



# Athletic Training Student Aide

## Study Guide

**Assessment:**

**8613 Athletic Training Student Aide**

career **tech** ✓  
**Testing**  
*The Provider of Online Testing Solutions*



**OKLAHOMA  
WORKS**

Aligned with the NATA  
Board of Certification

## Overview

This study guide is designed to help students prepare for the Athletic Training Student Aide assessment. It not only includes information about the assessment, but also the skills standards upon which the assessment is based and test taking strategies. The assessment measures a student's ability to apply knowledge of the skills necessary for success in the athletic training field.

Each of the four sections in this guide provides useful information for students preparing for the Athletic Training Student Aide assessment.

- CareerTech and Competency-Based Education: A Winning Combination
- Athletic Training Student Aide assessment
  - ▶ Assessment Information
  - ▶ Standards and Test Content
  - ▶ Sample Questions
  - ▶ Abbreviations, Symbols, and Acronyms
- Strategies for Test Taking Success
- Notes

This assessment's standards are aligned with those of the National Athletic Trainers' Association (NATA) Board of Certification. The NATA is the professional membership association for certified athletic trainers and others who support the athletic training profession. The Board of Certification, Inc. (BOC) was incorporated in 1989 to provide a certification program for entry-level athletic trainers. The BOC establishes and regularly reviews both the standards for the practice of athletic training and the continuing education requirements for Certified Athletic Trainers. The BOC has the only accredited certification program for athletic trainers in the United States.

**[www.nata.org](http://www.nata.org)**

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## CareerTech and Competency-Based Education: A Winning Combination

Competency-based education uses learning outcomes that emphasize both the application and creation of knowledge and the mastery of skills critical for success. In a competency-based education system, students advance upon mastery of competencies, which are measurable, transferable outcomes that empower students.

Career and technology education uses industry professionals and certification standards to identify the knowledge and skills needed to master an occupation. This input provides the foundation for development of curriculum, assessments and other instructional materials needed to prepare students for wealth-generating occupations and produce comprehensively trained, highly skilled employees demanded by the work force.

### Tools for Success

CareerTech education relies on three basic instructional components to deliver competency-based instruction: skills standards, curriculum materials, and competency assessments.

**Skills standards** provide the foundation for competency-based instruction and outline the knowledge and skills that must be mastered in order to perform related jobs within an industry. Skills standards are aligned with national skills standards and/or industry certification requirements; therefore, a student trained to the skills standards is equally employable in local, state and national job markets.

**Curriculum materials and textbooks** contain information and activities that teach students the knowledge and skills outlined in the skills standards. In addition to complementing classroom instruction, curriculum resources include supplemental activities that enhance learning by providing opportunities to apply knowledge and demonstrate skills.

**Certification Assessments** test the student over material outlined in the skills standards and taught using the curriculum materials and textbooks. When used with classroom performance evaluations, assessments provide a means of measuring occupational readiness.

Each of these components satisfies a unique purpose in competency-based education and reinforces the knowledge and skills students need to gain employment and succeed on the job.

### Measuring Success

Evaluation is an important component of competency-based education. Pre-training assessments measure the student's existing knowledge prior to receiving instruction and ensure the student's training builds upon this knowledge base. Formative assessments administered throughout the training process provide a means of continuously monitoring the student's progress towards mastery.

Certification assessments provide a means of evaluating the student's mastery of knowledge and skills. Coaching reports communicate assessment scores to students and provide a breakdown of assessment results by standard area. The coaching report also shows how well the student has mastered skills needed to perform major job functions and identifies areas of job responsibility that may require additional instruction and/or training.

# Athletic Training Student Aide Assessment

## What is the Athletic Training Student Aide assessment?

The Athletic Training Student Aide assessment is an end-of-program assessment for students in athletic training programs. The assessment provides an indication of student mastery of basic knowledge and concepts necessary for success in careers in this area.

## How was the assessment developed?

The assessment was developed by the CareerTech Testing Center. The assessment and standards align with the NATA Board of Certification standards. Items were developed and reviewed by a committee of subject matter experts.

