

## HEALTH SCIENCE 1, SEMESTER A

Credits: 0.5

### COURSE OVERVIEW AND GOALS

[Getting Started/Best Practices Template](#)

This one-semester course is intended to help you understand the basic structure and function of the human body. This course has 16 lessons organized into four units, plus four Unit Activities. Each lesson contains one or more Lesson Activities.

This course will cover the structure of the human body systems and their functions. It will also cover diseases and medical procedures related to each body system.

You will submit the Unit Activities to your teacher, and you will grade your work in the Lesson Activities by comparing them with given sample responses. The Unit Activities (submitted to the teacher) and the Lesson Activities (self-checked) are the major components of this course. There are other assessment components, namely the mastery test questions that feature along with the lesson; the pre- and post-test questions that come at the beginning and end of the unit, respectively; and an end-of-semester test. All of these tests are a combination of simple multiple-choice questions and technology enhanced (TE) questions.

Prerequisite courses: There are no recommended prerequisite courses.

Foundational skills: general literacy and communication skills needed for all high school online courses

By the end of this course, you will be able to do the following:

- ❖ Examine the language of medicine, including terminology, eponyms, abbreviations, and the structure of medical terms.
- ❖ Examine the organization of the healthcare system, including specializations, facility types, departments, equipment, and career pathways.
- ❖ Identify the planes, cavities, tissues, and positional terminology of the human body and examine diseases that affect body tissues.
- ❖ Examine the structure, function, and related disorders of the skeletal, muscular, cardiovascular, and integumentary systems, and correlate how these systems are interrelated.

- ❖ Summarize the functioning of multiple body systems and the roles of healthcare professionals who support them.
- ❖ Examine the structure, function, and related disorders of the respiratory, nervous, sensory, and lymphatic/immune systems, including relevant career specializations and autoimmune conditions.
- ❖ Examine the structure, function, and related disorders of the endocrine, reproductive, digestive, and excretory systems, including relevant career specializations.
- ❖ Compare disorders across body systems, evaluating causes, symptoms, treatments, and systemic interrelationships.

## COURSE COMPONENTS AND GRADING RUBRIC

The table gives a breakdown of the weight for each component in the course. Weight represents the percentage of the total score coming from each activity.

| Course Components                                                                                                                                                                                                                                                                                                                                                                                                                             | Count | Weight * |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|
| <b>Pretest.</b> <i>A pretest is an optional assessment, typically designed for credit recovery. If a student shows mastery of a lesson objective, the student may be automatically exempted from the upcoming activities associated with the mastered objective. Pretests are not included as a component of the student's final grade.</i>                                                                                                   | 4     | 0%       |
| <b>Module.</b> <i>Each module in this course contains an interactive tutorial or study and an associated mastery test. Tutorials and studies combine instruction and practice to prepare students for the mastery test, which is a computer-scored lesson-level summative assessment. The module score comes from a student's score on the mastery test.</i>                                                                                  | 16    | 30%      |
| <b>Discussion.</b> <i>A discussion activity is an opportunity for students to collaborate with their peers. An online threaded discussion mirrors the educational experience of a classroom discussion initiated when a teacher asks a complex, open-ended question. Students can engage in the discussion by responding both to the question and to the thoughts of others allowing for higher-order thinking about terminal objectives.</i> | 4     | 10%      |

| Course Components                                                                                                                                                                                                                                                                                                                                        | Count     | Weight*     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|
| <b>Unit Activity.</b> <i>A Unit Activity is at the end of a unit and constitutes one or more small tasks. Its purpose is to deepen understanding of key unit concepts and tie them together. Each Unit Activity includes a simple rubric. The teacher versions include both a rubric and modeled sample answers. Unit Activities are teacher graded.</i> | 4         | 20%         |
| <b>Posttest.</b> <i>A posttest appears at the end of each unit.</i>                                                                                                                                                                                                                                                                                      | 4         | 20%         |
| <b>End-of-Semester Test.</b> <i>An end-of-semester test (EOS) appears at the end of each course.</i>                                                                                                                                                                                                                                                     | 1         | 20%         |
| <b>Total</b>                                                                                                                                                                                                                                                                                                                                             | <b>33</b> | <b>100%</b> |

Weight\* Teachers may manually adjust these weights if desired, per district grading requirements.

