

## Anatomy Learning Objectives for the Anato-Bee

Anato-Bee Learning Objectives were obtained from the American Association for Anatomy, Anatomical Curriculum Task Force, and adapted by the co-founders of the Anato-Bee.

SYSTEM	LOCAL OBJECTIVES	REGIONAL OBJECTIVES
<b>Introduction to Anatomy</b>	List the body's organ systems and their primary functions.	
	Demonstrate an understanding of the anatomical position and terminology to describe body directions, regions, planes, and movements.	Define radiology and how it is used clinically to assess a patient's anatomy, including the differences between x-ray, CT, MRI, and ultrasound imaging.
	Define homeostasis, including its maintenance by negative and positive feedback systems.	
	Locate the major body cavities and list the major organs in each.	
<b>Skeletal System</b>	Describe the gross anatomy and characterizations of bone, including descriptive terms for common bony landmarks.	Identify different types of vertebrae: cervical, thoracic, lumbar, sacral, coccygeal.
	Identify the bones of the axial and appendicular skeleton.	Identify the normal and abnormal curvatures of the spine.
	Define cartilage, how it differs from bone anatomically, and identify primary examples of cartilage in the human body.	
	Define and classify joints, providing examples of synovial joints including: hinge, ball-and-socket, and plane joints.	Identify commonly injured joints and their ligaments, including those of the rotator cuff and knee.
<b>Muscular System</b>	Define the concepts of movers, antagonists, synergists, and describe how each promotes normal muscular function.	
	Identify the fascial compartments of the upper and lower limb, and generalized functions of muscles within each.	Define and identify examples of tendons, ligaments, superficial and deep fasciae, and aponeuroses.

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	Identify the major muscles of the upper and lower limbs, and actions for each.	Identify the major muscles of the back, neck, chest, and abdomen, and actions for each.
	Identify the main peripheral nerves and arteries of the body respective to the compartments that they innervate.	
<b>Nervous System</b>	Identify different classifications and functions of the nervous system, including its primary anatomical (central and peripheral) and functional (sensory and motor) components.	Identify the lobes of the adult human brain and the general functions attributed to each of them.
	Differentiate between the somatic and autonomic nervous systems, as well as the three divisions of the autonomic nervous system and their general functions.	
	Identify the anatomy of the spinal cord, including white and gray matter, roots, ganglia, and spinal nerves.	
	Identify the 5 special senses and their primary anatomical structures.	
<b>Cardiovascular System</b>	Identify the internal and external structures of the heart. Explain the basic function of these structures.	Describe the divisions of the mediastinum and each of their general contents.
	Trace the pathway of blood through the heart explaining which parts of the heart contain poorly oxygenated blood versus oxygenated blood.	Explain the components of the conduction system, including the nerves that modify the heart rate.
	Identify the main veins and arteries that supply the heart.	Define anastomoses and their benefit for circulation.
	Identify the great vessels of the heart and their branches. Explain the general function of the great vessels of the heart.	Describe the anatomy of the pericardium and its function/clinical relevance.
	Describe the structure and function of the respiratory system, including	Describe the tracheobronchial tree from conducting to respiratory

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<b>Respiratory System</b>	the gross structure of the lungs and trachea.	zones, naming their primary functions.
	Identify the structures at the hilum of the lung.	Identify the right and left lung based on the position of these structures.
	Discuss the movements of respiration including the role of the diaphragm, the intercostal muscles, and other accessory muscles of respiration.	Identify the innervation of the diaphragm.
		Describe the anatomy of the pleural cavities and their function/clinical relevance.
<b>Digestive System</b>	Define foregut, midgut, and hindgut. Identify the major organs in these areas.	Define and identify the peritoneum, peritoneal cavity, intraperitoneal structures, and retroperitoneal structures.
	Identify the celiac trunk, superior mesenteric artery (SMA), and inferior mesenteric artery and their major branches.	Identify the general functions of the enteric nervous system, vagus nerve, and sympathetic chain in respect to their innervation of the digestive system.
	Identify anatomical features of the larynx and pharynx.	Define the structures involved in swallowing.
	Define the anatomy and roles of the accessory digestive organs (gall bladder and pancreas) and their general functions.	
	Define the anatomical and functional lobes of the liver.	
<b>Urinary and Reproductive Systems</b>	Identify the organs (from kidney to external urethra) and discuss the functions of the urinary system. Additionally, explain differences between the anatomy of individuals assigned male and female at birth.	Identify the innervation of the bladder.
	Describe the anatomical structure of the breast, including its relation	

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	to the skin, superficial fascia, and pectoral muscles.	
	Describe the function of the male and female reproductive systems, as well as major anatomical components of each.	Explain the function of the pelvic floor and the two major muscles that comprise it.
<b>Immune System</b>	Describe the organization and function of lymphatic structures, including lymph nodes, ducts, vessels, and capillaries.	Identify and locate the major groups (cervical, pectoral, axillary, inguinal) of lymph nodes in the body.
<b>Endocrine System</b>	List the major endocrine and exocrine glands/organs and describe their locations and general function in the body.	