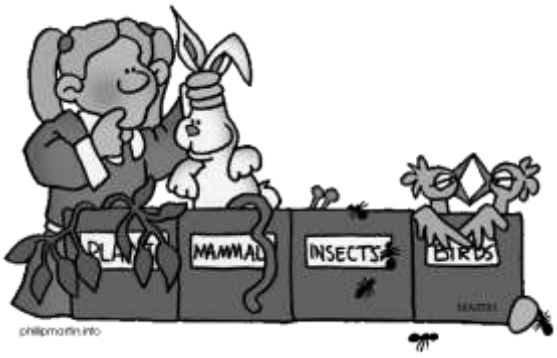


Advanced Placement Biology
Course Syllabus
2016-2017 School Year

Teacher: Mrs. Farina (melissa.farina@hak12.org)
Location: Room 45
Scheduled Meeting Times:
Class – Period 3 & Period 8: Day 2
Lab – Period 2, Days 4 & 6
Tutoring Hours: Before or after school by appointment only;
8th Period – proper **pre-signed** pass required

Course Description:

This inquiry-based course is designed to be the equivalent of a college introductory biology course, usually taken by biology majors during their first year. The AP biology course is designed for students to take after the successful completion of a first course in high school biology. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology. AP inquiry instruction incorporates teaching methods that encourage students to develop and build knowledge and encourage an understanding of how scientists study the natural world. The model or approach to inquiry instruction may vary for investigations based on the amount of necessary content or skill scaffolding, the extent of teacher involvement to support that scaffolding, and student readiness. This very intense course will cover the topics outlined below.

Tentative Course Outline:

Unit 1: Ecology	Ch. 51, 52, 53, 54, 55, & 56
Unit 2: Evolution	Ch. 22, 23, 24, 25, & 26
Unit 3: Biochemistry	Ch. 2, 3, 4, & 5
Unit 4: Microbiology & Immune System	Ch. 19, 27, & 43
Unit 5: Cellular Structure & Transport & Circulatory System	Ch. 6, 7, & 42
Unit 6: Cell Communication, Nervous & Endocrine Systems	Ch. 11, 39, 45, 48, 49, & 50
Unit 7: Cellular Metabolism	Ch. 8, 9, & 10
Unit 8: Cellular Division & Reproduction	Ch. 12, 13, & 16
Unit 9: Genetics	Ch. 14 & 15
Unit 10: Gene Expression	Ch. 17 & 18
Unit 11: Biotechnology	Ch. 20 & 21

Course Materials:

- **Textbook:** *AP Edition Biology, Campbell & Reece (9th ed.)*
- Notebook –A **three-ring binder** is required to keep and organize handouts and to take notes. This should be brought with you to class every day.
- Lab Notebook – A **separate three-ring binder** is also needed for labs. All lab notes and data will be kept in this binder. This will be checked and used to complete informal and formal lab reports.
- **Pencil** – This should be brought with you to class every day.
- Scientific or Graphing Calculator – recommended, but not required
- Color pencils, markers, and/or crayons – recommended, but not required

Policies and Procedures:

Classroom Expectations:

- **Be Respectful** to everyone and everything. You have to give respect to get respect.
- **Be Proud** of yourself, your accomplishments, your class, and your school.
- **Be Present and Prompt** You can't learn if you are not here.
- **Be Prepared** with all the proper materials (textbook, notebook/folder, assignments, pencil, etc.), as well as completing assignments on time.
- **Be Productive** Be willing to participate. Ask questions. Be a positive influence. Work to your ability.
- Cover your textbook (if applicable)
- Keep a good, neat, comprehensive notebook. Develop good organizational and study habits.
- Sharpen pencils, get paper, and request lavatory privileges at the beginning of the period.
- Make up classwork, assignments, quizzes, and/or tests as soon as possible. (see absentee policy below)
- Be responsible for yourself and your actions.
- Be well rested and alert for class.
- Be considerate. Once class starts only talk or walk around when appropriate.
- Eating is only allowed in the café.
- Profane, obscene, or suggestive language and behavior will not be tolerated.
- Chronic disruptive behavior will not be tolerated. Everyone will enjoy a positive learning environment.
- There is not excuse for poor manners.
- Follow all verbal and written directions.
- Follow proper laboratory safety.
- Remain in your seats until I dismiss you. The bell only signals the end of class.
- Remember that I am always available to help you. Be sure to ask for it and seek it early.

Disciplinary Consequences:

- **First Offense –** Student will be given a warning by the teacher explaining the infraction and why such behavior is not appropriate. At this time student and teacher will complete the "Respect & Responsibility Behavioral Review" form per the school discipline code.

- **Second Offense –** An email will be sent home to a parent/guardian discussing the student's infraction per the school discipline code.

- **Third Offense –** A discipline referral will be made to the high school office and the student will be assigned a one-hour detention per the school discipline code.

- **Fourth & Subsequent Offenses –** A discipline referral will be made to the high school office and the student will be assigned a two-hour detention per the school discipline code.

Depending on the nature of the infraction, the teacher reserves the right to impose initial consequences at a higher level.

