

Medical Terminology

ASSESSMENT AND EVALUATION

Cognitive Domain

4 - Lists and defines directional terms and cardinal planes used to describe the body and the relationship of its parts.

26 - Uses the terminology necessary to communicate the results of an athletic training assessment to physicians and other health professionals.

Psychomotor Domain

17 - Uses appropriate terminology in the communication and documentation of injuries and illnesses.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

4 - Interprets standard nomenclature of athletic injuries and illnesses.

5 - Recognizes appropriate written medical documentation and abbreviations.

PHARMACOLOGY

Cognitive Domain

4 - Identifies appropriate terminology and pharmaceutical abbreviations used in the prescription and dispensation of medications.

HEALTH CARE ADMINISTRATION

Cognitive Domain

14 - Uses accepted medical terminology and abbreviations (SOAP, CPT and HCFA coding).

Affective Domain

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

Basic Pharmacology

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 37 - Recognizes the signs and symptoms of toxic drug overdose.
- 38 - Describes the signs, symptoms, and causes of allergic, thermal, and chemical reactions of the skin.

PHARMACOLOGY

Cognitive Domain

- 1 - Recognizes the general concepts and differences in the legal regulation of non-prescription, prescription, and classified pharmaceuticals.
- 2 - Recalls and can access the laws, regulations, and procedures that govern storage, transportation, dispensation, and recording prescription and nonprescription medications (Controlled Substance Act, scheduled drug classification, and state statutes).
- 3 - Identifies the role of the Food and Drug Administration (FDA) in approving and recalling drugs.
- 4 - Identifies appropriate terminology and pharmaceutical abbreviations used in the prescription and dispensation of medications.
- 5 - Identifies the common resources used to identify indications, contraindications, precautions, and adverse reactions for prescription and nonprescription medications.
- 6 - Recalls how the concept of potency and expiration affects drug dose protocols.
- 7 - Identifies common methods used to administer medication.
- 8 - Relates the relationship of generic to brand name pharmaceuticals.
- 9 - Describes the kinetic process of absorption, distribution, metabolism, and elimination of administered medication.
- 10 - Describes how physical activity may influence a drug's therapeutic effect.
- 11 - Illustrates the general concepts of dissolution, bioavailability, and bioequivalence.
- 12 - Recognizes the general action of biotransformation in the biochemical reactions that occur during drug absorption.
- 13 - Recognizes that adverse drug reactions can be immediate (acute) or delayed (chronic).
- 14 - Describes the potential risks of co-interaction between two or more pharmaceutical agents.
- 15 - Recognizes the difference between cortical and anabolic steroids and other androgens.
- 16 - Describes the general indications, contraindications, and adverse reactions of prescription and nonprescription anti-inflammatory and antiarthritic medications (e.g., steroidal and nonsteroidal).
- 17 - Lists the general indications, contraindications, and adverse reactions of commonly used prescription and nonprescription analgesic medications.
- 18 - Lists the general indications, contraindications, and adverse reactions of prescription and nonprescription local anesthetics.
- 19 - Lists the general indications, contraindications, and adverse reactions of bronchodilators and other prescription and nonprescription respiratory medications as they relate to physical activity.
- 20 - Identifies the general indications, contraindications, and adverse reactions of prescription and nonprescription antibiotics.
- 21 - Identifies the general indications, contraindications, and adverse reactions of anaphylaxis medications.
- 22 - Identifies the general adverse reactions of gastrointestinal prescription and nonprescription medications.
- 23 - Lists the general indications, contraindications, and adverse reactions of beta-blockers and antihypertensives.
- 24 - Recalls the general indications, contraindications, and adverse reactions of prescription and nonprescription topical applications.
- 25 - Identifies the usage patterns, general effects, and adverse short- and long-term reactions of performance enhancing drugs.

Psychomotor Domain

- 1 - Employs the Physician's Desk Reference (PDR), the Drug Facts and Comparisons, or on-line services to obtain information on the medications prescribed for athletes and others involved in physical activity.
- 2 - Follows federal, state, and local regulations regarding storing, transporting, dispensing, and recording medications.
- 3 - Documents tracking of medications by name, manufacturer, amount, dosage, lot number, and expiration date.
- 4 - Replicates procedures for storage and inventory of medications.
- 5 - Reviews and adheres to a policies-and-procedures manual as it relates to medications.
- 6 - Replicates the procedure for using an emergency epinephrine injection to prevent anaphylaxis as per physician instruction.
- 7 - Replicates procedures for using an asthmatic inhaler to prevent and treat exercise-induced bronchial spasms and/or asthmatic conditions.

