# Course Description

This course is a continued study of the basic structural and functional aspects of the human body. Emphasis is placed on the cardiovascular, respiratory, digestive, urinary, and reproductive systems.

This course includes a hands-on experience, which will supplement and reinforce the material learned in the Anatomy and Physiology course.

# University Learning Outcomes (ULO)

* **ULO1:** Knowledge of Human Cultures and the Physical and Natural World
* **ULO2:** Intellectual and Practical Skills
* **ULO3:** Personal and Social Responsibility
* **ULO4:** Integrative and Applied Learning
* **ULO5:** Immersed in the Critical Concerns of the Sisters of Mercy of the Americas

# Program Learning Outcomes (PLO)

* **PLO1:** Synthesizes knowledge of nursing and the liberal arts and sciences as a basis for professional nursing practice.
* **PLO2:** Utilize professional judgment to formulate nursing decisions which reflect professional standards consistent with moral and ethical and legal principles.
* **PLO3:** Engages in reflective evaluation of self and other members of the healthcare team in accordance with the prevailing standards of care.
* **PLO4:** Collaborates with other health care providers and consumers in promoting the health and wellbeing of individuals, families, and communities.
* **PLO5:** Demonstrates responsibility and accountability in the use of the nursing process to deliver person centered care.
* **PLO6:** Utilize inter and intra professional communication and collaboration skills to deliver evidence-based care to promote the health and safety of individuals, families, and communities.
* **PLO7:** Applies leadership concepts, skills, and values to effectively implement patient safety and quality improvement initiatives in a variety of healthcare settings.
* **PLO8:** Creates a supportive environment through the therapeutic use of self when caring for individuals, families, and communities.
* **PLO9:** Demonstrates skills in using patient care technology, information systems, and communication devices that support safe nursing practice.
* **PLO10:** Integrates knowledge of social and cultural factors to deliver culturally sensitive care.
* **PLO11:** Advocates for social justice including a commitment to the health of vulnerable populations and the eliminations of health disparities to improve the human condition.
* **PLO12:** Articulates the value of pursuing practice excellence and lifelong learning to facilitate personal and professional development.

# Course Learning Outcomes (CLO)

* **CLO1:** Develop the ability to communicate effectively by demonstrating a basic command of the terminology of anatomy and physiology; students will communicate in a variety of media, both scientific and nonscientific ideas, to audiences of varying sophistication. (PLO2, 3)
* **CLO2:** Apply the principles of anatomy and physiology through knowledge of normal function, disease states, and pathology. (PLO3)
* **CLO3:** Demonstrate moral and ethical judgment through an awareness of the environment in regard to the prevention of disease. (PLO2, 3)
* **CLO4:** Be able to examine individual case studies using problem solving to diagnose and treat disease scenarios. (PLO2, 3)

# Student Expectations

Students are expected to:

* Ask probing and insightful questions related to course content.
* Make meaningful and relevant connections and application to their own learning process.
* Be productive and contributing members of class discussions.

# Required Course Materials

Textbook below is free online and downloadable from [Openstax.org](https://openstax.org/details/anatomy-and-physiology):

License: *Anatomy and Physiology* (2013) by OpenStax is licensed under Creative Commons Attribution License v4.0.

Digital ISBN: 1-947172-04-2

# Suggested Point Values

|  |  |  |
| --- | --- | --- |
| **Assessment** | **Point Value** | **Due** |
| **Week 1** |  |  |
| Week 1: Discussion Question 1 | 40 |  |
| Week 1: Discussion Question 2 | 40 |  |
| **Week 2** |  |  |
| Week 2: Discussion Question 1 | 40 |  |
| Week 2: Discussion Question 2 | 40 |  |
| **Week 3** |  |  |
| Week 3: Discussion Question 1 | 40 |  |
| Week 3: Discussion Question 2 | 40 |  |
| Week 3 Quiz | 90 |  |
| **Week 4** |  |  |
| Week 4: Discussion Question 1 | 40 |  |
| Week 4: Discussion Question 2 | 40 |  |
| **Week 5** |  |  |
| Week 5: Discussion Question 1 | 40 |  |
| Week 5: Discussion Question 2 | 40 |  |
| Week 5 Quiz | 90 |  |
| **Week 6** |  |  |
| Week 6: Discussion Question 1 | 40 |  |
| Week 6: Discussion Question 2 | 40 |  |
| Week 6 Quiz | 90 |  |
| **Week 7** |  |  |
| Week 7: Discussion Question 1 | 40 |  |
| Week 7: Discussion Question 2 | 40 |  |
| **Week 8** |  |  |
| Week 8: Discussion Question 1 | 40 |  |
| Week 8: Discussion Question 2 | 40 |  |
| Week 8 Quiz | 90 |  |
| **Total Points** | **1000** |  |

