invited to:

- Ask questions, no matter how naive they seem to you. I will do my best to offer you a satisfactory answer. The only dumb question is one that isn’t asked.
- Ask for help and/or clarification. Don’t suffer in silence. I can’t help you learn if I don’t know you’re confused or if my instructions are unclear.
- Use your group members as study partners! Review exam review questions or notes together. Group learning can be powerful and is often beneficial in a course like biology.
# BIO 1408 Spring 2018 Schedule (Tentative)

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<thead>
<tr>
<th>Week</th>
<th>Concepts</th>
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<tbody>
<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt; six weeks 1 1/7 - 1/11</td>
<td>DNA and the Molecular Basis of Inheritance - Ch 13</td>
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<tr>
<td>2 1/14 - 1/18</td>
<td>Gene Expression, from Genes to Proteins - Ch 14</td>
</tr>
<tr>
<td>3 1/21 - 1/25</td>
<td>Molecular Biology Techniques with DNA and RNA</td>
</tr>
<tr>
<td>4 1/28 - 2/1</td>
<td>Molecular Biology Techniques with DNA and RNA</td>
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</tbody>
</table>
| 5 2/4 - 2/8 | Exam 4  
Regulation of Gene Expression - Ch 15 |
| 6 2/11 - 2/15 | Genomes and their Evolution - Ch 18 |
| 5<sup>th</sup> six weeks 7 2/16 - 2/22 | Development, Stem Cells, and Cancer - Ch 16 |
| 9 3/4 - 3/8 | Species Interactions - Ch 41, Ecosystems and Energy - Ch 42 |
| 10 3/11 - 3/15 | Spring Break |
| 11 3/18 - 3/22 | Exam 5  
Membrane Transport and Cell Signaling - Ch 5 |
<p>| 12 3/25 - 3/29 | Cellular Respiration and Fermentation - Ch 7 |
| 13 4/1 - 4/5 | Photosynthesis - Ch 8 |</p>
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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>6&lt;sup&gt;th&lt;/sup&gt; six weeks</td>
<td>14</td>
<td>4/8 - 4/12</td>
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<tr>
<td></td>
<td>15</td>
<td>4/15 - 4/19</td>
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<td></td>
<td>16</td>
<td>4/22 - 4/26</td>
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<td>17</td>
<td>4/29 - 5/3</td>
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<td>18</td>
<td>5/6 - 5/10</td>
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<td>19</td>
<td>5/13 - 5/17</td>
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<td></td>
<td>20</td>
<td>5/20 - 5/24</td>
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<td>Last Week of School. Graduation Week.</td>
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Student Information Sheet–BIOLOGY 1408

You are required to sign and return this sheet to me. By doing so you acknowledge that you have received, read, and understand the syllabus and what is required of you to be successful in this course.

The information contained in this syllabus is your guide to the rules of this course. If you do not understand what is expected of you or the impact of your actions (i.e. missing a class), you should come and see me ASAP (within the first week of class).

YOUR NAME (PRINT): ___________________________________________________________________
(Note: If you prefer to go by your middle name or a nickname, please indicate that in parentheses. Ex. Joseph Student (Joe))

I acknowledge that I have received and accept the responsibility for the information in the class syllabus. I also acknowledge that I have read and will abide by the ASU Honor Code and Abilene ISD Grading Policy.

NAME (signature): ____________________________________________________________________