The committee assigned frequency and criticality ratings to each skill, which determines the significance of each task for test development:

**Frequency:** represents how often the task is performed on the job. Frequency rating scales vary for different occupations. The rating scale used in this publication is presented below:

1 = less than once a week      2 = at least once a week      3 = once or more a day

**Criticality:** denotes the level of consequence associated with performing a task incorrectly. The rating scale used in this publication is presented below:

1 = slight                                      2 = moderate                                      3 = extreme

## What does the assessment cover?

Specifically, the test includes multiple-choice test items over the following areas:

### Athletic Training Student Aide (75 questions)

Demonstrate Knowledge of Anatomy and Physiology	27%
Demonstrate Knowledge of Exercise Physiology	5%
Demonstrate Understanding of Therapeutic Modalities and Their Effects on the Body	8%
Clinically Evaluate Athletic Injuries	9%
Apply Basic Concepts of Rehabilitation	5%
Demonstrate Knowledge of First Aide and Emergency Medical Skills	8%
Demonstrate Administrative and Organizational Skills	9%
Demonstrate Basic Understanding of Nutrition	7%
Demonstrate a Basic Understanding of Pharmacology	5%
Demonstrate Knowledge of Basic Counseling Techniques	4%
Demonstrate Taping and Wrapping Techniques	8%
Demonstrate Skill in the Construction and Fitting of Equipment to Comply with Safety Regulations	4%

## What are the benefits of using this assessment?

Students receive a certificate for each assessment that he/she passes. This certificate may be included in his/her portfolio and used to communicate the student's mastery of the subject matter to potential employers.

## When should the assessment be taken?

The CareerTech Testing Center recommends that students take this assessment as soon as possible after receiving all standards-related instruction, rather than waiting until the end of the school year.

## Is the assessment timed?


No. However, most students finish the assessment within one hour.

## What resources can students use on these assessments?

Students are allowed to use calculators and scratch paper on CTTC assessments; however, these items must be provided by the testing proctor and returned to the proctor before the student's exam is submitted for scoring. Calculator apps on cell phones and other devices may not be used on these assessments.

## What accommodations can be made for students with Individualized Education Plans (IEPs)?

Accommodations are allowed for students with an Individualized Education Plan. Examples of allowable accommodations include:

- Extended time — This assessment is not timed; therefore, students may take as much time as needed to finish. The assessment must be completed in one testing session.
- Readers — A reader may be used to read the assessment to a student who has been identified as needing this accommodation.
- Enlarged text — Students needing this accommodation can activate this feature by clicking the  icon in the upper right corner of the screen.

## What can students expect on Test Day?

All CTTC assessments are web-based and delivered exclusively by a proctor in the school's assessment center. The proctor **cannot** be an instructor or anyone who was involved with the student during instruction.

Assessments are delivered in a question-by-question format. When a question is presented, the student can select a response or leave the question unanswered and advance to the next question. Students may also flag questions to revisit before the test is scored. All questions must be answered before the test can be submitted for scoring.

After the assessment is scored, the student will receive a score report that not only shows the student's score on the assessment, but also how the student performed in each standard area.

## Can students retake the test?

Students may retake the test unless their school or state testing policies prohibit retesting. Students who can retake must wait at least three days between test attempts.

## Standards and Test Content

### Demonstrate Knowledge of Anatomy and Physiology (20 questions)

1. Identify basic structures and describe functions of the skeletal system **(3/3)**
2. Identify basic structures and describe functions of the muscular system **(3/3)**
3. Identify basic structures and describe functions of the integumentary system **(1/2)**
4. Identify basic structures and describe functions of the digestive system **(1/2)**
5. Identify basic structures and describe functions of the circulatory system **(2/3)**
6. Identify basic structures and describe functions of the respiratory system **(2/3)**
7. Identify basic structures and describe functions of the urinary system **(1/1)**
8. Identify basic structures and describe functions of the central nervous system **(2/3)**
9. Identify basic structures and describe functions of the peripheral nervous system **(2/3)**
10. Identify basic structures and describe functions of the endocrine system **(1/1)**
11. Identify basic structures and describe functions of the reproductive system **(1/1)**
12. Identify basic structures and describe functions of the immune system **(2/2)**
13. Demonstrate a good working knowledge of medical terminology **(3/3)**



### Demonstrate Knowledge of Exercise Physiology (4 questions)

1. Perform and describe various stretching techniques **(3/2)**
2. Demonstrate understanding of body function during warm-up and cool-down **(2/2)**
3. Demonstrate understanding of the body's response to exercise **(2/3)**
4. Perform proper techniques for determining body fat percentages **(1/1)**
5. Perform and understand vital signs **(2/3)**