**Grading Scale**

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| --- | --- |
| **Grade** | **Range** |
| A | 93-100 |
| A- | 90-92 |
| B+ | 87-89 |
| B | 83-86 |
| B- | 82-80 |
| C+ | 77-79 |
| C | 73-76 |
| C- | 70-72 |
| D+ | 67-69 |
| D | 63-66 |
| D- | 60-62 |
| F | 59 |

# Course Schedule

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| --- | --- | --- |
| **Week** | **Start** | **End** |
| One | <insert start date> | <insert end date> |
| Two |  |  |
| Three |  |  |
| Four |  |  |
| Five |  |  |
| Six |  |  |
| Seven |  |  |
| Eight |  |  |

# Weekly Learning Modules

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| --- | --- | --- | --- |
| **Week One: Blood** | | | |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Describe the general characteristics of blood and discuss its major functions. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Distinguish among the formed elements and the liquid portion of blood. | | CLO1, CLO2, CLO4 | |
| * 1. Explain the significance of red blood cell counts. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Distinguish among the five types of white blood cells and give the functions of each one. | | CLO1, CLO2, CLO4 | |
| * 1. Explain blood typing and how it is used to avoid adverse reactions following blood transfusions. | | CLO1, CLO2, CLO3, CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Tutorials**  During this course, you will be asked to use and participate in various technologies to complete activities and assignments.  **Review** the tutorials available on Blackboard as needed.  **Click** the **Student Resources** button from the menu on the left. | | N/A | N/A |
| **Weekly Participation and Discussion**  The purpose of the weekly discussions is to provide you with a way to synthesize the concepts presented in this course. Each week, you will respond to the discussion questions with a substantive post of 200 to 250 words that addresses all the prompts for the question by 11:59 p.m. EST of the listed due date. By the conclusion of each week, Sunday at 11:59 p.m. EST, you will make at least one substantive comment of 100 to 150 words to three of your classmates’ posts for each assigned discussion question. Your comments must further the discussion by following the RISE Model for meaningful feedback. It is recommended that you check in periodically throughout the week to ensure that you are meeting the participation requirement.  **Review** the RISE Model for Peer Feedback, located on Blackboard. | |  |  |
| **Readings**  **Read** Ch. 18 “The Cardiovascular System: Blood” of *Anatomy and Physiology*. | | 1.1, 1.2, 1.3, 1.4, 1.5 | Lecture Activity = **1 hour** |
| **Student Bio Discussion Forum**  **Introduce** yourself by answering the following questions in the Student Bio discussion forum:   * What is your academic background? * What area are you currently working in? * What are your personal interests outside of work? * What is one detail about you that will help us remember you?   You can also include pictures of yourself, your family, pets, and so forth in your post.  **Read** all the discussion posts of your classmates. | | N/A | Lecture Activity = **1 hour** |
| **Video**  **Watch** the [“Red blood cells”](https://www.youtube.com/watch?v=fLKOBQ6cZHA) video (16:30) from Khan Academy:  **Post** questions and comments about the content of the video in the General Questions and Discussion Forum on Blackboard. | | 1.1, 1.2, 1.3, 1.5 | Lecture Activity = **1 hour** |
| ***Supplemental Resources and Activities***  *Explore these optional resources to deepen your understanding.* | | ***Alignment*** | ***AIE*** |
| **Website: Blood Disorders Home Page**  **Review** the [Centers for Disease Control and Prevention website](http://www.cdc.gov/ncbddd/blooddisorders/index.html). | | 1.1, 1.2, 1.3, 1.4, 1.5 | Lecture Activity = **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week 1: Discussion Question 1**  **Review** the information at the [American Red Cross website](https://www.redcrossblood.org/donate-blood/how-to-donate/how-blood-donations-help/blood-needs-blood-supply.html) regarding blood and blood needs.  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * What information presented on this web page was new to you? What was most surprising to you?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 1.1, 1.2, 1.3, 1.4, 1.5 | Discussion = **1 hour** |
| **Week 1: Discussion Question 2**  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * What arethe various types of anemia? * Pick one type of anemia and explain the cause and treatment options for this condition.   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 1.1, 1.2, 1.3, 1.4, 1.5 | Discussion = **1 hour** |
| **Total** |  |  |  |

