

Anatomy & Physiology

Implementation Guide

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About This Guide

This guide is a companion to NHA's *Anatomy & Physiology*, intended for those implementing this learning resource. We included information such as how many hours you will need to incorporate the training, numerous tips to make implementation seamless, and detailed information on what content and features are included. The *Anatomy & Physiology* implementation guide is organized so that you can quickly find what you are looking for. We hope this guide will lighten your load as you prepare to give learners the knowledge and skills they need for long-term success in their health care career.

LEGEND

Learner: Student, Employee, or Apprentice | Facilitator: Educator, Instructor, Trainer, or Employer

Description

Anatomy & Physiology is an integrated, interactive online learning resource that works on multiple devices, including mobile. The product is designed to provide content to meet the needs of the *Anatomy & Physiology* course for a variety of allied health programs. Content presented in the product is mapped to select NHA test plans for allied health credentials, including the CBCS, CCMA, CET, CPCT, CPhT, and CPT exams. This guide is provided as a tool to assist facilitators with implementation of the product.

This product contains the following resources:

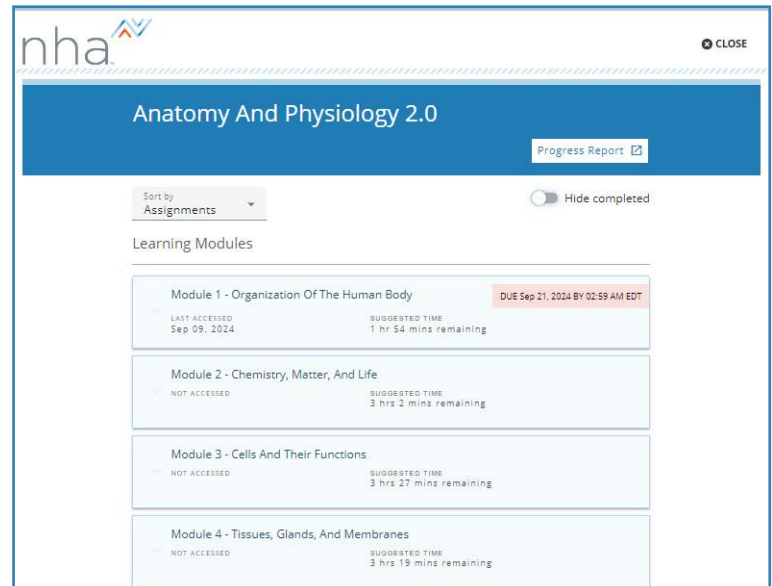
- Online Learning Modules
- Uses interactivity to increase learner engagement
- Provides content in small sections with frequent practice and feedback to increase confidence
- Encourages application of learned content through an integrated case study
- and activities, practice activities, and enrichment to increase retention
- Facilitator Toolkit

PRODUCT DASHBOARD

The product dashboard can be accessed by going into the NHA certification portal and clicking on “My Study Materials” and selecting the “Access” box. You may also choose “My Courses” and then select the *Anatomy & Physiology* “View Details” box. Once learners open the dashboard, they will see a listing of all the modules with usage and performance information.

Module activities are not scored, but learners are able to see the answers for each activity with rationale immediately following submission of their answers. To open a module, learners will click on the module they wish to begin, which expands the module menu to choose either “Lessons” or “Quiz.” Learners will click on the “Lessons” tab of the module they want to access. When first logging in, a Welcome! pop-up will provide a guided tour on how to navigate the product.

Instructional features within the modules are designed to engage learners and help them navigate content at their own pace. Module features are listed in the following section.



CONTENT MENU TAB

The menu tab can be found on the left-hand side of the screen at the top of the page. Click on the icon with three horizontal lines to open (expand) the menu. Its function is to open and close the Content Menu, which includes the following tabs.