## SCOPE AND SEQUENCE

### UNIT 1: MEDICAL TERMINOLOGY

In this unit, students learn about the basic components of medical terms. They will explore different healthcare facilities. They will examine healthcare specializations and discuss medical procedures. They will familiarize themselves with various abbreviations, acronyms, and symbols used in health care. They will learn about the human body planes and cavities. Additionally, they will discuss directional terms used to describe the position of structures and parts of the human body.

| Activity                           | Activity Objective                                                                                                                          |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Syllabus</b>                    | <ul style="list-style-type: none"> <li>Review the Course Syllabus at the beginning of the course.</li> </ul>                                |
| <b>Components of Medical Terms</b> | <ul style="list-style-type: none"> <li>Identify the basic components, origins, and meanings of medical terms, including eponyms.</li> </ul> |

| Activity                                           | Activity Objective                                                                                                                                                                    |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Specializations, Facilities, and Procedures</b> | <ul style="list-style-type: none"><li>Identify medical specializations and specialists.</li><li>Examine the functions of different healthcare facilities.</li></ul>                   |
| <b>Abbreviations, Acronyms, and Symbols</b>        | <ul style="list-style-type: none"><li>Recognize abbreviations, acronyms, and symbols used in health care.</li></ul>                                                                   |
| <b>Body Structure and Directional Terminology</b>  | <ul style="list-style-type: none"><li>Identify the planes and cavities of the human body and their respective positions.</li><li>Examine diseases that affect body tissues.</li></ul> |
| <b>Unit Activity: Medical Terminology</b>          | <ul style="list-style-type: none"><li>Examine some commonly used medical equipment and different departments of a hospital and various healthcare professions.</li></ul>              |

## UNIT 2: MUSCULOSKELETAL, CARDIOVASCULAR, AND INTEGUMENTARY SYSTEMS

In this unit, students learn about the structure and functions of each body system. They will identify diseases, disorders, and medical procedures related to each system. Additionally, they will explore health science professions related to each body system.

| Activity                   | Activity Objective                                                                                                                                                                                                               |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The Skeletal System</b> | <ul style="list-style-type: none"><li>Identify the parts and functions of the skeletal system and elements of good bone health.</li><li>Examine health care professions that involve treatment of the skeletal system.</li></ul> |
| <b>The Muscular System</b> | <ul style="list-style-type: none"><li>Identify muscular structures and functions.</li><li>Examine various diseases and specializations related to the muscular system.</li><li>Identify muscle-building exercises.</li></ul>     |

| Activity                                                                         | Activity Objective                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The Cardiovascular System</b>                                                 | <ul style="list-style-type: none"> <li>Identify the parts of the human heart and the structure and the functions of the cardiovascular system.</li> <li>Define pulse, blood pressure, and understand the normal values for each for adults.</li> <li>Recognize cardiovascular disorders and their causes.</li> </ul> |
| <b>The Integumentary System</b>                                                  | <ul style="list-style-type: none"> <li>Identify the layers of skin and the functions of the integumentary system.</li> <li>Recognize skin disorders and the role of a dermatologist.</li> </ul>                                                                                                                      |
| <b>Unit Activity: Musculoskeletal, Cardiovascular, and Integumentary Systems</b> | <ul style="list-style-type: none"> <li>Summarize the functioning of the four different body systems and correlate how these systems are interrelated.</li> </ul>                                                                                                                                                     |