# Faculty Notes

**Course Setup**

**General Questions and Discussion Forum:** This course includes a discussion forum for general questions, comments, and concerns. This forum is intended for any course-related commentary not found within a specific weekly discussion. This forum is not graded. Make sure to monitor this forum for student posts. You are encouraged to make an announcement advertising this forum and monitor and post regularly to build engagement.

**Adobe Connect:** Consider posting an announcement asking students to submit any questions or topics they would like addressed ahead of time. The instructor can then utilize those questions that come up in the first part of the week to tailor the live Adobe Connect class session that would be scheduled toward the later part of the week. That 1-hour synchronous session will allow students the opportunity to go over any questions they had with the homework and clarify any misconceptions they have about the course content. All Adobe Connect sessions should be recorded and a link to the recording should be posted to the course page so any student who misses the session can review it later in the week.

*Note:* It is the instructor’s choice as to what day they will schedule the Adobe Connect Live Session, but it is recommended that they schedule this session for Wednesday of the week so students have plenty of time to review their homework prior to the deadline on Sunday.

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| Week Two: Cardiovascular System | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Describe the cardiac cycle and the cardiac conduction system. | | CLO1, CLO2, CLO4 | |
| * 1. Identify the parts of a normal ECG pattern and discuss the significance of this pattern. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Compare the structures and functions of the major types of blood vessels. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Explain how blood pressure is produced and controlled. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Identify and locate the major arteries and veins. | | CLO1, CLO2, CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Readings**  **Read** Ch. 19 “The Cardiovascular System: The Heart” and Ch. 20 “The Cardiovascular System: Blood Vessels and Circulation” of *Anatomy and Physiology*. | | 2.1, 2.2, 2.3, 2.4, 2.5 | Lecture Activity = **1 hour** |
| **Videos**  **Watch** the following videos from Khan Academy and Xolette Science:   * [“Heart Disease and Heart Attacks”](http://youtu.be/_wre2WRPiFI) (10:46) * [“Thrombo-emboli and Thromboembolisms”](http://youtu.be/h0207xMD6b8) (5:04) * [“Stenosis, ischemia and heart failure”](http://youtu.be/3858MaULDdI) (7:53) * [“Strokes”](http://youtu.be/xbyfeEW56Nc) (6:08) * [“Fetal Pig Dissection Part 1- Opening the Cavity”](http://youtu.be/OKgDH5skH60) (2:23) * [“Fetal Pig Dissection Part 5- Circulatory System”](http://youtu.be/t25GwoAV95Y) (5:04)   **Post** questions and comments about the content of the video in the General Questions and Discussion Forum on Blackboard. | | 2.1, 2.2, 2.3, 2.4, 2.5 | Lecture Activity = **1 hour** |
| ***Supplemental Resources and Activities***  *Explore these optional resources to deepen your understanding.* | | ***Alignment*** | ***AIE*** |
| **Website: Heart Disease Home Page**  **Review** the [Centers for Disease Control and Prevention website](http://www.cdc.gov/heartdisease/index.htm). | | 2.1, 2.2, 2.3, 2.4, 2.5 | Lecture Activity = **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week 2: Discussion Question 1**  **Use of Stents**  **Review** the information at the [WebMD website](http://www.webmd.com/heart-disease/guide/stents-types-and-uses) on cardiac stents.  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * Would you consider having a stent used on yourself or a family member? Why or why not?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 2.1, 2.2, 2.3, 2.4, 2.5 | Discussion = **1 hour** |
| **Week 2: Discussion Question 2**  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * How does a stroke differ from a heart attack? What short- and long-term effects may result from either event?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 2.2, 2.3, 2.4, 2.5 | Discussion = **1 hour** |
| **Total** |  |  |  |