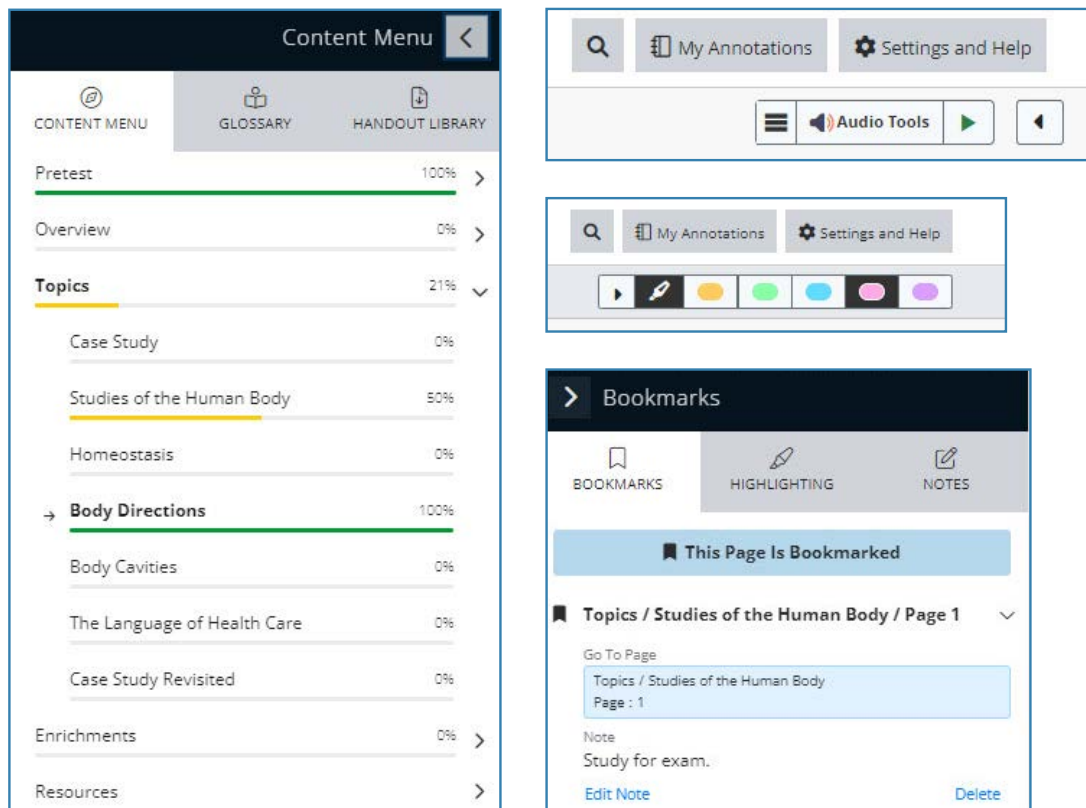
- *Content Menu*. This is the content in table of contents format. Click on each link to access the content.
- *Glossary*. This tab includes definitions for key terms and a pronunciation tool.
- *Video Library*. This contains all the videos within the related module (including Patient Experience Coach and the Walkthrough Demonstrations).
- *Handout Library*. This tab includes handouts such as Competency Checklists, Credits, Legal Disclaimer, and Additional Resources.

Learners can navigate through module materials by clicking on specific sections or topics. Sections will open into subsections (or topics).

SEARCH FEATURE, ANNOTATION TOOLS, SETTINGS AND HELP, AND AUDIO TOOLS

Additional tools are located in the upper right-hand corner of the screen. There is a Search feature, Annotation Tools, Settings and Help, and Audio Tools.

- **Search.** Click on the Search icon to search for content.
- **Settings and Help.** Click on the Settings tab to turn on/off in-text citations. The Help tab contains the Interactive Tour, Tools and Concepts, and Technical Specifications.
- **Audio Tools.** Click on the Audio Tools tab, and learners can listen to the module.
- **Closed Captioning.** Closed Captioning is available on all videos. Click on the CC icon and enable to display the captioning.
- **Annotation Tools.** Learners can annotate (highlight), place bookmarks, or write notes using the Annotation Tools feature (see images below).



