Curriculum Map

Course Name	Anatomy and Physiology
SEPTEMBER	Chemistry review Introduction to anatomy and physiology
OCTOBER	Cells, Mitosis
NOVEMBER	Tissues and cell types
DECEMBER	Skin and body membranes
JANUARY	Skeletal system
FEBRUARY	Cranial cavity and functions
MARCH	Structure and function of muscle cells.
APRIL	Muscular system
MAY	Nervous system

Course: Anatomy and Physiology

Text: Essentials of Human Anatomy and Physiology (10th Edition). Elaine N. Marieb

Course Description:

Students will study the structural and molecular biology, basic biochemical processes, cell physiology, and anatomy and physiology of major human body systems. Main units of study include: Basic Biochemistry-matter, molecules and compounds, chemical bonds and chemical reactions, organic/inorganic compounds; Cells and tissues-Anatomy of generalized cell, membrane transport, cell division, principles of heredity, protein synthesis, body tissues; Major Systems of the Body- skin and body membranes, skeletal system, muscular system, nervous system, cardiovascular system, respiratory system, and digestive system. This course will require several labs and dissections that are necessary to gather a true understanding of the course topics.

Pre-requisites: C average in Biology II AND proficient/advanced in Biology Keystone Exam

Number of possible credits:

1 high school science

3 credits at Saint Francis University (College Biology)

4 credits at Mount Aloysius College (Anatomy & Physiology 1)

This course allows students to:

-Gain an understanding of human anatomy and physiology.

-Develop discernment in evaluating one's own understanding.

-Establish and academic approach to a subject.

-Begin to develop an understanding of the demands of a college course.

Pa Standards:

Standard - 3.1.10.A4 Describe the cell cycle and the process and significance of mitosis.

Standard - 3.1.10.A5 Relate life processes to sub-cellular and cellular structures to their functions.

Standard - 3.1.10.A8 Investigate the spatial relationships of organisms' anatomical features using specimens, models, or computer programs.

Standard - 3.1.12.A1 Relate changes in the environment to various organisms' ability to compensate using homeostatic mechanisms.

Standard - 3.1.12.A5 Analyze how structure is related to function at all levels of biological organization from molecules to organisms.

Standard - 3.1.12.A8 CHANGE AND CONSTANCY Describe and interpret dynamic changes in stable systems.