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| Week Three: Lymphatic System and Immunity | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. List seven innate body defense mechanisms and describe the action of each mechanism. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Explain how allergic reactions, tissue rejection reactions, and autoimmunity arise from immune mechanisms. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Contrast innate versus adaptive immunity. | | CLO1, CLO2, CLO3, CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Readings**  **Read** Ch. 21 “The Lymphatic and Immune System” of *Anatomy and Physiology*. | | 3.1, 3.2, 3.3 | Lecture Activity = **1 hour** |
| **Videos**  **Watch** the following videos:   * [“What is the lymphatic system's role in immunity”](https://www.youtube.com/watch?v=kjLwVqxwaIM&feature=youtu.be) (9:42) * [“Your Immune System: Natural Born Killer - Crash Course Biology #32”](https://www.youtube.com/watch?v=CeVtPDjJBPU&feature=youtu.be) (15:01) * [“Flu Attack! How A Virus Invades Your Body”](https://www.youtube.com/watch?v=Rpj0emEGShQ&feature=youtu.be) (3:39) * [“Vaccines and the Autism Myth - Part 1”](https://www.youtube.com/watch?v=u6gpw_Deth8&feature=youtu.be) (9:50) * [“Vaccines and the Autism Myth - Part 2”](http://youtu.be/HGb9m1dbNdM) (9:00)   **Post** questions and comments about the content of the video in the General Questions and Discussion Forum on Blackboard. | | 3.1, 3.2, 3.3 | Lecture Activity = **1 hour** |
| ***Supplemental Resources and Activities***  *Explore these optional resources to deepen your understanding.* | | ***Alignment*** | ***AIE*** |
| **Website: Vaccines and Immunizations Home Page**  **Review** the [Centers for Disease Control and Prevention](http://www.cdc.gov/vaccines/). | | 3.2, 3.3 | Lecture Activity = **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week 3: Discussion Question 1**  **Respond** to the following questions by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * Why does vaccination provide long-lasting protection against a disease, whereas gamma globulin (IgG) provides only short-term protection? * Many parents are electing to not vaccinate their children. What is your viewpoint on this trend?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 3.1, 3.2, 3.3 | Discussion = **1 hour** |
| **Week 3: Discussion Question 2**  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * Describe an infectious disease such as measles, tuberculosis, Ebola, strep throat, or HIV/AIDS. Describe its effect on the immune system. Does it create a lasting immunity?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 3.1, 3.2, 3.3 | Discussion = **1 hour** |
| **Week 3 Quiz**  **Complete** the quiz over the topics covered in Ch. 18–21 of *Anatomy and Physiology*.  *Note*. All weekly quizzes are open-book and questions are randomly pulled from a large pool of questions for each chapter. You can take the quiz multiple times, but each time you take the quiz, you will likely encounter different questions. The highest score you earn on the quiz will be recorded and calculated into your course grade. | | 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3 | Quiz =  **1 hour** |
| **Total** |  |  |  |