Affective Domain

- 1 - Recognizes that pharmacology applies to the immediate and ongoing care of injury and illness.
- 2 - Recognizes the importance of pharmacological concepts in health care.
- 3 - Accepts physician (or other qualified health care provider) and pharmacist consultation as a legal, moral, and ethical necessity in the prescription and dispensation of medication.
- 4 - Appreciates the use of clinical references such as the PDR and clinical databases to identify medications.
- 5 - Accepts the laws and regulations that govern the storage, transportation, and dispensation of all drugs.
- 6 - Supports the moral and ethical behavior of athletic trainers in dealing with the issues of drug use and abuse in sports.
- 7 - Accepts moral and ethical responsibility for maintaining current knowledge of the medications commonly prescribed to athletes and others involved in physical activity.
- 8 - Advocates moral and ethical behavior of self and colleagues in dealing with issues of a pharmacological nature.
- 9 - Promotes accountability for moral and ethical decision-making in pharmacological issues.

THERAPEUTIC MODALITIES

Cognitive Domain

- 5 - Describes the role and function of the common prescription and nonprescription pharmacological agents that are used in conjunction with therapeutic modalities (e.g., topical ointments, phonophoresis, iontophoresis).

Affective Domain

- 4 - Initiates accepted medical protocol regarding therapeutic prescriptions.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

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

Psychomotor Domain

- 10 - Use and interprets urine diagnostic Chemstrips (dipsticks).

NUTRITIONAL ASPECTS

Cognitive Domain

12 - Paraphrases the prevailing misconceptions regarding the proper use of food, fluids, and nutritional supplements (common food fads and fallacies and strength or weight gain diets).

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

14 - Describes the principles, advantages, and disadvantages of the ergogenic aids and dietary supplements used by athletes and others involved in physical activity, in an effort to improve performance.

15 - Recognizes the implications of FDA endorsement of nutritional products.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

14 - Describes commonly abused substances (e.g., alcohol, tobacco, stimulants, nutritional supplements, steroids, marijuana, and narcotics) and their impact on an individual's health and physical performance.

15 - Recognizes the signs and symptoms of drug abuse and the use of ergogenic aids and other substances.

16 - Identifies the societal influences toward substance abuse in the athletic and physically active population.

17 - Contrasts psychological and physical dependence, tolerance, and withdrawal syndromes that may be seen in individuals addicted to alcohol, prescription or nonprescription medications, and/or 'street' drugs.

HEALTH CARE ADMINISTRATION

Cognitive Domain

38 - Describes the basic components of organizing and coordinating a drug testing and screening program.

39 - Locates and interprets current banned-drug lists that are published by various governing athletic associations (National Collegiate Athletic Association [NCAA], United States Olympic Committee [USOC], International Olympic Committee [IOC], etc).

Human Anatomy & Physiology I

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 1 - Describes the essential components of a typical human cell and their functions.
- 2 - Describes the principle functions of the cerebral cortex, basal ganglia, pons, medulla oblongata, cerebellum, spinal cord, and the peripheral nervous system.
- 3 - Describes and explains cell adaptations (e.g., atrophy, hypertrophy, hyperplasia, metaplasia, and dysplasia).
- 4 - Describes the morphology and function of the principle cells of the nervous system (e.g., neurons, astroglia, oligodendroglia, microglia, and ependymal cells).
- 5 - Describes the distribution of fluid between intracellular and extracellular compartments and the process of normal circulation.
- 9 - Describes the integration and coordination of cell function in response to injury (e.g., sources of cell injury, inflammation, healing, and repair).
- 10 - Describes cellular homeostasis and the integration and coordination of cell function in response to disease.
- 12 - Defines tissue lesions by body system in terms of etiology, pathogenesis, pathomechanics, treatment options, and expected outcomes.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 1 - Demonstrates knowledge of the normal anatomical structures of the human body systems and their physiological functions, including the musculoskeletal (including articulations), nervous (central and peripheral), cardiovascular, respiratory, digestive, urogenital, endocrine, dermatological, reproductive, and special sensory systems.
- 22 - Describes the location and function of the urinary, digestive, reproductive, and lymphatic systems.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 20 - Lists examples of the common conditions of the urinary tract, kidneys, and bladder (e.g., urinary tract infection (UTI) and kidney stones).
- 21 - Lists the common infections and conditions of the male reproductive organs (e.g., epididymitis, varicocele, hydrocele, undescended testicle, and testicular cancer).
- 22 - Lists the common infections and conditions of the female reproductive organs (e.g., pelvic inflammatory disease (PID), ectopic pregnancy, and pregnancy).

