INTRODUCTION

The Athletic Training Clinical Proficiencies describe the expected outcomes of students who complete a CAAHEP-accredited athletic training program. The tasks delineated in this document reflect the cognitive, psychomotor, and affective competencies identified in the *Athletic Training Educational Competencies* (ed 3).

The Clinical Proficiencies, also included in the *Athletic Training Educational Competencies* (ed 3), are being released as a guide to students, instructors, and clinical instructors. Readers should keep in mind that the educational competencies guide course structure and content while the NATA Board of Certification, Inc. is used to construct the certification examination as an entry-level athletic trainer. Relevant contact information is presented at the end of this introductory section.

The Clinical Proficiencies serve two purposes: (1) They define the common set of skills that entry level athletic trainers should possess and (2) They define the expectations of an outcomes-based clinical education system. Although each of the clinical proficiencies is presented individually, the user should recognize that each is a component of a larger systematic process.

The Clinical Proficiencies only describe the clinical aspects of educational pedagogy. Using a modification of the medical model, the Clinical Proficiencies must be used concurrently with the cognitive, psychomotor, and affective competencies. Thus, the Competencies will describe the symptoms, evaluation/assessment, differential techniques, and the treatment prognosis required for the health care of athletes and others involved in similar physical activity.

Athletic training education occurs in 12 major Subject Areas:

- Risk Management and Injury Prevention
- Pathology of Injuries and Illnesses
- Assessment and Evaluation
- Acute Care of Injury and Illness
- Pharmacology
- Therapeutic Modalities
- Therapeutic Exercise
- General Medical Conditions and Disabilities
- Nutritional Aspects of Injury and Illness
- Psychosocial Intervention and Referral
- Health Care Administration
- Professional Development and Responsibilities

Each Subject Area has corresponding clinical proficiencies with the exception of Pathology of Injury and Illness, whose competencies are addressed in other Subject Areas.
CAAHEP
35 East Wacker Drive
Suite 1970
Chicago, IL  60601-2208
(v) 312.553.9355
(f) 312. 553.9616
(e) caahep@caahep.org
www.caahep.org

JRC-AT
7108-C South Alton Way
Englewood, CO  80112-2106
(v) 303.779.4853
(f) 303.741.3655
www.cewl.com

NATA Board of Certification, Inc.
1512 South 60th Street
Omaha, NE  68106
(v) 402.559.0091
(f) 402.561.0598
(e) staff@nataboc.org
www.nataboc.org

NATA, Inc.
2952 Stemmons Freeway
Dallas, TX 75247-6196
(v) 800.879.6282
(f) 214.637.2206
www.nata.org

NATA Education Council
304 Dockser Hall
Northeastern University
Boston, MA  02115
(v) 617.373.5795
(f) 617.373.5920
(e) nataec@nata.org
www.cewl.com
Risk Management and Injury Prevention

Teaching Objective 1: 296
The student will perform anthropometric measurement techniques and other appropriate examination and screening procedures.

Specific Outcomes
1. The student will assess the following:
   a. height  
   b. weight  
   c. blood pressure  
   d. pulse  
   e. limb girth  
   f. limb length  
   g. vision using a Snellen eye chart  
   h. body composition, using a manual skinfold caliper and appropriate formulas

Teaching Objective 2: 306
The student will perform fitness tests and record and interpret the data using accepted procedures and equipment.

Specific Outcome
1. The student will demonstrate the ability to perform and evaluate the results of the following tests:
   a. flexibility tests  
   b. strength (repetition) testing  
   c. agility tests  
   d. speed tests

Teaching Objective 3: 296
The student will demonstrate the ability to 1) obtain and interpret environmental data, 2) recognize potential hazardous conditions and situations in the activity setting, and 3) make the appropriate recommendations for activity.

Specific Outcomes
1. The student will
   a. use a sling psychrometer  
   b. use a wet bulb globe index  
   c. interpret and present environmental data for the following conditions: heat; wind; humidity; potential for lightning strike; cold; poor air quality  
   d. check an activity setting for physical and/or environmental hazards  
   e. use and interpret weight charts

Teaching Objective 5: 296
The student will demonstrate the ability to select and fit standard protective equipment that provides safe and healthy participation in physical activity.

Specific Outcomes
1. The student will select and fit the following protective equipment:
   a. protective helmet and head gear  
   b. protective shoulder pads  
   c. footwear for physical activity  
   d. mouth guard  
   e. rib brace/guard  
   f. prophylactic ankle brace  
   g. prophylactic knee brace
Teaching Objective 6: 397
The student will operate and instruct the use of isometric, isotonic, and isokinetic weight training equipment.

Specific Outcomes
1. The student will demonstrate the ability to establish repetition maximum tests.
2. The student will demonstrate the ability to perform an isokinetic test for the knee and shoulder.
3. The student will demonstrate the ability to interpret data obtained from isokinetic testing and to use this information to determine appropriate follow-up care.
4. The student will perform isometric tests for the following parts of the body:
   a. ankle
   b. foot/toes
   c. knee
   d. hip
   e. trunk/torso

Teaching Objective 7: 397
The student will instruct and demonstrate specific flexibility exercises and activities.

