

NOUVEL CATHOLIC CENTRAL HIGH SCHOOL

ADVANCED PLACEMENT BIOLOGY

COURSE SYLLABUS

COURSE DESCRIPTION:	<p>This is an intensive, college-level course designed for 11th and 12th grade students planning on pursuing further studies in science. In addition to covering specific information on a wide variety of biological topics, there are recurring themes in science in general and biology in particular that will be stressed throughout the year.</p> <p>Students are strongly encouraged to take the Advanced Placement Biology Exam administered by the College Board in May. Students who pass the exam may earn college credit. Each university's policy on accepting AP scores is different. Students are encouraged to contact their preferred university for that information.</p> <p><i>Prerequisites: Successful completion of one year each of Biology and Chemistry with a "B" average or higher. Excellent work ethic and personal responsibility are also critical skills.</i></p>
MAJOR COURSE GOALS:	<p>As prescribed by The College Board, Advanced Placement Biology is organized into four "Big Ideas": Evolution, Energy Transfers in Living Organisms, Information Transfer, and Interaction of Biological Systems. Upon successful completion of this course, the learner will understand the following topics:</p> <ol style="list-style-type: none">1. Biological systems and how they work can be described and figured out through scientific experimentation.2. Living things are energy-rich, complex chemical structures.3. Cells are the unit of structure and function in living things.4. Organisms store, transfer, and transform the energy needed to live.5. Organisms have specialized structures to carry out life functions.6. The functions of the human body rely upon multiple body systems whose functions are interdependent.7. Organisms maintain an internal balance while the external environment changes.8. Matter and energy are transformed as they are transferred through and

	<p>ecosystem.</p> <p>9. Ecosystems are characterized by both stability and change on which human populations can have an impact.</p> <p>10. Through cell division, mitosis explains growth and specialization while meiosis explains genetic continuity.</p> <p>11. DNA carries the coded recipes for building proteins.</p> <p>12. All cells contain a complete set of genes for an organism but not all genes are expressed in each cell.</p> <p>13. Evolution provides a scientific explanation for changes seen in living organisms on Earth.</p>
COURSE ASSESSMENT PLAN:	<ul style="list-style-type: none"> • Daily work includes whole-class lecture and discussion, laboratory activities, and homework. Homework is normally end-of-chapter questions. • Word Ending Quizzes—Students will be given a packet of biology-related prefixes and suffixes that they will be tested on throughout the year. Quizzes will be on the first Friday of each month (with the exception of January, April, and June). • Approximately 60% of the grade is homework and laboratory activities while 40% of the grade is tests and quizzes. <ul style="list-style-type: none"> ○ <i>These percentages vary slightly from one marking period to the next.</i>
SUPPLIES AND MATERIALS NEEDED:	<ul style="list-style-type: none"> • General—Three-subject spiral notebook and pen (blue or black) or pencil for note-taking, and a folder. Occasionally students will need a calculator, graph paper, and colored pencils. • Texts—The textbook for this class is “Biology: Life on Earth (6th edition)” by Teresa Audesirk, Gerald Audesirk, and Bruce E. Byers, © 2002. Students will be issued a textbook at the beginning of the year.
EXTRA HELP:	<p>Extra help is available before school (most days) and after school by appointment. The end-of-chapter questions can be particularly challenging and the student is encouraged to seek teacher assistance in answering those questions, especially at the beginning of the year.</p>
INSTRUCTIONAL PHILOSOPHY:	<p>The goals for the AP Biology student are two-fold. First, the students will finish the course with a greater appreciation for the interconnectedness of nature and a deeper knowledge of how the living world around them works. Second, the student will be prepared to be successful on the AP Biology exam. Everything done in class revolves around those goals.</p>

<p>MAJOR COURSE PROJECTS AND INSTRUCTIONAL ACTIVITIES:</p>	<p>Major projects will center around laboratory activities as time permits. The following labs are part of the College Board’s prescribed course of study for Advanced Placement Biology, with one lab required for each of the four Big Ideas:</p> <ul style="list-style-type: none"> ◆ Artificial Selection (Big Idea One) ◆ Diffusion and Osmosis (Big Idea Two) ◆ Cell Division: Mitosis and Meiosis (Big Idea Three) ◆ Enzyme Activity (Big Idea Four)
<p>CLASSROOM EXPECTATIONS:</p>	<p>Everything that is expected of the student can be summed up in three simple statements:</p> <ol style="list-style-type: none"> 1. Be respectful of yourself and others. 2. Be respectful of any and all materials found in the classroom and in the possession of yourself or others. 3. Do as the teacher requests to the best of your ability. <p>Failure to abide by these guidelines will result in verbal reprimand, detention, or removal from class, depending on the severity and/or repetitive nature of the offense.</p>
<p>HOMEWORK POLICY AND GRADING SCALE:</p>	<ul style="list-style-type: none"> • Grades are calculated based on a point system. In addition to homework, tests, quizzes, and projects, students will also be graded on the structures they build on their Maniken™. Letter grades will be determined using the scale set forth in the Student Handbook. • Late work—Homework is expected to be turned in on time and be of high quality. In alignment with Science Department policy, homework will be accepted one day late for a maximum of half credit. • Extra credit—The student will have an opportunity to earn a few extra points each quarter. The student is to find science news articles from a newspaper or a source such as www.sciencedaily.com and write a short summary of the article. The article and the summary must be turned in together for a maximum score of two points per article. The student may do more than one article per quarter as the total number of points allowed will vary by quarter. No magazine articles will be accepted.
<p>CONTACT INFORMATION:</p>	
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