Human Anatomy & Physiology II

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

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Introduction to Athletic Training

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 7 - Evaluates the accepted guidelines, recommendations, and policy and position statements of applicable governing agencies relating to practice during extreme weather conditions (e.g., heat, cold, and lightning).
- 20 - Accesses and interprets the rules and regulations established by the associations that govern the use of protective equipment .

Affective Domain

- 2 - Acknowledges the importance of developing and implementing a thorough, comprehensive injury and illness prevention program.
- 3 - Understands the need for cooperation among administrators, athletic personnel, certified athletic trainers, parents/guardians, other health care professionals, and athletes and others engaged in physical activity in the implementation of effective injury and illness prevention programs.

ASSESSMENT AND EVALUATION

Affective Domain

- 3 - Accepts the role of the certified athletic trainer as a primary provider of assessment to the injuries and illnesses of athletes and others involved in physical activity.
- 6 - Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the evaluation and appropriate medical referral of injuries and illnesses of athletes and others involved in physical activity.

ACUTE CARE OF INJURIES AND ILLNESSES

Affective Domain

- 4 - Appreciates the role and function of various medical/paramedical specialties, and values their respective areas of expertise in the definitive treatment of acute injuries and illnesses.
- 6 - Appreciates the systematic approach to acute injury or illness of the secondary survey components of obtaining a history, inspection/observation, palpation, and using special tests.

THERAPEUTIC EXERCISE

Affective Domain

- 1 - Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the treatment, rehabilitation, or reconditioning of athletes and others involved in physical activity.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Affective Domain

- 1 - Supports the moral and ethical behavior of athletic trainers in issues dealing with diseases of athletics and physical activity.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

- 1 - Describes the current psychosocial and sociocultural issues and problems confronting athletic training and sports medicine and identifies their effects on athletes and others involved in physical activity.

HEALTH CARE ADMINISTRATION

Cognitive Domain

- 32 - Formulates a plan to promote the profession of athletic training and those services that certified athletic trainers perform in a variety of employment settings, such as high schools and colleges, professional and industrial settings, and community-based health care facilities.
- 33 - Differentiates the roles and responsibilities of the certified athletic trainer and other medical and allied health personnel to provide care to athletes and others involved in physical activity.
- 35 - Describes the role and function of various community-based medical, paramedical, and other health care providers.
- 36 - Describes the roles of various personnel in the organization of activity sessions and methods of instruction for athletes and others involved in physical activity.
- 41 - Identifies the current developments, missions, objectives, and professional activities of other allied health and medical organizations and professions.
- 43 - Understands how to locate Commission on the Accreditation of Allied Health Education Programs (CAAHEP) accreditation standards and recognizes their impact on the educational system.
- 44 - Describes the relationship between the National Athletic Trainers' Association, Inc. (NATA), NATA Board of Certification, Inc./ National Organization for Competency Assurance (NATABOC/NOCA), National Commission for Certifying Agencies (NCCA), and Joint Review Committee-Athletic Training/Commission on the Accreditation of Allied Health Education Programs (JRC-AT/CAAHEP).
- 45 - Identifies the roles and responsibilities of allied health care personnel in providing services to athletes and others involved in physical activity.

Affective Domain

- 1 - Appreciates the roles and responsibilities of medical and allied health care providers, and respects the systems that each provider works within.
- 2 - Appreciates the roles and functions of various medical and paramedical specialties as well as their respective areas of expertise in the acute care of injuries and illnesses to athletes and others involved in physical activity.
- 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 - Appreciates the roles and relationship between the NATA, NATABOC/NOCA, NCCA, and JRC-AT/CAAHEP.
- 10 - Respects the roles and cooperation of medical personnel, administrators, and other staff members in the organization and administration of athletic training service programs.
- 12 - Recognizes the certified athletic trainer's role as a liaison between athletes, physically active individuals, caretakers, employers, physicians, coaches, other health care professionals, and any individual who may be involved with the care provided by the certified athletic trainer.