Specific Outcome
1. The student will select range-of-motion exercises and activities for all major muscle groups and their associated joints and instruct a client to perform these exercises. The exercises must include the following body regions and joints:
   a. cervical region
   b. shoulder: joint and girdle
   c. elbow
   d. wrist
   e. hand and fingers
   f. lumbar region
   g. hip and pelvis
   h. knee
   i. leg
   j. ankle
   k. foot and toes

Teaching Objective 8: 306
The student will demonstrate the ability to instruct and establish a safe environment for the use of strength and conditioning equipment.

Specific Outcomes
1. The student will demonstrate the proper lifting technique for the following exercises:
   a. parallel squat
   b. heel raises
   c. power clean
   d. bench press
   e. shoulder press
   f. dead lift
   g. arm curl
   h. triceps extension
   i. knee curl (flexion)
   j. knee extension
   k. leg press
2. The student will demonstrate the proper spotting technique for the following exercises:
   a. parallel squat  
   b. shoulder press  
   c. dead lift  
   d. bench press  
   e. power clean

Teaching Objective 9: 296
The student will demonstrate the ability to construct custom protective devices. These devices include, but are not limited to, those that protect contusions, sprains, strains, wounds, and fractures from further injury.

Specific Outcomes
1. The student will construct, apply, and remove the following protective devices:
   a. bony prominence pad  
   b. muscle contusion pad  
   c. soft playing cast (e.g., silicone, thermofoam)  
   d. hard, immobilization splint or cast (e.g., thermoplastic, plaster, fiberglass)  
   e. friction pad (“doughnut” pad)  
   f. checkrein device

Teaching Objective 10: 304L, 296
The student will demonstrate the ability to select and apply preventative and protective taping, wrapping, splinting, bracing, and rehabilitative devices in order to prevent further injury.

Specific Outcomes
1. The student will demonstrate the ability to tape, splint, wrap, pad or brace the following joints to limit motions:
   a. cervical spine  
   b. shoulder joint and girdle  
   c. elbow  
   d. wrist  
   e. hand and fingers  
   f. lumbar spine  
   g. hip and pelvis  
   h. knee  
   i. leg  
   j. ankle  
   k. foot and toes
Assessment and Evaluation

Teaching Objective 1: 304L, 296
The student will conduct static and postural evaluation and screening procedures.

Specific Outcomes
1. The student will recognize the following postural deviations and predisposing conditions:
   a. kyphosis
   b. lordosis
   c. scoliosis
   d. pelvic obliquity
   e. tibial torsion
   f. hip anteversion and retroversion
   g. genu valgum, varum, and recurvatum
   h. rearfoot valgus and varus
   i. forefoot valgus and planus
   j. pes cavus and planus
   k. foot and toe posture

2. The student will perform a postural assessment of the following:
   a. cervical spine and head
   b. shoulder
   c. lumbo-thoracic region
   d. hip and pelvis
   e. knee
   f. ankle, foot, and toes

3. The student will identify and classify body types as
   a. endomorph
   b. ectomorph
   c. mesomorph

Teaching Objective 2: 297
The student will perform record keeping skills while maintaining patient confidentiality.

Specific Outcomes
1. The student will
   a. use standardized record keeping methods (e.g., SOAP, HIPS, HOPS)
   b. select and use injury, rehabilitation, referral, and insurance documentation
   c. use progress notes

Injury Evaluation and Physical Examination Skills
Teaching Objective 3: 396, 397, 495
The student will demonstrate the ability to palpate anatomical structures.

Specific Outcomes
1. The student will identify and palpate the following:
   a. bony landmarks of the head, trunk, spine, scapula, and extremities
   b. soft tissue structures of the head, trunk, spine, and extremities
   c. abdominal and thoracic structures
   d. primary neurological and circulatory structures
Teaching Objective 4: 495
The student will assess neurological responses.

Specific Outcomes
1. The student will identify and assess the following:
   a. cranial nerves
   b. dermatomes
   c. myotomes
   d. deep tendon reflexes
   e. pathological reflexes

Teaching Objective 5: 396, 397, 495
The student will perform proper clinical evaluation techniques, including range-of-motion testing (active, passive, assisted).

Specific Outcomes
1. The student will qualitatively assess active, passive, resistive range of motion for the following:
   a. temporomandibular joint
   b. cervical spine
   c. shoulder
   d. elbow
   e. wrist and hand
   f. thumb and fingers
   g. hip
   h. lumbar spine
   i. thoracic spine
   j. knee
   k. ankle
   l. foot and toes

Teaching Objective 6:
The student will perform clinical evaluations of major body areas to assess and interpret for injury and illness.