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| Week Four: Digestion and Nutrition | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Name the major organs of the digestive system. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Describe the functions of the structures associated with the mouth. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Locate each of the digestive organs and glands; describe the general function of each. | | CLO1, CLO2, CLO4 | |
| * 1. Identify the function of each enzyme secreted by the digestive organs. | | CLO1, CLO2, CLO4 | |
| * 1. Describe how cells use carbohydrates, lipids, and proteins. | | CLO1, CLO2, CLO3, CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Readings**  **Read** Ch. 23 “The Digestive System” and Ch. 24 “Metabolism and Nutrition” of *Anatomy and Physiology*. | | 4.1, 4.2, 4.3, 4.4, 4.5 | Lecture Activity = **1 hour** |
| **Videos**  **Watch** the following videos:   * [“The Digestive System”](http://youtu.be/qF6TBRaE2_A) (11:24) * [“The Digestive System: CrashCourse Biology #28”](http://youtu.be/s06XzaKqELk) (11:52) * [“Esophagus”](http://youtu.be/wU9_daCwr_w) (5:33) * [“Stomach”](http://youtu.be/OzLoUCCASwM) (5:57) * [“Small Intestine 1: Structure”](http://youtu.be/UgnF1w-H8vw) (6:29) * [“Small Intestine 2: Digestion”](http://youtu.be/nLCNoT79_-o) (6:44) * [“Small Intestine 3: Absorption”](http://youtu.be/7zq3s3F5Do8) (4:54) * [“Liver”](http://youtu.be/rDjWrNRKfvg) (6:27) * [“Exocrine Pancreas”](http://youtu.be/BtqlMr1rUT8) (9:48) * [“Endocrine Pancreas”](https://www.youtube.com/watch?v=xNf--q0YMq8&feature=youtu.be) (6:49) * [“Colon, Rectum, Anus”](http://youtu.be/Lzr9GGjh6YQ) (9:44) * [“Control of the GI Tract”](http://youtu.be/_kfB2qKjdgM) (9:55) * [“Fetal Pig Dissection Part 3- Digestive System”](http://youtu.be/dkaUnbTF2FU) (2:26)   **Post** questions and comments about the content of the video in the General Questions and Discussion Forum on Blackboard. | | 4.1, 4.2, 4.3, 4.4, 4.5 | Lecture Activity = **1 hour** |
| ***Supplemental Resources and Activities***  *Explore these optional resources to deepen your understanding.* | | ***Alignment*** | ***AIE*** |
| **Website: Gastric Ulcers**  **Review** the [Mayo Clinic website](https://www.mayoclinic.org/diseases-conditions/peptic-ulcer/multimedia/ulcers/img-20008060). | | 4.1, 4.3, 4.4 | Lecture Activity = **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week 4: Discussion Question 1**  **Respond** to the following questions by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * Examine the label information on two dry breakfast cereals. Which types of cereals provide adequate sources of vitamins and minerals? Which major nutrients are lacking in these cereals? * List the cereal you selected. Would you select this cereal for your breakfast? Why or why not?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 4.5 | Discussion = **1 hour** |
| **Week 4: Discussion Question 2**  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * Describe a disease or condition related to the gastrointestinal tract. What treatment options are appropriate for treatment of this disease or condition?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 4.1, 4.2, 4.3, 4.4, 4.5 | Discussion = **1 hour** |
| **Total** |  |  |  |

