

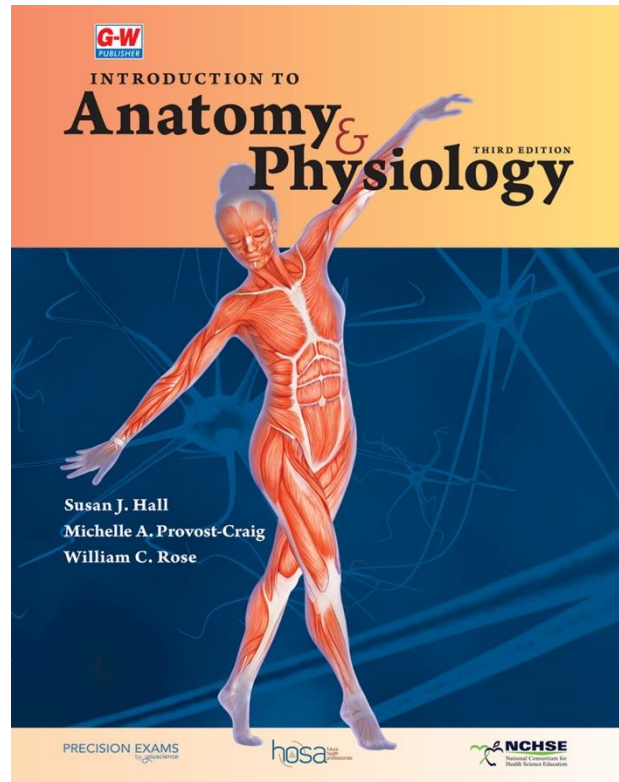


Correlation of
Introduction to Anatomy and Physiology
 (Goodheart-Willcox Publisher ©2024)

to

**South Carolina Health Science, Course Code 5552: Human Structure,
 Function, and Disease**
(formerly Health Science 3)

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
Foundation Standard 1: Academic Foundations: Healthcare professionals will understand human anatomy, physiology, common diseases and disorders, and medical math principles as required for proficiency within their area. They will use this knowledge as needed in their role. The following accountability criteria are considered essential for students in a health science program of study.	
1.1. Demonstrate the ability to analyze diagrams, charts, graphs, and tables to interpret healthcare results.	28-29, 44, 94-95, 228, 278, 314-315, 354, 392, 414, 428-429, 480-481, 526, 571, 608, 609, 641, 658
1.2. Demonstrate competency in basic math skills and conversions as they relate to healthcare.	9-10, 660-661
1.2.a. The Metric System, i.e., centi-, milli-, kilo-, deci-, and micro-	9-10, 56, 400, 659
1.2.b. Mathematical (average, ratios, fractions, percent ages, addition, subtraction, multiplication, division).	10, 374, 393, 456, 457, 481, 483, 659, 660, 661

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Standards / Objectives / Indicators	Textbook Pages
1.2.c. Conversions (height, weight/mass, length, volume, temperature, household measurements)	659
1.2.d. Perform mathematical applications to determine vital sign applications and basic pharmacology equations.	457-460, 463-464
1.3. Demonstrate use of the 24-hour clock/military time.	609, 640
1.4. Identify basic levels of organization of the human body, i.e., chemical, cellular, tissue, organs, systems, organism.	4-5, 8, 12-15, 48-59, 61-87
1.5. Identify and demonstrate body planes, directional terms, cavities, and quadrants.	5-8, 11
1.5.a. Body planes (sagittal, mid-sagittal, coronal/frontal, transverse/horizontal).	5-7, 11
1.5.b. Directional terms (superior, inferior, anterior/ventral, posterior/dorsal, medial, lateral, proximal, distal, superficial, and deep).	7
1.5.c. Cavities (dorsal, cranial, spinal, thoracic, abdominal, and pelvic).	8
1.5.d. Quadrants (upper right, lower right, upper left, and lower left).	7
1.6. Identify basic structures and functions of human body systems (skeletal, muscular, integumentary, cardiovascular, lymphatic, respiratory, nervous, special senses, endocrine, digestive, urinary, and reproductive).	12-15
1.6.a. Skeletal (bone anatomy with emphasis on long bone, axial and appendicular skeletal bones, functions of bones to include mineral storage and hematopoiesis, ligaments, types and movements of joints)	130-183
1.6.b. Muscular (microscopic anatomy of muscle tissue, types of muscle, locations of skeletal muscles, functions of muscles, tendons, directional movements)	184-229
1.6.c. Integumentary (layers, structures, functions and components of skin)	96-129
1.6.d. Cardiovascular (components of blood, structures and functions of blood components, structures and functions of the cardiovascular system, conduction system of the heart, cardiac cycle to include blood flow)	394-481
1.6.e. Lymphatic (structures and functions of lymphatic system, movement of lymph fluid)	482-527
1.6.f. Respiratory (structures and functions of respiratory system, physiology of respiration)	356-393
1.6.g. Nervous (structures and functions of nervous tissue and system, organization of nervous system, emphasis on sensation, movement and processing)	230-279
1.6.h. Special senses (structures and functions of eye, ear, nose and tongue; identify senses for sight, hearing, smell, taste, touch)	256-258, 282-285, 293-295, 302-304, 306
1.6.i. Endocrine (endocrine versus exocrine, structures and functions of endocrine system, hormones, regulation of hormones)	316-355
1.6.j. Digestive (structures and functions of gastrointestinal tract with focus on absorption and excretion, chemical and mechanical digestion, structures and functions of accessory organs)	528-571