Head and Face Evaluation 495
The student will
1. obtain the medical history of an ill or injured athlete or other physically active individual.
2. observe and identify the clinical signs and symptoms associated with head injury:
   a. amnesia (retrograde or post-traumatic)
   b. levels of consciousness
   c. orientation (person, time, place orientation)
   d. intracranial hematoma
   e. balance and coordination
   f. pupil and eye movements
   g. pulse
   h. blood pressure
   i. facial postures
3. observe and identify the clinical signs and symptoms associated with eye injuries and illnesses:
   a. orbital blowout fracture
   b. conjunctivitis
   c. corneal abrasion
   d. corneal laceration
   e. detached retina
   f. hyphema
   g. stye
4. observe and identify the clinical signs and symptoms associated with an ear injury or illness:
   a. pinna hematoma ("cauliflower ear")
   b. impacted cerumen
   c. otitis externa
   d. otitis media
5. observe and identify the clinical signs and symptoms associated with nose injury:
   a. deviated septum
   b. epistaxis
   c. nasal fracture
6. observe and identify the clinical signs and symptoms associated with jaw, mouth, or tooth injury or illness:
   a. gingivitis  
   b. mandibular fracture  
   c. maxilla fracture  
   d. periodontitis  
   e. temporomandibular joint dislocation  
   f. temporomandibular joint dysfunction  
   g. tooth abscess  
   h. tooth extrusion  
   i. tooth fracture  
   j. tooth intrusion  
   k. tooth luxation
7. administer appropriate sensory, neurological, and circulatory tests
8. administer functional tests and activity-specific tests
9. identify, palpate, and assess the integrity of bony landmarks
10. identify, palpate, and assess the integrity of soft tissue
11. administer commonly used special tests to make a differential assessment of the following:
   a. cranial nerves (e.g., eye motion, facial muscles)  
   b. cognitive tests (e.g., recall, serial 7s, digit span)  
   c. cerebellar function (e.g., Romberg's test, finger-to-nose test, heel-toe walking, heel-to-knee standing)  
   d. spinal nerve roots (e.g., upper quarter screen)

Cervical Spine Evaluation 495
The student will
1. obtain the medical history of an ill or injured athlete or other physically active individual
2. observe and identify the clinical signs and symptoms associated with common injuries, illnesses, and predisposing conditions:
   a. atrophy  
   b. dislocation or subluxation  
   c. vertebral fracture  
   d. head and neck posture  
   e. intervertebral disc herniation  
   f. nerve root compression or stretch  
   g. ischemia  
   h. torticollis
3. administer active and passive range-of-motion tests using quantifiable techniques (e.g., tape measure, goniometer, and inclinometer)
4. use manual muscle-testing techniques
5. administer appropriate sensory, circulatory, and neurological tests
6. administer functional tests and activity-specific tests
7. identify, palpate, and assess the integrity of bony landmarks
8. identify, palpate, and assess the integrity of soft tissue
9. administer commonly used special tests to make a differential assessment of the following:
   a. nerve root compression (e.g., distraction/compression test, Spurling's test, shoulder depression test)  
   b. brachial plexus neuropathy (e.g., brachial tension test, Tinel's sign)  
   c. cervical disc herniation (e.g., Valsalva’s maneuver)  
   d. neurovascular dysfunction (e.g., vertebral artery test)
**Shoulder Evaluation 397**

The student will

1. obtain the medical history of an ill or injured athlete or other physically active individual
2. observe and identify the clinical signs and symptoms associated with common injuries, illnesses, and predisposing conditions:
   a. atrophy
   b. bursitis
   c. dislocation or subluxation
   d. efficiency of movement
   e. fracture
   f. sprain
   g. nerve injury
   h. positioning (Sprengel’s deformity)
   i. strain
   j. scapulohumeral rhythm
   k. scapular winging
   l. step deformity
   m. symmetry
   n. tenosynovitis and tendonitis
3. administer active and passive range-of-motion tests using standard goniometric techniques
4. use manual muscle-testing techniques
5. administer appropriate sensory, neurological, and circulatory tests
6. administer functional tests and activity-specific tests
7. identify and palpate bony landmarks
8. identify and palpate soft tissue landmarks
9. administer commonly used special tests to make a differential assessment of the following
   a. glenohumeral instability (e.g., anterior drawer test, posterior drawer test, relocation test, apprehension test, clunk test, sulcus sign)
   b. acromioclavicular instability (e.g., shear test, compression test)
   c. rotator cuff impingement/inflammation (e.g., Speed's test, drop arm test, empty can test, impingement test, Hawkins-Kennedy impingement test, Neer impingement test, pectoralis major contracture test)
   d. biceps and biceps tendon pathology (e.g., Yergason's test, Ludington's test)
   e. thoracic outlet syndrome (e.g., Adson’s maneuver, Allen test, military brace position)

**Elbow Evaluation 397**

The student will

1. obtain the medical history of an ill or injured athlete or other physically active individual
2. observe and identify the clinical signs and symptoms associated with common injuries, illnesses, and predisposing conditions:
   a. symmetry
   b. carrying angle (cubital valgus and varus)
   c. dislocation or subluxation
   d. fracture
   e. atrophy
   f. efficiency of movement
   g. bursitis
   h. epicondylitis
   i. tenosynovitis and tendonitis
   j. osteochondritis dissecans
   k. sprain
   l. strain
   m. nerve injury
3. administer active and passive range-of-motion tests using standard goniometric techniques
4. use manual muscle-testing techniques
5. administer appropriate sensory, neurological, and circulatory tests
6. administer functional tests and activity-specific tests
7. identify, palpate, and interpret the integrity of bony landmarks
8. identify, palpate, and interpret the integrity of soft tissue
9. administer commonly used special tests to make a differential assessment of the following:
   a. joint instability (e.g., valgus stress test, varus stress test)
   b. inflammatory conditions (e.g., tests for lateral epicondylitis, tests for medial epicondylitis)
   c. neuropathy (e.g., Tinel's sign, pronator teres syndrome, pinch grip test)

