Correlation of

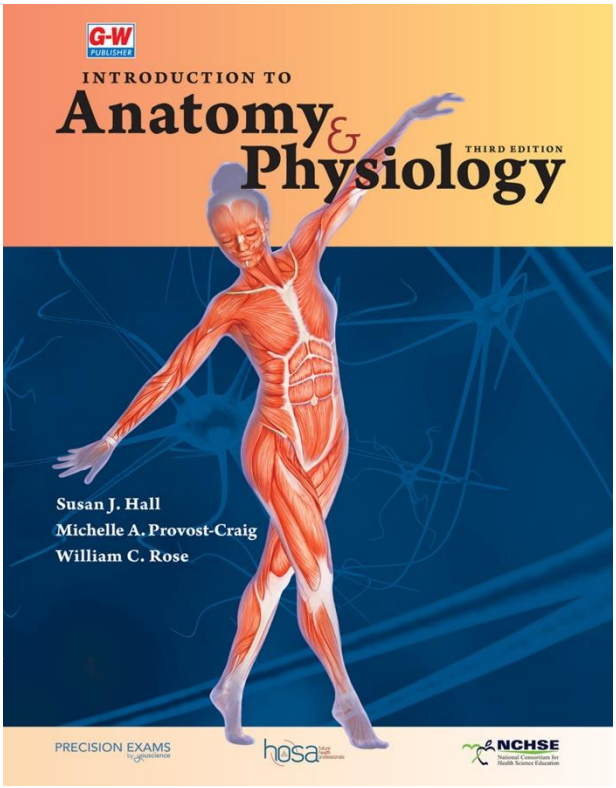
Introduction to Anatomy and Physiology

(Goodheart-Willcox Publisher ©2024)

to

Florida Anatomy and Physiology (Course #2000350) Standards 2022

Introduction to Anatomy and Physiology covers all body systems using a student-friendly writing style that makes complex subjects easier to understand. Written specifically for the high school market, the chapters in this textbook are divided into lessons, providing content in a manageable format for the student. To add realism, clinical case studies and real-world applications enhance student interest and involvement. An abundance of study aids, such as learning objectives, lesson summaries, and extensive assessment opportunities increase students' ability to succeed in this challenging course.



Standards / Objectives / Indicators	Textbook Pages
SC.912.L.14: Organization and Development of Living Organisms	
L.14.11. Classify and state the defining characteristics of epithelial tissue, connective tissue, muscle tissue, and nervous tissue.	76-87
L.14.12. Describe the anatomy and histology of bone tissue.	132-141
L.14.13. Distinguish between bones of the axial skeleton and the appendicular skeleton.	142
L.14.14. Identify the major bones of the axial and appendicular skeleton.	142-160
L.14.16. Describe the anatomy and histology, including ultrastructure, of muscle tissue.	186-188, 195-199
L.14.17. List the steps involved in the sliding filament of muscle contraction.	194
L.14.18. Describe signal transmission across a myoneural junction.	

Correlation of *Introduction to Anatomy & Physiology* to Florida Anatomy and Physiology (Course #2000350) Standards—page 2