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| Week Five: Respiratory System | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Explain how air and blood exchange gases. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. List the ways blood transports oxygen and carbon dioxide. | | CLO1, CLO2, CLO3, CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Readings**  **Read** Ch. 16 “The Respiratory System” of *Anatomy and Physiology*. | | 5.1, 5.2 |  |
| **Videos**  **Watch** the following videos:   * [“The lungs and pulmonary system”](http://youtu.be/SPGRkexI_cs) (20:33) * [“Meet the lungs”](http://youtu.be/qGiPZf7njqY) (9:36) * [“What is emphysema?”](http://youtu.be/laBUtu_QEEE) (10:54) * [“What is asthma?”](http://youtu.be/uX1RzoE_9BI) (10:11) * [“What is pneumonia?”](http://youtu.be/dzJNabJAPaE) (9:49) * [“Fetal Pig Dissection Part 6- Respiratory System”](http://youtu.be/d7BAgA80KcY) (1:12)   **Post** questions and comments about the content of the video in the General Questions and Discussion Forum on Blackboard. | | 5.1, 5.2 | Lecture Activity = **1 hour** |
| ***Supplemental Resources and Activities***  *Explore these optional resources to deepen your understanding.* | | ***Alignment*** | ***AIE*** |
| **Website: Tuberculosis (TB) Home Page**  **Review** the following information from the [Centers for Disease Control and Prevention website](http://www.cdc.gov/tb/):  TB is a disease caused by a bacterium called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs, but TB bacteria can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. TB disease was once the leading cause of death in the United States. | | 5.1, 5.2 | Lecture Activity = **1 hour** |
| **Website: American Lung Association Home Page**  **Review** the following information from the [American Lung Association website](http://www.lung.org/):  The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease through Education, Advocacy and Research. With the generous support of the public, we are “Fighting for Air.” When you join the American Lung Association in the fight for healthy lungs and healthy air, you help save lives today and keep America healthy tomorrow. | | 5.1, 5.2 | Lecture Activity = **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week 5: Discussion Question 1**  **Review** the data relevant to lung cancer at the [Department of Health for New York](https://www.health.ny.gov/statistics/cancer/registry/vol1.htm).  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * What surprises you about the data? What do you find interesting about the array of data?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 5.1, 5.2 | Discussion = **1 hour** |
| **Week 5: Discussion Question 2**  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * Describe one of the common diseases associated with the lungs such as asthma, pneumonia, COPD, bronchiogenic carcinoma, hay fever, and the common cold. What are the treatment options that may be appropriate for the disease you described?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 5.1, 5.2 | Discussion = **1 hour** |
| **Week 5 Quiz**  **Complete** the quiz over the topics covered in Ch. 22, 23, and 24 of *Anatomy and Physiology*.  *Note*. All weekly quizzes are open-book and questions are randomly pulled from a large pool of questions for each chapter. You can take the quiz multiple times, but each time you take the quiz, you will likely encounter different questions. The highest score you earn on the quiz will be recorded and calculated into your course grade. | | 4.1, 4.2, 4.3, 4.4, 4.5, 5.1, 5.2 | Quiz =  **1 hour** |
| **Total** |  |  |  |

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| Week Six: Urinary System, Water, Electrolyte, and Acid-Base Balance | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. List the functions of the kidneys. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Describe a nephron and explain the functions of its major parts. | | CLO1, CLO2, CLO4 | |
| * 1. Explain how glomerular filtrate is produced and describe its composition. | | CLO1, CLO2, CLO4 | |
| * 1. Describe the structure of the ureters, urinary bladder, and urethra. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. List the routes by which electrolytes enter and leave the body and explain how electrolyte intake and output are regulated. | | CLO1, CLO2, CLO4 | |
| * 1. Describe the causes and consequences of increase or decrease in body fluid pH. | | CLO1, CLO2, CLO3, CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Readings**  **Read** Ch. 25 “The Urinary System” and Ch. 26 “Fluid, Electrolyte, and Acid-Base Balance” of *Anatomy and Physiology*. | | 6.1, 6.2, 6.3, 6.4, 6.5, 6.6 |  |
| **Videos**  **Watch** the following videos:   * [“Meet the kidneys! (Overview)”](http://youtu.be/mcQQGGShmLs) (6:23) * [“The kidney and nephron”](http://youtu.be/cc8sUv2SuaY) (18:38) * [“The Excretory System: From Your Heart to the Toilet”](http://youtu.be/WtrYotjYvtU) (12:20) * [“Urination”](http://youtu.be/rheO1tVyB0U) (9:32) * [“Fetal Pig Dissection Part 4- Urinary System”](http://youtu.be/YlUfK1Dlndw) (1:19)   **Post** questions and comments about the content of the video in the General Questions and Discussion Forum on Blackboard. | | 6.1, 6.2, 6.3, 6.4, 6.5, 6.6 | Lecture Activity =  **1 hour** |
| ***Supplemental Resources and Activities***  *Explore these optional resources to deepen your understanding.* | | ***Alignment*** | ***AIE*** |
| **Website: The National Kidney Foundation**  **Review** the following information from the [National Kidney Foundation website](https://www.kidney.org/):  The National Kidney Foundation is the leading organization in the U.S. dedicated to the awareness, prevention and treatment of kidney disease for hundreds of thousands of healthcare professionals, millions of patients and their families, and tens of millions of Americans at risk. | | 6.1, 6.2, 6.3, 6.4, | Lecture Activity = **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week 6: Discussion Question 1**  **Review** the information about urinary tract infections (UTIs) at the [National Institutes of Health website](http://kidney.niddk.nih.gov/kudiseases/pubs/utiadult/).  **Respond** to the following questions by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * Where you aware of the prevalence of UTIs in the population? * What do researchers say is the reason for why UTIs are more common in females than in males? * Where do the organisms that cause UTIs come from?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 6.1, 6.2, 6.3, 6.4, 6.5, 6.6 | Discussion = **1 hour** |
| **Week 6: Discussion Question 2**  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * After eating an undercooked hamburger, a 25-year-old male developed diarrhea due to infection with a strain of *Escherichia coli* that produces a shigatoxin. How would this affect his blood pH, urine pH, and respiratory rate?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 6.6 | Discussion = **1 hour** |
| **Week 6 Quiz**  **Complete** the quiz over the topics covered in Ch. 25 and 26 of *Anatomy and Physiology*.  *Note*. All weekly quizzes are open-book and questions are randomly pulled from a large pool of questions for each chapter. You can take the quiz multiple times, but each time you take the quiz, you will likely encounter different questions. The highest score you earn on the quiz will be recorded and calculated into your course grade. | | 6.1, 6.2, 6.3, 6.4, 6.5, 6.6 | Quiz =  **1 hour** |
| **Total** |  |  |  |