Forearm, Wrist, and Hand Evaluation 397
The student will
1. obtain the medical history of an ill or injured athlete or other physically active individual
2. observe and identify the clinical signs and symptoms associated with the following:
   a. fracture (Colles’ fracture, Bennett's fracture, carpal fracture ["boxer's fracture"], metacarpal fracture, phalanges fracture)
   b. dislocation or subluxation
   c. disease states (e.g., clubbed nails, spoon-shaped nails)
   d. soft tissue pathology (e.g., sprain, flexor tendon avulsion [jersey finger sign], extensor tendon avulsion [mallet finger], extensor tendon rupture [boutonniere deformity], volar plate rupture [pseudo-boutonniere deformity], Dupuytren’s contracture, ganglion, swan neck deformity, trigger finger)
   e. neurovascular involvement (e.g., carpal tunnel syndrome, bishop’s or benediction deformity, ape hand, claw fingers, drop-wrist deformity, Volkmann's contracture)
3. administer active and passive range-of-motion tests using standard goniometric techniques
4. use manual muscle-testing techniques
5. administer appropriate sensory, neurological, and circulatory tests
6. administer functional tests and activity-specific tests
7. identify, palpate, and interpret the integrity of bony landmarks
8. identify, palpate, and interpret the integrity of soft tissue
9. administer commonly used special tests to make a differential assessment of the following:
   a. inflammatory conditions (e.g., Finkelstein test)
   b. joint instability (e.g., valgus stress test, varus stress test, glide tests)
   c. neurovascular pathology (e.g., Tinel's sign, Phalen’s test)

Thoracic/Lumbar Spine Evaluation 495
The student will
1. obtain the medical history of an ill or injured athlete or other physically active individual
2. observe and identify the clinical signs and symptoms associated with common injuries, illnesses, and predisposing conditions:
   a. café au lait macules (spots)
   b. dislocation or subluxation
   c. spina bifida occulta
   d. facet syndrome
   e. intervertebral disc pathology
f. spinal posture (kyphosis/ lordosis)
g. leg length discrepancies
h. nerve root compression
i. sacroiliac dysfunction
j. scoliosis
k. vertebral pathology (e.g., spondylitis, spondylolysis, spondylolisthesis)
l. sprain
m. stenosis
n. step deformity
o. strain

3. administer active and passive range-of-motion tests using standard qualitative and quantitative techniques
4. use manual muscle-testing techniques
5. administer appropriate sensory and neurological tests
6. administer functional tests and activity-specific tests
7. identify, palpate, and interpret the integrity of bony landmarks
8. identify, palpate, and interpret the integrity of soft tissue
9. administer commonly used special tests to make a differential assessment of the following:
   a. intervertebral disc herniation (e.g., Valsalva’s maneuver)
   b. neuropathy (e.g., straight leg raise test, well straight leg test, Babinski’s reflex test, Oppenheim’s gait test, Kernig’s sign, Brudzinski sign test, bowstring test, Hoover sign test)
   c. vertebral defects (e.g., stork standing test/spondylolisthesis test)
   d. joint instability (e.g., spring test)

**Hip/Pelvis Evaluation 396**

The student will
1. obtain the medical history of an ill or injured athlete or other physically active individual
2. observe and identify the clinical signs and symptoms associated with common injuries, illnesses, and predisposing conditions:
   a. leg length discrepancies
   b. hip retroversion
   c. hip anteversion
   d. Legg-Calvè-Perthes disease
   e. apophysitis
   f. slipped capital femoral epiphysis
   g. dislocation or subluxation
   h. fracture
   i. stress fracture
   j. osteitis pubis
   k. athletic pubalgia
   l. bursitis
   m. piriformis syndrome
   n. iliobial band syndrome
   o. contusion
   p. sprain
   q. strain
   r. tendonitis
3. administer active and passive range-of-motion tests using standard goniometric techniques and/or a tape measure
4. use manual muscle-testing techniques
5. administer appropriate sensory, neurological, and circulatory tests
6. administer functional tests and activity-specific tests
7. identify, palpate, and interpret the integrity of bony landmarks
8. identify, palpate, and interpret the integrity of soft tissue
9. administer commonly used special tests to make a differential assessment of the following:
   a. sacroiliac dysfunction (e.g., Patrick's/FABER, Gaenslen’s test, pelvic compression/distraction test)
   b. neuropathy (e.g., femoral nerve traction test)
   c. neuromuscular pathology (e.g., Trendelenburg test, Thomas test, rectus femoris contracture test, Ober test, Noble’s test, piriformis test)

**Knee Evaluation 396**
The student will
1. obtain the medical history of an ill or injured athlete or other physically active individual
2. observe and identify the clinical signs and symptoms associated with common injuries, illnesses, and predisposing conditions:
   a. bursitis
   b. chondromalacia patella
   c. dislocation and subluxation
   d. fat pad contusion
   e. fracture
   f. leg length
   g. meniscal tear
   h. Osgood-Schlatter disease
   i. osteochondritis dissecans
   j. patellar alignment (e.g., patella alta, patella baja, squinting patella, Q angle)
   k. patellar tendon rupture
   l. peroneal nerve contusion or palsy
   m. popliteal cyst
   n. sprain
   o. strain
   p. tendinitis
   q. tibial torsion
   r. tibiofemoral alignment (e.g., genu recurvatum, genu valgum, genu varum)
3. administer active and passive range-of-motion tests using standard goniometric techniques
4. use manual muscle-testing techniques
5. administer appropriate sensory, neurological, and circulatory tests
6. administer functional tests and activity-specific tests
7. identify, palpate, and interpret the integrity of bony landmarks
8. identify, palpate, and interpret the integrity of soft tissue
9. administer commonly used special tests to make a differential assessment of the following:
   a. uniplanar stress tests (e.g., valgus stress test, varus stress test, Lachman test, anterior drawer test, posterior drawer test, posterior sag sign)
   b. multiplanar (rotational) stress tests (e.g., Slocum test, Hughston's test, lateral pivot shift maneuver)
   c. meniscal tears (e.g., McMurray’s test, Apley’s test)
d. patellofemoral dysfunction (e.g., grind test, apprehension test)
e. intra-extracapsular swelling (e.g., sweep test, ballottable patella)