Standards / Objectives / Indicators	Textbook Pages
L.14.20. Identify the major muscles of the human on a model or diagram.	201-210, 211 (In the Lab #4)
L.14.21. Describe the anatomy, histology, and physiology of the central and peripheral nervous systems and name the major divisions of the nervous system.	232-234, 245-261
L.14.23. Identify the parts of a reflex arc.	243
L.14.24. Identify the general parts of a synapse and describe the physiology of signal transmission across a synapse.	240-242
L.14.25. Identify the major parts of a cross section through the spinal cord.	251
L.14.26. Identify the major parts of the brain on diagrams or models.	245-251, 252 (In the Lab #1, 2), 279 (Lab Investigations #1)
L.14.28. Identify the major functions of the spinal cord.	251
L.14.29. Define the terms endocrine and exocrine.	76, 78, 87 (Analyze and Apply #2), 318, 319
L.14.30. Compare endocrine and neural controls of physiology.	318-323
L.14.32. Describe the anatomy and physiology of the endocrine system.	318-324
L.14.33. Describe the basic anatomy and physiology of the reproductive System.	618-632
L.14.34. Describe the composition and physiology of blood, including that of the plasma and the formed elements.	396-408
L.14.35. Describe the steps in hemostasis, including the mechanism of coagulation. Include the basis for blood typing and transfusion reactions.	403, 405-406
L.14.36. Describe the factors affecting blood flow through the cardiovascular system.	435-456, 462-472
L.14.38. Describe normal heart sounds and what they mean.	461 (In the Lab #2)
L14.39. Describe hypertension and some of the factors that produce it.	459, 471
L.14.41. Describe fetal circulation and changes that occur to the circulatory system at birth.	455
L.14.42. Describe the anatomy and the physiology of the lymph system.	484-493
L.14.44. Describe the physiology of the respiratory system including the mechanisms of ventilation, gas exchange, gas transport and the mechanisms that control the rate of ventilation.	366-374
L.14.46. Describe the physiology of the digestive system, including mechanical digestion, chemical digestion, absorption and the neural and hormonal mechanisms of control.	537-566
L.14.47. Describe the physiology of urine formation by the kidney.	580-588
L.14.49. Identify the major functions associated with the sympathetic and parasympathetic nervous systems.	233, 260
L.14.50. Describe the structure of vertebrate sensory organs. Relate structure to function in vertebrate sensory systems.	249, 256-258, 282-309
L.14.51. Describe the function of the vertebrate integumentary system.	101-102

Standards / Objectives / Indicators	Textbook Pages
L.14.52. Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.	69, 494-511
SC.912.L.16: Heredity and Reproduction	
L.16.8. Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.	73-74, 114, 613-615
SC.912.L.18: Matter and Energy Transformations	
L.18.1. Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.	48-59
L.18.11. Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.	51, 52
SC.912.N.1: The Practice of Science	
N.1.1. Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following: 1. Post questions about the natural world. 2. Conduct systematic observations. 3. Examine books and other sources of information to see what is already known. 4. Review what is known in light of empirical evidence. 5. Plan investigations. (Design and evaluate a scientific investigation 6. Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs). 7. Pose answers, explanations, or descriptions of events. 8. Generate explanations that explicate or describe natural phenomena (inferences). 9. Use appropriate evidence and reasoning to justify these explanations to others. 10. Communicate results of scientific investigations. 11. Evaluate the merits of the explanations produced by others.	26-31, 37 (In the Lab #1), 45 (Communicating about Anatomy & Physiology #2), 95 (Communicating about Anatomy & Physiology #2), 95 (Lab Investigations #2), 129 (Lab Investigations #2), 229 (Lab Investigations #229)
MA.K12.MTR	
MTR.1.1. Actively participate in effortful learning both individually and collectively.	60 (In the Lab #1, 2), 75 (In the Lab #3), 100 (In the Lab #1, 2), 109 (In the Lab #2) 129 (Lab Investigations #1)
MTR.2.1. Demonstrate understanding by representing problems in multiple ways.	44-45 (Communicating about Anatomy & Physiology #1), 45 (Lab Investigations #1, 2), 75 (In the Lab #1), 87 (In the Lab #1, 2), 95 (Lab Investigations #3), 151 (In the Lab #1, 2), 160 (In the Lab #1, 2), 191 (In the Lab #1, 2), 200 (In the Lab #2), 412 (In the Lab #2), 445 (In the Lab #1), 592 (In the Lab #2), 617 (In the Lab #1), 641 (In the Lab #2)
MTR.3.1. Complete tasks with mathematical fluency.	9-10, 11 (In the Lab #3)
MTR.4.1. Engage in discussions that reflect on the mathematical thinking of self and others.	45 (Lab Investigations #3), 481 (Lab Investigations #1)

