

<b>SUBJECT:</b>	Career and Technical Education	<b>CORRELATION</b>
<b>GRADE LEVEL:</b>	9, 10, 11, 12	<b>FLORIDA DEPARTMENT OF EDUCATION</b>
<b>COURSE TITLE:</b>	Health Science Anatomy & Physiology	<b>INSTRUCTIONAL MATERIALS CORRELATION</b>
<b>COURSE CODE:</b>	8417100	<b>COURSE STANDARDS / BENCHMARKS</b>
<b>SUBMISSION TITLE:</b>	<i>Introduction to Anatomy and Physiology</i>	
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<b>BENCHMARK CODE</b>	<b>BENCHMARK</b>	<b>LESSONS WHERE BENCHMARK IS DIRECTLY ADDRESSED IN-DEPTH IN MAJOR TOOL</b> (Include the student edition and teacher edition with the page numbers of lesson, a link to lesson, or other identifier for easy lookup by reviewers.)
<b>01.0 Analyze and interpret an overview of the human body, including organization and chemical process–The student will be able to:</b>		
01.01	Evaluate interrelationships of the basic structural and functional organization of the human body including chemical, cellular, tissue and organ systems.	9, 12, 14, 16, 35 (#43), 38–50, 51–62, 64–67, 68–73, 82–84, 85–91, 110–119, 120–129, 130–137, 138–141, 156–161, 162–170, 171–181, 193 (#46), 196–201, 202–206, 207–215, 216–222, 223 (#8), 235 (#50), 238–246, 247–250, 253, 254–259, 268–274, 275–285, 302–309, 310–317, 318–325, 329 (#13, #14), 331 (#50), 333–346, 347–351, 365 (#41), 368–374, 375–381, 382–396, 412–420, 421–428, 429–437, 452–458, 459–478, 492–497, 498–510, 511–519, 527–534, 535–539, 540–549, 550–558
01.02	Examine medical implications of body planes, directional terms, cavities, abdominal regions and quadrants.	5–7, 32, 35 (#44), 172–174
01.03	Discuss the chemical processes that maintain life, including homeostasis, cellular respiration and the basic concepts of metabolism.	12–16, 47–48, 50 (#40), 501
<b>02.0 Apply correct medical terminology relating to body structure and function within a real-world application–The student will be able to:</b>		
02.01	Evaluate and apply anatomical terminology to describe location of parts or areas of the body and to describe the relation of one part to another.	5–7, 8 (#9, #10), 35 (#43, #44), 94, 125–126, 131–135, 176–181, 214

02.02	Interpret correct medical terminology including roots, prefixes and suffixes to indicate anatomical structures and function.	72, 138, 243, 415, 465, 466 (Check Your Understanding, #4), 474, 478 (#8), 542
02.03	Extend medical terminology to real-world applications.	415, 465, 466 (Check Your Understanding, #4), 474, 478 (#8), 542
<b>03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions–The student will be able to:</b>		
03.01	Discuss and describe cell structure and function in healthy tissue.	51–58, 60–63
03.02	Discuss and describe cell structure and function in diseased tissue including how damage to one tissue may impact the function of another tissue.	62–63, 92, 94, 97, 98, 99, 100, 223, 224, 228, 234 (#40, #41)
03.03	Compare and contrast the four main types of tissue including the interrelationships of tissues.	64–73
03.04	Discuss the location and function of tissues as it relates to homeostasis.	111, 272–273, 280, 334–335, 337–338, 473, 476
<b>04.0 Analyze the integumentary system in relation to health and disease–The student will be able to:</b>		
04.01	Apply medical terminology as related to the integumentary system.	92–100
04.02	Discuss and describe the structure and function of the integumentary system across the lifespan.	87, 88, 90
04.03	Demonstrate knowledge of cells and tissues in the integumentary system.	82–91
04.04	Identify and analyze common diseases and disorders of the integumentary system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	92–100

04.05	Discuss or research health careers related to the integumentary system.	102–103
<b>05.0 Analyze the skeletal system in relation to health and disease–The student will be able to:</b>		
05.01	Apply medical terminology as related to the skeletal system.	142–147
05.02	Discuss and describe the structure and function of the skeletal system across the lifespan.	115, 116, 123, 125
05.03	Identify and explain major bone markings and their implications.	120–126
05.04	Identify and explain joints and their implications.	138–141
05.05	Discuss the interrelationship between calcium, hormones, and the skeletal system.	145 (What Research Tells Us)
05.06	Apply knowledge of cells and tissues in the skeletal system.	111–117
05.07	Identify and analyze common diseases and disorders of the skeletal system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	142–147
05.08	Discuss or research health careers related to the skeletal system.	148–149
05.09	Demonstrate knowledge of skills related to the skeletal system which may include range of motion.	138–141
<b>06.0 Analyze the muscular system in relation to health and disease–The student will be able to:</b>		
06.01	Apply medical terminology as related to the muscular system.	182–187
06.02	Discuss and describe the structure and function of the muscular system across the lifespan.	156, 166, 186, 187, 191 (#8)