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Standards / Objectives / Indicators	Textbook Pages
1.6.k. Urinary (structures and functions of urinary system, gross and microscopic anatomy, process of urine formation, urine composition, homeostatic balance)	572-609
1.6.l. Reproductive (structures and functions of male and female reproductive systems, formation of gametes, hormone production and effects, menstrual cycle, and conception)	610-658
1.7. Describe common diseases and disorders of each body system (such as: cancer, diabetes, dementia, stroke, heart disease, tuberculosis, hepatitis, COPD, kidney disease, arthritis, ulcers, asthma, cataracts, concussions/TBI, cystic fibrosis, melanoma, muscular dystrophy, myocardial infarction, sexually transmitted infection, urinary tract infections).	110-123, 165-175, 212-221, 262-271, 286-292, 297-300, 304-305, 307-308, 338-347, 375-385, 413-423, 462-473, 512-519, 557-565, 595-603, 642-651
1.7.a. Etiology	113, 116, 117, 118, 121, 166, 171, 213, 215, 218, 263, 267, 287, 290, 297, 304, 308, 339, 340, 342, 343, 344, 376, 378, 379, 384, 415, 417, 419, 465, 467, 468, 470, 513, 558, 562, 595, 643
1.7.b. Pathology	113, 116, 117, 118, 121, 166, 171, 213, 215, 218, 263, 267, 287, 290, 297, 304, 308, 339, 340, 342, 343, 344, 376, 378, 379, 384, 415, 417, 419, 465, 467, 468, 470, 513, 558, 562, 595, 643
1.7.c. Diagnosis	113, 116, 117, 118, 121, 166, 171, 213, 215, 218, 263, 267, 287, 290, 297, 304, 308, 339, 340, 342, 343, 344, 376, 378, 379, 384, 415, 417, 419, 465, 467, 468, 470, 513, 558, 562, 595, 643
1.7.d. Treatment	113, 116, 117, 118, 121, 166, 171, 213, 215, 218, 263, 267, 287, 290, 297, 304, 308, 339, 340, 342, 343, 344, 376, 378, 379, 384, 415, 417, 419, 465, 467, 468, 470, 513, 558, 562, 595, 643
1.7.e. Prevention	113, 116, 117, 118, 121, 166, 171, 213, 215, 218, 263, 267, 287, 290, 297, 304, 308, 339, 340, 342, 343, 344, 376, 378, 379, 384, 415, 417, 419, 465, 467, 468, 470, 513, 558, 562, 595, 643
1.8. Discuss research related to emerging diseases and disorders (such as: autism, VRSA, PTSD, Listeria, seasonal flu).	50, 71, 114, 346, 376, 377, 382, 420, 491, 515, 519, 648, 649, 650
1.9. Describe biomedical therapies as they relate to the prevention, pathology, and treatment of disease.	81
1.9.a. Gene testing	384, 558
1.9.b. Gene therapy	57, 384
1.9.c. [standard deleted]	--
1.9.d. Cloning	525
1.9.e. Stem cell research	648
Foundation Standard 2: Communications: Healthcare professionals will know and demonstrate the various methods of giving and obtaining information. They will communicate effectively, both orally and in writing.	
2.1. Use medical terminology and medical math to communicate information, orally and written.	36, 39, 45, 129, 279, 315, 392, 429, 461, 527, 571, 572, 632, 646
2.2. Apply active speaking and listening skills	25, 382, 599

