

ADVANCED PLACEMENT BIOLOGY
Currituck County High School
Mr. Andrejkovics
2022-2023

COURSE SYLLABUS

Course Overview

This course is designed to offer students a solid foundation in introductory college-level biology by structuring the course around the four big ideas, enduring understandings, and science practices. Furthermore, this will assist students in developing an appreciation for the study of life and help them identify and understand unifying principles within a diversified biological world. What we know today about biology is a result of scientific inquiry. Science is a way of knowing. Therefore, the process of inquiry in science and developing critical thinking skills is the most important part of this course. At the end of the course, students will have an awareness of the integration of other sciences in the study of biology, understand how the species to which we belong is similar to, yet different from, other species, and be knowledgeable and responsible citizens in understanding biological issues that could potentially impact their lives.

Introduction to Advanced Placement:

Advanced Placement courses were developed by the College Board over fifty years ago as a result of pressure by well-known northeastern prep schools to permit accelerated secondary students to receive college credit for courses. AP Biology was one of the first such courses developed and has a well-established and successful history. The Advanced Placement curriculum is established by committees of college professors, and secondary instructors. Since the comprehensive outlines and high expectations are driven by the university systems in the United States, the AP tests are widely accepted. The United States is the envy of the world when it comes to post-secondary education! AP Biology is designed to be a two-semester introductory college course for biology majors and is the only AP science course that has mandatory laboratory requirements that are tested on the exam. You can expect to receive up to 8 college credits (3 per semester lecture, 1 per semester lab) if you achieve a successful score on the exam.

AP Credit Policy Search <https://apstudent.collegeboard.org/creditandplacement/search-credit-policies>

Instructor

Thomas Andrejkovics
B.S. Biology
Science Department Chair
CCHS 2020-2021 Teacher of the Year
CCHS Science Olympiad Coach
Email: tandrejkovics@currituck.k12.nc.us
Phone: 252-453-0014 ext. 3214

Textbook

Hillis, David M., David Sadava, Richard W. Hill, and Mary V. Price. *Principles of Life, for the AP Course*. 2nd edition. Bedford, Freeman and Worth Publishing Group.

Materials

School issued Chromebook or personal laptop (charged and ready to go)
3-ringed binder with loose-leaf paper or 5-star notebook
Pens, pencils, and colored pencils
Calculator

Course Organization

This course is structured around the four big ideas and the enduring understandings identified in the Curriculum Framework. All essential knowledge will be taught, and all learning objectives will be addressed through this curriculum. Students will be given a copy of the big ideas and enduring understandings to self-monitor mastery of these major organizing tools.

The four Big ideas are:

- **Big idea 1:** The process of evolution drives the diversity and unity of life.
- **Big idea 2:** Biological systems utilize free energy and molecular building blocks to grow, reproduce, and maintain dynamic homeostasis.
- **Big idea 3:** Living systems store, retrieve, transmit and respond to information essential to life processes.
- **Big idea 4:** Biological systems interact, and these systems and their interactions possess complex properties.

In addition to the four Big Ideas, the new curriculum emphasizes Seven **SCIENCE PRACTICES** which will form the basis of our practical laboratory investigations and activities.

- **Science Practice 1:** The student can use representations and models to communicate scientific phenomena and solve scientific problems.
- **Science Practice 2:** The student can use mathematics appropriately.
- **Science Practice 3:** The student can engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course
- **Science Practice 4:** The student can plan and implement data collection strategies appropriate to a particular scientific question.
- **Science Practice 5:** The student can perform data analysis and evaluation of evidence.
- **Science Practice 6:** The student can work with scientific explanations and theories.
- **Science Practice 7:** The student is able to connect and relate knowledge across various scales, concepts, and representations in and across domains.

Class Format

The vast amount of material will be covered in a two-semester alternating day format, with the national AP exam to be administered on **Wednesday, May 10th, 2023**. Our class meets every Tuesday, Thursday, and alternating Friday's for approximately 90 minutes during 2nd bell. During this time, you will be engaging in direct instruction, hands-on activities, simulations, and laboratory investigations that will assist in your understanding of the material. On Mondays, Wednesdays, and alternating Fridays you will report to my class for study hall. This is an opportunity for you to complete required assignments for this course and receive assistance when needed. This time can also be used to complete assignments outside the scope of this course. It will be your responsibility to manage your workload throughout the year.

The Investigative Laboratory Component

Laboratory investigations will make up a minimum of **25%** of instructional time. Students will conduct a variety of inquiry-based investigations. Supplemental labs and activities are also used to widen the range of topics covered. By undertaking a variety of investigations throughout the course, all seven science practice skills will be used by students on a regular basis with the goal of leading students toward open inquiry investigations. The science practice skills need to be honed over the entire course and reinforced through opportunities to make observations, ask questions based on those observations, and investigate their own questions both in and out of the designated lab times. It is critical for me, as an instructor, to help students discover how the biological world works as we know it and to learn how to investigate the biological world that is still unknown.

Homework & Readings

Homework will take many forms and is designed to help with student understanding of the current unit being studied. Not all assignments will be collected for a grade but rather used for the development of class discussions or other activities. Homework assignments for each unit include, but are not limited to, the following; reading & chapter outlines, pre-laboratory reading, practice assessments, formal/informal laboratory reports, and projects. Students will also frequently be asked to watch videos and use the textbook resources on the current topic to build on assigned readings.