## UNIT 3: RESPIRATORY, NERVOUS, SENSORY, AND LYMPHATIC AND IMMUNE SYSTEMS

In this unit, students learn about the structure and functions of each body system. They will identify diseases, disorders, and medical procedures related to each system. Additionally, they will explore health science professions related to each body system.

| Activity                      | Activity Objective                                                                                                                                                                                                                                     |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The Respiratory System</b> | <ul style="list-style-type: none"> <li>Identify the parts and functions of the respiratory system.</li> <li>Examine respiratory diseases, including causes and treatments.</li> <li>Recognize the roles of various respiratory professions.</li> </ul> |

| Activity                                                                              | Activity Objective                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The Nervous System</b>                                                             | <ul style="list-style-type: none"> <li>Recognize ways in which the nervous system is the communication center of the body.</li> <li>Identify the lobes of the brain and their functions.</li> <li>Recognize the effects of diseases and disorders on the nervous system.</li> </ul>                                                                                                                                 |
| <b>The Sensory System</b>                                                             | <ul style="list-style-type: none"> <li>Name the parts and functions of the human eye and ear.</li> <li>Identify disorders of the sensory system, including treatments.</li> </ul>                                                                                                                                                                                                                                   |
| <b>The Lymphatic and Immune Systems</b>                                               | <ul style="list-style-type: none"> <li>Identify the parts of the lymphatic and immune systems and how they fight infection and disease.</li> <li>Recognize the characteristics of lymphatic and immune system disorders.</li> <li>Identify the word parts and meanings of the lymphatic and immune system terms.</li> <li>Examine a career specialty relating to the lymphatic system and immune system.</li> </ul> |
| <b>Unit Activity: Respiratory, Nervous, Sensory, and Lymphatic and Immune Systems</b> | <ul style="list-style-type: none"> <li>Summarize autoimmune disorders of the respiratory, nervous, sensory, and lymphatic systems.</li> </ul>                                                                                                                                                                                                                                                                       |

## UNIT 4: ENDOCRINE, REPRODUCTIVE, DIGESTIVE, AND EXCRETORY SYSTEMS

In this unit, students learn about the structure and functions of each body system. They will identify diseases, disorders, and medical procedures related to each system. Additionally, they will explore health science professions related to each body system.

| Activity                                                                        | Activity Objective                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>The Endocrine System</b>                                                     | <ul style="list-style-type: none"> <li>Identify the parts and functions of the endocrine system.</li> <li>Examine the characteristics of endocrine system disorders.</li> <li>Summarize the role of a registered dietitian.</li> </ul>                                                                                                  |
| <b>The Male and Female Reproductive Systems</b>                                 | <ul style="list-style-type: none"> <li>Identify the parts and functions of the male and female reproductive systems.</li> <li>Examine disorders of each reproductive system, including causes and treatments.</li> </ul>                                                                                                                |
| <b>The Digestive System</b>                                                     | <ul style="list-style-type: none"> <li>Identify the parts and the major functions of the digestive system.</li> <li>Summarize the role of enzymes in digestion.</li> <li>Recognize the characteristics of digestive system disorders.</li> <li>Compare different types of weight-loss surgery.</li> </ul>                               |
| <b>The Excretory System</b>                                                     | <ul style="list-style-type: none"> <li>Identify the parts and functions of the excretory system.</li> <li>Recognize the characteristics of excretory system disorders.</li> <li>Identify the word parts and meanings of the excretory system terms.</li> <li>Summarize a medical specialty relating to the excretory system.</li> </ul> |
| <b>Unit Activity: Endocrine, Reproductive, Digestive, and Excretory Systems</b> | <ul style="list-style-type: none"> <li>Summarize one of the disorders of the endocrine, reproductive, digestive, or the excretory systems.</li> </ul>                                                                                                                                                                                   |

## COURSE MAP

You will achieve course level objectives by completing each lesson's instruction, assignments, and assessments. For a detailed look at how the materials meet these objectives, review the [course](#)

[map.](#)