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| Week Seven: Reproductive Systems | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Describe the general functions of each part of the male reproductive system. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Outline the process of spermatogenesis. | | CLO1, CLO2, CLO4 | |
| * 1. Explain how hormones control the activities of the male reproductive organs and the development of male secondary sex characteristics. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Describe the general functions of each part of the female reproductive system. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Outline the process of oogenesis. | | CLO1, CLO2, CLO4 | |
| * 1. Explain how hormones control the activities of the female reproductive organs and the development of female secondary sex characteristics. | | CLO1, CLO2, CLO3, CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Readings**  **Read** Ch. 27 “The Reproductive System” of *Human Anatomy and Physiology*. | | 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | Lecture Activity = **1 hour** |
| **Videos**  **Watch** the following videos:   * [“Welcome to reproductive system”](http://youtu.be/jRYEqOOrjH8) (6:37) * [“The Reproductive System: How Gonads Go”](http://youtu.be/_7rsH2loIY8) (12:01) * [“Anatomy of the male reproductive system”](http://youtu.be/_ce-IVjQYws) (10:02) * [“Transport of sperm via erection and ejaculation”](http://youtu.be/XLoLvz0r550) (10:56) * [“Spermatogenesis”](https://www.youtube.com/watch?time_continue=571&v=QUJ-xnv53UM) (10:27) * [“Testosterone”](http://youtu.be/k4e70nG3T8U) (9:39) * [“Basics of egg development”](http://youtu.be/Msrym4oGVSk) (7:18) * [“The ovarian cycle”](http://youtu.be/VYSFNwTUkG0) (10:44) * [“Reproductive cycle graph - Follicular phase”](http://youtu.be/gmKAuceSf-s) (8:38) * [“Reproductive cycle graph - Luteal phase”](http://youtu.be/uA7Xny276sk) (9:04) * [“Fetal pig reproductive and urinary”](http://youtu.be/ypRkYLpoYLQ) (12:36)   **Post** questions and comments about the content of the video in the General Questions and Discussion Forum on Blackboard. | | 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | Lecture Activity =  **1 hour** |
| ***Supplemental Resources and Activities***  *Explore these optional resources to deepen your understanding.* | | ***Alignment*** | ***AIE*** |
| **Website: Sexually Transmitted Diseases (STDs)**  **Review** the [Centers for Disease Control and Prevention website](http://www.cdc.gov/std/). | | 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | Lecture Activity = **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week 7: Discussion Question 1**  **Review** the cancers related to the male and female reproductive systems at the [New York Department of Health website](http://www.health.ny.gov/statistics/cancer/registry/vol1.htm).  **Respond** to the following questions by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * What surprises you about the data available on this website? * What do you find interesting about the array of data?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | Discussion = **1 hour** |
| **Week 7: Discussion Question 2**  **Respond** to the following question by Thursday 11:59 p.m. (EST). Provide specific examples to support your answers.   * Describe one of the common sexually transmitted diseases. How can it be prevented? What treatment options may be appropriate to treat the STD you described?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | Discussion = **1 hour** |
| **Total** |  |  |  |