Utilizing the textbook and topic presentations, as assigned in class, is extremely important for success in this course. There is not enough time to discuss all the information you are responsible for learning during class time so it is expected that you will acquire much of this by a careful and consistent reading use of the resources. Class time will be spent on more difficult concepts and answering specific questions you have as a result of text reading or class discussion and lab work.

Grading

The state has issued a new 10-point grading scale that is to be used statewide. It goes as follows:

A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

The science department issues the following grading scale for each science class:

Exams	40%
Labs/Quizzes	30%
Classwork/Homework	30%

Please note that the end-of-year exam will not be applied to your final grade in this course. Instead, each semester will be weighted 50% and averaged together to formulate your final grade. **Failure to take the AP Biology Exam will result in receiving a final grade that will be weighted as if you took an honors level course.**

Tests

Each one of your unit tests will be a “mini AP” exam based on the new format consisting of multiple choice and free-response questions. Unit review guides will be available prior to each exam to assist in studying. **Each exam will be curved to adjust your scores due to the rigor of the test questions.**

Late Work Policy

Students who fail to complete an assignment by the assigned due date will still be allowed to complete the work up to 3 days after the assignment is due. Any assignment turned in after the 3rd day will **not** be accepted.

Calendar School Days Late	Grade Impact
1 school day	-10% off total possible points
2 school days	-30% off total possible points
3 school days	-50% off total possible points
After 3 school days	Student will receive a 0

NOTE: Stipulations for extended time as set forth in IEPs and 504s must be complied with prior to the late assignment policy taking effect.

If there are extenuating circumstances (i.e., personal crises, internet access...), teacher discretion may be used on a case by case basis.

A student who does not work in class is making a choice to be penalized according to the late work policy.

- If the student refuses to work and/or becomes a behavioral issue, disciplinary actions should be taken by the teacher.
- If the assignment is a timed task or activity and a student refuses to provide a genuine attempt, a zero will be assigned and will be noted in PowerSchool.
- If an assignment or task is intended to be completed during one class period and a student refuses to provide a genuine attempt, a zero will be assigned and will be noted in PowerSchool.

Discipline

Currituck County High School must be a safe and disciplined environment in order for teachers to teach and students to learn. Standards for behavior are established to foster a safe and disciplined environment. Behavior that detracts from a student's ability to profit from instruction or interferes with the rights of others warrants disciplinary action. The intent of any disciplinary action is to bring about a positive change in the student's behavior.

The [Currituck County High School Discipline Handbook](#) will be utilized to address any misbehaviors that take place in the classroom. It is the responsibility of both the parent(s)/guardian(s) and the student to familiarize themselves with these policies.

Electronic Device Policy

Cell phones, smart watches, and earbuds are not permitted for use during instruction time. These devices are to be kept out of sight to limit distractions. Failure to do so will result in disciplinary action for noncompliance and insubordination.

Academic Integrity

Students are expected to complete their own lab reports, research, and other writing assignments. Absolutely no plagiarism of any kind will be tolerated. While I understand that students will have similar lab data when in the same groups, it is expected that your data analysis, conclusions and research be written in your own words. Expect me to be vigilant in checking your references and online sources. Any student that is found cheating or plagiarizing will receive a zero for that assignment with the potential for further escalation. In addition, your parent/guardian will be notified of the incident and you will be referred to the honor court.

Tardies and Absences

Attendance will be taken during all class sessions. If you are absent, please see our Google Classroom agenda for the day(s) you missed. You will be required to make up any work that is missed during your absence. Documentation for excused absences should be emailed to Mrs. Porr.

Power Time

Power Time will be utilized for the purpose of remediation, enrichment, and to complete missing assessments. If you wish to receive extra help or have concerns that need to be addressed, please feel free to contact me prior to Power Time to set up a meeting. Assessments can only be made up if a legitimate reason is provided in advance.

AP Exam

All AP students are **required** to take the AP Biology Exam on **Wednesday, May 10th, 2023**. The AP Biology Exam assesses student understanding of the science practices and learning objectives outlined in the course framework. The exam is 3 hours long and includes 60 multiple-choice questions and 6 free-response questions. A four-function, scientific, or graphing calculator is allowed on both sections of the exam. The details of the exam, including exam weighting and timing, can be found below:

Unit Exam Weighting

- 1: Chemistry of Life (8–11%)
- 2: Cell Structure and Function (10–13%)
- 3: Cellular Energetics (12–16%)
- 4: Cell Communication and Cell Cycle (10–15%)
- 5: Heredity (8–11%)
- 6: Gene Expression and Regulation (12–16%)
- 7: Natural Selection (13–20%)
- 8: Ecology (10–15%)

Advanced Placement Biology Fall 2022-23 Syllabus

You may keep the syllabus for future reference. Please return this page signed and dated by Tuesday, August 30, 2022.

STUDENT: I have read the syllabus and understand it.

Student's Name: _____

Student's Signature: _____ **Date:** _____

PARENT/GUARDIAN: I have read this syllabus, and understand it.

I, the parent or guardian of _____, understand the expectations and policies of this course.

Parent/Guardian Signature: _____ **Date:** _____

Please indicate your preferred method of communication (select at least one):

- ☐ Email
- ☐ Phone Call
- ☐ Text

Parent/Guardian Name: _____ **Phone # :** _____

Email Address: _____

Parent/Guardian Name: _____ **Phone # :** _____

Email Address: _____

Below you may provide any other pertinent information that you feel would be relevant to the teacher.