

Anatomy and Physiology/Lab I

Methods of instruction include lecture and demonstrations with laboratory requirement. A general overview of the organization of the human body is presented followed by major organ systems and an overview of pathophysiology topics.

Students will identify cell types, tissue types, and gross anatomy of the body with regard to the following systems: Integumentary, Skeletal, Cardiovascular, Respiratory, Digestive, and Endocrine; students will be able to explain the normal functioning of the body in each system, as well as an identify disruptions in homeostasis resulting in disease states.

Anatomy and Physiology/Lab II

Methods of instruction include lecture and lab. A general overview of the organization of the human body is presented followed by major organ systems and an overview of pathophysiology topics. Pre-requisite: Anatomy and Physiology I.

Students will identify cell types, tissue types, and gross anatomy of the body with regard to the following systems: Nervous, Muscular, Lymphatic, Urinary, and Reproductive; students will be able to explain the normal functioning of the body in each system and identify relevant pathophysiologic conditions as imbalances in homeostasis.

Biology/Lab

Methods of instruction include lecture and lab. Topics include the scientific method, chemical basis of life, cell structure and metabolism, cellular reproduction, genetics and transfer of genetic information from genes to protein, and the molecular basis of cancer.

Students will identify and explain the basic biological concepts that form the foundation for a future specialized study in the fields of biomedicine and health professions.

Chemistry/Lab

Methods of instruction include lecture and labs. Topics include atoms, molecules, atomic theory, chemical formulas and equations, matter and energy, properties of solution, periodicity of elements, chemical bonding, and properties of gasses.

Students will identify and explain the fundamental concepts in chemistry that will form the foundation for future specialized study in the fields of biomedicine and health professions; apply important concepts and theories of general and inorganic chemistry to

other disciplines in the applied sciences; plan and perform experiments; gather and analyze data, and draw conclusions.

Nutrition

Methods include lecture and lab. Topics include digestion, absorption of nutrients, carbohydrates, fats, protein, vitamins and mineral requirements, additives, fads, diet, exercise and body response, socioeconomic influences on nutritional habits, and culture and consumer concerns.

Students will demonstrate a basic knowledge of the six key nutrients and describe their food sources and functions in the body; discuss the digestion process; devise a dietary pattern which meets human needs at various life cycle states; identify the basic principles of nutrition and factors influencing diet, and discuss the relation of food consumption to physical and mental health; recognize socioeconomic, cultural and psychological factors; explain the relationship between energy balance and weight management; analyze factors involved in modified diets; analyze food intake according to RDA's, the pyramid and exchange lists; implement a personal dietary assessment; interpret food label information and apply nutrition principles to make modifications; adapt recipes; relate nutrition to health concerns; discuss research studies and controversial issues in nutrition; identify tenets of successful goal setting and behavior change; determine a fad diet from healthy eating; explain the basis of eating disorders and body image disturbances, their prevention and causes; experience varied exercise mediums and explain the components of fitness.