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(Note: Various printers and word processors may alter number scheme.)
PREFACE

This is the next to final draft of the educational competencies that must be met accredited athletic training education programs and represents the combined efforts of the Education Council’s Competencies in Education Committee and Clinical Education Committee. To date more than 100 individuals representing all facets of health care have contributed to, or reviewed, the content of this document.

This draft is intended for review and feedback from members of the National Athletic Trainers’ Association. As it is still a draft, it should not yet be used for any academic, clinical, or legislative purposes.

We are seeking your input regarding the content of this document. Please return your comments and suggestions by 1 December 1998 to:

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The Athletic Training Educational Competencies for the Health Care of the Physically Active enumerated in this document have been identified as those necessary for effective performance as an entry-level Certified Athletic Trainer (ATC). These competencies are required for curriculum development and education of the student enrolled in accredited entry-level athletic training education programs.

The competencies serve as a guide to the development of educational programs and learning experiences leading to National Athletic Trainers’ Association (NATA) recognition as a Certified Athletic Trainer. This document is intended to assist Certified Athletic Trainers, athletic training education program directors, physicians, allied health practitioners, administrators, additional instructional personnel, and students in identifying knowledge and skills to be mastered within an entry-level athletic training educational program.

Certified Athletic Trainers and other instructional personnel at institutions sponsoring athletic training education programs should utilize this document to assist in structuring the clinical education experience for the student. Students preparing for careers in athletic training should find the list of competencies helpful as a guide to self-study and self-evaluation of their strengths and weaknesses.

The competencies included in this document are categorized according to the twelve major “domains” that comprise the role of the Certified Athletic Trainer in the health care of athletes and other physically active individuals. Although not stated as such, the competencies identified within each domain are categorized according to the following commonly accepted method of classifying behavioral objectives: (1) Cognitive Domain (knowledge and intellectual skills), (2) Psychomotor Domain (manipulative and motor skills), (3) Affective Domain (attitudes and values). Conversion of the competencies into appropriately stated behavioral objectives and development of criteria for acceptable student performance is left to the discretion of instructional personnel. In addition to the competencies identified in this document, a list of clinical proficiencies is included following the applicable domain. While the proficiencies identified serve as a guide for inclusion of subject matter in educational programs, the lists do not necessarily include all clinical proficiencies required in advanced clinical settings.

The National Athletic Trainers’ Association Board of Certification (NATABOC) regularly conducts a role delineation study within a sample of the membership. The results of these studies are considered when reviewing these competencies for clinical application. The basic premise of the competencies is that of preparing the entry-level ATC for current practices verified by the role delineation studies. Copies of the most recent NATABOC Role Delineation Study may be obtained by contacting the NATABOC publishing company, FA Davis.
PROFICIENCIES OVERVIEW

The Entry Level Athletic Training Proficiencies (Proficiencies) serves two purposes. First, the Proficiencies define the common set of skills that should be possessed by entry level athletic trainers. Secondly, the Proficiencies redefine the structure of clinical education from its current quantitative approach (“hours”) to an outcomes-based qualitative system.

Format

This document describes only the clinical aspects of the educational pedagogy. In its final form, the Proficiencies are being developed concurrently with the Athletic Training Educational Competencies for the Health Care of the Physically Active, forming a single document that describes the cognitive, psychomotor, and affective competencies. Using the medical model, the Competencies will describe the symptoms, evaluation/assessment, differential techniques, and the treatment/prognosis required for the health care of the physically active.

Minimal Proficiencies

The skills described in this document define the core content of our clinical education. Programs are encouraged to build upon these skills and structure them in the method that is best suited for their institutional needs. However, these modifications should not occur at the expense of these minimal standards. For example, Teaching Objective 1-h describes that the student should demonstrate proficiency in determining body composition using a skinfold caliper. If the resources are available, programs are encouraged to teach body composition measurements using electrical impedance and/or hydrostatic weighing, so long as skinfold calipers are integrated into the methodology.
Acute Care of Injury & Illness

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to recognize, provide immediate care and refer when appropriate acute injuries and illnesses of the physically active.

Cognitive Domain (Knowledge and Intellectual Skills)

1. Explains the legal, moral and ethical parameters that define the scope of first aid and emergency care and identifies the proper roles and responsibilities of the Certified Athletic Trainer.

2. Describes the availability, purposes, and maintenance of contemporary first aid/emergency care equipment with commonly recommended contents of emergency care field kits.

3. Plans for emergency care supplies and equipment necessary for event coverage, including biohazardous waste disposal, splints, short-distance transportation, emergency access tools, primary survey instruments (CPR mask, bag/valve mask, etc.) and ice.

4. Applies current standards of first aid, emergency care, rescue breathing, and cardiopulmonary resuscitation for the professional rescuer including (a) bag/valve mask, (b) pocket mask, (c) chin lift/jaw thrust maneuver, (d) one or more rescuers, and (e) drowning.

5. Uses standard nomenclature of athletic injuries and illnesses effectively communicating the identified clinical signs and symptoms to medical personnel.

6. Uses appropriate medical documentation and abbreviations to communicate effectively between allied health personnel regarding the status of injury/illness/recovery of the physically active.

7. Understands principles and rationale for a primary survey including airway, breathing and circulation.

8. Differentiates the components of a secondary survey, including history, inspection/observation, palpation and special tests utilized to indicate the type and severity of injury/illness sustained.
9. Describes normal vital signs, the measurement of, alternate means of obtaining, and interpretation of changes in usual range, including but not limited to blood pressure, pulse, respiration rate, skin, temperature, pupils.

10. Explains the life-threatening conditions and their management that can occur spontaneously or as a result of direct trauma to the throat, thorax, and viscera.

11. Identifies the different types of hemorrhage and their management.

12. Manages external hemorrhaging, including location of pressure points, safe barriers, and proper disposal of biohazardous materials.

13. Recognizes signs and symptoms associated with internal hemorrhaging.

14. Recognizes signs and symptoms of head trauma including LOC, standardized neurological signs (Glasgow), cranial nerves assessment, PEARL, and be aware of symptoms that indicate underlying trauma.

15. Explains the signs and symptoms associated with increasing intracranial pressure.

16. Explains the importance of monitoring a physically active patient following a head injury including clearance by a physician before further participation. (acute, sub-acute, chronic)

17. Defines cerebral concussion and lists the signs and symptoms used to classify concussions. (Canto, Colorado, Torg)

18. Describes proper concussion management techniques based upon classification.

19. Recognizes the signs and symptoms of shock.

20. Identifies the different types of shock and their management. (traumatic, hypovolemic, anaphylactic, septic, etc.)


22. Describes proper treatment of diabetic coma and insulin shock.

23. Describes appropriate actions for when a seizure occurs.
24. Determines when to refer an injury or illness for further or immediate medical attention (i.e. life or limb threatening situation).

25. Selects appropriate splint and applies proper splinting techniques to an injured limb/joint including stabilization of the injured area and maintenance of distal circulation including, but not limited to casting, splints, etc.

26. Explains principles of application of cryotherapy, elevation, and compression to treat acute non-limb threatening pathologies.

27. Determines when and why various cervical stabilization devices should be utilized.

28. Understands the proper techniques and guidelines for the removal of the helmet and shoulder pads from an athlete with a suspected cervical spine injury.

29. Recognizes proper positioning and securing of a person with a suspected spinal injury onto a backboard/body splint, including preparatory positioning prior to placement of the backboard/body splint.

30. Explains the need for leadership and teamwork when utilizing a backboard/body splint.

31. Selects correct method and demonstrates proficiency with the various types of equipment for short-distance transportation methods and/or equipment of an injured person including the securing of a person on such devices.

32. Recognizes the signs and symptoms of toxic drug overdose.

33. Cites the signs, symptoms, and causes of edema and hyperemia.

34. Describes allergic, thermal, and chemical reactions of the skin.

35. Describes infestations and insect bites and contrasts them with other skin infections.

36. Recognizes the signs and symptoms of infectious disease and takes appropriate steps in the control and containment of the disease with appropriate medical referral.

37. Recognizes aseptic techniques and approved sanitation methods (OSHA).

38. Recognizes proper treatment of wounds, including sanitary cleaning and dressing, and appropriate referral.
39. Understands position statements or guidelines (ACSM, NATA, NCAA, NFHS) regarding safety in extreme environmental conditions (heat, cold, lightning).

40. Understands the signs, symptoms, and treatment of the physically active that suffer adverse reactions to environmental conditions.

41. Understands proper technique for using ambulatory aids, including selecting an aid appropriate for the injury/person.

42. Understands proper technique using ambulatory aids for coordinated movement on flat, slippery, or uneven terrain, and the navigation of steps, ramps, doors or obstacles.

**Psychomotor Domain (Manipulation and Motor Skills)**

1. Acquires and maintains certification in first aid and emergency care, rescue breathing, and CPR for the professional rescuer from an approved provider.

2. Performs a primary survey in appropriate situations.

3. Performs a secondary survey, including history, inspection/observation, palpation and special tests.

4. Palpates a variety of anatomic locations to assess the pulse in resting (non-emergency) and trauma situations.

5. Demonstrates proper use of barriers and aseptic techniques when controlling external hemorrhaging.

6. Palpates for rigidity, guarding, and rebound tenderness associated with internal injury or illness.

7. Performs proper care and positioning of an individual suffering from shock.

8. Assesses possible closed head trauma including standard neurological tests (Glasgow), tests for cranial nerve function, and PEARL.

10. Demonstrates proper technique for removal of the helmet and shoulder pads on an athlete with a possible cervical injury.

11. Applies various cervical stabilization devices correctly, with the victim in various positions.

12. Performs correct technique for movement of an injured person safely onto a backboard for stabilization/transportation purposes.

13. Applies various types of splints to different body parts, employing different constructions of splinting materials and allows for distal pulse palpation.

14. Performs short-distance transportation utilizing proper positioning techniques, strapping, and efficient transportation.

15. Administers cryotherapy, elevation, and compression to a limb/joint.

16. Demonstrates proper wound cleaning and care including the use of barriers, aseptic protocols, and disposal of biohazardous waste.

17. Demonstrates proper techniques utilizing ambulatory aids for coordinated movement on flat, slippery, or uneven terrain, and the navigation of steps, ramps, doors or obstacles.

18. Fabricates and applies commonly used contemporary immobilization devices. (casting materials, splints, etc.)

19. Fabricates and applies special protective equipment (braces, special pads, modified taping procedures, etc.)

**Affective Domain (Attitudes and Values)**

1. Appreciates the medical-legal and ethical protocol governing referral in injured/ill physically active persons for medical services.

2. Appreciates the legal, moral and ethical parameters, which define the scope of first aid and emergency care and values the proper role of the Certified Athletic Trainer.

3. Appreciates the roles and responsibilities of various community based emergency care personnel (paramedics, emergency medical technicians, emergency room personnel, etc.).
4. Appreciates the role and function of various medical/paramedical specialties and their respective areas of expertise in the definitive treatment of acute care of injury and illnesses to the physically active.

5. Values the importance of certification in First Aid and Emergency Care and Cardiopulmonary Resuscitation from approved providers.

6. Appreciates the systematic approach to all acute injury/illness in the secondary survey components of history, inspection/observation, palpation and special tests.

7. Realizes the importance of searching for signs and symptoms in cases of possible shock, internal bleeding and closed head trauma.

8. Supports the principles of proper splinting techniques for the prevention of further injury.

9. Appreciates different construction of various splinting devices, and appropriate uses for each.

10. Values the proper positioning and securing of a person with a suspected spinal injury onto a back board/body splint, including preparatory positioning prior to placement of backboard/body splint as critical for prevention of further trauma.

11. Appreciates the need for leadership and teamwork when utilizing a backboard/body splint.

12. Respects short-distance transportation techniques as a crucial means of moving an injured person.

13. Supports the application of cryotherapy, elevation, and compression as primary care for a non-limb threatening injury.

14. Accepts approved sanitation methods for the cleaning, treatment, and bandaging of wounds, as well as disposal of biohazardous waste.

15. Respects the daily challenges of those using ambulatory aids.
Athletic Training Clinical Proficiencies

Teaching Objective 1:

The student will demonstrate the ability to implement an emergency management plan (EMP).

Specific Outcomes

1. The student will demonstrate the ability to implement an EMP for an activity setting or event.

2. The student will correctly triage emergency situations.

Teaching Objective 2:

The student will demonstrate the ability to construct custom protective devices to include, but not be limited to the protection of contusions, sprains, strains, wounds, and fractures.