06.03	Identify and explain the 3 main types of muscles and their implications.	156–161
06.04	Interpret muscle function by examining attachment to bone.	156, 159, 171
06.05	Discuss the interrelationship between calcium, ions, and the muscular system.	164–165
06.06	Apply knowledge of cells and tissues in the muscular system.	156–158, 161, 162–170
06.07	Identify and analyze common diseases and disorders of the muscular system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	182–187
06.08	Discuss or research health careers related to the muscular system.	188–189
06.09	Demonstrate knowledge of skills related to the muscular system which may include isometric and isotonic contractions.	159–160
<b>07.0 Analyze the nervous system in relation to health and disease–The student will be able to:</b>		
07.01	Apply medical terminology as related to the nervous system.	223–229
07.02	Discuss and describe the structure and function of the nervous system across the lifespan.	207, 228–229
07.03	Identify and explain the interrelatedness of the Central Nervous System (CNS) and Peripheral Nervous System (PNS).	196–197
07.04	Compare and contrast the divisions of the Autonomic Nervous System (ANS).	197–198
07.05	Apply knowledge of cells and tissues in the nervous system.	198–201, 207–214, 216–217

07.06	Explain how neurotransmitters help propagate electrical impulses.	202–205
07.07	Describe reflex pathways and their importance.	205–206
07.08	Identify and analyze common diseases and disorders of the nervous system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	223–229
07.09	Discuss or research health careers related to the nervous system.	230–231
07.10	Demonstrate knowledge of skills related to the nervous system which may include recognizing signs and symptoms of a stroke.	223–229
<b>08.0 Analyze the endocrine system in relation to health and disease–The student will be able to:</b>		
08.01	Apply medical terminology as related to the endocrine system.	286–293
08.02	Discuss and describe the structure and function of the endocrine system across the lifespan.	280, 281, 283, 284
08.03	Compare and contrast endocrine and exocrine glands.	64, 66, 67 (Check Your Understanding, #4), 269, 270 (Check Your Understanding, #2)
08.04	Compare and contrast negative and positive feedback loops.	13
08.05	Evaluate the relationship between the endocrine system and homeostasis in health and disease.	14, 54 (What Research Tells Us), 272–273, 280–284
08.06	Apply knowledge of cells and tissues in the endocrine system.	270, 274, 276, 279–281, 283–284, 285

08.07	Identify and analyze common diseases and disorders of the endocrine system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	286–293
08.08	Discuss or research health careers related to the endocrine system.	294–295
08.09	Demonstrate knowledge of skills related to the endocrine system which may include recognizing the signs and symptoms of low blood sugar.	283–284
<b>09.0 Analyze the cardiovascular/circulatory system in relation to health and disease–The student will be able to:</b>		
09.01	Apply medical terminology as related to the cardiovascular system.	397–403
09.02	Discuss and describe the structure and function of the cardiovascular system across the lifespan.	368, 392, 397
09.03	Demonstrate knowledge of major blood vessels.	382–391
09.04	Compare and contrast the structure and function of arteries, veins, and capillaries.	382–385
09.05	Analyze the interdependence between systemic and pulmonary circulation.	385–388
09.06	Design a map or flow chart depicting the normal pathway of blood flow through the heart.	374 (#9)
09.07	Design a map or flow chart depicting the normal electrical pathway through the heart.	376–377
09.08	Apply knowledge of cells and tissues in the cardiovascular system.	372, 376,–378, 382–386, 400

09.09	Demonstrate knowledge of the composition of blood to include formed elements and plasma.	334–338
09.10	Evaluate ABO blood types and Rh factor.	347–350, 351 (#13)
09.11	Predict potential blood donors for a transfusion through the analysis of blood types with ABO and/or Rh compatibility.	351 (#13)
09.12	Identify and analyze common diseases and disorders of the cardiovascular system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	397–403
09.13	Discuss or research health careers related to the cardiovascular system.	404–405
09.14	Demonstrate knowledge of skills related to the cardiovascular system which might include assessing pulse.	393–395
<b>10.0 Analyze the lymphatic and immune systems in relation to health and disease—The student will be able to:</b>		
10.01	Apply medical terminology as related to the lymphatic and immune systems.	438–443
10.02	Discuss and describe the structure and function of the lymphatic and immune systems across the lifespan.	430
10.03	Validate the importance of the accessory organs (thymus, tonsils, spleen, appendix, Peyer's patch) promoting the effectiveness of the lymphatic and immune system.	417, 418–419
10.04	Compare and contrast passive and active immunity.	435