## Demonstrate Understanding of Therapeutic Modalities and Their Effects on the Body (6 questions)

1. Identify and explain the use of thermo-therapeutic modalities **(3/3)**
  - Indications/contraindications/safety
  - Hydrocollator packs
  - Paraffin bath
  - Topical analgesic
  - Ultrasound
  - Hot whirlpool
  - Diathermy
2. Identify and explain the use of cryo-therapeutic modalities **(3/3)**
  - Indications/contraindications/safety
  - Ice packs
  - Ice massage
  - Ice water immersion
  - Cold whirlpool
  - Chemical coolants
  - Ice and Stretch
3. Identify and explain the use of hydro-therapeutic modalities **(3/3)**
  - Indications/contraindications/safety
  - Contrast immersion
  - Hot and cold whirlpools
4. Identify and explain the use of electrical stimulation modalities **(3/3)**
  - Indications/contraindications/safety
  - TENS
  - Interferential
  - Pre-Mod
5. Identify and explain the use of manual and mechanical modalities **(2/3)**
  - Indications/contraindications/safety
  - Intermittent compression unit
  - Ice and stretch
  - Massage
  - Traction
6. Identify and explain the use of light modalities **(1/2)**
  - Indications/contraindications/safety
  - Laser therapy



## Clinically Evaluate Athletic Injuries (7 questions)

1. Demonstrate the ability to obtain and document injury information and refer as necessary **(3/3)**
  - Utilize appropriate S.O.A.P note format
2. Identify and describe signs of closed soft tissue injuries to the upper and lower extremities **(3/3)**
  - Muscle
  - Tendon
  - Ligament
  - Joint Capsule
  - Nerves
  - Cartilage
3. Identify and describe signs of open soft tissue injuries **(3/3)**
  - Wounds
4. Define and identify injuries to bony tissue **(2/3)**
  - Fractures (open, closed, stress)
  - Common fractures to upper and lower extremities

5. Identify signs and symptoms of infection and disease **(3/3)**
6. Identify signs and symptoms of head, neck, and spinal injuries **(2/3)**
  - Facial
  - Brain/concussion
  - Spinal cord

## Apply Basic Concepts of Rehabilitation (4 questions)

1. Demonstrate a working knowledge of the phases of healing **(3/3)**
2. Demonstrate a working knowledge of rehabilitation as it pertains to individualized patient needs **(3/3)**
3. Demonstrate and use rehabilitation techniques and equipment **(3/3)**
  - Decrease pain
  - Increase range-of-motion and flexibility
  - Increase strength
  - Increase proprioception
  - Increase cardiovascular endurance
  - Return to activity criteria

## Demonstrate Knowledge of First Aid and Emergency Medical Skills (6 questions)

1. Understand and perform CPR, AED, rescue breathing, and skills for clearing obstructed airways **(1/3)**
2. Recognize signs and demonstrate skills to control bleeding and care for wounds using universal precautions **(3/3)**
  - Internal bleeding
  - External bleeding
3. Demonstrate understanding and treatment of heat and cold illness **(2/3)**
  - Heat cramps
  - Heat exhaustion
  - Heat stroke
  - Hypothermia
  - Frostbite
4. Demonstrate understanding of immobilization techniques and equipment **(1/3)**
  - Spineboarding
  - Splinting
  - Cervical collar
5. Identify signs and symptoms of illness **(2/3)**
  - Body temperature
  - Skin temperature
  - Dizziness
  - Blood pressure
  - Vomiting
  - Skin appearance
  - Pulse
  - Diarrhea
  - Headache
6. Demonstrate understanding and treatment of illness **(1/3)**
  - Diabetes
  - Heart attack
  - Shock
  - Fainting
  - Seizure
  - Asthma
  - Poisoning
  - Allergic reactions
  - Internal organs
  - Male/Female-specific conditions
  - Sickle cell





7. Demonstrate understanding and treatment of closed soft tissue injuries to upper and lower extremities **(3/3)**
8. Demonstrate understanding and treatment of open soft tissue to upper and lower extremities **(3/3)**
9. Demonstrate understanding and treatment of injuries to bony tissue **(2/3)**
10. Demonstrate understanding and treatment of head, neck, spinal and facial injuries **(2/3)**

## **Demonstrate Administrative and Organizational Skills (7 questions)**

1. Provide and maintain appropriate documentation of all individualized patient records **(3/3)**
2. Organize pre-participation physicals **(1/3)**
3. Maintain open lines of communication and referral with sports medicine team members **(3/3)**
  - Athlete
  - Family physician
  - Athletic director
  - Allied health professionals
  - Parents
  - Team physician
  - Coaches
4. Demonstrate knowledge of emergency/catastrophic management plan **(1/3)**
5. Understand principles of athletic training room design and function **(3/2)**
6. Utilize safety and sanitation procedures in the athletic training room **(3/3)**
7. Demonstrate knowledge of education, certification/licensure requirements, and professional organizations **(1/3)**
  - NATA
  - State Organizations
  - CAATE
  - BOC
8. Identify, understand, and comply with regulations and policies **(3/3)**
  - Confidentiality
  - HIPAA
  - OSHA
  - FERPA
  - ADA
9. Develop knowledge of athletic training room supplies and their use **(3/3)**
  - Emergency supplies
  - Athletic training kit
  - Inventory
  - Budget



