

ADVANCED PLACEMENT BIOLOGY

COURSE GOALS: TO PROVIDE COLLEGE BOUND STUDENTS WITH AN IN DEPTH STUDY OF THE BIOLOGICAL SCIENCES THROUGH A MOLECULAR APPROACH, SO THAT STUDENTS WILL OBTAIN THE BACKGROUND NECESSARY TO SUCCEED IN COLLEGE LEVEL BIOLOGY COURSES. STUDENTS WILL ALSO RECEIVE AN EXTENSIVE QUANTITATIVE LABORATORY EXPERIENCE.

COURSE CONTENT:

- I. Molecules and Cells
 - A. Chemistry of Life
 - 1. Diffusion and osmosis lab
 - 2. Enzyme Catalysis lab
 - B. Cells
 - 1. Mitosis and meiosis lab
 - C. Cellular Energetics
 - 1. Plant pigments and photosynthesis lab
 - 2. Cell respiration lab

- II. Heredity and Evolution
 - A. Heredity
 - 1. Molecular biology lab
 - B. Molecular Genetics
 - 1. Genetics of organisms lab
 - C. Evolutionary Biology
 - 1. Population genetics and evolution lab

- III. Organisms and Populations
 - A. Diversity of Organisms
 - 1. Transpiration lab
 - B. Structure and Function of Plants and Animals
 - 1. Physiology of the circulatory system lab
 - 2. Animal behavior lab
 - C. Ecology
 - 1. Dissolved oxygen and primary productivity lab

COURSE REQUIREMENTS:

1. COMPLETE DETAILED QUESTION GUIDED OUTLINES FOR EACH CHAPTER
2. COMPLETE ALL READING ASSIGNMENTS. ***THIS IS VITAL !!!*** TO MAINTAIN THE NECESSARY SPEED TO COMPLETE THE COURSE, YOU MUST BE FAMILIAR WITH THE MATERIAL ***BEFORE*** WE BEGIN TO DISCUSS IT !!!
3. WRITTEN LAB REPORTS OR SECTIONS OF FORMAL LAB REPORTS WITH DETAILED ANALYSIS FOR SELECTED AP LABS. THIS IS ***ESSENTIAL*** DUE TO THE FACT THAT ONE OR MORE OF THE ESSAY QUESTIONS ON THE AP EXAM MAY INVOLVE ALL OR PART OF ***ANY*** OF THE LAB ACTIVITIES.
4. TWO PROJECTS, ONE EACH TERM. TERM ONE IS THE PLANT PROJECT. TERM TWO WILL BE A BODY SYSTEMS PROJECT TO COVER THE PHYSIOLOGY MATERIAL.
6. REVIEW SESSIONS IN THE SPRING, DURING MUTUALLY CONVENIENT EVENINGS (ONCE A WEEK) FROM 7-9 IN ROOM 129. THE DATE OF THE EXAM IS ***MAY 12, 2008***.

ASSESSMENT

1. CLASS DISCUSSIONS - ALL STUDENTS ARE EXPECTED TO COME TO CLASS PREPARED TO DISCUSS THE READING ASSIGNMENT WITH FAMILIARITY. A QUESTION GUIDED OUTLINE WILL ASSIST STUDENTS IN THIS PROCESS.
2. THE PROJECTS.
3. BI-WEEKLY QUIZZES. (MULTIPLE CHAPTERS)
4. AP STYLE, FREE RESPONSE, GRADED QUESTIONS.
5. END OF CHAPTER QUESTIONS.
6. SECTION TESTS - SIMILAR IN STYLE TO THE AP EXAM - 50 MULTIPLE CHOICE QUESTIONS AND TWO BROAD SCOPE ESSAY QUESTIONS. TESTS WILL COVER ***SIX OR MORE*** CHAPTERS.

GRADING : GRADES ARE DETERMINED BY A PERCENTAGE DERIVED FROM THE POINTS EARNED BY A STUDENT VERSES TOTAL POINTS POSSIBLE. POINTS ARE EARNED FROM HOMEWORK, LABS, QUIZZES AND TESTS. THESE ITEMS ARE WEIGHTED AS FOLLOWS: TESTS 40%, WEEKLY QUIZZES 20%, LAB REPORTS 15%, PROJECT 15%, AND HOMEWORK 10%

PERSONAL BACKGROUND : 29TH YEAR TEACHING, 27TH AT ELCO.
I AM THE CURRENT ADVISOR TO THE ENVIROTHON CLUB AND THE ENVIROTHON TEAMS. TEAM MEMBERS SURVEY LOCAL STREAMS AND ASSIST WITH THE STREAM STUDY ACTIVITIES FOR THE 5TH GRADE CAMPING EXPERIENCE. I HELPED ESTABLISH THE RENAISSANCE PROGRAM FOR ACADEMIC ACHIEVEMENT AT ELCO HIGH SCHOOL AND CURRENTLY WORK WITH THE STUDENT RECOGNITION COMMITTEE. MY UNDERGRADUATE DEGREE WAS EARNED AT BLOOMSBURG UNIVERSITY AND I HAVE COMPLETED POST GRADUATE WORK (57 CREDITS) FROM VARIOUS UNIVERSITIES INCLUDING MILLERSVILLE, EAST STROUDSBURG, WILKES, AND PENN STATE. I AM A MEMBER OF THE PENNSYLVANIA STATE SCIENCE TEACHERS ASSOCIATION, NATIONAL SCIENCE TEACHERS ASSOCIATION, AND THE LEBANON COUNTY EDUCATIONAL HONOR SOCIETY.

TEACHER ACCESS : 12:40 PM THROUGH 1:55 PM (PREPARATION PERIOD) AND 2:30 PM UNTIL 3:00 PM (OFFICE HOURS). PLEASE FEEL FREE TO CALL THE SCHOOL OFFICE (866-7447) ANYTIME DURING NORMAL SCHOOL HOURS AND LEAVE A MESSAGE. I WILL RETURN YOUR CALL AT THE EARLIEST MUTUALLY CONVENIENT TIME OR CONTACT ME VIA E-MAIL AT : laponick@elcosd.org (please note the new address !)