INSTRUCTIONAL DESIGN AND MODULE FEATURES

Anatomy & Physiology consists of 25 modules.

- **The Body as a Whole:** Modules 1 to 4
- **Disease and the First Line of Defense:** Modules 5 to 6
- **Movement and Support:** Modules 7 to 8
- **Coordination and Control:** Modules 9 to 12
- **Circulation and Body Defense:** Modules 13 to 17
- **Energy:** Supply and Use: Modules 18 to 22
- **Perpetuation of Life:** Modules 23 to 25

Each module in the product includes the same components.

A **pretest** to assess background knowledge before completion of a module. Here the learner can gauge prior knowledge of key concepts and determine where focus is needed. This ungraded quiz with immediate sets the stage for learning.

The screenshot shows the 'Pretest' interface for 'Module 1 - Organization Of The Human Body'. The header includes the 'nha' logo, the module title, and a 'CLOSE' button. Below the header, there are navigation icons for 'My Annotations' and 'Settings and Help'. The main content area contains two multiple-choice questions. The first question asks 'Which of the following two body cavities are separated by the diaphragm?' with four options: A. Cranial and spinal cavities, B. Dorsal and ventral cavities, C. Thoracic and abdominal cavities, and D. Abdominal and pelvic cavities. The second question asks 'Which of the following body systems consists of the skin and accessory organs?' with four options: A. Circulatory system, B. Nervous system, C. Integumentary system, and D. Digestive system. Each question has a 'Submit' button below the options.

An **overview**. Here the learner will find a brief introduction to the body system and module objectives. Practice activities and quizzes are designed to test knowledge of the objectives. Underlined words have definition and audio pronunciation pop-ups.

The screenshot shows the 'Overview' interface for 'Module 3 - Cells And Their Functions'. The header includes the 'nha' logo, the module title, and a 'CLOSE' button. Below the header, there are navigation icons for 'My Annotations' and 'Settings and Help'. The main content area is titled 'Introduction' and contains a paragraph of text about the cell as the basic unit of life. To the right of the text is a 'Learning Objectives' section with a list of 11 objectives. The objectives are: 1. List three types of microscopes used to study cells. 2. Describe the composition and functions of the plasma membrane. 3. Describe the cytoplasm of the cell, and cite the names and functions of the main organelles. 4. Describe methods by which substances enter and leave cells that do not require chemical energy. 5. Explain what will happen if cells are placed in solutions with concentrations the same as or different from those of the cytoplasm. 6. Describe methods by which substances enter and leave cells that require chemical energy. 7. Describe the composition, location, and function of the DNA in a cell. 8. Compare the functions of three types of RNA in cells. 9. Explain briefly how cells make proteins. 10. Name and briefly describe the stages in mitosis. 11. Discuss the cellular changes that may lead to cancer, and list several cancer risk factors.

Topics are where the learning path unfolds. These include:

- Opening case study
- Structure and function
- Diseases and disorders
- Treatments
- Closing case study

Topics are designed to present small sections of information followed by practice activities that align to the learning objectives for that topic—i.e., if a topic is focused on structure, learners would be asked to match descriptions with their corresponding structures. Presentation of the information varies from text with audio pronunciations, illustrations, photography, and animations. The variety in presentation of the materials as well as the practice activities helps increase student engagement and retention of information.

Topics are designed to present small sections of information followed by practice activities that align to the learning objectives for that topic—i.e., if a topic is focused on anatomy, students would be asked to label anatomical structures. Presentation of the information varies from text with audio pronunciations, illustrations, photography, and animations. The variety in presentation of the materials as well as the practice activities helps increase student engagement and retention of information.

nha

Module 6 - Integumentary System

CLOSE

Topics

Q My Annotations Settings and Help

Audio Tools

Structure of the Skin

Recall from *Tissues, Glands, and Membranes* that the skin, or cutaneous membrane, is an epithelial membrane. Like all epithelial membranes, it contains an outer layer of epithelium and an inner layer of connective tissue.