Standards / Objectives / Indicators	Textbook Pages
MTR.5.1. Use patterns and structure to help understand and connect mathematical concepts.	44, 123 (In the Lab #1), 244 (In the Lab #2), 392 (Analyzing and Evaluating Data #1-4)
MTR.6.1. Assess the reasonableness of solutions.	75 (In the Lab #3)
MTR.7.1. Apply mathematics to real-world contexts.	123 (In the Lab #1), 355 (Lab Investigations #1), 374 (In the Lab #1, 2), 393 (Lab Investigations #1), 445 (In the Lab #1), 481 (Lab Investigations #3), 609 (Lab Investigations #2) Also: Analyzing and Evaluating Data activities on pages 44, 94-95, 129, 182, 228, 278-279, 314-315, 354-355, 428-429, 480-481, 526, 571, 608, 658
ELA.K12.EE	
EE.1.1. Cite evidence to explain and justify reasoning.	109 (In the Lab #1), 279 (Communicating about Anatomy & Physiology #1), 324 (In the Lab #3), 393 (Lab Investigations #2)
EE.2.1. Read and comprehend grade-level complex texts proficiently.	183 (Lab Investigations #1), 279 (Communicating about Anatomy & Physiology #2, 3)
EE.3.1. Make inferences to support comprehension.	95 (Communicating about Anatomy & Physiology #1), 519 (In the Lab #1), 571 (Lab Investigations #1)
EE.4.1. Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.	183 (Communicating about Anatomy & Physiology #2, 3), 228 (Communicating about Anatomy & Physiology #1), 315 (Communicating about Anatomy & Physiology #2), 347 (In the Lab #3), 355 (Communicating about Anatomy & Physiology #2), 481 (Communicating about Anatomy & Physiology #3), 527 (Communicating about Anatomy & Physiology #2)
EE.5.1. Use the accepted rules governing a specific format to create quality work.	392 (Communicating about Anatomy & Physiology #3), 527 (Communicating about Anatomy & Physiology #3), 571 (Communicating about Anatomy & Physiology #2)
EE.6.1. Use appropriate voice and tone when speaking or writing.	355 (Communicating about Anatomy & Physiology #3), 392 (Communicating about Anatomy & Physiology #3), 658 (Communicating about Anatomy & Physiology #3)
HE.912.C.1: Core Concepts: Comprehend concepts related to health promotion and disease prevention to enhance health.	
C.1.3. Evaluate how environment and personal health are interrelated.	129 (Communicating about Anatomy & Physiology #1) 221 (In the Lab #3, 4)
C.1.5. Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases.	129 (Communicating about Anatomy & Physiology #1, 3), 183 (Lab Investigations (4,

Standards / Objectives / Indicators	Textbook Pages
	5), 221 (In the Lab #1, 2), 473 (In the Lab #3), 565 (In the Lab #2)
C.1.7. Analyze how heredity and family history can impact personal health.	429 (Communicating about Anatomy & Physiology #2, 3), 511 (In the Lab #1)
ELD.K12.ELL.SC: Language of Science	
ELL.SC.1. English language learners communicate information, ideas, and concepts necessary for academic success in the content area of Science.	Communicating about Anatomy & Physiology activities on the following pages: 44-45, 95, 129, 183, 228, 279, 315, 355, 392, 429, 481, 527, 571, 609, 658 *Note:* Refer to the Instructor's Resource materials for many additional ideas about how to incorporate this standard using *Introduction to Anatomy & Physiology*.
ELD.K12.ELL.SI: Language of Social and Instructional Purposes	
ELL.SI.1. English language learners communicate for social and instructional purposes within the school setting.	Communicating about Anatomy & Physiology activities on the following pages: 44-45, 95, 129, 183, 228, 279, 315, 355, 392, 429, 481, 527, 571, 609, 658 *Note:* Refer to the Instructor's Resource materials for many additional ideas about how to incorporate this standard using *Introduction to Anatomy & Physiology*.