Leg, Ankle and Foot Evaluation 396
The student will
1. obtain the medical history of an ill or injured athlete or other physically active individual
2. observe and identify the clinical signs and symptoms associated with the following common injuries, illnesses, and predisposing conditions:
   a. overuse injuries (e.g., bursitis, exostosis, fasciitis, stress fracture, tarsal tunnel syndrome, tendonitis and/or tenosynovitis, tibial stress syndrome)
   b. Achilles tendon rupture
c. compartment syndromes
d. apophysitis
e. dislocation or subluxation
f. foot type/structure (e.g., forefoot varus/valgus, equinus deformity, pes cavus/planus, plantar flexed first ray, rearfoot [hindfoot] varus/valgus)
g. fracture
h. deep vein thrombosis (e.g., Homans’ sign)
i. neuroma
j. osteochondritis dissecans
k. sprain
l. strain
m. toe structure/alignment (e.g., bunion, claw toes, hallux rigidus, hallux valgus, hammer toes, mallet toe, Morton’s foot syndrome)
n. weight-bearing versus non-weight-bearing alignment
o. gait
3. administer active and passive range-of-motion tests using standard goniometric techniques
4. use manual muscle-testing techniques
5. administer appropriate sensory, neurological, and circulatory tests
6. administer functional tests and activity-specific tests
7. identify, palpate, and interpret the integrity of bony landmarks
8. identify, palpate, and interpret the integrity of soft tissue
9. administer the following commonly used special tests to make a differential assessment:
   a. compression test (e.g., Pott’s fracture)
   b. percussion test
c. anterior drawer test
d. Kleiger’s test
   e. talar tilt test
   f. Thompson test
g. Tinel's sign
   h. Homans’ sign
Acute Care of Injury and Illness

**Teaching Objective 1: 297**
The student will demonstrate the ability to implement an emergency action plan (EAP).

**Specific Outcomes**
1. The student will demonstrate the ability to implement an EAP for an activity, setting, or event.
2. The student will correctly triage emergency situations.

**Teaching Objective 2: 296**
The student will demonstrate the ability to apply first-aid techniques using universal precautions.

**Specific Outcomes**
1. The student will demonstrate the ability to
   a. manage open and closed wounds
   b. apply direct and indirect pressure to control bleeding
   c. clean, debride, and protect an open wound
   d. apply superficial skin closures
   e. properly apply and remove gloves and other personal protective equipment
   f. properly dispose of biohazardous waste
   g. apply appropriate dressings
   h. apply ice, compression, and elevation to an acute sprain, strain, or contusion

**Teaching Objective 3: 296**
The student will demonstrate the ability to apply immobilization devices to applicable body parts.

**Specific Outcomes**
1. The student will demonstrate the ability to
   a. select and apply an appropriate splint to a sprain, strain, fracture, subluxation, and dislocation
   b. stabilize and spine board or body splint an adult or child with a suspected spinal injury

**Teaching Objective 4: 296**
The student will recognize and manage environmentally related injuries and illnesses and, when indicated, refer the patient to the proper medical professional.

**Specific Outcomes**
1. The student will evaluate and manage the following:
   a. heat exhaustion
   b. heat syncope
   c. heat stroke
   d. hypothermia


Teaching Objective 5: 296, 162
The student will demonstrate the ability to perform basic life-support techniques.

Specific Outcomes
1. The student will demonstrate the ability to
   a. establish and manage an airway
   b. establish and manage an airway in an athlete wearing protective headgear
   c. perform CPR on an adult or child with or without a spinal injury
   d. use a bag-valve-mask (BVM) on an adult or child for rescue breathing
   e. use a protective pocket mask/shield on an adult or child for rescue breathing

Teaching Objective 6: 296, 162
The student will demonstrate the ability to use various methods of stabilization and transportation to facilitate the movement or ambulation of the injured person.

Specific Outcomes
1. The student will demonstrate the ability to
   a. stabilize and transport an adult or child with a head and/or spinal injury
   b. stabilize and transport an adult or child with a fracture and/or dislocation
   c. select, fit, and instruct the patient in the use of crutches
   d. select, fit, and instruct the patient in the use of a cane
   e. transport an injured adult or child using a manual conveyance technique
   f. perform two-person CPR
   g. assist a drowning victim
Pharmacology

Teaching Objective 1 297
The student will locate and utilize pharmaceutical products, storage, dispensing, and tracking information.

Specific Outcomes
The student will
1. Use the PDR or another drug reference to search for information on the medications commonly prescribed to athletes and others involved in physical activity and to identify the following facts:
   a. generic and brand names
   b. indications for use
   c. contraindications
   d. warnings
   e. dosing
   f. other notes (e.g., banned substance)
   g. side (adverse) effects
2. Document, or simulate the documentation of, the tracking of medications by recording the following information about the medication:
   a. name
   b. manufacturer
   c. amount
   d. dosage
   e. lot number
   f. expiration date
3. Locate the policies-and-procedures manual, identify the section on medications, and replicate the procedures for administering medications to athletes and others involved in physical activity, which include the following:
   a. determine type of over-the-counter (OTC) medication to be used according to the physical ailment and established protocols
   b. identify the precautions, expiration date, lot number, and dosage for the medication as provided on the package and individual dose packets
   c. administer OTC medication by providing verbal and written instruction for its use to the patient and then recording and documenting the administration

Teaching Objective 2 297
The student will activate a poison control service.

