

**COURSE TITLE:** Biology  
**COURSE LENGTH:** Full Year  
**PREREQUISITE:** None  
**GRADE LEVEL:** 9th

**GENERAL DESCRIPTION:** Biology, the study of life, includes investigations into the cell, the molecular basis of heredity, biological evolution, inter-dependence of organisms, the behavior of organisms, and matter, energy, and organization in living systems.

**MODE OF PRESENTATION:** Demonstrations, lecture, labs, videos, presentations, group and class discussions, outside readings, notes, group and individual study, etc.

**GRADING PROCEDURE:** Tests, quizzes, worksheets, labs, projects, reading summaries, etc. All items as listed above are given point amounts and a total point accumulation is figured to arrive at a percent and final grade. Attitude, promptness of work, and general class citizenship will be considered.

**STUDENT SKILLS, KNOWLEDGE TO BE GAINED:**

1. Students will gain an organized method of knowledge in biology and ecology.
2. Students will gain a thorough knowledge of cell structures and function.
3. Students will understand DNA function and formation and how it relates to the make-up of an organism.
4. Students will be introduced to the five-kingdom approach to the classification of living things.
5. Students will gain general knowledge and understanding of plant structure and function.
6. Students will gain knowledge and understanding of different organisms and their classification.
7. Students will gain the knowledge and background of the scientific procedure in order to complete their science fair experiment.
8. Students will gain experience with lab techniques and technology.

**COURSE TITLE:** Physical Science  
**COURSE LENGTH:** Full Year  
**PREREQUISITE:** Biology  
**GRADE LEVEL:** 10

**GENERAL DESCRIPTION:** In physical science, students will study an introductory course for chemistry and physics. Students will learn about a world of science that cannot always be seen, but certainly does exist and does affect our everyday life.

**MODE OF PRESENTATION:** Demonstrations, lectures, labs, videos, projects, group and class discussion, outside readings, notes, problem solving, etc.

**GRADING PROCEDURE:** Test, quizzes, worksheets, labs, projects, reading summaries, etc. All items as listed above are given point amounts and a total point

accumulation is figured to arrive at a percent and final grade. Attitude, promptness of work, and general class citizenship will be considered.

**STUDENT SKILLS, KNOWLEDGE TO BE GAINED:**

1. Know that law of motion can be used to determine the effects of forces on objects.
2. Recognizes different classifications of matter. (The chart of matter)
3. Understands how elements are arranged in the periodic table and how this arrangement shows repeating patterns among elements with similar properties.
4. Describes the structure of an atom.
5. Identifies the types of bonding formed between atoms.
6. Demonstrates a knowledge of chemical reactions.
7. Explains the law of conservation of energy.
8. Compare between different types of simple machines.

**COURSE TITLE:** Human Anatomy & Physiology

**COURSE LENGTH:** Full Year

**PREREQUISITE:** Biology (B or better)

**GRADE LEVEL:** 11, 12

**GENERAL DESCRIPTION:** Human Anatomy and Physiology is an upper level science course, that provides information on the structural makeup and functioning of the human body. Mode of instruction will move from system to system giving information on structural makeup and will continue on to how the specific parts of the body operates.

**MODE OF PRESENTATION:** Text, lectures, labs, videos, group and individual study, class discussions, field trips, etc.

**GRADING PROCEDURE:** Grade will be based on tests, quizzes, lab participation, class attitude, presentations, etc.

**STUDENT SKILLS, KNOWLEDGE TO BE GAINED:**

1. Review basic human anatomy
2. Review basic systems of the body
3. Determine how each system functions
4. Examine some effects of disease on these systems
5. Enable the student to apply this knowledge to his/her own health

**COURSE TITLE:** Chemistry

**COURSE LENGTH:** Full Year

**PREREQUISITE:** B or better in Physical Science, Completed Algebra II or enrolled in Algebra II **with** a teacher recommendation

**GRADE LEVEL:** 11, 12

**GENERAL DESCRIPTION:** This is a basic, but comprehensive, high school chemistry

class including lecture and laboratory experiments. It includes an introduction to chemical concepts using practical issues and applications to illustrate the principles of chemistry. The language of chemistry, scientific method and measurement, experimentation with data collection, and current issues with application to chemical principles.

Subjects that are covered include but are not limited to: matter, stoichiometry, gases, thermodynamics, atomic structure, the periodic table, chemical bonds, metals, nonmetals, solutions, chemical kinetics, and organic chemistry.

This course is a prerequisite for dual credit DMACC Chemistry.

**COURSE TITLE:**        **Environmental Science**

**COURSE LENGTH:**    Full Year

**PREREQUISITE:**        Biology

**GRADE LEVEL:**        11, 12

**GENERAL DESCRIPTION:** This course is designed to provide students with a sound foundation in basic principles and unifying concepts of Environmental Science based on major themes of modern environmental sciences: humans and sustainability; science and ecological principles; sustaining biodiversity and natural resources; and sustaining environmental quality and human societies. Students will gain an awareness of the importance of Earth's systems in sustaining our daily lives, plus the scientific foundation and tools needed to apply critical thought to environmental issues.