Specific Outcomes

1. The student will demonstrate the ability to fashion, apply, and remove a(n):

   a. acromioclavicular pad;   e. friction pad ("donut" pad);
   b. muscle contusion pad     f. checkrein device.
   c. soft playing cast
   d. hard, immobilization cast or splint (e.g. thermoplastic, plaster, fiberglass or silicon);
Teaching Objective 3:

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:
   
   a. toe(s) to limit flexion, extension and abduction;
   b. medial and longitudinal arch of the foot;
   c. ankle to limit inversion, eversion, plantar flexion, and dorsiflexion;
   d. knee to limit flexion, extension, rotation, valgus and varus laxity
   e. knee for patellofemoral dysfunction
   f. elbow to limit hyperextension, valgus, and varus laxity
   g. thumb to limit hyperextension and hyperabduction
   h. wrist to limit flexion, extension, ulna and radial deviation
   i. fingers to limit flexion, extension, abduction, deviation, valgus and varus laxity
   j. hip/groin to limit abduction, flexion and extension
   k. shoulder to limit abduction, flexion, extension and rotation
   l. low back to limit rotation, flexion and extension.

Teaching Objective 4:

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. proper disposal of bio-hazardous waste
   g. apply appropriate dressing
   h. apply ice, compression, and elevation to an acute sprain, strain and contusion.
Teaching Objective 5:

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 for a sprain, strain, fracture, subluxation, and dislocation
   
   b. stabilize and backboard/body splint a physically active individual (adult and child) with a suspected spinal injury.

Teaching Objective 6:

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 in an athlete wearing protective headgear
   
   b. perform CPR on a physically active individual (adult and child) with and without a spinal injury
   
   c. use a bag valve mask (BVM) on a physically active individual (adult and child) for rescue breathing
   
   d. use a protective pocket mask/shield on a physically active individual (adult and child) for rescue breathing.
Teaching Objective 7:

The student will demonstrate the ability to use various methods of stabilization and transportation to facilitate the moving or ambulation of the injured physically active person.

Specific Outcomes

1. The student will demonstrate the ability to:
   
a. stabilize and transport a physically active individual (adult and child) with a spinal injury
b. stabilize and transport a physically active individual (adult and child) with a hip fracture/dislocation
c. select, fit, and instruct in the use of crutches
d. select, fit, and instruct in the use of a cane
e. transport a physically active individual (adult and child) using a manual conveyance technique.
Assessment and Evaluation

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to conduct an assessment, formulate an impression to determine proper care; and refer when appropriate, injuries to and illnesses of the physically active.

Cognitive Domain (Knowledge and Intellectual Skills)

1. Demonstrates knowledge of normal anatomical structures and physiological functions of the human body including the musculoskeletal (including articulations), nervous (central and peripheral), cardiovascular, respiratory, digestive, urogenital, dermatological, reproductive, and special sensory systems.

2. Distinguishes anatomical and physiological growth and development characteristics as related to the preadolescent, adolescent, and adult male and female physically active individual.

3. Defines principles and concepts of body movement including functional classification of joints, joint biomechanics, normal ranges of joint motion, joint action terminology, muscular structures responsible for joint actions (prime movers, synergists, etc.), skeletal muscle contraction, and kinesthesia/proprioception.

4. Lists and defines the principal directional terms and body sections (planes) employed in describing the body and the relationship of its parts.

5. Describes commonly accepted techniques and procedures for clinical evaluation of common injuries and illnesses to the physically active including (a) history, (b) inspection or observation, (c) palpation, (d) functional testing (range of motion testing, ligamentous/capsular stress testing, manual muscle testing, sensory, motor, reflex neurological testing, etc.), and (e) special evaluation techniques (auscultation and percussion, etc.).

6. Demonstrates knowledge of a systematic process to obtain a history of an injury or illness, including but not limited to mechanism of injury, chief complaint, and previous relevant injuries/illnesses.

7. Explains the measurement of neurological function of cranial nerves, spinal nerves, and peripheral nerves and their relationships in a neurological examination.
8. Describes the use of myotomes, dermatomes, and reflexes (deep tendon, superficial, etc.) including manual muscle testing, range of motion testing, and distinguishes between primary, cortical and discriminatory forms of sensation.

9. Defines the measurement and subsequent grading of myotomes, dermatomes, and reflexes and their relationships in a neurological examination.

10. Describes what can be ascertained about an injury from active, passive, and resisted range of motion testing.

11. Explains the role of special tests, testing joint play, and postural examination in injury assessment.

12. Explains the measurement of resistive range of motion (or strength) of major joints and motions through the use of manual muscle testing or break tests.

13. Differentiates the use of diagnostic tests (x-rays, arthrograms, MRI, CAT scan, bone scan, ultrasound, etc.) and their relationship to assist in the assessment of an injury or illness.


15. Describes the components of medical documentation (SOAP, HIPS, HOPS, etc.) and identifies information recorded in each section.

16. Describes the normal motions of the foot, ankle, knee, hip, shoulder, elbow, forearm wrist, hand, head, and spine.

17. Explains the relationship of accurate athletic injury assessment to the systematic observation of the athlete as a whole person.

18. Describes the use of basic body composition techniques and somatotyping as a mechanism to quantify objective physical characteristics.


20. Describes the etiological factors, symptoms, and signs, and management procedures for the major injuries of the foot ankle, lower leg, knee, thigh, hip, pelvis, shoulder, upper arm, elbow, forearm, wrist, hand, spine, thorax, abdomen, head, and face.
21. Explains how to identify and evaluate various postural deformities (i.e., kyphosis, lordosis, scoliosis, and lower extremity).

22. Describes the location and function of the abdominal viscera related to the urinary system, the digestive system, and the lymphatic system.

23. Describes the signs and symptoms of injuries to the abdominal viscera.

24. Explains the key terminology necessary to communicate the results of an assessment to physicians and allied health professionals.

25. Explains the distinction between body weight and body composition.

26. Describes the physiological and psychological effects of physical activity and its impact on the male and female physically active.

**Psychomotor Domain (Manipulation and Motor Skills)**

1. Constructs and phrases questions appropriate to obtaining a medical history of an injured/ill individual including a previous history and a history of the present injury/illness.

2. Visually identifies clinical signs associated with common injuries/illnesses to the physically active including skin and mucous membranes, structural deformities, edema, discoloration, etc.

3. Performs appropriate clearing examination for injuries to the upper and lower extremities including functional testing.

4. Measures the neurological function of cranial nerves, spinal nerves, and peripheral nerves and assesses the level of involvement.

5. Assesses the functioning of myotomes, dermatomes, and reflexes (deep tendon, superficial, etc.) and quantifies their relationship in a neurological examination.

6. Performs appropriate manual muscle testing techniques and/or break tests including application of the principles of muscle/muscle group isolation, segmental stabilization resistance/pressure, grading, etc. to evaluate injuries to the physically active.
7. Demonstrates the proper use of the otoscope for ear and nasal examination, including determining proper position of the patient and examiner, in addition to the technique of use.

8. Demonstrates the proper utilization of the ophthalmoscope for eye examination, including determining proper position of the patient and examiner, in addition to the technique for use.

9. Demonstrates auscultation of normal heart, breath, and bowel sounds to include proper position and location of stethoscope.

10. Palpates the important bony and soft tissue structures to determine normal/abnormal tissue(s).

11. Screens and examines for the various postural deformities (i.e., kyphosis, lordosis, scoliosis, and lower extremity).

12. Demonstrates appropriate palpation techniques and special tests of the abdomen, cranium, and musculoskeletal system.

13. Demonstrates active, passive, and resisted range of motion testing of the foot, ankle, knee, hip, shoulder, elbow, wrist, hand, and spine.

14. Applies appropriate clinical laxity (stress) tests for ligamentous/capsular instability considering the application of the principles of joint positioning, segmental stabilization, pressure, etc.

15. Measures the grade of ligamentous laxity for a joint stress test via millimeter of laxity and according to end feel.

16. Administers static and dynamic postural evaluation and screening procedures including functional testing for muscle shortening.

17. Applies appropriate and commonly used special tests for evaluation of athletic injuries to various anatomical areas.

18. Measures joint range of motion with a goniometer.

19. Performs an appropriate clearing examination for an individual that has sustained a head injury.
20. Selects appropriate terminology usage in communication and documentation of injuries/illnesses.

Affective Domain (Attitudes and Values)

1. Appreciates the importance of a systematic assessment process in the management of injuries and illness of the physically active.

2. Appreciates the importance of documentation of assessment findings/results.

3. Accepts the role of the Certified Athletic Trainer as a primary provider of assessment of injuries and illnesses of the physically active.

4. Recognizes the initial clinical evaluation by the Certified Athletic Trainer as an assessment and screening procedure rather than a diagnostic procedure.

5. Appreciates the practical importance of thoroughness in a clinical evaluation.

6. Accepts the professional, ethical, and legal parameters that define the proper role of the Certified Athletic Trainer in the evaluation of injuries/illnesses to the physically active and appropriate medical referral.

7. Values the personal skills necessary for an individual to competently assess injuries and illnesses of the physically active.
Entry Level Athletic Training Clinical Proficiencies

Teaching Objective 1:

The student will demonstrate the ability to perform static and postural evaluation/ screening procedures.

Specific Outcomes

1. The student will demonstrate the ability to assess the range of motion for:
   a. cervical spine
   b. shoulder
   c. elbow
   d. wrist
   e. fingers and thumb
   f. hip
   g. low back
   h. knee
   i. ankle/foot/toes

2. The student will recognize postural anomalies.
   a. kyphosis
   b. lordosis
   c. scoliosis
   d. pelvic obliquity
   e. genu valgum/varum/recurvatum
   f. rearfoot valgus/varus
   g. forefoot valgus/varus
   h. pes cavus/planus

3. The student will demonstrate the ability to perform postural evaluation of the:
   a. neck
   b. shoulders
   c. lumbo-thoracic region
   d. hip/pelvis
   e. knee
   f. ankle/foot
Teaching Objective 2:

The student will demonstrate the ability to perform record keeping skills, with sensitivity to patient confidentiality.

Specific Outcomes

1. The student will demonstrate the ability to:
   a. use standardized record keeping methods (e.g., SOAP, HIPS HOPS)
   b. select and utilize injury, rehabilitation, referral, and insurance documentation
   c. use progress notes

Injury Evaluation and Physical Examination Skills

Teaching Objective 1:

The student will demonstrate the ability to palpate anatomical structures.

Specific Outcomes

1. The student will demonstrate the ability to palpate and identify:
   a. bony landmarks of the head, trunk, spine 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 2:

The student will demonstrate the ability to perform an assessment of neurological responses.

Specific Outcomes

1. The student will demonstrate the ability to identify and assess:
   a. the cranial nerves
   b. the dermatomes
   c. the myotomes
   d. deep tendon and pathological reflexes
Teaching Objective 3:

The student will demonstrate the ability to perform proper clinical evaluation techniques including muscle testing and special tests.

Specific Outcomes

Head and Face Evaluation

The student will demonstrate the ability to:

1. obtain a medical history.