Specific Outcome
1. Locate the phone number and address of the nearest poison control center and replicate the reporting of a drug overdose or poisoning situation. The report should state the following information:
   a. name and location of person making the call
   b. name and age of person who has taken the medication
   c. name and dosage of the drug taken
   d. time the drug was taken
   e. signs and symptoms associated with overdose or poison situation, including vital signs

Teaching Objective 3 297
The student will demonstrate the ability to instruct the use of and administer bronchodilators and epinephrine.

Specific Outcome
1. Replicate the following procedures for using an emergency epinephrine injection to prevent anaphylaxis:
   a. identify indications for an epinephrine injection
   b. demonstrate proper use through verbal and nonverbal instruction
   c. identify signs and symptoms that might indicate an allergic reaction to or overdose of epinephrine
   d. demonstrate proper storage of epinephrine injectable
   e. demonstrate proper disposal of used injection system

2. Replicate the following procedures for using an emergency bronchodilator (inhaler) to prevent asthma attacks:
   a. identify indications for use of a bronchodilator
   b. demonstrate proper use through verbal and nonverbal instruction
   c. identify signs and symptoms that might indicate an allergic reaction to or overdose of a bronchodilator
   d. demonstrate proper storage of a bronchodilator
Therapeutic Modalities

Teaching Objective 1: 396
The student will relate the findings of a physical examination to determine the appropriate course of treatment.

Specific Outcomes
1. The student will perform a physical examination to identify the current inflammatory stage.
2. The student will perform a physical examination and interview to identify the indications, contraindications, and precautions to various treatment protocols.

Teaching Objective 2: 296, 396
The student will demonstrate the ability to apply therapeutic modalities.

Specific Outcomes

Cryotherapy
1. The student will demonstrate the ability to select the appropriate parameters for and then prepare and apply the following:
   a. cold whirlpool treatment
   b. controlled cold therapy unit
   c. ice pack
   d. vapo-coolant spray
   e. ice immersion
   f. ice massage
   g. cryokinetics

Thermotherapy
1. The student will demonstrate the ability to select the appropriate parameters for and then prepare and apply the following:
   a. moist heat pack
   b. paraffin treatment
   c. contrast bath
   d. warm whirlpool treatment

Electrotherapy
1. The student will demonstrate the ability to select the appropriate parameters for and then prepare and apply the following:
   a. sensory-level pain control treatment
   b. noxious-level pain control treatment
   c. motor-level pain control treatment
   d. muscle re-education treatment
   e. muscle pumping treatment
   f. muscle atrophy retardation treatment
   g. acute edema treatment
   h. muscle splinting/spasm treatment
   i. iontophoresis treatment
2. The student will set-up and apply the following types of electrical stimulation units:
   a. monophasic stimulator (e.g., high volt stimulation)
   b. biphasic stimulator (e.g., Transcutaneous Electrical Nerve Stimulation [TENS], Neuromuscular Electrical Stimulation [NMES])
   c. direct current (e.g., iontophoresis)
   d. alternating current (e.g., interferential, NMES)
   e. multifunction electrical stimulation devices

Ultrasound
1. The student will demonstrate the ability to select the appropriate parameters for and then prepare and apply the following:
   a. thermal ultrasound treatment
   b. non-thermal ultrasound treatment
   c. combination electrical-stimulation/ultrasound treatment
   d. phonophoresis treatment
   e. indirect application of ultrasound treatment (underwater, bladder)

Traction
1. The student will demonstrate the ability to select the appropriate parameters for and then prepare and apply the following:
   a. mechanical traction
   b. manual traction
   c. positional traction

Intermittent Compression
1. The student will demonstrate the ability to select the appropriate parameters for and then prepare and apply intermittent compression to the upper and lower extremities.

Therapeutic Massage
1. The student will demonstrate the ability to prepare and apply a massage treatment.
2. The student will demonstrate the ability to properly perform the following therapeutic massage strokes:
   a. effleurage
d. tapotement
   b. petrissage
e. vibration
   c. friction (circular, transverse)f. myofascial release techniques
Therapeutic Exercise

Teaching Objective 1: 397
The student will demonstrate the ability to perform therapeutic exercises.