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Standards / Objectives / Indicators	Textbook Pages
<p>Foundation Standard 3: Systems: Healthcare professionals will understand how their role fits into their department, their organization and the overall healthcare environment. They will review and identify how key systems affect services they perform and the quality of care. (This foundation is covered in detail in HS 1 and HS 2.)</p>	
<p>Foundation Standard 4: Employability Skills: Healthcare professionals will understand how employability skills enhance their employment opportunities and job satisfaction. They will demonstrate key employability skills and will maintain and upgrade skills, as needed.</p>	
4.1. Demonstrate employability skills (as they apply to hygiene, dress, language, confidentiality, behavior and work ethic)	38, 39, 88, 316, 392, 394, 520, 521
4.2. Expand components of a personal portfolio (letter of introduction, resume, healthcare project, writing sample, work-based learning, oral presentation, service learning, credentials, technology, and leadership experience).	3, 38-39, 45, 47, 95, 97, 129, 131, 183, 185, 228, 231, 279, 281, 315, 317, 355, 357, 392, 395, 429, 431, 481, 483, 527, 529, 571, 573, 609, 611, 658
4.3. Participate in healthcare work-based learning experiences (guest speakers, virtual tours, job shadowing, blood drives, community service projects, etc.).	
<p>Foundation Standard 5: Legal Responsibilities: Healthcare professionals will understand the legal responsibilities, limitations, and implications of their actions within the healthcare delivery setting. They will perform their duties according to regulations, policies, laws, and legislated rights of clients.</p>	
5.1. Review procedures for accurate documentation and record keeping.	For content related to this standard, see Goodheart-Willcox’s nursing assistant programs: <i>The Nursing Assistant: Essentials of Holistic Care</i> and <i>The Nursing Assistant: Essentials of Holistic Care, Brief Edition</i> .
5.2. Review standards for Health Insurance Portability and Accountability Act (HIPAA).	For content related to this standard, see Goodheart-Willcox’s health science programs: <i>Medical Law & Professional Ethics</i> ; <i>The Nursing Assistant: Essentials of Holistic Care</i> ; and <i>The Nursing Assistant: Essentials of Holistic Care, Brief Edition</i> .
<p>Foundation Standard 6: Ethics: Healthcare professionals will understand accepted ethical practices with respect to cultural, social, and ethnic differences within the healthcare environment. They will perform quality healthcare delivery.</p>	
6.1. Discuss bioethical issues related to disease.	30, 57, 520, 579, 599, 645
6.2. Apply ethical behaviors in healthcare including personal, professional, and organizational ethics.	39
6.3. Apply procedures for reporting activities and behaviors that affect health, safety, and welfare of others.	For content related to this standard, see Goodheart-Willcox’s health science programs: <i>Medical Law & Professional Ethics</i> ; <i>The Nursing Assistant: Essentials of Holistic Care</i> ; and <i>The Nursing Assistant: Essentials of Holistic Care, Brief Edition</i> .
<p>Foundation Standard 7: Safety Practices: Healthcare professionals will understand the existing and potential hazards to clients, co-workers, and self. They will prevent injury or illness through safe work practices and follow health and safety policies and procedures.</p>	
7.1. Demonstrate principles of infection control using standard precautions in relation to the disease process and prevention.	30, 113, 495, 527, 561
7.2. Comply with safety signs, symbols and labels.	39

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Standards / Objectives / Indicators	Textbook Pages
<p>Foundation Standard 8: Teamwork: Healthcare professionals will understand the roles and responsibilities of individual members as part of the healthcare team, including their ability to promote the delivery of quality healthcare. They will interact effectively and sensitively with all members of the healthcare team.</p>	
<p>8.1. Act responsibly as a team member.</p>	<p>27-30, 39, 125, 200, 228, 349</p>
<p>Foundation Standard 9: Health Maintenance Practices: Healthcare professionals will understand the fundamentals of wellness and the prevention of disease processes. They will practice preventive health behaviors among the clients.</p>	
<p>9.1. Describe strategies for prevention of diseases including health screenings and examinations.</p>	<p>For content related to this standard, see Goodheart-Willcox’s nursing assistant programs: <i>The Nursing Assistant: Essentials of Holistic Care</i> and <i>The Nursing Assistant: Essentials of Holistic Care, Brief Edition</i>.</p>
<p>9.2. Apply practices that promote prevention of disease and injury.</p>	<p>113, 116, 117, 118, 121, 166, 171, 213, 215, 218, 263, 267, 287, 290, 297, 304, 308, 339, 340, 342, 343, 344, 376, 378, 379, 384, 415, 417, 419, 465, 467, 468, 470, 513, 558, 562, 595, 643</p>
<p>Foundation Standard 10: Technical Skills: Healthcare professionals will apply technical skills required for all career specialties. They will demonstrate skills and knowledge as appropriate.</p>	
<p>10.1. Integrate procedures for measuring and recording vital signs as you approach the appropriate body system, (including recognition of normal ranges and understanding what the data means in relation to body systems and disease.)</p>	<p>456, 457-460, 463-464</p>
<p>Foundation Standard 11: Information Technology in Healthcare: Healthcare professionals will use information technology applications required within all career specialties. They will demonstrate use as appropriate to healthcare application.</p>	
<p>Healthcare professionals will use information technology applications required within all career specialties. They will demonstrate use as appropriate to healthcare application.</p>	<p>35-36</p>