2. observe and identify clinical signs associated with head injury:
   a. amnesia (retrograde or post-traumatic)
   b. confusion (orientation)
   c. intracranial hematoma
   d. levels of consciousness
   e. pulse and blood pressure
   f. pupils/eye movements

3. observe and identify clinical signs associated with eye injury/illness:
   a. orbital blowout fracture
   b. conjunctivitis
   c. corneal abrasion
   d. corneal laceration
   e. detached retina
   f. hyphema
   g. stye

4. observe and identify clinical signs associated with ear injury/illness:
   a. pinna hematoma (Cauliflower ear)
   b. impacted cerumen
   c. otitis externa
   d. otitis media

5. observe and identify clinical signs associated with nose injury:
   a. deviated septum
   b. epistaxis
   c. nasal fracture
6. observe and identify clinical signs associated with jaw and mouth injury:
   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 for the purpose of making a differential assessment:
   a. cranial nerves (eye motion, facial muscles, etc.)  
   b. cognitive tests (recall, serial 7s, digit span)  
   c. cerebellar function (e.g., Romberg's test, finger to nose, heel/toe walking, heel to knee standing)  
   d. spinal nerve roots (e.g., upper quarter screen)

**Cervical Spine Evaluation**

The student will demonstrate the ability to:

1. obtain a medical history

2. observe and identify clinical signs associated with common injuries/illnesses:
   a. atrophy  
   b. dislocation/subluxation  
   c. facial expressions  
   d. vertebral fracture  
   e. head and neck posture  
   f. intervertebral disc herniation  
   g. nerve root compression/stretch syndrome  
   h. ischemia  
   i. torticollis
3. administer active and passive range-of-motion tests using quantifiable techniques
4. use manual muscle testing techniques
5. administer appropriate sensory, circulatory, and neurological tests
6. administer functional tests and activity-specific tests
7. demonstrate the ability to identify palpate and assess the integrity of bony landmarks
8. demonstrate the ability to identify, palpate and assess the integrity of soft tissue
9. administer commonly used special tests for the purpose of making a differential assessment:
   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 test)
   d. neurovascular dysfunction (e.g., vertebral artery test)

**Shoulder Evaluation**

The student will demonstrate the ability to:

1. obtain a medical history of an ill/injured athlete
2. observe and identify clinical signs associated with common injuries/illnesses:
   a. atrophy  h. positioning (Sprengel’s deformity)
   b. bursitis  i. muscular strain
   c. dislocation/subluxation  j. rupture
   d. efficiency of movement  k. scapular winging
   e. fracture  l. step deformity
   f. ligamentous sprain  m. symmetry
   g. nerve injury  n. tenosynovitis/tendinitis

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 for the purpose of making a differential assessment:
   a. **gross 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, pectoralis major contracture test)
   d. **biceps/biceps tendon pathology** (e.g., Yergason's test, Ludington's test)
   e. **thoracic outlet syndrome** (e.g., Adson’s test, Allen test, military brace position)

**Elbow Evaluation**

The student will demonstrate the ability to:

1. obtain a medical history
2. observe and identify clinical signs associated with common injuries/illnesses
   a. bursitis
   b. carrying angle (cubital valgus & varus)
   c. dislocation/subluxation
   d. epicondylitis
   e. fracture
   f. gunstock deformity
   g. nerve injury
   h. osteochondritis dissecans
   i. sprain

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 assess the integrity of bony landmarks

8. identify, palpate, and assess the integrity of soft tissue

9. administer commonly used special tests for the purpose of making a differential assessment:
   a. gross 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

The student will demonstrate the ability to:

1. obtain a medical history

2. observe and identify clinical signs associated with:
   a. bony fracture (e.g., Colles fracture, Bennett's fracture, carpal fracture [boxer's fracture], metacarpal fracture, phalanges fracture)
   b. dislocation/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, Volkman'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 assess the integrity of soft tissue bony landmarks

8. identify, palpate, and assess the integrity of soft tissue

9. administer commonly used special tests for the purpose of making a differential assessment:
   a. inflammatory conditions (e.g., Finkelstein test)
   b. ligamentous injury (e.g., valgus stress test, varus stress test, glide tests, Lunatotriquetral Ballottement Test)
   c. neurovascular pathology (e.g., Tinel's sign, Phalen’s test)

Thoracic/Lumbar Spine Evaluation

The student will demonstrate the ability to:

1. obtain a medical history

2. observe and identify clinical signs associated with common injuries/illnesses:
   a. body type
   b. café au lait spots
   c. dislocation/subluxation
   d. spina bifida (faun’s beard)
   e. facet syndrome
   f. intervertebral disc pathology
   g. spinal posture (kyphosis/ lordosis)
   h. leg length discrepancy
   i. nerve root compression
   j. sacroiliac dysfunction
   k. scoliosis
   l. vertebra defect (e.g., spondylitis, spondylolysis, spondylolisthesis
   m. sprain
   n. stenosis
   o. step deformity
   p. strain

3. administer active and passive range-of-motion tests using standard qualitative techniques

4. use manual muscle testing techniques
5. administer appropriate sensory and neurological tests
6. administer functional tests
7. identify, palpate, and assess the integrity of soft tissue bony landmarks
8. identify, palpate, and assess the integrity of soft tissue
9. administer commonly used special tests for the purpose of making a differential assessment:
   a. intervertebral disc herniation (e.g., Valsalva maneuver)
   b. neuropathy (e.g., straight leg raise test, well straight leg test, Babinski test, Oppenheim test, Kernig/Brudzinski test, bowstring test, Hoover test)
   c. vertebral defects (e.g., stork standing test/spondylolisthesis test)
   d. ligamentous instability (e.g., spring test)

**Hip/Pelvis Evaluation**

The student will demonstrate the ability to:

1. obtain a medical history
2. observe and identify clinical signs associated with common injuries/illnesses:
   a. apophysitis
   b. body type
   c. bursitis
   d. contusion
   e. dislocation/subluxation
   f. fracture
   g. hip anteversion
   h. hip retroversion
   i. iliotibial band syndrome
   j. leg length discrepancy (true/apparent)
   k. Legg-Calve Perthes disease
   l. osteitis pubis
   m. piriformis syndrome
   n. slipped capital femoral epiphysis
   o. sprain
   p. step deformity
   q. strain
   r. stress fracture
   s. tendinitis
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 assess the integrity of bony landmarks

8. identify, palpate, and assess the integrity of soft tissue

9. administer commonly used special tests for the purpose of making a differential assessment:
   a. **sacroiliac dysfunction** (e.g., Patrick's/Faber test, Gaenslen’s test, pelvic compression/distraction test)
   b. **neuropathy** (e.g., femoral nerve traction test)
   c. **neuromuscular pathology** (e.g., Trendelenburg's test, Thomas test, rectus femoris contracture test, Ober’s test, Nobel’s test, Piriformis test)

**Knee Evaluation**

The student will demonstrate the ability to:
1. obtain a medical history of an ill/injured athlete

2. observe and identify clinical signs associated with common injuries/illnesses:
   a. bursitis
   b. chondromalacia patella
   c. dislocation/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/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 assess the integrity of bony landmarks
8. identify, palpate, and assess the integrity of soft tissue
9. administer commonly used special tests for the purpose of making a differential assessment:
   a. **uniplanar ligamentous stress tests** (e.g., valgus stress test, varus stress test, Lachman test, anterior drawer test, posterior drawer test, posterior sag sign)
   b. **rotatory (multiplanar) stress tests** (e.g., Slocum test, Hughston’s test, lateral pivot shift maneuver)
   c. **meniscal tears** (e.g., McMurray test, Appley’s distraction 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**

The student will demonstrate the ability to:

1. obtain a medical history
2. observe and identify clinical signs associated with common injuries/illnesses:
   a. Overuse injuries (e.g., bursitis, exostosis, fasciitis, stress fracture, tarsal tunnel syndrome, tendonitis/tenosynovitis, tibial stress syndrome)
   b. Achilles’ tendon rupture
   c. compartment syndromes
   d. apophysitis
   e. dislocation/subluxation
   f. foot type/structure (e.g., forefoot varus/valgus, equinus deformity, pes cavus, pes planus, plantar flexed first ray, rearfoot [hindfoot] varus/valgus)
   g. fracture
   h. Homan's sign for deep vein thrombosis
   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)
   n. Weight-bearing vs. non-weight-bearing alignment

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 assess the integrity of bony landmarks

8. identify, palpate, and assess the integrity of soft tissue

9. administer commonly used special tests for the purpose of making a differential assessment:
   a. Pott’s compression test
   b. percussion test
   c. anterior drawer test
   d. talar tilt
   e. Thompson test
   f. Tinel's sign
General Medical Conditions and Disabilities

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to recognize, provide care, and refer when appropriate general medical conditions and disabilities of the physically active.

Cognitive Domain (Knowledge and Intellectual Skills)

Understands congenital or acquired abnormalities, physical disabilities and diseases. Lists the common causes, signs and symptoms of respiratory infections (i.e. pneumonia, bronchitis, sinusitis, URI, asthma, etc.).

1. Describes common conditions that affect the liver, gall bladder and pancreas (i.e. jaundice, hepatitis, diabetes mellitus, pancreatitis, etc.).

2. Understands common conditions of the urinary tract, kidneys and bladder (i.e. UTI, cystitis, calcium “stones”, etc.).

3. Lists common infections and conditions of the female reproductive organs (i.e. Pelvic Inflammatory Disease, ectopic pregnancy, pregnancy, etc.).

4. Recognizes common conditions of the breast (i.e. gynecomastia, cancer, fibrous cysts, etc.).

5. Recognizes skin lesions, infections and disorders (i.e. wounds, thermal, electrical, radiation injury, bacterial, fungal, viral infections, bites, acne, dermatitis, folliculitis, eczema, etc.).

6. Recognizes conditions that affect bones and joints (i.e. epiphysitis, apophysitis, aseptic necrosis, arthritis, gout, felon, etc.).

7. Recognizes common conditions that affect muscles (i.e. myositis, rhabdomyolysis, etc.).

8. Recognizes the main cerebral lesions caused by trauma (i.e. subdural, epidural hematoma, aneurysm, etc.).

9. Recognizes post concussion syndrome.

10. Recognizes common conditions of the eye and ear (i.e. conjunctivitis, hyphema, retinopathy, corneal injury, scleral trauma, otitis, ruptured tympanic membrane, etc.).
11. Recognizes common conditions of the mouth, sinus, oropharynx and nasopharynx.

12. Understands the bodies thermoregulatory mechanisms pertaining to acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.

13. Identifies common injuries to each major body part as indicated by contemporary epidemiological studies of injuries to the physically active.

14. Identifies typical symptoms and common clinical signs associated with injury and illness to the physically active including those associated with local tissue inflammation (cellulitis) and systemic infection (lymphangitis, lymphadenitis, bacteremia).

15. Describes the signs and symptoms of common respiratory tract infections.

16. Describes the signs and symptoms of common disorders of the gastrointestinal tract.

17. Identifies common signs and symptoms of contagious viral diseases.

18. Explains the typical history, signs, and symptoms associated with cardiopulmonary conditions.

19. Describes strategies for reducing the frequency and severity of asthma attacks.

20. Identifies the different types of shock and their management.

21. Identifies skin infections that are potentially contagious.


23. Recognizes signs and symptoms of convulsive disorders.

24. Identifies the possible causes of sudden death syndrome among the physically active.

25. Measures blood pressure at rest and during activity.

26. Monitors respiration rate in the physically active.

27. Compares and contrasts the symptoms and signs of the following respiratory tract conditions: the common cold, influenza, and allergic rhinitis.
28. Identifies the physiological effects of physical active females on menstruation (oligomenorrhea, amenorrhea, dysmenorrhea) or pregnancy.

29. Identifies indications and contraindications for exercise and sport participation during pregnancy.

30. Identifies the various menstrual irregularities and the implications they may have on sport participation.

31. Describes the signs and symptoms and current treatment of common sexually transmitted diseases.

32. Lists the advantages and disadvantages of sports participation of the physically active afflicted with the hepatitis B virus or human immunodeficiency virus.

33. Describes general principles of health maintenance and personal hygiene of the physically active, pertaining to skin care, dental hygiene, environmental sanitation, immunizations, avoidance of infectious, and contagious diseases, diet, rest, exercise, weight control, etc.

34. Describes the signs, symptoms and causes of Marfan’s Syndrome, cystic fibrosis, hemophilia, muscular dystrophy, multiple sclerosis and diabetes mellitus (IDDM).

35. Describes common heart conditions such as CAD, hypertrophic cardiomyopathy, heart murmurs, mitral valve prolapse and Wolff-Parkinson-White Disease.

36. Describes the evidence for viral carcinogenesis in humans with emphasis on human papillomavirus, Epstein-Barr virus and hepatitis B virus.

37. Cite the signs, symptoms and causes of edema, hyperemia, hemorrhage and all types of shock.

**Psychomotor Domain (Manipulation and motor skills)**

1. Assesses the physically active for congenital or acquired abnormalities, physical disabilities and diseases.

2. Recognizes and treats the physically active in response to the bodies thermoregulatory mechanisms pertaining to acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.
3. Recognizes the signs and symptoms of common disorders of the gastrointestinal tract.

4. Recognizes and takes appropriate steps in control and containment of common contagious viral and infectious diseases.

5. Recognizes and refers the physically active individual exhibiting a history, signs, and symptoms associated with cardiopulmonary conditions.

6. Takes appropriate steps to reduce the frequency and severity of asthma attacks.

7. Recognizes and quickly treats shock.

8. Acts quickly to contain and refers when appropriate skin infections that are potentially contagious.


10. Takes appropriate steps when treating a seizure in the physically active.

11. Recognizes infectious disease, management, control and disposition of the ill person.

12. Knows where and how to seek medical assistance on disease control, notification, and epidemic prevention.

Affective Domain (Attitudes and values)

1. Appreciates the importance and treats the physically active in response to the bodies thermoregulatory mechanisms pertaining to acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.

2. Supports moral and ethical behavior of athletic trainers in issues dealing with diseases of the physically active.

3. Recognizes the moral and ethical responsibility of taking control in the containment of common contagious viral and infectious diseases.