## Demonstrate Basic Understanding of Nutrition (5 questions)

1. Demonstrate knowledge of the basics of human nutrition **(2/2)**
  - Carbohydrates
  - Fat
  - Proteins
  - Vitamins
  - Minerals
  - Water
2. Recognize the special nutritional needs of the athlete **(2/2)**
3. Identify and explain the nutritional supplements/ergogenic aids **(2/3)**
4. Demonstrate understanding of proper hydration techniques **(3/3)**
5. Demonstrate understanding of eating disorders **(1/3)**
  - Anorexia nervosa
  - Bulimia nervosa
6. Demonstrate knowledge of proper weight-loss or weight-gain methods **(1/3)**

## Demonstrate a Basic Understanding of Pharmacology (4 questions)

1. Define anti-pyretic and identify its effect on the body **(2/3)**
2. Define anti-inflammatory and identify its effect on the body **(2/3)**
3. Define analgesic and identify its effect on the body **(2/3)**
4. Understand the role of medications **(3/3)**
  - Anti-fungal
  - Gastrointestinal
  - Antibiotics
  - OTC medication
  - Asthma medication
5. Understand legal regulations of medication **(3/3)**
  - Minors
  - Prescription drugs
  - OTC drugs



## Demonstrate Knowledge of Basic Counseling Techniques (3 questions)

1. Demonstrate understanding of psychosocial conditions that require referral of patient to appropriate care giver **(2/3)**
2. Utilize basic understanding of interpersonal skills **(3/3)**
3. Maintain confidentiality **(3/3)**
  - HIPAA

## **Demonstrate Taping, Wrapping, and Bracing Techniques (6 questions)**

1. Identify and understand the use of taping, wrapping and bracing supplies **(3/3)**
2. Demonstrate common taping, wrapping and bracing techniques of the shoulder **(2/3)**
3. Demonstrate common taping, wrapping and bracing techniques of the elbow, wrist, and hand **(3/3)**
4. Demonstrate common taping, wrapping and bracing techniques of the hip and thigh **(2/3)**
5. Demonstrate common taping, wrapping and bracing techniques of the knee **(1/3)**
6. Demonstrate common taping, wrapping and bracing techniques of the lower leg, ankle, and foot **(3/3)**

## **Demonstrate Skill in the Construction and Fitting of Equipment to Comply with Safety Regulations (3 questions)**

1. Demonstrate proper fitting of football helmet **(1/3)**
2. Demonstrate proper fit of protective gear for all applicable sports **(2/3)**
3. Demonstrate knowledge of proper crutch fitting/gait training **(1/3)**



## Sample Questions

- \_\_\_\_\_ 1. Fluid that has been lost from the body and not replaced adequately results in:
- a. atrophy.
  - b. hyperhydration.
  - c. isohydration.
  - d. dehydration.
- \_\_\_\_\_ 2. Which of the following treatments is an example of cryotherapy?
- a. ice massage
  - b. ultra sound
  - c. heat massage
  - d. traction
- \_\_\_\_\_ 3. In a concentric contraction, what does the muscle do?
- a. shortens as it is contracted
  - b. lengthens as it is contracted
  - c. remains the same as it is contracted
  - d. lengthens and then shortens as it is contracted
- \_\_\_\_\_ 4. A soft tissue injury that develops due to friction or rubbing and involves fluid under the skin is a/an:
- a. avulsion.
  - b. blister.
  - c. callus.
  - d. abrasion.
- \_\_\_\_\_ 5. What is a sign of inflammation?
- a. blueness
  - b. contraction
  - c. decreased tissue temperature
  - d. redness
- \_\_\_\_\_ 6. The term used to describe something that is “in front and toward the outside or farthest from the midline” is:
- a. anteroinferior.
  - b. anterolateral.
  - c. posterolateral.
  - d. posteromedial.