PROFESSIONAL DEVELOPMENT AND RESPONSIBILITIES

Cognitive Domain

- 1 - Compares and contrasts the role and function of state athletic training practice acts and registration, licensure, and certification agencies.
- 5 - Outlines the process of attaining and maintaining an athletic training professional credential.
- 6 - Describes the current professional development requirements for the continuing education of certified athletic trainers.
- 8 - Describes the role and function of the governing structures of the National Athletic Trainers' Association.
- 9 - Differentiates the essential documents of the NATA, including, but not limited to, the Role Delineation Study, the Code of Ethics, JRC-AT Standards and Guidelines, Athletic Training Educational Competencies, and the Standards of Practice of the Profession.
- 12 - Able to access the professional objectives, scope of practice, and services of other health care providers.
- 14 - Properly interprets the role of the certified athletic trainer as a health care provider, and provides information regarding the role of the certified athletic trainer to athletes, the physically active, parents/guardians, athletic department personnel, and others.

Affective Domain

- 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 to athletes and others involved in physical activity.
- 8 - Advocates the NATA as an allied health professional organization dedicated to the care of athletes and others involved in physical activity.
- 9 - Respects the role and responsibilities of the other health care professions.
- 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.

Concepts of Health and Fitness

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 1 - Identifies the physical and environmental risk factors associated with specific activities the physically active person may engage in.
- 4 - Outlines the basic concepts and practice of wellness screening. This includes, but is not limited to, various baselines and standards and other fundamental methods used to screen for wellness.
- 9 - Defines 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.
- 10 - Describes the body's anatomical and physiological adaptation to cardiovascular and muscular conditioning programs.
- 12 - Compares and contrasts the use of various types of flexibility and stretching programs, considering the results athletes and others involved in physical activity would expect if they followed a recommended routine.
- 13 - Compares and contrasts the use of various types of strength training and cardiovascular conditioning programs, considering the effects that athletes and others involved in physical activity would expect if they followed a recommended routine.
- 14 - Lists the safety precautions, hazards, and contraindications of various stretching, strengthening, or flexibility routines and/or equipment.
- 25 - Identifies the basic principles and concepts of home, school, and work place ergonomics and their relationship to the prevention of illness and injury.

Psychomotor Domain

- 11 - Implements and administers fitness programs, including correction or modification of inappropriate, unsafe, or dangerous fitness routines.

Affective Domain

- 6 - Accepts and respects the established guidelines for scheduling physical activity to prevent exposure to unsafe environmental conditions.
- 9 - Appreciates and respects the concepts and theories pertaining to strength, flexibility, and endurance programs or routines.
- 12 - Appreciates and respects the principles and concepts of home, school, and work place ergonomics.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 2 - Distinguishes the anatomical and physiological growth and development characteristics of athletic and physically active males and females in the following stages: pre-adolescent; adolescent; adult; and senior.
- 17 - Explains the distinction between body weight and body composition.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 8 - Interprets vital signs as normal or abnormal including, but not limited to, blood pressure, pulse, respiration, and body temperature.

PHARMACOLOGY

Cognitive Domain

- 15 - Recognizes the difference between cortical and anabolic steroids and other androgenics.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 3 - Describes the general principles of health maintenance and personal hygiene, including skin care, dental hygiene, sanitation, immunizations, avoidance of infectious and contagious diseases, diet, rest, exercise, and weight control.
- 12 - Recognizes the relationship between changes in blood pressure and changes in activity level.
- 13 - Recognizes the relationship between changes of respiration rate and changes in activity level.
- 14 - Explains the typical history, signs, and symptoms associated with cardiopulmonary conditions.
- 15 - Describes common heart conditions, such as coronary artery disease, hypertrophic cardiomyopathy, heart murmurs, and mitral valve prolapse.
- 25 - Identifies the physiological effects and the changes to woman's body caused by pregnancy, and describes the body's response to exercise during pregnancy. Also identifies the indications and contraindications for exercise throughout pregnancy.