4. Values the importance of collecting temperature and humidity data as well as other environmental conditions that can affect the physically active.
Athletic Training Clinical Proficiencies

General Medical Evaluation

Specific Outcomes

The student will demonstrate the ability to:

1. Obtain a basic medical history
   a. previous medical history  e. pertinent family history
   b. previous surgical history  f. seizure disorder, asthma, HNT
   c. social history  g. tobacco or drug use
   d. current medication history  h. allergies

2. Ascertain body temperature
   a. oral  c. tympanic
   b. rectal  d. axillary

3. Ascertain vital signs
   a. blood pressure  c. respirations (rate-quality)
   b. pulse (rate-quality)  d. skin (temperature-moisture-color)

4. Palpate the four abdominal quadrants and assess for:
   a. guarding/rigidity  c. rebound tenderness
   b. pain  d. percussion

5. Use a stethoscope to identify:
   a. pathological breath sounds  c. pathological bowel sounds
   b. pathological heart sounds  d. pathological bruits (neck, abdomen)

6. Identify pathological breathing patterns the purpose of making a differential assessment:
   a. Apneustic  d. Slow
   b. Biot’s  e. Thoracic
   c. Cheyne-Stokes
6. Demonstrate proficiency in the use of an otoscope.

7. Measure urine values with chemstrip

8. Recognize the signs and symptoms associated with the following:

**Dermatology**
- a. Abscesses
- b. Acne Vulgaris
- c. Carbuncle
- d. Cellulitis
- e. Chicken Pox
- f. Dermatitis
- g. Eczema
- h. Folliculitis
- i. Frostbite
- j. Furunculosis
- k. Herpes Simple
- 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

**Head and Neck**
- a. Common Cold
- b. Conjunctivitis
- c. Hypothyroidism
- d. Laryngitis
- e. Meningitis
- f. Mumps
- g. Pharyngitis
- h. Rhinitis
- i. Sinusitis
- j. Tetanus
- k. Tonsillitis

**Respiratory**
- a. Asthma
- b. Bronchitis
- c. Hyperventilation
- d. Influenza
- e. Pneumonia

**Cardiovascular**
- a. Hypertension
- b. Hypertrophic Myocardiopathy
- c. Hypotension
- d. Shock
Gastrointestinal
  a. Appendicitis
  b. Colitis
  c. Constipation
  d. Diabetes
  e. Diarrhea
  f. Gastritis
  g. Gastroenteritis
  h. Hepatitis
  i. Indigestion
  j. Pancreatitis

Disordered Eating
  a. Anorexia
  b. Bulimia
  c. Obesity

Sexually Transmitted Diseases/ Body Fluid Exposure
  a. AIDS/HIV
  b. Chlamydia
  c. Gonorrhea
  d. Syphilis
  e. Urethritis
  f. Urinary Tract Infections

Genital Urinary
  a. Kidney Stones
  b. Spermatic Cord Torsion
  c. Urethritis
  d. Urinary Tract Infections

Gynecological
  a. Amenorrhea
  b. Dysmenorrhea
  c. Oligomenorrhea
  d. Pelvic Inflammatory Disease
  e. Vaginitis

Viral Syndromes
  a. Infectious Mononucleosis
  b. Measles
  c. Mumps

Neurological
  a. Epilepsy
  b. Syncope

Miscellaneous
  a. Hay Fever
  b. Heat Exhaustion
  c. Heat Stroke
  d. Hypothermia
  e. Iron Deficient Anemia
  f. Reflex Sympathetic Dystrophy
  g. Sickle Cell Anemia
Health Care Administration

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to develop, administer and manage a health care facility and associated venues providing for health care of the physically active.

Cognitive Domain (Knowledge and Intellectual Skills)

1. Understands the organization and administration of pre-participation examination/screening, for the physically active individual, including but not limited to maintaining records, developing forms, scheduling personnel, and site utilization.

2. Describes typical community-based emergency health care delivery plans including communication and transportation systems.

3. Recognizes and appraises Emergency Action Plans for the care of the acutely injured/ill including on-site care, notification of EMS, location of exits and other relevant information.

4. Identifies typical availability and capabilities of community based emergency care facilities, community based systems including managed care, as well as associated policies such as, but not limited to, admission and treatment.

5. Interprets typical administrative policies and procedures governing first aid and emergency care including those pertaining to parent/guardian, right to know, media, incident reports, and appropriate record keeping.

6. Identifies basic components of a comprehensive athletic injury emergency care plan including (a) personnel training, (b) equipment, (c) emergency care facilities, (d) communication, (e) transportation, (f) activity/event coverage, and (g) record keeping.

7. Assembles an Emergency Action Plan for all settings including on-site care, notification of EMS or appropriate personnel, and location of exit/evacuation routes.

8. Selects sideline emergency care supplies and equipment necessary and appropriate for the setting.

9. Knows basic legal concepts as they apply to health care performance of medical/allied health care practitioner's responsibilities to include but are not limited to, standard of care, scope of practice, liability, negligence, informed consent, confidentiality, and Title IX.
10. Understands federal and state infection control regulations/guidelines as they pertain to the prevention, exposure and control of infectious disease.

11. Understands basic concepts of organizing and coordinating a drug testing and screening program.

12. Understands how to locate and interpret current banned drug lists published by various governing athletic associations (NCAA, USOC, IOC, etc).

13. Lists the components of a medical record such as but not limited to permission to treat, emergency information, treatment documentation, living will, release of medical information.

14. Identifies the advantages and disadvantages associated medical record keeping including paperwork, electronic data, security, systems, and confidentiality.

15. Knows the types of insurance policies (HMO, PPO, Fee for service) and the procedures associated with filing health care insurance claims.

16. Understands common insurance benefits and exclusions identified within policies.

17. Lists the current injury/illness surveillance and reporting systems such as but not limited to NEISS, National Athletic Head and Neck Injury Registry, NCAA.

18. Understands budgeting processes including purchasing, requisition and bidding.

19. Knows basic architectural considerations pertinent to the design of a safe and efficient clinical practice setting.

20. Knows the principles of personnel management including (a) recruitment and selection of employees, (b) retention of employees, (c) development of policy and procedure manual, and (d) employment performance evaluation systems.

21. Formulates a plan to avoid discrimination and bias based on race, gender, disability, religion, national origin, or age.

22. Identifies the principles of physician recruitment, selection, employment and of other medical/allied health care personnel in the deployment of athletic health care services.
23. Understands common human resource policy as well as federal legislation including but not limited to American Disabilities Act, Wage and Hour, Family Medical Leave Act, Family Educational Rights Privacy Act, Fair Labor Standards Act, and Sexual Harassment.

24. Describes the universal precautions as mandated by the Occupational Safety and Health Administration and how they apply to the athletic trainer.

25. Lists the components of a comprehensive risk management plan which includes areas of security, fire, electrical and equipment safety, emergency preparedness, and hazardous chemicals.

26. Lists the accrediting agencies for health care facilities and their function. (Ex: JCAHO, CARF, etc.)

27. Identifies the process of obtaining state regulatory acts for athletic trainers and becomes familiar with locally relevant statutes, rules and regulations.

28. Describes the continuing education process for Certified Athletic Trainers as outlined by the NATA and those states that require such professional career objectives by law.

29. Stays abreast of developments, missions, objectives, and professional activities of other allied health and medical organizations/professions.


31. Understands how to locate and interpret CAAHEP accreditation standards.

32. Identifies the roles and responsibilities of allied health care personnel in providing services to the physically active.

33. Describes various communication skills appropriate for interaction with physicians, allied health care providers, caretakers, and others whom work closely with the Certified Athletic Trainer.

34. Formulates a plan to promote the profession of athletic training and those services that Certified Athletic Trainers perform in a variety of employment settings including high school, professional, college, industrial, and community based health care facilities.
35. Explains the advantages and disadvantages of various compute systems and software related to technology utilized by a Certified Athletic Trainer. (Statistical, educational, injury, etc.)

36. Explains the computer needs for effective athletic training facility operation.

37. Differentiates the roles and responsibilities of the Certified Athletic Trainer and other medical and allied health personnel in providing care to the physically active.

38. Identifies contemporary personal and community health issues and commonly available school health services, community health agencies, and community based psychological and social support services.

39. Describes the role and function of various community based medical/paramedical specialists (orthopedists, neurologists, internists, etc.) and other health care providers (psychologists, counselors, social workers, etc.).

40. Describes the roles of various personnel in the organization of activity sessions and methods of instruction used for the physically active.

41. Explains the protocol governing the referral of clients/patients to medical/paramedical specialists and other health care providers.

42. Understands the various methods for recording patient information, and can compare the strengths and weaknesses of each approach.

**Psychomotor Domain (Manipulation and Motor Skills)**

1. Develops an operational and capital budget based on a supply inventory and needs assessment.

2. Develops a plan/drawing of a safe and efficient health care facility.

3. Develops a risk management plan to include areas of liability reduction, security, fire, electrical and equipment safety, emergency preparedness and hazardous chemicals (MSDS sheets).

4. Develops a policy and procedure manual for a health care facility that meets the guidelines set forth by accrediting agencies.
5. Demonstrates the ability to access medical and health care information through electronic media.

6. Utilizes appropriate medical documentation for the recording of injuries/illnesses of the physically active. (Client encounters, history, progress notes, discharge summary, physician letters, treatment encounters, etc.)

7. Demonstrates the ability to organize a comprehensive patient file management system utilizing both paper and electronic media.

8. Demonstrates the ability to prepare a sample design for scientific research in the areas of a case study, outcome measurement, literature review, etc.

9. Demonstrates the ability to construct a resume and to critically critique others.

10. Demonstrates the ability to complete appropriate insurance forms. (HCFA-1500, UB92, etc.)

Affective Domain (Attitudes and Values)

1. Appreciates the roles and responsibilities of medical and allied health care providers and the systems that each works within.

2. Appreciates the role and function of various medical and paramedical specialties as well as their respective areas of expertise in the definitive treatment of acute care of injury and illnesses to the physically active.

3. Values the need for sideline emergency care supplies and equipment as deemed necessary for all athletic training settings.

4. Appreciates the importance of an Emergency Action Plan tailored for specific venues/setting.

5. Accepts the value of a common medical language and terminology used to communicate within and between the health professions.

6. Accepts the professional, ethical, and legal parameters that define the proper role of the Certified Athletic Trainer in the administration and implementation of health, care delivery systems.
7. Recognizes and accepts of the need for organization and conduction of health care programs for the physically active on the basis of sound administrative policies and procedures.

8. Accepts the responsibility for completion of necessary paperwork and maintenance of records associated with the administration of health care programs for the physically active.

9. Respects the roles and cooperation of medical personnel, administrators, and other staff member in the organization and administration of athletic training programs.

10. Recognition and acceptance of the importance of good public relations with the media (radio, TV, press), general public, medical and allied health care personnel, and legislators.

11. Recognizes the Certified Athletic Trainer's role as a liaison among the physically active, caretakers, employers, physicians, coaches, other health care professionals, and any individuals who may be involved with the care rendered by the Certified Athletic Trainer.
Athletic Training Clinical Proficiencies

Organization and Communication Skills

Teaching Objective 1:

The student will demonstrate the ability to implement appropriate communication skills.

Specific Outcomes

1. The student will demonstrate the ability to:
   a. calm, reassure, and explain a potentially catastrophic injury to a physically active individual (adult and child), coach, and/or family member;
   b. effectively communicate and work with physicians, EMT, other members of the allied health care community and sports medicine team.
   c. regularly communicate with coaches and family members.
   d. use cultural sensitivity in all aspects of communication.
   e. communicate with diverse populations.

Teaching Objective 2:

The student will demonstrate the ability to use contemporary multimedia, computer hardware and software.

Specific Outcomes

1. The student will demonstrate the ability to access information and manage data using contemporary multimedia, computer equipment and software. This should include, but not be limited to the following:
   a. word processing
   b. file management
   c. spreadsheets
   d. budgeting
   e. scheduling
   f. injury tracking
   g. World Wide Web
   h. communication (e-mail)
   i. presentation
Teaching Objective 3:

The student will demonstrate the ability to perform record keeping skills, with sensitivity to patient confidentiality.

Specific Outcomes

1. The student will demonstrate the ability to:
   a. use standardized record keeping methods (e.g., SOAP, HIPS, HOPS)
   b. select and utilize injury, rehabilitation, referral, and insurance documentation
   c. use progress notes
   d. organize patient files to allow systematic storage and retrieval.
Nutritional Aspects of Injury and Illnesses

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to understand and recognize nutritional aspects of the physically active and refer when appropriate.