- The epidermis (ep-ih-DER-mis), the outermost portion, which itself is subdivided into thin layers called *strata* (STRA-tah) (sing. stratum). The epidermis is composed entirely of epithelial cells and contains no blood vessels.
- The dermis, which is the connective tissue portion of the cutaneous membrane, contains many blood vessels, nerve endings, and glands.

epidermis +

stratum +

dermis +

CROSS-SECTION OF THE SKIN The dermis and epidermis make up the skin. The skin and its associated structures make up the integumentary system.

Summative quizzes assess knowledge of module content.

Downloadable enrichment content includes the following.

- Topics

Q My Annotations

⚙ Settings and Help

≡ Audio Tools

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Practice Activity

Which two categories of tissues repair themselves most easily?
(Enter your response and submit to compare to the correct answer.)

Type your answer here.

Submit

List four factors that affect skin healing.
(Enter your response and submit to compare to the correct answer.)

Type your answer here.

Submit

Levator palpebrae

Fat

Orbicularis oculi

Eyelid

Eyelashes

Cornea

Sclera

Conjunctival sac

Conjunctiva

eyeball

A sagittal view of the eye orbit.

Reprinted with permission from McConnell T, Hull K. Human Form, Human Function. Philadelphia, PA: Lippincott Williams & Wilkins, 2011.

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Facilitator Tool Kit

NHA's *Anatomy & Physiology* also includes a Facilitator's Tool Kit (FTK). This tool kit will assist facilitators in deploying the product to meet their specific needs, whether in class or online.

The Tool Kit includes the following.

- Implementation Guide
- Answer keys with rationales for quizzes and practice activities
- Strategies for Effective Teaching: General Concepts
- Strategies for Effective Teaching: Meeting Students' Needs
- Strategies for Effective Teaching: Preparing Your Materials
- Lesson Plans
- PowerPoints for lectures
- Mapping to accreditation standards and NHA test plans
- Crosswalks to current A&P textbooks
- 7 section tests with rationales
- 1 final exam with rationales

Implementation Strategies

Knowledge of basic anatomy and physiology is a critical foundational skill required across most allied health professions. The flexibility of delivery with NHA's *Anatomy & Physiology* allows facilitators the ability to implement the product when and where it makes sense within an individual program.

1. Review the overall product, module by module. This includes the enrichment items. It would be best to complete all modules to become familiar with the content. If time does not allow for that, pick several modules that are different from one another (i.e., the muscular system and the digestive system) and complete those.
2. Decide how the product will be implemented into your program.
 - a. Will *Anatomy & Physiology* be used in one specific course or across multiple courses (as in a wheel structure)?
 - b. Will the course be delivered in person, online, or in a hybrid format?
 - c. What is the time frame for the course? Over how many weeks will the content be delivered?
3. Plan for implementation.
 - a. If *Anatomy & Physiology* will be a standalone resource, match the course outcomes to each module.
 - b. If *Anatomy & Physiology* will be implemented across multiple courses, match the content to the appropriate courses or units.
 - c. A transition guide from several *Anatomy & Physiology* textbooks is included in the FTK to assist with this process.

PATHWAYS TO IMPLEMENTATION

<i>Option 1: Standalone Course</i>	<i>Option 2: Threaded throughout Multiple Courses</i>
The course will be separate from other courses in the program	The resource will be used in a wheel program in which the modules are threaded throughout the program
Can be used in class, online, or in a hybrid environment	Can be used in class, online, or in a hybrid environment

Recommended Time in the Anatomy & Physiology Resource

See below for the time recommendations that students should spend in the product. It is based on word counts and the amount and types of activities in each module. This is purely an estimate—some learners will need less time, others will need more. As NHA gathers user analytics, we will update this section.

