

### General Course Information

Course Name: Biology	
Department: Science	Grade Level(s): 9, 10
Duration/Credits: 1 year/1 credit	Prerequisites: none
BOE Approval Date: December 2022	Course Code: H3120- Honors Biology H3110- Regular Biology H3100- Biology Concepts
Course Description:	
The topics covered in this course include molecules of life, cell structure and function, cell reproduction, genetics, cell energy, ecology, and natural selection.	
Course Rationale:	
In today's world, scientific literacy is a necessity for everyone in order to make wise choices using scientific information. Post-secondary experiences demand advanced skills, requiring people to learn, reason, think creatively, make decisions, and solve problems. An understanding of biological science and scientific processes contribute to these skills.	
Course Objectives:	
<ol style="list-style-type: none"><li>1. The student will discuss cellular structure and function such as cellular transport, cellular energy and basic cellular biochemistry with 80% accuracy. Assessed on End of Course Exams, Biology. (A+: Reading)</li><li>2. The student will read about and discuss basic DNA structure and function and how it relates to inheritance patterns and evolutionary theories with 80% accuracy. Assessed on End of Course Exams, Biology. (A+: Speaking)</li><li>3. The student will construct a model of how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</li><li>4. The student researches and classifies living organisms and understands their interactions with both biotic and abiotic factors with 80% accuracy. Assessed on End of Course Exams,</li></ol>	

Biology. (A+:Research)

5. The student will explain how various biotic and abiotic factors affect the carrying capacity and biodiversity of an ecosystem using mathematical and/or computational representations.

6. The student will design, perform and analyze in writing scientific experiments with 80% accuracy. Assessed on End of Course Exams, Biology. (A+: Writing)

**Standards Alignment:**

NGSS with correlation to MLS noted  
[Standards List](#)