**Cognitive Domain (Knowledge and Intellectual Skills)**

1. Knows and understands of personal health habits (hygiene, diet, nutrition, weight control, proper amount of sleep, effects of alcohol, tobacco, and drugs) and their relationship to preventing injury or illness, and maintenance of a healthy lifestyle.

2. Understands principles of nutrition including the role of fluids and electrolytes, vitamins, minerals, ergogenic aids, macronutrients, carbohydrates, protein, fat, and dietary supplements as related to the dietary and nutritional needs of the physically active.

3. Understands physiological processes and time factors involved in the digestion, absorption, and assimilation of food, fluids, and nutritional supplements as related to the design and planning of pre and post activity meals including consideration of menu content, time scheduling, and the effect of tension and anxiety before-activity.

4. Understands prevailing misconceptions regarding the proper utilization of food, fluids, and nutritional supplements as related to common food fads, fallacies, and strength or weight gain diets.

5. Knows the difference between a nutritional product endorsed by the FDA and one that is not.

6. Understands principles of weight control including methods of determining body fat percentage, caloric requirements, the effect of exercise, and fluid loss.

7. Understands prevailing misconceptions regarding the proper utilization of food, fluids, and exercise to dispel weight control diet fads and fallacies.

8. Describes the signs and symptoms of various disordered eating.

9. Understands the referral system for individuals with disordered eating.

10. Explains guidelines for safe weight loss and weight gain.
11. Explains the importance of good nutrition in enhancing performance and preventing injury and illness.

12. Describes the advantages or disadvantages of supplementing nutrients in the athlete's diet.


14. Describes the advantages and disadvantages of ergogenic aids and dietary supplements used by the physically active in an effort to improve performance.

15. Knows the effects of a poor dietary habits on bone loss, injury, and long-term health.


17. Knows the difference between saturated, unsaturated, and polyunsaturated fat and their effects on diet, performance, health care, heart disease, diabetes and cancer.

18. Knows the signs, symptoms and physiological effects of iron deficiency and anemia and foods that enhance absorption and are high in iron.

19. Knows how to access and determine the recommended daily amounts and common food sources for essential vitamins and minerals.

20. Knows the common illnesses and injuries attributed to poor nutrition.

21. Knows methods to determine the RDA’s of a healthy diet for the physically active.

22. Understands basic principles of supplementation in a healthy diet.

23. Knows the primary organizations responsible for nutrition information.

24. Understands basic information and sources for common herbs and their uses.

25. Understands the nutritional considerations in rehabilitation, including nutrients involved in healing, and nutritional risk factors.

26. Understands the demands of specific activities and the nutritional demands placed on the physically active.
27. Understands the principles of body mass index computation.

28. Understands the food pyramid and how to utilize it.

**Psychomotor Domain (Manipulation and Motor Skills)**

1. Disseminates information regarding the principles of fluid and electrolyte replacement and the physiological processes, effects, and timing of fluid that is appropriate for supervisors and the physically active to know.

2. Utilizes principles of nutrition including the role of fluids and electrolytes, vitamins, minerals and ergogenic aids as related to the dietary and nutritional needs of the physically active.

3. Administers techniques of measuring body fat percentage, such as skin fold calipers and hydrostatic weighing and applies appropriate formulas for computation.

4. Designs a pre-participation meal.

5. Applies proper percentages of carbohydrates, proteins and fat in a diet for the physically active based upon age and gender.

6. Adheres to scientific position papers guiding healthy weight loss, fluid maintenance, disordered eating, nutritional ergogenic aids, and assessment of body composition in the physically active population.

7. Observes physical characteristics of disordered eating.

8. Observes physical characteristics of anemia and other diet-related conditions and pathologies.

9. Observes the signs, symptoms and physical consequences of disordered eating.

10. Observes the signs, symptoms and consequences of improper fluid replacement.
Affective Domain (Attitudes and Values)

1. Appreciates proper nutrition for the health care of the physically active.
2. Respects the various recognized position papers regarding nutrition wellness.
3. Appreciates the long-term ramifications of disordered eating, bone density loss, and secondary amenorrhea on the skeletal health of the physically active.

Athletic Training Clinical Proficiencies

Nutritional Aspects of Injury and Illness

Teaching Objective 1

Student will demonstrate ability to design general nutrition programs for the physically active.

Specific Outcomes

1. The student will be able to demonstrate the ability to design nutritional guidelines for:
   a. pre-participation meal
   b. weight loss
   c. weight gain

2. The student will be able to demonstrate utilization of the food pyramid.

3. The student will be able to demonstrate the ability to evaluate nutritional intake for:
   a. RDA or equivalency
   b. protein intake
   c. fat intake
   d. carbohydrate intake
   e. vitamin intake
   f. mineral intake
   g. water intake
Pathology of Injuries & Illnesses

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to understand the physiological responses of human growth/development, and the progression of injuries to, illnesses and diseases of the physically active.

Cognitive Domain (Knowledge and Intellectual Skills)

1. Defines the inflammatory response i.e. margination, diapedesis, emigration, exudation, chemotaxis, phagocytosis, microbicidal substance, and proteolytic enzymes of normal and abnormal tissue.

2. Defines lesions by body system in terms of etiology, pathogenesis, pathomechanics, treatment options and expected outcomes of normal and abnormal tissue.

3. Describes the essential components of a typical human cell and their function.

4. Describes the aging process as it relates to the physically active.

5. Understands selected autoimmune and immunodeficiency diseases such as lupus and AIDS.

6. Recognizes cancer warning signs and cardinal symptoms.

7. Describes cellular events in acute and chronic inflammation.

8. Describes repair and healing process of fractures.

9. Describes the morphology and function of the principle cells of the nervous system (i.e. neurons, astroglia, oligodendroglia, microglia and ependymal cells).

10. Describes the principle functions of the cerebral cortex, basal ganglia, pons, medulla oblongata, cerebellum, spinal cord, and the peripheral nervous system.

11. Describes the integration and coordination of cell function and response to injury (i.e. reversible, irreversible and causes of cell injury).

12. Describes the integration and coordination of cell function and response to disease, and the concept of homeostasis.
13. Describes and explain cell adaptations i.e. atrophy, hypertrophy, hyperplasia, metaplasia and dysplasia.

14. Describes the natural, acquired and autoimmune response.

15. Describes the causes and symptoms of thrombosis, embolism and infarction.

16. Describes the pathogenesis of hypertension.

17. Describes the distribution of fluid between intracellular and extracellular compartments and the basic aspects of normal circulation.

18. Analyze the physiologic response of diseases to physical activity and inactivity.

19. Describes the pathology, of diseases of the blood (i.e. anemia, iron deficiency, hemolytic, plastic) associated with the physically active.

20. Understands normal physiological responses of the human body to trauma and inactivity on specific body tissues (ligaments/capsules, muscles, tendons, bones, etc.)

21. Understands the diseased body’s adaptation to illness during exercise.

**Affective Domain (Attitudes and Values)**

1. Appreciates an understanding of pathology as essential to caring for the physically active.

2. Recognizes the importance of developing an understanding of pathology concepts.

3. Recommends physician consultation as a moral and ethical necessity in issues of diagnosis and treatment of pathologic conditions.

4. Accepts the role pathology has in defining health anomalies.

5. Accepts moral and ethical responsibility for maintaining current knowledge of pathologic conditions of the physically active.

6. Promotes accountability for moral and ethical decision making as it pertains to caring for conditions of a pathologic nature.

7. Appreciates the utilization of exercise to improve the nondiseased organ system to enhance overall wellness.
Pharmacology

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer on pharmacologic applications including indications, contraindications, precautions interactions, and governing regulations relevant to the treatment of injuries to and illnesses of the physically active.

Cognitive Domain (Knowledge and Intellectual Skills)

1. Knows the general indications, contraindications, and adverse reactions of anti-inflammatory and anti-arthritis medications (i.e. prescription and non-prescription).

2. Knows the general indications, contraindications and adverse reactions of commonly prescribed analgesic medications (i.e. prescription and non-prescription).

3. Knows the general indications, contraindications and adverse reactions of local anesthetics.

4. Knows the general indications, contraindications and adverse reactions of bronchodilators and other respiratory medications as related to the physically active.

5. Knows the general indications, contraindications and adverse reactions of commonly prescribed antibiotics.

6. Describes the general adverse reactions of gastrointestinal prescription and non-prescription medications as utilized by the physically active.

7. Knows the general indications, contraindications, and adverse reactions of Beta-blockers, and anti-hypertensives.

8. Knows the general indications, contraindications and adverse reactions of topical medicated applications (i.e. prescription and non-prescription).

9. Identifies common resources used to identify indications, contraindications, precautions, and adverse reactions for prescription and non-prescription medications.

10. Understands the difference between cortical and anabolic steroids, performance enhancing drugs, other androgenics and the general effects and adverse short and long-term reactions of each.
11. Understands the use of anabolic steroids, diuretics, currently used ergogenic aids, and growth hormones by the physically active in an effort to improve performance.

12. Identifies the role the FDA plays in approving and recalling drugs.

13. Identifies proper terminology and pharmaceutical abbreviations as related to administration of medications.


15. Understands and can access the laws and governing bodies policies and procedures governing storage, transportation, dispensation and recording of prescription and non-prescription medications. (Controlled Substance Act, scheduled drug classification, state statutes, NCAA, NAIA, ACSM, NHSF, etc.)


17. Understands how the concept of potency and expiration affects drug dose protocols.

18. Understands the administration and how drugs are handled by the body through the kinetic process of absorption, distribution, metabolism and elimination.

19. Understands how physical activity may influence a drug’s therapeutic effect.

20. Understands the general concepts of dissolution, bioavailability and bioequivalence.

21. Recognizes that adverse reactions can be immediate (acute) or delayed (chronic).

22. Understands the general potential risks of pharmaceutical co-interaction.

23. Recognizes the general action of biotransformation in the biochemical reactions that occur during drug absorption.

24. Understands the general concepts of generic and brand name pharmaceuticals and their USP Formulary names.
**Psychomotor Domain (Manipulation and Motor Skills)**

1. Employs the PDR, Drug Facts and Comparison, etc., or on-line services to obtain information on medications prescribed for the physically active individual.

2. Follows federal, state and local regulations regarding medications.

3. Documents tracking of medications by name, manufacturer, amount, dosage, lot number, and expiration date.

4. Replicates procedures for storing and inventorying medications.

5. Reviews, and utilizes a policies and procedures manual as it relates to medications.

6. Replicates procedure for using an emergency epinephrine injection to prevent anaphylaxis.

7. Replicates procedures for using an asthmatic inhaler to prevent and treat exercised induced bronchial spasms and or asthmatic conditions.

**Affective Domain (Attitudes and Values)**

1. Recognizes that pharmacology applies to caring for the physically active.

2. Recognizes the importance of developing an understanding of pharmacology concepts.

3. Recommends physician consultation as a legal, moral and ethical necessity in medication, prescription, and dispensation issues.

4. Appreciates the use of clinical references such as the PDR and computer clinical databases to identify a medication.

5. Recognizes the importance in obeying laws and all regulations governing the prescription, dispensation and administration of all drugs.

6. Respects the role of physician and pharmacist in the proper prescription and administration of medications to the physically active.
7. Supports moral and ethical behavior of athletic trainers in issues dealing with drugs in sport.

8. Values of a systematic process of utilizing pharmacology principles in caring for the physically active.

9. Accepts moral and ethical responsibility for maintaining current knowledge of medications prescribed for the physically active.