NUTRITIONAL ASPECTS

Cognitive Domain

- 1 - Describes personal health habits (hygiene, diet, nutrition, weight control, proper amount of sleep, effects of alcohol, tobacco, and drugs) and their role in preventing injury or illness and in maintaining a healthy lifestyle.
- 3 - Describes the nutritional food pyramid and explains its use.
- 6 - Explains the importance of good nutrition in enhancing performance and preventing injury and illness.
- 7 - Describes the common illnesses and injuries that are attributed to poor nutrition.
- 8 - Evaluates the energy and nutritional demands of specific activities and the nutritional demands placed on athletes and others involved in physical activity.
- 10 - Applies the principles of nutrition, including the roles of fluids and electrolytes, vitamins, minerals, ergogenic aids, macronutrients, carbohydrates, protein, fat, and dietary supplements, as they relate to the dietary and nutritional needs of athletes and others involved in physical activity.
- 16 - Locates, obtains, and interprets scientific position papers describing healthy weight loss, fluid maintenance, disordered eating, nutritional ergogenic aids, diet supplements, and assessment of body composition in athletes and others involved in physical activity.
- 17 - Analyzes the principles of weight control, including body fat percentage, caloric requirements, effects of exercise, and fluid loss.
- 18 - Identifies the consequences of improper fluid replacement.
- 19 - Describes and applies the principle of caloric balance.
- 20 - Summarizes the proper use of food, fluids, and exercise in weight control to dispel the prevailing misconceptions regarding weight control diet fads and fallacies.
- 21 - Explains the guidelines for safe weight loss and weight gain.
- 22 - Describes the principles of body mass index computation.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

4 - Describes 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.

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Kinesiology

ASSESSMENT AND EVALUATION

Cognitive Domain

- 4 - Lists and defines directional terms and cardinal planes used to describe the body and the relationship of its parts.
- 5 - Defines the 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), skeletal muscle contraction, and kinesthesia/proprioception.

Psychomotor Domain

- 4 - Measures active and passive joint range of motion with a goniometer.

First Aid & CPR: Health Care Professionals

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 5 - Identifies areas that athletic personnel or supervisors must be familiar with in order to avoid or reduce the possibility of injury or illness occurring to athletes and others engaged in physical activity (e.g., CPR and first aid).
- 23 - Relates the principles and concepts involved in the fabrication and appropriate application of dynamic and static splints.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 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, contents, purposes, and maintenance of contemporary first aid and emergency care equipment.
- 6 - Describes the principles and rationale for a primary survey of the airway, breathing, and circulation.
- 10 - Applies the current standards of first aid, emergency care, rescue breathing, and cardiopulmonary resuscitation for the professional rescuer, including (1) use of a bag-valve-mask, (2) use of a pocket mask, and (3) the chin lift-jaw thrust maneuver.
- 11 - Describes the role and function of an automated external defibrillator in the emergency management of acute heart failure and abnormal heart rhythms.
- 12 - Describes the role and function of oxygen administration as an adjunct to cardiopulmonary resuscitation techniques.
- 13 - Recognizes the characteristics of common life-threatening conditions that can occur either spontaneously or as the result of direct trauma to the throat, thorax and viscera, and identifies the management of these conditions.
- 14 - Describes the management of external hemorrhage, including the location of pressure points, use of universal precautions, and proper disposal of biohazardous materials.
- 15 - Recognizes signs and symptoms associated with internal hemorrhaging.
- 16 - Recommends the appropriate use of aseptic or sterile techniques, approved sanitation methods, and universal precautions for the cleansing and dressing of wounds.
- 28 - Describes the proper techniques and necessary supplies for removing equipment and clothing in order to evaluate and/or stabilize the involved area.
- 32 - Recognizes the signs and symptoms of shock.
- 33 - Identifies the different types of shock type (traumatic, hypovolemic, anaphylactic, septic) and the proper management of each.
- 37 - Recognizes the signs and symptoms of toxic drug overdose.
- 43 - Describes the proper immobilization techniques and selects the appropriate splinting material to stabilize the injured joint or limb and maintain distal circulation.
- 44 - Recognizes the proper technique for using ambulatory aids, including selecting an aid appropriate for the injury and person.