Specific Outcomes
1. Exercise to improve the range of motion of the upper extremity, lower extremity, trunk, and cervical spine.
The student will demonstrate the ability to instruct the following exercises:
   a. passive range-of-motion exercises
   b. active range-of-motion exercises
   c. active-assisted range-of-motion exercises
   d. joint mobilization
   e. self-mobilizations

2. Exercise to improve muscular strength.
The student will demonstrate the ability to instruct exercises for the following parts of the body using isometric and progressive resistance techniques:
   a. lower extremity
   b. upper extremity
   c. cervical spine
   d. trunk and torso

3. Exercise to improve muscular endurance.
The student will demonstrate the ability to instruct the following exercise modalities:

<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. aquatic</td>
<td>a. aquatic</td>
</tr>
<tr>
<td>b. UBE/stationary bicycle</td>
<td>b. stationary bicycle</td>
</tr>
<tr>
<td>c. physioballs</td>
<td>c. stair</td>
</tr>
<tr>
<td></td>
<td>d. physioballs</td>
</tr>
<tr>
<td></td>
<td>e. treadmill</td>
</tr>
</tbody>
</table>

4. Exercise to improve muscular speed.
The student will demonstrate the ability to instruct the following activities:

<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. reaction drills</td>
<td>a. reaction drills</td>
</tr>
<tr>
<td></td>
<td>b. sprint work</td>
</tr>
<tr>
<td></td>
<td>c. Fartlek training</td>
</tr>
</tbody>
</table>

5. Exercise to improve muscular power.
The student will demonstrate the ability to instruct plyometric exercises for the upper and lower extremities.

6. Exercise to improve neuromuscular control and coordination.
The student will demonstrate the ability to instruct the following activities:
<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. PNF patterns</td>
<td>a. PNF patterns</td>
</tr>
<tr>
<td>b. rhythmic stabilization</td>
<td>b. proprioception board or balance apparatus</td>
</tr>
<tr>
<td>c. double- and single-arm balancing</td>
<td>c. incline board</td>
</tr>
<tr>
<td>d. wobble board or balance apparatus</td>
<td>d. Single-leg balancing</td>
</tr>
<tr>
<td>e. weighted-ball rebounding or toss</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neck</th>
<th>Trunk</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. stabilization</td>
<td>a. stabilization</td>
</tr>
<tr>
<td>b. postural correction</td>
<td>b. postural correction</td>
</tr>
</tbody>
</table>

7. Exercise to improve agility.
The student will demonstrate the ability to instruct the following activities:

<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. throwing</td>
<td>a. Carioca</td>
</tr>
<tr>
<td>b. catching</td>
<td>b. cross-over</td>
</tr>
<tr>
<td></td>
<td>c. figure eight (8)</td>
</tr>
</tbody>
</table>

8. Exercise to improve cardiorespiratory endurance.
The student will demonstrate the ability to instruct the following activities:

<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. upper-body ergometer</td>
<td>a. bicycle ergometer</td>
</tr>
<tr>
<td>b. stationary bicycle</td>
<td>b. treadmill</td>
</tr>
<tr>
<td>c. aquatic</td>
<td>c. stair climber</td>
</tr>
<tr>
<td>d. stair climber</td>
<td>d. aquatic</td>
</tr>
</tbody>
</table>

9. The student will demonstrate the ability to assess joint end point and to select and perform appropriate joint mobilization techniques for the appendicular and axial skeleton, including the following:

| a. long-axis distraction |
| b. appropriate glides (e.g., anterior/posterior, superior/inferior) |

10. The student will demonstrate the ability to instruct and perform exercises to improve activity-specific skills (running, striking, throwing, catching, swimming, biking, climbing, etc.).
General Medical Conditions and Disabilities

Specific Outcomes 296, 396, 495

The student will

1. Obtain a basic medical history that includes the following components:
   a. previous medical history
   b. previous surgical history
   c. pertinent family medical history
   d. current medication history
   e. relevant social history
   f. chief medical complaint

2. Ascertain body temperature via the following:
   a. oral temperature
   b. axillary temperature
   c. tympanic temperature

3. Ascertain the following vital signs:
   a. blood pressure
   b. pulse (rate and quality)
   c. respirations (rate and quality)

4. Palpate the four abdominal quadrants to assess for the following:
   a. guarding and rigidity
   b. pain

5. Use a stethoscope to identify the following:
   a. normal breath sounds
   b. normal heart sounds
   c. normal bowel sounds

6. Identify pathological breathing patterns to make a differential assessment for the following respiratory conditions:
   a. apnea
   b. tachypnea
   c. hyperventilation
   d. bradypnea
   e. dyspnea
   f. obstructed airway

7. Demonstrate proficiency in the use of an otoscope to examine the nose and the outer and middle ear.

8. Measure urine values with Chemstrip (dipsticks)

9. Recognize the signs, symptoms, and predisposing conditions associated with the following diseases and conditions:

   The Skin 304L
   a. abscesses
   b. acne vulgaris
   c. carbuncle
   d. cellulitis
   e. molluscum contagiosum
   f. dermatitis
   g. eczema
   h. folliculitis
   i. frostbite
   j. furunculosis
   k. herpes simplex
   l. herpes zoster
   m. hives
   n. impetigo
   o. psoriasis
   p. ringworm
   q. scabies
   r. sebaceous cysts
   s. tinea cruris
   t. tinea pedis
   u. verruca plantaris
   v. verruca vulgaris
l. tinea versicolor
n. pediculosis
z. tinea capitis

The Eyes, Ears, Nose, and Throat 495
a. common cold
e. rhinitis
b. conjunctivitis
f. sinusitis
c. laryngitis
g. tetanus
d. pharyngitis
h. tonsillitis

Respiratory System 495
a. asthma
e. influenza
b. bronchitis
f. pneumonia
c. hyperventilation
g. upper respiratory infection (URI)
d. hay fever

Cardiovascular System 495
d. migraine headache
b. hypertrophic myocardiopathy
e. shock
c. hypotension
f. syncope
b. hypotension
c. hypothyroidism
d. pancreatitis

Endocrine System 495
f. gastritis
g. gastroenteritis
h. indigestion
i. ulcer
j. irritable bowel syndrome