10. Values the effects that proper academic preparation in pharmacology will have on society.

11. Advocates moral and ethical behavior of self and colleagues in dealing with issues of pharmacologic nature.

12. Promotes accountability for moral and ethical decision making as it pertains to pharmacologic issues.

Athletic Training Clinical Proficiencies

Pharmacology

Teaching Objective 1

Specific Outcomes

The student will demonstrate the ability to:

1. Use a PDR or other drug reference to search for information relating to common medications prescribed for the physically active and identify:

   a. generic and brand name
   b. indications for use
   c. contraindications
   d. side (adverse) effects
   e. warnings
   f. dosing
   g. other notes (i.e., banned substance)
2. Document the tracking of medications by recording medications:

   a. name  
   b. manufacturer  
   c. amount  
   d. dosage  
   e. lot number  
   f. expiration date

3. Locate the policy and procedure manual, identifies the area pertaining to medications, and replicates the procedure related to the administration of medications to athletes to include:

   a. determine type of OTC to be used according to physical ailment and established protocols  
   b. identify the information provided on the box and individual dose packets relative to use, precautions, expiration, lot number, dosage  
   c. the administration of OTC medication including verbal and written instruction for its use  
   d. recording and documentation of administration of an OTC

4. Locate the nearest poison control center and replicate a conversation reporting an incident of a drug overdose or poisoning situation. The conversation reports:

   a. name and location of person making the call  
   b. name and age of person who has taken the medication  
   c. name and dose of the drug taken  
   d. time the drug was taken  
   e. signs and symptoms associated with overdose or poison situation including vital signs

5. Replicates procedures for using an emergency epinephrine injection to prevent anaphylaxis:

   a. identifies indications for use of epinephrine injection  
   b. demonstrates proper use through verbal and nonverbal instruction  
   c. identify signs and symptoms that might indicate an allergic reaction or overdose of epinephrine  
   d. demonstrate proper storage of epinephrine injectable  
   e. demonstrate proper disposal of used injection system

6. Locates storage areas for medications and demonstrates procedures for storing and inventorying medications.
Professional Development and Responsibilities

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to understand professional responsibilities, avenues of professional development, national and state regulatory agencies/standards, to promote athletic training as a professional discipline and to provide education to students of athletic training, the general public, the physically active and associated individuals.

Cognitive Domain (Knowledge and Intellectual Skills)

1. States the current professional development requirements that pertain to continuing education of Certified Athletic Trainers.

2. Locates available approved continuing education opportunities for Certified Athletic Trainers.

3. Explains the basic legislative processes for the implementation of practice acts for athletic training.

4. Understands and can locate state and federal Athletic Training practice acts, registration, licensure, and certification agencies.

5. Defines the rationale for state and federal regulations governing the practice of athletic training.

6. Understands the process of attaining and maintaining an athletic training professional credential.

7. Understands the consequences of violating federal and state regulatory acts.

8. Describes the role and function of the governing structures of the National Athletic Trainers' Association.

9. Has familiarity with essential documents of the NATA (to include, but not limited to the Role Delineation Study, Code of Ethics, JRC-AT Standards and Guidelines, Athletic training Educational Competencies, Standards of Practice of the Profession, etc.).

10. Understands position statements relevant to the practice of athletic training (NATA, NCAA, NAIA, NHSF, ACSM, AAP, AFP, AOSSM, etc.)
11. Understands and can access the current activities and requirements pertaining to the professional preparation of the Certified Athletic Trainer (Education Council, JRC-AT, CAAHEP, etc.)

12. Has familiarity with and can access professional objectives, scope of practice and services of general health care providers to the physically active.

13. Distinguishes issues and concerns confronting health care of the physically active (public relations, third party payment, managed care, etc.).

14. Properly interprets the role of the Certified Athletic Trainer as a health care provider and is able to provide information regarding the role of the Certified Athletic Trainer to the physically active, parents, athletic department personnel, and others.

15. Describes availability of educational materials and programs in health-related subject matter areas (Audiovisual aids, pamphlets, newsletters, computers, software, workshops, seminars, etc.)

16. Contrasts the basic principles of learning, motivation and methods of classroom instruction including instructional techniques, use of audiovisual aids, computers, software, test construction, and evaluation of student competencies.

17. Describes the principles of organizing laboratory/clinical experiences and techniques of instruction in athletic training psychomotor skills.

18. Lists the components of a strategic plan using a model that helps in the development of a vision, mission, and SWOT analysis.

19. States the general principles of planning and organizing workshops, seminars, and clinics in athletic training, and sports medicine for health care personnel, administrators, coaches and the general public.

20. Demonstrates a fundamental comprehension of basic research design and statistical analysis and ability to interpret research in athletic training, sports medicine and related areas.
Psychomotor Domain (Manipulation and Motor Skills)

1. Demonstrates methods of classroom instruction including instructional techniques, use of audiovisual aids and test construction.

2. Demonstrates the techniques and methods of disseminating injury prevention and health care information among athletes, coaches, parents and the general public (team meetings, parents’ nights, PTO meetings, booster clubs, workshops, seminars, etc.).

Affective Domain (Attitudes and Values)

1. Accepts professional responsibility to satisfy Certified Athletic Trainers' continuing education requirements.

2. Appreciate the need for, the process and benefits of, athletic training regulatory acts (registration, licensure, certification, etc.).

3. Realizes that the state regulatory acts relevant to the practice of athletic training vary from state to state.

4. Realizes the consequences of non-compliance with regulatory athletic training practice acts.

5. Accepts the professional, historical, ethical and organizational structures that define the proper roles and responsibilities of the Certified Athletic Trainer in providing health care.

6. Defends the moral and ethical responsibility to intervene in situations that conflict with NATA standards.

7. Accepts the function of professional organization position statements relative to the practice of athletic training.

8. Advocates the NATA as an allied health professional organization for the care of the physically active.

9. Respects the role and responsibilities of other health care professions.

10. Appreciates the dynamic nature of issues and concerns as they relate to the health care of the physically active.
11. Defends the responsibility to interpret and promote athletic training as a professional discipline among allied-health professional groups and the general public.

12. Accepts the responsibility to enhance the professional growth of athletic training students, colleagues, and peers through a continual sharing of knowledge skills, values and professional recognition.

13. Recognizes the professional responsibility to create learning experiences, which will provide athletic training students with an opportunity to develop the competencies necessary for effective functioning as a Certified Athletic Trainer.
Psychosocial Intervention and Referral

This domain is a collection of knowledge and values required of the entry-level Certified Athletic Trainer to recognize, intervene, and refer when appropriate, the social, mental, emotional and physical behaviors of the physically active.

Cognitive Domain (Knowledge and Intellectual Skills)

1. Provides health care information to athletes, parents, athletic personnel, and others on the psychological and emotional well being of the physically active.

2. Disseminates information regarding the role and function of various community based health care providers (sport psychologists, counselors, social workers, etc.).

3. Understands current psychosocial issues and problems confronting athletic training and sports medicine and their affect on the physically active.

4. Describes accepted protocols governing the referral of the physically active for psychological, community health, or social services.

5. Describes the theories and techniques of interpersonal communication among Certified Athletic Trainers, athletes, patients, administrators, health care professionals, parents, and others.

6. Understands the basic principles of counseling including techniques and methods of discussion, listening, and resolution, etc.

7. Describes the various strategies Certified Athletic Trainers may employ to avoid and resolve conflicts among superiors, peers, and subordinates.

8. Understands the basic principles of mental preparation, relaxation and visualization techniques, general personality traits, associated trait anxiety, locus of control, and athlete and social environment interactions, etc.

9. Understands the psychosocial requirements of various sports activities as related to the readiness of the injured/ill physically active to resume physical participation.

10. Understands the psychological and emotional responses (motivation, anxiety, apprehension, etc.) to trauma and forced physical inactivity as related to the rehabilitation and reconditioning process.
11. Identifies the symptoms and clinical signs of common disordered eating (anorexia nervosa, bulimia, etc.) and the psychological considerations occurring with these disorders.

12. Identifies the psychological considerations that could effect menstruating females.

13. Identifies medical and community-based resources utilized for the dissemination of information regarding safe sexual activity and the risk factors associated with sexually transmitted diseases.

14. Describes common substances abused by the physically active and the impact on the individual’s health and physical performance.

15. Understands the effects of commonly abused drugs, ergogenic aids, and other substances on the physically active’s psychological health and athletic performance (i.e. alcohol, tobacco, stimulants, nutritional supplements, steroids, marijuana, narcotics, etc.)

16. Recognizes the signs and symptoms that the physically active may have when abusing drugs, ergogenic aids, and other substances (i.e. alcohol, tobacco, stimulants, nutritional supplements, steroids, marijuana, narcotics, etc.)

17. Identifies the societal influences of substance abuse in the physically active population.

18. Contrasts psychological and physical dependence, tolerance and withdrawal syndromes that may be seen in individuals addicted to alcohol, prescription or non-prescription medications, and “street” drugs of abuse.

19. Describes the basic signs and symptoms of mental disorders (psychoses, etc.), emotional disorders (neuroses, depression, etc.), or personal/social conflict (family problems, school related academic or emotional stress, personal assault/abuse, sexual assault, sexual harassment, conflict resolution, etc.).

20. Identifies contemporary personal, school, and community health service agencies including community based psychological and social support services available to the physically active.

21. Formulates a plan for appropriate psychological intervention and referral with all involved parties when confronted with a catastrophic event.

22. Understands the acceptance and grieving processes that result from a catastrophic event.
23. Understands that an injury may produce a predictable psychophysiological reaction that follows a stress-response model.

24. Defines Seasonal Affective Disorder (SAD).

25. Understands the potential psychosocial need for intervention and referral with special populations (e.g. exercise-induced asthma, diabetes, epilepsy, drug allergies and interactions, unilateral organs, etc.)

26. Describes motivational techniques to be utilized by the Certified Athletic Trainer in the processes, which affect injury rehabilitation and reconditioning.

27. Describes motivational techniques to be utilized by the Certified Athletic Trainer for use with student athletic trainers and co-workers.

Affective Domain (Attitudes and Values)

1. Accepts the professional, ethical and legal parameters, which define the proper role of the Certified Athletic Trainer in providing health care information, intervention, and referral.

2. Accepts the responsibility to provide health care information, intervention, and referral consistent with the Certified Athletic Trainer’s professional training.

3. Recognizes the Certified Athletic Trainer’s role as a liaison among the physically active, athletic personnel, health care professionals, parents and the public.

4. Accepts the need for appropriate interpersonal relationships between all entities involved with the physically active.

5. Accepts the moral and ethical responsibility to intervene in situations of suspected or known use and/or abuse of legal and illegal drugs and chemicals.

6. Accepts the moral and ethical responsibility to intervene in situations of mental, emotional and/or personal/social conflict.

7. Respects the physically active as individuals deserving of quality professional health care.

8. Accepts the physically active individual's physical complaint(s) without personal bias or prejudice.
Athletic Training Clinical Proficiencies

Teaching Objective 1

Specific Outcomes

The student will demonstrate the ability to:

1. Simulate intervention with a physically active individual that has a substance abuse problem for appropriate referral.

2. Simulate a confidential conversation with a health care professional concerning suspected substance abuse of a physically active individual.

3. Locate available community based resources for psychosocial intervention.

4. Simulate motivational techniques utilized with the physically active during rehabilitation
   a. Verbal         c. imagery
   b. Visualization  d. desensitization
Risk Management and Injury Prevention for the Physically Active

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to identify injury and illness risk factors that a physically active person may encounter, and has the ability to plan and implement a risk management and prevention program.

Cognitive Domain (Knowledge and Intellectual Skills)

1. Knowledge and understanding of the principles of effective heat loss and heat illness prevention programs. Including but not limited to: knowledge of the body’s thermoregulatory mechanisms pertaining to acclimation and conditioning, fluid and electrolyte replacement requirements, proper practice and competition attire, and weight loss.

2. Knows and understands accepted guidelines, recommendations and policy and position statements of governing agencies relating to practice during extreme weather conditions (NATA, NHSF, NCAA, NAIA, CAAFP, AAP, AOSSM, ACSM, etc.).

3. Knows and understands the use of a sling psychrometer and the ability to apply WBGT reading to the scheduling, type, and duration of practice.

4. Knows and understands the use of standard tests, test equipment, and testing protocol for the measurement of cardiovascular respiratory fitness, body composition, posture, flexibility, or muscular strength, power and endurance.

5. Knows and understands the use of various types of flexibility and stretching programs including the effects a physically active person would expect if they follow a recommended routine.

6. Knows and understands the safety precautions, hazards, and or contraindications of various stretching, strengthening or flexibility routines, and or equipment.

7. Knows and understands basic aspects regarding protective equipment including standards for design, construction, maintenance, and reconditioning of protective sports equipment (football, hockey, lacrosse, etc.)

8. Identifies basic legal concepts and consideration associated with protective equipment including product and personal liability.

9. Understands and can access rules and regulations governing the use of special protective equipment as established by the governing associations.
10. Knows and understands the principles and concepts relating to prophylactic taping, wrapping, bracing, protective pad fabrication, etc.

11. Knows and understands basic principles and concepts of protective equipment and material composition from football shoulder pads to the appropriate material to care for a blister. Concepts would range from the maximum stress equipment will tolerate or to how well a jersey will dissipate heat.

12. Understands and can access recommended or required components of a pre-participation examination based on governing authorities rules, guidelines, and recommendations.

13. Knows and understands the risk factors associated with common congenital or acquired abnormalities, physical disabilities, and diseases.

14. Identifies the risk factors associated with specific activities the physically active person may engage in.

15. Knows and understands the principles and concepts involved in the fabrication, and appropriate application of a dynamic splint.