- \_\_\_\_\_ 7. The only bone-to-bone connection between the axial skeleton and the appendicular skeleton in the upper extremity occurs at which joint?
- a. acromioclavicular
  - b. glenohumeral
  - c. scapulothoracic
  - d. sternoclavicular
- \_\_\_\_\_ 8. “Runner’s knee” and “runner’s hip” involve which muscle?
- a. gastrocnemius
  - b. gracilis
  - c. rectus femoris
  - d. tensor fascia latae
- \_\_\_\_\_ 9. How many pairs of spinal nerves are in the human body?
- a. 21
  - b. 24
  - c. 31
  - d. 34
- \_\_\_\_\_ 10. The patella is classified as which type of bone?
- a. flat
  - b. irregular
  - c. sesamoid
  - d. short



## Sample Questions — Key

1. Fluid that has been lost from the body and not replaced adequately results in:
  - a. atrophy. **Incorrect by definition**
  - b. hyperhydration. **Incorrect by definition**
  - c. isohydration. **Incorrect by definition**
  - d. dehydration. **Correct by definition**
  
2. Which of the following treatments is an example of cryotherapy?
  - a. ice massage **Correct**
  - b. ultra sound **Incorrect**
  - c. heat massage **Incorrect**
  - d. traction **Incorrect**
  
3. In a concentric contraction, what does the muscle do?
  - a. shortens as it is contracted **Correct**
  - b. lengthens as it is contracted **Incorrect**
  - c. remains the same as it is contracted **Incorrect**
  - d. lengthens and then shortens as it is contracted **Incorrect**
  
4. A soft tissue injury that develops due to friction or rubbing and involves fluid under the skin is a/an:
  - a. avulsion. **Incorrect by definition**
  - b. blister. **Correct by definition**
  - c. callus. **Incorrect by definition**
  - d. abrasion. **Incorrect by definition**
  
5. What is a sign of inflammation?
  - a. blueness **Incorrect**
  - b. contraction **Incorrect**
  - c. decreased tissue temperature **Incorrect**
  - d. redness **Correct**
  
6. The term used to describe something that is “in front and toward the outside or farthest from the midline” is:
  - a. anteroinferior. **Incorrect by definition**
  - b. anterolateral. **Correct by definition**
  - c. posterolateral. **Incorrect by definition**
  - d. posteromedial. **Incorrect by definition**

7. The only bone-to-bone connection between the axial skeleton and the appendicular skeleton in the upper extremity occurs at which joint?
- a. acromioclavicular      **Incorrect**
  - b. glenohumeral      **Incorrect**
  - c. scapulothoracic      **Incorrect**
  - d. sternoclavicular      **Correct**
8. “Runner’s knee” and “runner’s hip” involve which muscle?
- a. gastrocnemius      **Incorrect**
  - b. gracilis      **Incorrect**
  - c. rectus femoris      **Incorrect**
  - d. tensor fascia latae      **Correct**
9. How many pairs of spinal nerves are in the human body?
- a. 21      **Incorrect**
  - b. 24      **Incorrect**
  - c. 31      **Correct**
  - d. 34      **Incorrect**
10. The patella is classified as which type of bone?
- a. flat      **Incorrect**
  - b. irregular      **Incorrect**
  - c. sesamoid      **Correct**
  - d. short      **Incorrect**

## Abbreviations, Symbols and Acronyms

The following is a list of abbreviations, symbols, and acronyms used in the Athletic Training Student Aide study guide and on the Athletic Training Student Aide assessment.

%	Percent
ADA	Americans with Disabilities Act
AED	Automated External Defibrillator
BOC	Board of Certification
CAATE	Commission on Accreditation of Athletic Training Education
CPR	Cardiopulmonary Resuscitation
FERPA	Family Educational Rights and Privacy Act
HIPAA	Health Insurance Portability and Accountability Act
IEP	Individualized Education Plan
NSAID	Nonsteroidal anti-inflammatory drug
NATA	National Athletic Trainers' Association
OSHA	Occupational Safety and Health Administration
OTC	Over- the- Counter
SOAP (note)	Subjective, Objective, Assessment, Plan
TENS	Transcutaneous Electrical Nerve Stimulation



## Test Taking Strategies

This section of the study guide contains valuable information for testing success and provides a common-sense approach for preparing for and performing well on any test

### General Testing Advice

1. Get a good night's rest the night before the test — eight hours of sleep is recommended.
2. Avoid junk food and “eat right” several days before the test.
3. Do not drink a lot or eat a large meal prior to testing.
4. Be confident in your knowledge and skills!
5. Relax and try to ignore distractions during the test.
6. Focus on the task at hand — taking the test and doing your best!
7. Listen carefully to the instructions provided by the exam proctor. If the instructions are not clear, ask for clarification.

### Testing Tips

1. Read the entire question before attempting to answer it.
2. Try to answer the question before reading the choices. Then, read the choices to determine if one matches, or is similar, to your answer.
3. Do not change your answer unless you misread the question or are certain that your first answer is incorrect.
4. Answer questions you know first, so you can spend additional time on the more difficult questions.
5. Check to make sure you have answered every question before you submit the assessment for scoring — unanswered questions are marked incorrect.