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| Week Eight: Reproductive Systems | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Describe fertilization. | | CLO1, CLO2, CLO4 | |
| * 1. Describe the major events of the embryonic and fetal stages of development. | | CLO1, CLO2, CLO3, CLO4 | |
| * 1. Trace the path of blood through the fetal cardiovascular system. | | CLO1, CLO2, CLO4 | |
| * 1. Describe the major cardiovascular and other physiological adjustments in the newborn. | | CLO1, CLO2, CLO3, CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Readings**  **Read** Ch. 28 “Development and Inheritance” of *Anatomy and Physiology*. | | 8.1, 8.2, 8.3, 8.4 | Lecture Activity = **1 hour** |
| **Videos**  **Watch** the following videos:   * [“Meet the Placenta”](https://www.youtube.com/watch?v=bQioHx12JuY&feature=youtu.be) (12:32) * [“Estrogen”](http://youtu.be/eK7Gp6AWnuY) (7:20) * [“Maternal changes in pregnancy”](http://youtu.be/A0sp7I9rlz8) (7:25) * [“Labor (parturition)”](http://youtu.be/GxQAAqRzwNw) (10:25) * [“Breast anatomy and lactation”](http://youtu.be/bflHwVKgRNE) (7:26) * [“Septic Shock - pathophysiology and symptoms”](http://youtu.be/-bt-H5VQl5E) (9:59)   **Post** questions and comments about the content of the video in the General Questions and Discussion Forum on Blackboard. | | 8.1, 8.2, 8.3, 8.4 | Lecture Activity =  **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week 8: Discussion Question 1**  **Write** a response to the following discussion question in the discussion forum:   * After reading about pre-implantation genetic diagnosis (PGD) in Ch. 20, what are your thoughts about PGD?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 8.1, 8.2, 8.3, 8.4 | Discussion = **1 hour** |
| **Week 8: Discussion Question 2**  **Write** a response to the following discussion question in the discussion forum:   * Describe one of the methods of prenatal testing, such as ultrasound, chorionic villus sampling, and amniocentesis. Why might a health care provider request each of these tests?   **Post** constructive criticism, clarification, additional questions, or your own relevant thoughts to three of your classmates' posts by 11:59 p.m. (EST) on Sunday. | | 8.1, 8.2, 8.3, 8.4 | Discussion = **1 hour** |
| **Week 8 Quiz**  **Complete** the quiz over the topics covered in Ch. 27 and 28 of *Anatomy and Physiology*.  *Note*. All weekly quizzes are open-book and questions are randomly pulled from a large pool of questions for each chapter. You can take the quiz multiple times, but each time you take the quiz, you will likely encounter different questions. The highest score you earn on the quiz will be recorded and calculated into your course grade. | | 7.1, 7.2, 7.3, 7.4, 7.5, 7.6,  8.1, 8.2, 8.3, 8.4 | Quiz =  **1 hour** |
| **Total** |  |  |  |

# Breakdown of Academic Instructional Equivalencies

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|  | **AIE Hours** |
| **Week 1** |  |
| Required | 5 |
| Supplemental | 2 |
| **Week 2** |  |
| Required | 4 |
| Supplemental | 1 |
| **Week 3** |  |
| Required | 5 |
| Supplemental | 1 |
| **Week 4** |  |
| Required | 4 |
| Supplemental | 1 |
| **Week5** |  |
| Required | 4 |
| Supplemental | 2 |
| **Week 6** |  |
| Required | 4 |
| Supplemental | 1 |
| **Week 7** |  |
| Required | 4 |
| Supplemental | 1 |
| **Week 8** |  |
| Required | 5 |
| Supplemental |  |
|  |  |
| **Total Required Hours** | 35 |
| **Total Supplemental Hours** | 9 |
| **Total Hours** | 44 |