16. Understands the basic principles and concepts of orthotic fabrication. This would include but not be limited to evaluation to determine the need for orthotics, selection of the appropriate material from which to manufacture the orthotic, manufacture of the orthotic, and fitting of the orthotic.

17. Knows and understands the basic concept and practice of wellness screening. This would include, but not be limited to various baselines and standards and other fundamental methods used to screen for wellness.

18. Identifies basic principles and concepts of workplace ergonomics and their relationship to the prevention of illness/injury for the physically active person.

19. Identifies recommended areas (CPR, First Aid, etc.), that athletic personnel or supervisors require to be familiar with to avoid or reduce the possibility of injury/illness occurring to a physically active person during physical activity.
Psychomotor Domain (Manipulation and Motor Skills)

1. Performs appropriate recommended tests and examinations as required for pre-participation physical.

2. Collects and appropriately interprets results of pre-participation examination.

3. Selects, fabricates, and applies appropriate preventive taping and wrappings, splints, braces, and other special protective devices, consistent with sound anatomical and biomechanical principles.

4. Selects and fits standard protective equipment and clothing consistent with the physical characteristics and need of the individual.

5. Collects, interprets, and applies climatic data (temperature, humidity, distance of lighting from practice or competition areas, etc.) with use of appropriate instruments, or personal observation, to the scheduling of physical activity.

6. Utilizes commercial fitness equipment, administers standard physical fitness tests, records, and interprets test results.

7. Operates contemporary isometric, isotonic, and isokinetic strength testing devices.

8. Administers static and dynamic postural evaluation procedures, including tests for muscle shortening.

9. Provides supervision and instruction in the use of commercial weight training equipment.

10. Implements and administers fitness programs appropriate for a physically active person including but not limited to correction or modification of inappropriate, unsafe, or dangerous fitness routines undertaken by a physically active person.

11. Implements and administers appropriate screening procedures to identify common congenital risk factors that would predispose a physically active person to certain types of injuries. Testing for potential general participation problems or weaknesses, and also identifies possible activity specific problems.

12. Assesses the need to construct and apply orthotics.

13. Assesses the need to construct and apply functional splints.
14. Inspects, measures, and observes, dimensions of workspace, tasks to be done at a workstation, and dimensions of the physically active person. Compares results, and implements proper adjustments to workspace fixtures to reduce or minimize possible risk of injury/illness.

Affective Domain (Attitudes and Values)

1. Accepts moral, professional, and legal responsibility to conduct appropriate pre-participation examination.

2. Appreciates the value and benefits in correctly selecting and using prophylactic taping, wrapping, or handmade prophylactic padding.

3. Appreciates and respects the correct and appropriate fitting and use of protective equipment.

4. Appreciates and respects the concepts and theories pertaining to strength, flexibility, and endurance programs or routines.

5. Accepts the moral, professional, and legal responsibilities to conduct safe programs for the physically active population, and to minimize injury/illness risk factors to the fullest extent.

6. Accepts and respects the established guidelines relating to the scheduling of physical activity during unsafe environmental conditions.

7. Appreciates developing and implementing a thorough and comprehensive injury/illness prevention program.

8. Appreciates the need for cooperation among administrators, athletic personnel, Certified Athletic Trainers, parents/guardians, and the physically active population in the implementation of effective injury/illness prevention programs.

9. Appreciates and respects the role of athletic personnel and supervisors in injury/illness prevention of the physically active.

10. Appreciates and respects principles and concepts of workplace ergonomics.
Athletic Training Clinical Proficiencies

Risk Management and Injury Prevention

Teaching Objective 1:

The student will perform anthropometric measurement techniques and other appropriate examination/screening procedures on physically active participants.

Specific Outcomes

1. The student will demonstrate the ability to assess:

   a. height  
   b. weight  
   c. blood pressure  
   d. heart rate  
   e. limb girth  
   f. limb length  
   g. vision using a Snellen eye chart  
   h. body composition using a manual skinfold caliper

Teaching Objective 2:

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:

   a. flexibility tests  
   b. 1 repetition maximum test  
   c. agility tests  
   d. speed tests
Teaching Objective 3:

The student will demonstrate the ability to obtain and interpret environmental data, recognize potential hazardous conditions and situations in the activity setting, and make the appropriate recommendations for activity.

Specific Outcomes

1. The student will demonstrate the ability to:
   
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.

Teaching Objective 4:

The student will demonstrate the ability to select and fit standard protective equipment for the provision of creating safe and healthy participation in physical activity.

Specific Outcomes

1. The student will demonstrate the ability to select and fit (a):
   
a. protective helmet and head gear  
b. protective shoulder pads  
c. footwear for physical activity  
d. mouthpiece  
e. thoracic brace  
f. ankle brace  
g. knee brace

Teaching Objective 5:

The student will operate and instruct the use of commercial 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 to include the:
   a. knee
   b. shoulder
   c. ankle

3. The student will demonstrate the ability to interpret data obtained from isokinetic testing and determine appropriate follow-up care.

4. The student will demonstrate the ability to perform an isometric test for the:
   a. ankle
   b. foot/toes
   c. knee
   d. hip
   e. shoulder
   f. elbow
   g. wrist
   h. hand/fingers

5. The student will demonstrate the ability to perform a(n):
   a. upper body strength test
   b. lower body strength test
   c. upper body power test
   d. lower body power test
   e. upper body muscular endurance test
   f. lower body muscular endurance test
Teaching Objective 6:

The student will demonstrate the ability to perform and instruct specific flexibility exercises/activities.

Specific Outcome

1. The student will demonstrate the ability to select and instruct specific flexibility exercises/activities to encompass all major joints and muscle groups for various specific physical activities to include the following:

   a. cervical region
   b. shoulder: joint and girdle
   c. elbow
   d. wrist
   e. hand/fingers
   f. lumbar region
   g. hip/pelvis
   h. knee
   i. leg
   j. ankle
   k. foot/toes

Teaching Objective 7:

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:

   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. leg curl
   j. leg extension
   k. leg press

2. The student will demonstrate the proper spotting technique for the:

   a. parallel squat
   b. shoulder press
   c. bench press
   d. power clean
   e. dead lift
**Therapeutic Exercise**

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to plan, implement, document, and evaluate the efficacy of therapeutic exercise programs for the rehabilitation/reconditioning of injuries to and illnesses of the physically active.

**Cognitive Domain (Knowledge and Intellectual Skills)**

1. Understands basic components of a therapeutic exercise program for rehabilitation and reconditioning.

2. Chooses appropriate therapeutic exercises and determines therapeutic goals and objectives through sound assessment of baselines, frequent re-evaluation and appropriate goal setting.

3. Revises goals and objectives and develops criteria for progression and return to competition based on level of function and patient outcomes.

4. Describes appropriate methods of evaluating rehabilitation and reconditioning progress and interprets results.

5. Interprets physician notes, post-op notes and physician prescriptions, records rehabilitation, functional notes, and reconditioning progress through the use of follow-up notes, progress notes, SOAP, etc.

6. Describes appropriate measurement and functional testing protocols (isokinetic devices, goniometers, dynamometers, calipers, postural stability, hop tests, specific function, etc.)

7. Interprets physical and physiological measurements (muscular strength/endurance, range-of-motion, etc.) as a basis for development of individualized rehabilitation and reconditioning programs.

8. Understands physiological process of wound healing and tissue repair and its implications (limitations, contraindications, etc.) on the development of an appropriate rehabilitation or reconditioning plan.

9. Describes common surgical techniques as related to anatomical alterations and the effect on exercise programs for rehabilitation and reconditioning.
10. Describes therapeutic exercises, selection and application in consideration of the following:
   a. the physiological responses of the human body to trauma.
   b. the physiological effects of inactivity and immobilization on the musculoskeletal, cardiovascular, nervous, and respiratory systems of the human body.
   c. the associated anatomical and/or biomechanical alterations of commonly used techniques of primary and reconstructive surgery.
   d. the physiological adaptations induced by the various forms of therapeutic exercise such as fast vs slow twitch motor units.
   e. the physiological responses of additional factors such as age, disease, etc.

11. Interprets results of appropriate injury assessment and determines an appropriate rehabilitation and reconditioning plan for return to physical activity.

12. Describes indications, contraindications, theory and principles for the incorporation and application of various contemporary therapeutic exercises including:
   a) Isometric, isotonic, and isokinetic
   b) Eccentric vs Concentric
   c) Open vs. Closed Chain
   d) The use of elastic, mechanical and manual resistance
   e) Manual muscle testing
   f) Joint mobilization
   g) Plyometrics- dynamic reactive exercise, eccentrics
   h) Proprioceptive neuromuscular facilitation (PNF) for muscular strength/endurance, muscle stretching, and improved range-of-motion
   i) Exercises to improve dynamic joint stability, neuromuscular coordination, postural stability, and proprioception
   j) Passive, active, active assistive, and resistive exercise
   k) Cardiovascular exercise including the use of stationary bicycles, upper-body ergometer, treadmill, stairclimber etc.
   l) Aquatic Therapy
   m) Functional rehabilitation and reconditioning
   n) Sport Specific activity
   o) Soft tissue mobilization

13. Describes the mechanical principles applied to the design and operation of rehabilitation or reconditioning exercise equipment (leverage, force, etc.).

14. Compares the effectiveness of taping, wrapping, bracing, and other supportive/protective methods for facilitation of safe progression to advanced therapeutic exercises and functional activities.
15. Interprets physical and physiological measurements (muscular strength/endurance, range-of-motion, etc.) as a basis for development of individualized rehabilitation and reconditioning programs.

**Psychomotor Domain (Manipulation and Motor Skills)**

1. Performs functional assessment for safe return to physical activity.

2. Demonstrates appropriate methods of evaluating rehabilitation and reconditioning progress and interprets results.

3. Records rehabilitation or reconditioning progress (Follow-up notes, progress notes, SOAP notes, etc.).

4. Measures physical and physiological affects of injury using contemporary methods (isokinetic devices, goniometers, dynamometers, calipers, functional testing, etc.) as a basis for development of individualized rehabilitation or reconditioning programs.

5. Demonstrates appropriate application of contemporary therapeutic exercises including:

   a) Isometric, isotonic, and isokinetic
   b) Eccentric and concentric
   c) Open and closed chain
   d) The use of elastic, mechanical and manual resistance
   e) Manual muscle testing
   f) Flexibility
   g) Joint mobilization
   h) Plyometrics- dynamic reactive exercise, eccentrics
   i) Proprioceptive neuromuscular facilitation (PNF) for muscular strength/endurance, muscle stretching, and improved range-of-motion
   j) Exercises to improve dynamic joint stability, neuromuscular coordination, postural stability, and proprioception
   k) Passive, active, active assistive, and resistive exercise
   l) Cardiovascular exercise including the use of stationary bicycles, upper-body ergometer, treadmill, stairclimber etc.
   m) Aquatic therapy
   n) Functional rehabilitation or reconditioning
   o) Sport specific activity
   p) Soft tissue mobilization
6. Demonstrates segmental stabilization techniques.


**Affective Domain (Attitudes and Values)**

1. Accepts the professional, ethical, and legal parameters that define the proper role of the Certified Athletic Trainer in the treatment and rehabilitation and reconditioning of the injured physically active individual.

2. Accepts the moral and ethical obligation to provide rehabilitation and reconditioning of the injured physically active individual to the fullest extent possible.

3. Respects the proper role of attending physicians and other medical and paramedical personnel in the treatment and rehabilitation and reconditioning of injured physically active individual.

4. Respects accepted medical/paramedical protocol involving confidentiality of medical information, medical/therapeutic prescriptions, and health care referral as related to the rehabilitation and reconditioning process.
Athletic Training Clinical Proficiencies

Therapeutic Exercise

Teaching Objective 1:

The student will demonstrate the ability to perform therapeutic exercises.

