

Anatomy and Physiology 121 Course Outline

- I. Introduction to Human Anatomy and Physiology (Chapter 1) *
 - A. Gross Anatomy
 - B. Levels of Organization
 - C. Anatomy and Physiology
 - D. Body Plans and Divisions
 - E. Homeostasis
 - F. Characteristics of Life

Chapter 2: Optional for students with a limited chemistry background. Read section on biochemistry. Review terminology.

- II. Cell Biology (Chapter 3) (Review)
 - A. Plasma (cell) membrane, Cytoplasm, Nucleus, and Organelles
 - B. Diffusion, Osmosis, Filtration, Facilitated Transport, Active Transport
 - C. Cell Growth and Reproduction
 - D. Cell differentiation

- III. Cellular Metabolism (Chapter 23) (Review)
 - A. Anabolic and Catabolic
 - B. Enzymes
 - C. Aerobic respiration
 - D. Anaerobic respiration
 - E. Lipid, Protein and Carbohydrate Pathways

- IV. Histology (Chapter 4) *
 - A. Four Major Categories
 - 1. Epithelial Tissues
 - a. Simple and Stratified Squamous
 - b. Simple Cuboidal
 - c. Simple, Ciliated, Pseudo Stratified Columnar
 - d. Transitional Epithelium
 - e. Glandular Epithelium
 - 2. Connective
 - a. Loose Connective
 - b. Adipose
 - c. Fibrous Connective (White Fibrous)
 - d. Elastic
 - e. Reticular
 - f. Cartilage
 - g. Bone
 - h. Blood (Erythrocytes, Leukocytes)

3. Muscular
 - a. Skeletal
 - b. Smooth
 - c. Cardiac
4. Nervous

EXAM I

- V. Integumentary System (Chapter 5)
 - A. Skin and tissue
 - B. Accessory organs
 1. Hair Follicles
 2. Sebaceous Glands
 3. Nails
 4. Sweat Glands
 5. Apocrine, Merocrine and Holocrine Glands
- VI. Skeletal System (Chapters 6 and 7)
 - A. Bone Function
 - B. Bone Structure
 - C. Bone Development and Growth
 - D. Skeletal Divisions
 1. Skull
 2. Vertebrae
 3. Thoracic
 4. Pectoral Girdle
 5. Pelvic Girdle
 6. Upper Limbs
 7. Lower Limbs
- VII. Joints (Chapter 8)
 - A. Articulations

NOTE: Lab will be devoted to Skeletal System ID and Joints

EXAM II

- VIII. Muscular System (Chapter 9 and 10)
 - A. Functions of Muscle
 - B. Structure of Skeletal Muscle
 - C. Muscle Contraction
 - D. Muscular Responses
 - E. Smooth and Cardiac Muscle
 - F. Major Muscles of the Skeleton
 - G. Muscle Movements and Actions

NOTE: Cat and cadaver will be used for muscle ID. The cat will be used as the exam specimen.
Lab Review Period

EXAM III

- IX. Nervous System (Chapters 11, 12, and 13)
 - A. Nerve Impulse
 - B. Nerve Tissues and Cell Types
 - C. Central Nervous System – Brain
 - D. Central Nervous System – Spinal Cord
 - E. Peripheral Nervous System – Cranial Nerves
 - F. Peripheral Nervous System – Spinal Nerves
 - G. Autonomic nervous system
 - H. Sense organs

- X. Reproductive Systems (Chapter 26)
 - A. Definition and Importance
 - B. Meiosis - Gametogenesis
 - C. Male Reproductive System
 - D. Female Reproductive System
 - E. Female Reproductive Cycle
 - F. Oogenesis and Spermatogenesis

EXAM IV

POINTS BREAKDOWN

Exam I	=	125pts
Exam II	=	125pts
Exam III	=	125pts
Exam IV	=	125pts
Reproductive	=	50pts
Lab Quiz 1	=	20pts
Histo Quiz	=	10pts
Bone Quiz 1	=	50pts
Bone Quiz 2	=	50pts
Muscle Quiz	=	50pts