10.05	Discuss the impact of B cells and T cells on diseases of the immune system.	417–419, 423, 430–432, 435–436, 439–442
10.06	Evaluate and discuss the body's defense mechanisms in relation to common communicable diseases.	421–436
10.07	Apply knowledge of cells and tissues in the lymphatic and immune systems.	415–417
10.08	Identify and analyze common diseases and disorders of the lymphatic and immune system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	438–443
10.09	Discuss or research health careers related to the lymphatic and immune systems.	444–445
10.10	Demonstrate knowledge of skills related to the lymphatic and immune systems.	420 (#10, #11), 437 (#9), 443 (#11)
<b>11.0 Analyze the respiratory system in relation to health and disease–The student will be able to:</b>		
11.01	Apply medical terminology as related to the respiratory system.	318–325
11.02	Discuss and describe the structure and function of the respiratory system across the lifespan.	
11.03	Evaluate the interrelatedness of the cardiovascular and respiratory systems.	302, 310, 331 (#50), 384
11.04	Apply knowledge of cells and tissues in the respiratory system.	303–309
11.05	Identify and analyze common diseases and disorders of the respiratory system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	318–325



11.06	Discuss or research health careers related to the respiratory system.	326–327
11.07	Demonstrate knowledge of skills related to the respiratory system which might include monitoring respirations.	315–316
<b>12.0 Analyze the digestive system in relation to health and disease–The student will be able to:</b>		
12.01	Apply medical terminology as related to the digestive system.	479–483
12.02	Discuss and describe the structure and function of the digestive system across the lifespan.	453, 457, 465
12.03	Apply knowledge of cells and tissues in the digestive system.	462–464, 465–470
12.04	Identify and analyze common diseases and disorders of the digestive system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	479–483
12.05	Discuss or research health careers related to the digestive system.	484–485
12.06	Demonstrate knowledge of skills related to the digestive system which might include a nutritional self-assessment using the <a href="http://www.choosemyplate.gov/">http://www.choosemyplate.gov/</a> website.	458 (#9), 478 (#15), 489 (#51)
<b>13.0 Analyze the urinary system in relation to health and disease–The student will be able to:</b>		
13.01	Apply medical terminology as related to the urinary system.	511–520
13.02	Discuss and describe the structure and function of the urinary system across the lifespan.	509, 516

13.03	Justify the interrelatedness of the urinary and cardiovascular system in promoting homeostasis.	493–497, 498–506
13.04	Apply knowledge of cells and tissues in the urinary system.	493, 494, 496, 499, 501, 502, 503, 505, 506, 507, 512, 513
13.05	Identify and analyze common diseases and disorders of the urinary system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	511–520
13.06	Discuss or research health careers related to the urinary system.	520–521
13.07	Demonstrate knowledge of skills related to the urinary system which may include measuring Intake and Output.	500, 501
<b>14.0 Analyze the both the male and female reproductive systems in relation to health and disease–The student will be able to:</b>		
14.01	Apply medical terminology as related to the each of the male and female reproductive systems.	559–565
14.02	Discuss and describe the structure and function of both reproductive systems across the lifespan.	529, 531–532, 545, 547–548, 557, 568
14.03	Apply knowledge of cells and tissues of both reproductive systems.	528–531, 532, 534 (#6, #13), 535, 538, 539 (#6), 540, 541, 545–548, 551, 552–554, 555–556, 558 (#13), 560, 562–565, 570 (#14, #32), 571 (#52)
14.04	Identify and analyze common diseases and disorders of both reproductive systems including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	559–565
14.05	Discuss or research health careers related to both reproductive systems.	566–567

14.06	Demonstrate knowledge of skills related to the reproductive system which may include measuring fetal development and relating it to possible complications.	532 (#12, #13), 555 (Check Your Understanding, #1), 558 (#13)
<b>15.0 Identify and explain factors relating to genetics and disease—The student will be able to:</b>		
15.01	Analyze DNA and its role in human heredity.	46–47
15.02	Describe the role of human genetics in relation to genetic diseases.	62–63, 357
15.03	Discuss or research current issues related to genetic research.	563
15.04	Explore the relationship between mutation, cell cycle and uncontrolled cell growth that can result in cancer.	62–63, 97 (What Research Tells Us), 563, 570 (#43)
15.05	Explore how environmental factors contribute to an individual's overall wellness and quality of life.	12–14, 15, 28, 29 (#9), 89, 92, 261, 273–274, 387, 559–560,
<b>16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios. –The student will be able to:</b>		
16.01	Discuss and explain the direct and indirect transmission of disease.	94–97, 319, 321, 441
16.02	Discuss and apply the principles of the chain of infection to real-world scenarios.	94–97, 441–443, 561–562
16.03	Categorize the common microorganisms affecting the human body.	94–98, 319
16.04	Identify and analyze common diseases caused by microorganisms.	94–98, 101 (#10), 252, 319, 320, 321, 353, 440–443, 480–482, 487, 561–562, 564, 570 (#44)