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*Academy for Health and Medical Sciences at SCVTHS*  
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**Anatomy and Physiology College Credit Course - Academy Grade 10**

**Course of Study Outline:**

- i. The Human Body: An Orientation  
Students get an overview of Anatomy & Physiology and get to know the Language of Anatomy. They understand the levels of Structural Organization, and Homeostasis
- ii. Basic Chemistry  
Students get an Introduction to Chemistry. They learn the Concepts of Matter and Energy, the Composition of Matter, Molecules and Compounds, Chemical Bonds and Chemical Reactions, Biochemistry: The Chemical Composition of Living Matter
- iii. Cells and Tissues  
Students get an overview of the Cellular Basis of Life. They comprehend the Anatomy of a Generalized Cell, Cell Physiology, Body Tissues, and Developmental Aspects of Cells and Tissues
- iv. Skin and Body Membranes  
Students learn the Classification of Body Membranes, the Integumentary System (Skin), and the Developmental Aspects of Skin and Body Membranes
- v. The Skeletal System  
Students get an overview of the Bones in our body. They can identify and describe the Axial Skeleton, Appendicular Skeleton, Joints, and the Developmental Aspects of the Skeleton
- vi. The Muscular System  
This topic provides an Overview of Muscle Tissues, Microscopic Anatomy of Skeletal Muscle, Muscle Movements, Types, and Names, Anatomy of Skeletal Muscles, and Developmental Aspects of the Muscular System
- vii. The Nervous System  
Students gain an understanding of the Organization of the Nervous System, Nervous Tissue: Structure and Function, Central Nervous System, Peripheral Nervous System, and Developmental Aspects of the Nervous System
- viii. Special Senses  
This chapter deals with our sense organs and provides insights into the Eye and Vision, the Ear: Hearing and Balance, Chemical Senses: Taste and Smell, and the Developmental Aspects of the Special Senses
- ix. The Endocrine System  
Students get an overview of the Endocrine System and Hormone Function. They are familiarized with the Major Endocrine Organs, Other Hormone-Producing Tissues and Organs, and the Developmental Aspects of the Endocrine System

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- x. Blood  
Students comprehend the Composition and Function of Blood, Hemostasis, Blood Groups and Transfusions, and the Developmental Aspects of Blood
- xi. The Cardiovascular System  
Students study the anatomy and physiology of the Heart, Blood Vessels, and Developmental Aspects of the Cardiovascular System
- xii. The Lymphatic System and Body Defenses  
Students understand the Lymphatic System, Body Defenses, and Developmental Aspects of the Lymphatic System and Body Defenses
- xiii. The Respiratory System  
This topic informs students of the Functional Anatomy of the Respiratory System, Respiratory Physiology, Respiratory Disorders, and the Developmental Aspects of the Respiratory System
- xiv. The Digestive System and Body Metabolism  
Students get information on the Anatomy of the Digestive System, Functions of the Digestive System, Nutrition, Metabolism, and Developmental Aspects of the Digestive System and Metabolism
- xv. The Urinary System  
Students study the Kidneys, Ureters, Urinary Bladder, and Urethra, Fluid, Electrolyte, and Acid-Base Balance, and Developmental Aspects of the Urinary System
- xvi. The Reproductive System  
Anatomy of the Male Reproductive System  
Male Reproductive Functions  
Anatomy of the Female Reproductive System  
Female Reproductive Functions and Cycles  
Mammary Glands  
Developmental Aspects of the Reproductive System

In this course, we strive to facilitate each learner's development of critical thinking. Critical thinking skills include "higher order" types of thinking abilities such as synthesis, evaluation, problem-solving, application, and so on. That is, using both new and old knowledge beyond simple memorization of facts. This kind of thinking is modeled in lectures, labs, demonstrations, and readings, practiced in classroom discussions, and self-study activities, and evaluated in the form of test items that ask students to apply these skills.