Recommended Time

Learning content in the entire product. 55 hours

Pre-Test quizzes. 4 hours

Practice activities 15 hours

End-of-module quizzes 4 hours

Estimated total time 78 hours

Recommended Time per Module

<i>Module</i>	<i>Seat Time</i>
<i>Module 1.</i> Organization of the Human Body	2 hours 19 minutes
<i>Module 2.</i> Chemistry, Matter, and Life	3 hours 2 minutes
<i>Module 3.</i> Cells and their Functions	3 hours 27 minutes
<i>Module 4.</i> Tissues, Glands, and Membranes	3 hours 19 minutes
<i>Module 5.</i> Disease and Disease Producing Organisms	5 hours 9 minutes
<i>Module 6.</i> Integumentary System	3 hours 15 minutes
<i>Module 7.</i> Skeletal System: Bones and Joints	3 hours 30 minutes
<i>Module 8.</i> Muscular System	3 hours 35 minutes
<i>Module 9.</i> Nervous System: The Spinal Cord and Spinal Nerves	2 hours 55 minutes
<i>Module 10.</i> Nervous System: The Brain and Cranial Nerves	2 hours 52 minutes
<i>Module 11.</i> Sensory System	3 hours 6 minutes
<i>Module 12.</i> The Endocrine System: Glands and Hormones	4 hours 5 minutes

Module	Seat Time
<i>Module 13.</i> Blood	3 hours 48 minutes
<i>Module 14.</i> The Heart and Heart Disease	4 hours 13 minutes
<i>Module 15.</i> Blood Vessels and Blood Circulation	3 hours 36 minutes
<i>Module 16.</i> Lymphatic System and Lymphoid Tissue	2 hours 11 minutes
<i>Module 17.</i> Immunity	3 hours 8 minutes
<i>Module 18.</i> Respiratory System	3 hours 39 minutes
<i>Module 19.</i> Digestive System	3 hours 35 minutes
<i>Module 20.</i> Metabolism, Nutrition, and Body Temperature	2 hours 50 minutes
<i>Module 21.</i> Urinary System	2 hours 43 minutes
<i>Module 22.</i> Body Fluids	2 hours 2 minutes
<i>Module 23.</i> Male and Female Reproductive Systems	3 hours 56 minutes
<i>Module 24.</i> Development and Birth	2 hours 37 minutes
<i>Module 25.</i> Heredity and Hereditary Disease	2 hours 37 minutes

Frequently Asked Questions

Questions	Answers
Where are the technical requirements for <i>Anatomy & Physiology</i> located?	Technical requirements for <i>Anatomy & Physiology</i> can be found at https://knowledge.nhanow.com/what-are-the-system-requirements .
What specific requirements does <i>Anatomy & Physiology</i> fulfill?	<i>Anatomy & Physiology</i> fulfills educational materials requirements for the <i>Anatomy & Physiology</i> course taught across multiple allied health programs.
What is the reading level of this product?	NHA does not perform precise reading level analyses on our products. Instead, we are focused on ensuring that all content is appropriate for learning the subject and the knowledge needed for the assessments within the product. The content is validated both through iterative content expert reviews and through psychometric evaluation of testing data.
How long will <i>Anatomy & Physiology</i> take to complete?	Inclusive of content, practice, and assessment, total time in the product is approximately 78 hours.
Where should we plug this offering into our current programs?	The product should be used in the <i>Anatomy & Physiology</i> section of your program, whether as a standalone or integrated course.
Who are ideal candidates for this training?	Students in all allied health programs must have some knowledge of anatomy and physiology.
Can learners receive continuing education credit for this program?	NHA does not currently offer continuing education credit for this product.

Technical Requirements

To learn more about technical requirements for this offering, refer to the following link.

Requirements for the running module content:

<https://knowledge.nhanow.com/what-are-the-system-requirements>

PRODUCT SUPPORT

At NHA, we pride ourselves on timely, effective support to meet your needs. Please contact us at 800-499-9092 if you need assistance with this product.

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