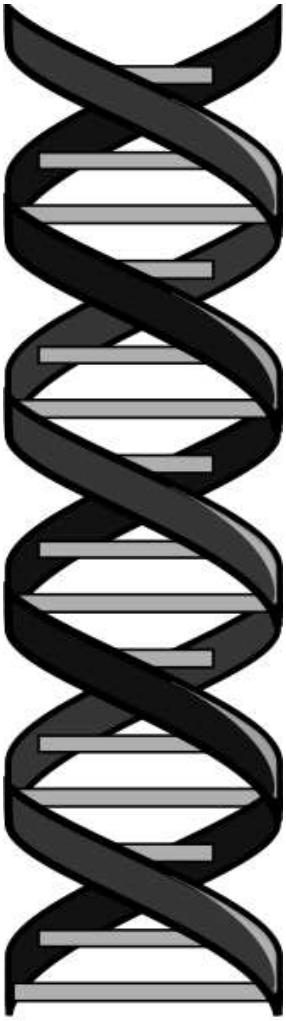
Should an infraction occur in a laboratory setting, the student will be sent back to his/her seat and receive a zero for the laboratory activity. Given a severe enough infraction, a visit to the principal's office may be in order and/or possible removal from laboratory activities for a given amount of time possibly up to the remainder of the course.

For severe or repeat behavior, the teacher may request a parent/student/teacher conference to discuss the issue(s). If needed, a principal and/or guidance counselor may be asked to participate in the conference as well provide additional input on the student's behavior.

Absentee Policy:

If a student is absent, it is their responsibility to make-up any and all missed work.

- There is a binder located with their class bin that will include the daily agenda and homework, as well as any missed worksheets. The student is expected to consult this binder as soon as he/she returns to class.
- Class notes should be obtained from a classmate.
- The student will be expected to take any announced quizzes the day he/she returns to class unless otherwise told by the teacher. It is the responsibility of the student to schedule time to make up these assessments.
- The student should consult with the teacher to schedule a time to make any missed tests. The student has one week to make-up the test unless otherwise told by the teacher. It is the responsibility of the student to schedule time to make up these assessments.
- The student is expected to make-up any missed laboratory activities. It is the responsibility of the student to schedule time to make up these activities.
- Any work due on the day of the absence is expected to be turned in on the day when he/she returns to class unless otherwise told by the teacher.



Assignments & Grading:

The student will receive grades on various assignments throughout this course. Such assignments may include, but are not limited to:

- Online Activities
- Laboratory Activities
- Tests/Quizzes
- Projects
- Homework
- Classwork
- Notebook Checks
- Participation

Grades are calculated by a point system. Each grade is assigned a particular number of points. Your total number of points earned is divided by the total number of possible points.

Late work is unacceptable and NO credit will be awarded for late work. Late work includes: incomplete, at home or in locker, thus resulting in NO credit. Late lab reports will receive half credit for one day late and zero credit for 2+ days late. Excused absences or extended absences will be discussed on an individual basis.

Unit Assessments

Unit assessments will take on various forms. There will be exams that contain previously used AP Exam multiple-choice questions or new grid-in mathematical type questions, tests that use AP Exam free-response questions of both the multi-part and single-part type, or laboratory investigations based on analysis and conclusions or full, formal lab reports.

AP Laboratory

The following inquiry-based labs are guidelines for AP biology courses. They are grouped according to the 4 big ideas, where at least 2 labs must be performed under each topic, for a total of 8 required laboratories.

Big Idea 1: Evolution

1. Artificial Selection
2. Mathematical Modeling: Hardy-Weinberg
3. Comparing DNA Sequences to Understand Evolutionary Relationships with BLAST

Big Idea 2: Cellular Processes: Energy & Communication

4. Diffusion & Osmosis
5. Photosynthesis
6. Cellular Respiration

Big Idea 3: Genetics and Information Transfer

7. Cell Division: Mitosis & Meiosis
8. Biotechnology: Bacterial Transformation
9. Biotechnology: Restriction Enzyme Analysis of DNA

Big Idea 4: Interactions

10. Energy Dynamics
11. Transpiration
12. Fruit Fly Behavior
13. Enzyme Activity

AP Biology Exam

The AP exam is divided into two sections. Section I is comprised of 55 multiple-choice questions that test both scientific facts and their applications and 5 grid-in questions that test mathematical manipulation/calculation. You have a total of 90 minutes for this section and it counts as 50% of your total score. Section II is free-response, where you will be asked to respond to 2 multi-part questions, 1 of which connects to the lab experience for 25% of your total score and averages 20-25 minutes per question. Finally, there will be 7 single-part questions (short answer) that make up the final 25% of your total score and average 3-10 minutes per question.

AP Biology Course Syllabus Signature Page
2016-2017 School Year

After reading the course syllabus, please fill out this following information. After, please detach this completed page and return to the teacher. Thank you!

I, _____(student name - print) have read and understand the rules, procedures, and expectations that I must follow in this course. I also understand the consequences should I not comply with these expectations.

_____ _____ _____
Student Signiture Class Period Date

_____ _____
Parent Signiture Date

Day – _____

Evening – _____
Parent(s)/Guardian(s) Preferred Contact Phone Number

_____
Parent(s)/Guardian(s) Email Address

E-Newsletters: *(please check if applicable)*

_____ I would like to receive an e-newsletter at the start of ***each week***. This newsletter would contain a tentative schedule of topics/activities to be done in class, as well as tentative homework assignments.

Please list below any special accommodations (i.e. needing to seat in the front of the room to see, allergies, etc.) or other important information that the teacher should be aware of.