Psychomotor Domain

- 1 - Acquires and maintains skills in first aid and emergency care.
- 2 - Acquires and maintains skill in rescue breathing and CPR, including two-person skills and the use of a bag-valve-mask and a pocket mask.
- 5 - Palpates a variety of anatomic locations to assess the pulse in resting (non-emergency) and trauma situations.
- 6 - Demonstrates proper use of universal precautions and aseptic or sterile techniques when controlling external hemorrhaging.
- 7 - Demonstrates proper wound cleaning and care, including the use of barriers, aseptic protocols, and disposal of biohazardous waste.
- 16 - Performs proper care and positioning of an individual suffering from shock.
- 17 - Applies various types of splints to different body parts, employing different constructions of splinting materials and allowing for distal pulse palpation.
- 18 - Performs short-distance transportation using proper positioning techniques, immobilization, and appropriate transportation methods.

Affective Domain

- 2 - Appreciates the legal, moral, and ethical parameters that define the scope of first aid and emergency care, and values the proper role of the certified athletic trainer in providing this care.
- 3 - Appreciates the roles and responsibilities of various community-based emergency care personnel (paramedics, emergency medical technicians, emergency room personnel).
- 4 - Appreciates the role and function of various medical/paramedical specialties, and values their respective areas of expertise in the definitive treatment of acute injuries and illnesses.
- 5 - Values the importance of certification in first aid and emergency care and cardiopulmonary resuscitation.
- 7 - Realizes the importance of identifying signs and symptoms in cases of possible shock, internal bleeding, and closed-head trauma.
- 10 - Appreciates state laws, rules, and regulations governing the application of immobilization devices
- 14 - Supports the application of cryotherapy, elevation, and compression as primary care for a non-threatening injury.
- 15 - Accepts the approved aseptic and sterile methods for cleaning, treating, and bandaging wounds and for disposing of biohazardous waste.

PHARMACOLOGY

Cognitive Domain

- 13 - Recognizes that adverse drug reactions can be immediate (acute) or delayed (chronic).

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Psychomotor Domain

- 15 - Assesses vital signs.

Care & Prevention of Athletic Injuries

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 1 - Identifies the physical and environmental risk factors associated with specific activities the physically active person may engage in.
- 2 - Appraises the risk factors associated with common congenital and acquired abnormalities, disabilities, and diseases.
- 3 - Implements the recommended or required components of a pre-participation examination based on governing authorities' rules, guidelines, and recommendations.
- 4 - Outlines the basic concepts and practice of wellness screening. This includes, but is not limited to, various baselines and standards and other fundamental methods used to screen for wellness.
- 6 - Describes the principles of effective heat loss and heat illness prevention programs. These principles include, but are not limited to knowledge of the body's thermoregulatory mechanisms for acclimation and conditioning, fluid and electrolyte replacement requirements, proper practice and competition attire, and weight loss.
- 8 - Describes the use of a sling psychrometer, and possesses the ability to apply wet bulb globe thermometer (WBGT) reading and other heat and humidity indices to determine the scheduling, type, and duration of practice.
- 11 - Identifies the components of a physical conditioning program (pre-season, in-season, post-season, off-season).
- 18 - Describes the basic principles regarding protective equipment, including standards for design, construction, maintenance, and reconditioning of protective sports equipment (e.g., football, hockey, and lacrosse pads and headgear).
- 19 - Identifies basic legal concepts and considerations associated with protective equipment, including product and personal liability.
- 21 - Describes the principles and concepts relating to prophylactic taping, wrapping, and bracing and protective pad fabrication.
- 22 - Explains the basic principles and concepts of protective equipment and material composition (e.g., tensile strength, maximum tolerances, heat dissipation).
- 23 - Relates the principles and concepts involved in the fabrication and appropriate application of dynamic and static splints.

Affective Domain

- 2 - Acknowledges the importance of developing and implementing a thorough, comprehensive injury and illness prevention program.
- 3 - Understands the need for cooperation among administrators, athletic personnel, certified athletic trainers, parents/guardians, other health care professionals, and athletes and others engaged in physical activity in the implementation of effective injury and illness prevention programs.
- 4 - Appreciates and respects the role of athletic personnel and supervisors in injury and illness prevention programs.
- 5 - Accepts moral, professional, and legal responsibility of conducting appropriate pre-participation examinations.
- 6 - Accepts and respects the established guidelines for scheduling physical activity to prevent exposure to unsafe environmental conditions.
- 7 - Appreciates the importance of the body's thermoregulatory mechanisms for acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.
- 8 - Values the importance of collecting data on temperature, humidity, and other environmental conditions that can affect the human body when exercising in adverse weather conditions.
- 10 - Understands the values and benefits of correctly selecting and using prophylactic taping and wrapping or prophylactic padding.
- 11 - Appreciates and respects the importance of correct and appropriate fitting in the use of protective equipment.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 6 - Analyzes the normal physiological responses of the human body to trauma and inactivity of specific body tissues (ligaments/capsules, muscles, tendons, and bones).
- 9 - Describes the integration and coordination of cell function in response to injury (e.g., sources of cell injury, inflammation, healing, and repair).
- 11 - Defines the inflammatory response to acute and chronic injury and illness.
- 17 - Describes the healing process of bone.