Specific Outcomes

1. Exercise to improve joint range of motion

The student will demonstrate the ability to instruct the following exercises:

<table>
<thead>
<tr>
<th>Upper Body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Codman’s exercises</td>
<td>a. Wall slides</td>
</tr>
<tr>
<td>b. Backward C exercises</td>
<td>b. Heel slides</td>
</tr>
<tr>
<td>c. T exercises</td>
<td>c. CPM</td>
</tr>
<tr>
<td>d. PNF Stretching</td>
<td>d. PNF Stretching</td>
</tr>
<tr>
<td>e. CPM</td>
<td>e. Prone knee extension hang</td>
</tr>
<tr>
<td>f. Active ROM</td>
<td>f. Active ROM</td>
</tr>
<tr>
<td>g. Passive ROM</td>
<td>g. Passive ROM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trunk</th>
<th>Cervical</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. William’s Exercises</td>
<td>a. Flexion/Extension</td>
</tr>
<tr>
<td>b. McKenzie Exercises</td>
<td>b. Lateral Flexion/Extension</td>
</tr>
<tr>
<td>c. Rotation</td>
<td>c. Rotation</td>
</tr>
<tr>
<td>d. Stabilization</td>
<td>d. Stabilization</td>
</tr>
<tr>
<td>e. Active ROM</td>
<td>e. Active ROM</td>
</tr>
<tr>
<td>f. Passive ROM</td>
<td>f. Passive ROM</td>
</tr>
</tbody>
</table>
2. **Exercise to improve muscle strength**
The student will demonstrate the ability to instruct the following exercises using isometric and progressive resistance techniques.

<table>
<thead>
<tr>
<th><strong>Upper body</strong></th>
<th><strong>Lower Body</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Shoulder abduction</td>
<td>a. Ankle dorsiflexion</td>
</tr>
<tr>
<td>b. Shoulder adduction</td>
<td>b. Ankle eversion</td>
</tr>
<tr>
<td>c. Shoulder flexion</td>
<td>c. Ankle inversion</td>
</tr>
<tr>
<td>d. Shoulder extension</td>
<td>d. Ankle plantar flexion</td>
</tr>
<tr>
<td>e. Shoulder internal rotation</td>
<td>e. Heel raises</td>
</tr>
<tr>
<td>f. Shoulder external rotation</td>
<td>f. Toe extension</td>
</tr>
<tr>
<td>g. Scaption</td>
<td>g. Toe flexion</td>
</tr>
<tr>
<td>h. Shoulder horizontal</td>
<td>h. Hip abduction</td>
</tr>
<tr>
<td>i. Shoulder horizontal flexion</td>
<td>i. Hip adduction</td>
</tr>
<tr>
<td>j. Shoulder girdle elevation</td>
<td>j. Hip extension</td>
</tr>
<tr>
<td>k. Shoulder girdle depression</td>
<td>k. Hip flexion</td>
</tr>
<tr>
<td>l. Shoulder girdle protraction</td>
<td>l. Lower extremity PNF patterns</td>
</tr>
<tr>
<td>m. Shoulder girdle retraction</td>
<td>m. Leg curls</td>
</tr>
<tr>
<td>n. Upper extremity PNF pattens</td>
<td>n. Leg extensions;</td>
</tr>
<tr>
<td>o. Elbow flexion</td>
<td>o. Leg press;</td>
</tr>
<tr>
<td>p. Elbow extension</td>
<td>p. Quad/Ham co-contraction;</td>
</tr>
<tr>
<td>q. R/U Pronation</td>
<td>q. Quadriceps setting;</td>
</tr>
<tr>
<td>r. R/U Supination</td>
<td>r. Short arc quadriceps extensions</td>
</tr>
<tr>
<td>s. Wrist flexion</td>
<td>s. Squats</td>
</tr>
<tr>
<td>t. Wrist extension</td>
<td>t. Straight leg raises</td>
</tr>
<tr>
<td>u. Wrist ulnar deviation (adduction)</td>
<td></td>
</tr>
<tr>
<td>v. Wrist radial deviation (abduction)</td>
<td></td>
</tr>
<tr>
<td>w. Thumb flexion</td>
<td></td>
</tr>
<tr>
<td>x. Thumb extension</td>
<td></td>
</tr>
<tr>
<td>y. Thumb abduction</td>
<td></td>
</tr>
<tr>
<td>z. Thumb adduction</td>
<td></td>
</tr>
<tr>
<td>aa. Finger flexion</td>
<td></td>
</tr>
<tr>
<td>bb. Finger extension</td>
<td></td>
</tr>
<tr>
<td>cc. Finger abduction</td>
<td></td>
</tr>
<tr>
<td>dd. Finger adduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Neck</strong></td>
</tr>
<tr>
<td></td>
<td>a. Neck flexion</td>
</tr>
<tr>
<td></td>
<td>b. Neck extension</td>
</tr>
<tr>
<td></td>
<td>c. Neck rotation</td>
</tr>
<tr>
<td></td>
<td>d. Neck lateral flexion</td>
</tr>
<tr>
<td></td>
<td><strong>Trunk</strong></td>
</tr>
<tr>
<td></td>
<td>a. Trunk flexion</td>
</tr>
<tr>
<td></td>
<td>b. Trunk extension</td>
</tr>
<tr>
<td></td>
<td>c. Trunk rotation</td>
</tr>
<tr>
<td></td>
<td>d. Trunk lateral flexion</td>
</tr>
</tbody>
</table>
3. Exercise to improve muscle endurance

The student will demonstrate the ability to instruct the following:

<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. swimming</td>
<td>a. swimming</td>
</tr>
<tr>
<td>b. UBE/Stationary Bicycle</td>
<td>b. stationary bicycle</td>
</tr>
<tr>
<td>c. Stair climber</td>
<td>c. stair climber</td>
</tr>
</tbody>
</table>

4. Exercise to improve muscle speed

The student will demonstrate the ability to instruct the following:

<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 muscle power

The student will demonstrate the ability to instruct the following:

<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plyometrics</td>
<td>Plyometrics</td>
</tr>
</tbody>
</table>

6. Exercise to improve neuromuscular control and coordination

The student will demonstrate the ability to instruct the following:

<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>a. Rhythmic stabilization</td>
<td>b. Wobble board or balance apparatus</td>
</tr>
<tr>
<td>b. Double &amp; single arm balancing</td>
<td>c. Incline board</td>
</tr>
<tr>
<td>c. Wobble board or balance apparatus</td>
<td></td>
</tr>
<tr>
<td>d. Weighted ball rebounding</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>
</tbody>
</table>
7. Exercise to improve agility

The student will demonstrate the ability to instruct the following:

<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></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:

<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></td>
<td>c. Stair climber</td>
</tr>
</tbody>
</table>

9. Manual Therapy Techniques

The student will demonstrate the ability to select and perform appropriate joint mobilization for:

<table>
<thead>
<tr>
<th>Upper body</th>
<th>Lower Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distal traction of the head of the humerus</td>
<td>Tibio-femoral joint traction</td>
</tr>
<tr>
<td>Anterior/Posterior glide of the head of the</td>
<td>Posterior glide of the tibia on the femur</td>
</tr>
<tr>
<td>humerus</td>
<td>Anterior glide of the tibia on the femur;</td>
</tr>
<tr>
<td>Anterior/posterior glide of radius</td>
<td>Patellofemoral joint distal glide;</td>
</tr>
<tr>
<td>Distal traction of ulna</td>
<td>Patellofemoral joint medial-lateral glide</td>
</tr>
<tr>
<td>Posterior glide of ulna</td>
<td>Anterior/posterior glide of the ankle.</td>
</tr>
<tr>
<td>Anterior/posterior glide of wrist</td>
<td></td>
</tr>
<tr>
<td>Anterior/posterior glide of fingers</td>
<td></td>
</tr>
</tbody>
</table>

10. The student will demonstrate the ability to instruct and perform exercise to improve activity-specific skills.
Therapeutic Modalities

This domain is a collection of knowledge, skills, and values required of the entry-level Certified Athletic Trainer to plan, implement, document, and evaluate the efficacy of therapeutic modalities in the treatment of injuries to and illnesses of the physically active.

Cognitive Domain (Knowledge and Intellectual Skills)

1. Determines goals and objectives in selecting therapeutic modalities.


3. Computes limb edema/effusion with volumetric and anthropometric measurements to determine effectiveness of treatment outcomes.

4. Understands physiological responses of the body during and following application of therapeutic modalities.

5. Identifies precautions in the case of surgical implants, prosthetics, and hardware as they relate to selection of therapeutic modalities.

6. Understands the role and function of common prescription and non-prescription pharmacological agents utilized in conjunction with therapeutic modalities. (Topical, phonophoresis, iontophoresis)

7. Understands principles of electrophysics including basic concepts associated with the electromagnetic and acoustic spectra. (Frequency, wavelength, etc.)

8. Interprets terminology, principles, and basic concepts associated with electrical units. (Amperes, volts, watts, ohms, etc.)

9. Identifies prevailing pain control theories.

10. Assesses the selection and use of therapeutic modalities for the control of acute and chronic pain.
11. Understands electrophysics, biophysics, and specific physiological effects associated with the use of (a) electrical stimulating currents, (b) thermotherapy, (c) cryotherapy, (d) diathermy, (e) ultrasound, (f) intermittent compression, (g) cervical and lumbar traction, (h) laser, (i) EMG and bio-feedback (j) massage, (k) other contemporary therapeutic modalities.

12. Understands typical physiological and psychological response to trauma relative to utilization and application of therapeutic modalities.

13. Interprets local, state, and federal standards related to operation and safety standards of therapeutic modalities.

**Psychomotor Domain (Manipulation and Motor Skills)**

1. Utilizes patient assessment skills to determine specific therapeutic modality indications, contraindications, and precautions.

2. Measures limb edema/effusion via volumetric tank procedures and anthropometric measurements as related to therapeutic modality outcomes.

3. Compares patient specific indications and contraindications and precautions for specific therapeutic modality application. (i.e.: age, underlying pathology, disease processes)

4. Performs appropriate patient preparation and positioning for therapeutic modality application.

5. Performs appropriate therapeutic modality set-ups.

6. Selects and applies appropriate therapeutic modality parameters and modifies as required. (e.g. intensity, length of time, duration, frequency)

7. Operates and applies contemporary therapeutic modalities according to established guidelines. (electrical stimulating currents, thermotherapy, cryotherapy, diathermy, ultrasound, intermittent compression, cervical and lumbar traction, laser, EMG and biofeedback massage, other contemporary therapeutic modalities).

8. Evaluates patient response to therapeutic modalities during and following application. (skin, comfort, etc.)

9. Formulates appropriate progress notes and treatment outcomes relevant to the selection and application of therapeutic modalities.
Affective Domain (Attitudes and Values)

1. Accepts the professional, ethical, and legal parameters that define the proper role of the Certified Athletic Trainer in the treatment and rehabilitation and reconditioning of the physically active with therapeutic agents.

2. Respects for the proper role of attending physicians and other medical and allied health personnel in the treatment and rehabilitation and reconditioning of the physically active with therapeutic agents.

3. Advocates accepted medical protocol involving confidentiality of medical information relative to therapeutic modality treatments.

4. Initiates accepted medical protocol regarding therapeutic prescriptions.

5. Promotes accepted medical protocol regarding health care referral as related to the rehabilitation and reconditioning process.

Athletic Training Clinical Proficiencies

Teaching Objective 1:

The student will demonstrate the ability to apply therapeutic modalities.

Specific Outcomes

Cryotherapy

1. The student will demonstrate the ability to properly select the appropriate parameters, prepare, and apply a(n):

   a. cold whirlpool treatment  e. ice immersion
   b. controlled cold therapy unit  f. ice massage
   c. ice bag  g. contrast bath
   d. vapor-coolant spray  h. cryokinetics
Thermotherapy

1. The student will demonstrate the ability to properly select appropriate parameters, prepare, and apply a(n):
   
   a. moist heat pack
   b. paraffin treatment
   c. warm whirlpool treatment
   d. fluidotherapy
   e. diathermy
   f. infrared

Electrotherapy

1. The student will demonstrate the ability to properly select appropriate parameters, prepare, and apply a(n):
   
   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. chronic edema treatment
   i. muscle spasm treatment
   j. muscle splinting treatment
   k. MENS treatment

2. The student will demonstrate proficiency in the setup and application of the following types of electrical stimulation units:
   
   a. Monophasic stimulator (e.g., high volt stimulation)
   b. Biphasic stimulator (e.g., TENS, NMES)
   c. Direct current (e.g., iontophoresis)
   d. Alternating current (e.g., interferential, NMES)

Ultrasound

1. The student will demonstrate the ability to properly select appropriate parameters, prepare, and apply a:
   
   a. thermal direct/indirect ultrasound treatment
   b. non-thermal direct/indirect ultrasound treatment
   c. combination electric-stimulation/ultrasound treatment
   d. phonophoresis treatment
Traction

1. The student will demonstrate the ability to properly select appropriate parameters, prepare, and apply:

   a. mechanical traction  
   b. manual traction  
   c. positional traction

Intermittent Compression

1. The student will demonstrate the ability to properly select appropriate parameters, prepare, and apply intermittent compression.

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 massage strokes.

   a. effleurage  
   b. petrissage  
   c. friction  
   d. tapotement  
   e. vibration