Gastrointestinal Tract 495
f. gastritis
f. gastritis
g. gastroenteritis
h. indigestion
i. ulcer
j. irritable bowel syndrome

Eating Disorders 304
a. anorexia
b. bulimia
c. obesity

Sexually Transmitted Diseases/Diseases Transmitted by Body Fluid 495
d. genital warts
e. gonorrhea
f. syphilis

Genitourinary Tract and Organs 495
d. urinary tract infection
f. hydrocele
g. varicocele

a. HIV/AIDS
b. hepatitis
c. chlamydia

d. kidney stones
b. spermatic cord torsion
c. candidiasis
d. urethritis
Gynecological Disorders 495
   a. amenorrhea
   b. dysmenorrhea
   c. oligomenorrhea
   d. pelvic inflammatory disease
   e. vaginitis

Viral Syndromes 495
   a. infectious mononucleosis
   b. measles
   c. mumps

Neurological Disorders 495
   a. epilepsy
   b. syncope
   c. reflex sympathetic dystrophy
   d. meningitis

Systemic Diseases 495
   a. iron-deficiency anemia (systemic)
   b. sickle cell anemia (systemic)
   c. Lyme disease
Nutritional Aspects of Injury and Illnesses

Teaching Objective 1  297
The student will demonstrate the ability to design general nutrition programs for athletes and others involved in physical activity.

Specific Outcomes
1. The student will demonstrate the ability to access and recommend nutritional guidelines for the following:
   a. pre-participation meal           c. weight gain
   b. weight loss                      d. fluid replacement

2. The student will demonstrate the ability to use the nutritional food pyramid.

3. The student will demonstrate the ability to access and assess the following nutritional intake values:
   a. RDA or equivalency               e. vitamin intake
   b. protein intake                   f. mineral intake
   c. fat intake                       g. fluid intake
   d. carbohydrate intake

4. The student will demonstrate the ability to determine energy expenditure and caloric intake.

2. The student will demonstrate the ability to calculate the basal metabolic rate of energy expenditure.

3. Simulate intervention with an individual who has the signs and symptoms of disordered eating.
   Identify proper referral sources for disordered eating.
Psychosocial Intervention and Referral

**Teaching Objective 1**
The student will demonstrate the ability to intervene and make the referral to appropriate medical or allied medical professional.

**Specific Outcomes**
The student will
1. Simulate intervention with an individual who has a substance abuse problem and recommend appropriate referral
2. Simulate a confidential conversation with a health care professional concerning suspected substance abuse by an athlete or other physically active individual
3. Locate the available community-based resources for psychosocial intervention

**Teaching Objective 2**
The student will integrate motivational techniques into the rehabilitation program.

**Specific Outcome**
The student will
1. Simulate the following motivational techniques used during rehabilitation:
   - verbal motivation
   - visualization
   - imagery
   - desensitization
Health Care Administration

Teaching Objective 1: 297
The student will demonstrate appropriate communication skills.

Specific Outcomes
1. The student will
   a. calm, reassure, and explain a potentially catastrophic injury to an injured adult or child, athletic personnel, and/or family member
   b. effectively communicate and work with physicians, emergency medical technicians (EMTs), and other members of the allied health care community and sports medicine team
   c. appropriately communicate with athletic personnel and family members
   d. use ethnic and cultural sensitivity in all aspects of communication
   e. communicate with diverse community populations

Teaching Objective 2: 297
The student will use contemporary multimedia, computer hardware, and software as related to the practice of athletic training.

Specific Outcomes
1. The student will access information and manage data using contemporary multimedia, computer equipment, and software. This should include, but not be limited to, use of the following:
   a. word processing software
   b. file management systems
   c. spreadsheets
   d. budgeting software
   e. injury tracking software
   f. the World Wide Web
   g. communication (e-mail)
   h. presentation software

Teaching Objective 3: 297
The student will demonstrate the ability to perform record keeping skills with sensitivity to patient confidentiality.

Specific Outcomes
1. The student will
   a. use standardized record keeping methods (e.g., SOAP, HIPS, HOPS)
   b. select and use injury, rehabilitation, referral, and insurance documentation
   c. use progress notes
   d. organize patient files to allow systematic storage and retrieval

Teaching Objective 4: 297
The student will demonstrate the ability to develop athletic training facilities and administrative plans.

Specific Outcomes
1. The student will demonstrate the ability to develop facility design plans that include, but are not limited to, the following components:
   a. basic floor plan design
   b. facility evacuation
2. The student will demonstrate the ability to develop administrative plans that include but are not limited to, the following components:
   a. risk management
   b. developing policies and procedures
   c. developing budget (expendable and capital)
   d. addressing facility hazards

**Teaching Objective 5: 412**
The student will demonstrate the ability to prepare and interpret sample design for scientific research.

**Specific Outcomes**
1. The student will interpret the following basic literature:
   a. case study
   b. outcome measurement, including statistical interpretation
   c. literature review
Professional Development and Responsibilities

Teaching Objective 1
The student will demonstrate the ability to disseminate injury prevention and health care information.

Specific Outcomes 296, 297
1. The student will develop a presentation outline for an athletic training topic. The outline may include, but is not limited to, the following audiences:
   a. peer athletic trainers
   b. physicians
   c. parents
   d. athletic personnel
   e. general public
   f. athletes and others involved in physical activity
2. The student will develop a professional resume.