Affective Domain

- 2 - Recognizes that physician consultation is a moral and ethical necessity in the diagnosis and treatment of pathologic conditions.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 6 - Differentiates injury recognition, assessment, and diagnosis.
- 7 - Describes commonly accepted techniques and procedures for evaluation of the common injuries and illnesses that are incurred by athletes and others involved in physical activity. These techniques and procedures include the following: (a) taking a history, (b) inspection or observation, (c) palpation, (d) functional testing (range of motion, ligamentous or capsular stress, manual muscle, sensory, motor, reflex neurological), (e) special evaluation techniques (e.g., orthopedic tests, auscultation, percussion)
- 9 - Demonstrates knowledge of a systematic process that uses the medical or nursing model to obtain a history of an injury or illness that includes, but is not limited to, the mechanism of injury, chief complaint, and previous relevant injuries or illnesses.
- 13 - Describes active, passive, and resisted range-of-motion testing and differentiates the significance of the findings of each test.
- 14 - Explains the role of special tests, testing joint play, and postural examination in injury assessment.
- 15 - Explains how to measure resistive range of motion (or strength) of major muscles using manual muscle testing or break tests.
- 19 - Explains how to recognize and evaluate athletes and others involved in physical activity who demonstrate clinical signs and symptoms of environmental stress.
- 20 - Describes the etiological factors, signs, symptoms, and management procedures for injuries of the toes, foot, ankle, lower leg, knee, thigh, hip, pelvis, shoulder, upper arm, elbow, forearm, wrist, hand, thumb, fingers, spine, thorax, abdomen, head, and face.

Affective Domain

- 3 - Accepts the role of the certified athletic trainer as a primary provider of assessment to the injuries and illnesses of athletes and others involved in physical activity.
- 4 - Recognizes the initial clinical evaluation by the certified athletic trainer as an assessment and screening procedure, rather than as a diagnostic procedure.
- 5 - Appreciates the practical importance of thoroughness in a clinical evaluation.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 3 - Determines what emergency care supplies and equipment are necessary for event coverage, such as biohazardous waste disposal containers, splints, short-distance transportation equipment, emergency access tools, primary survey instruments (CPR mask, bag-valve-mask), and ice.

4 - Interprets standard nomenclature of athletic injuries and illnesses.

7 - Differentiates the components of a secondary survey, including obtaining a history, inspection and observation, palpation, and the use of special tests to determine the type and severity of the injury or illness sustained.

16 - Recommends the appropriate use of aseptic or sterile techniques, approved sanitation methods, and universal precautions for the cleansing and dressing of wounds.

17 - Discriminates those wounds that require medical referral.

18 - Explains the application principles of cold application, elevation, and compression in treatment of acute non-limb-threatening pathologies.

19 - Cites the signs, symptoms, and pathology of acute inflammation.

31 - Identifies the appropriate short-distance transportation method for an injured athlete or other physically active individual, including immobilization if applicable.

41 - Recognizes the signs, symptoms, and treatment of individuals suffering from adverse reactions to environmental conditions.

42 - Uses the information obtained during the examination to determine when to refer an injury or illness for further or immediate medical attention (e.g., a life- or limb-threatening situation).

Affective Domain

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

15 - Accepts the approved aseptic and sterile methods for cleaning, treating, and bandaging wounds and for disposing of biohazardous waste.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

11 - Identifies the possible causes of sudden death syndrome among athletes and others involved in physical activity.

NUTRITIONAL ASPECTS

Cognitive Domain

18 - Identifies the consequences of improper fluid replacement.

HEALTH CARE ADMINISTRATION

Cognitive Domain

1 - Describes the organization and administration of pre-participation examination and screening including, but not limited to, maintaining medical records, developing record keeping forms, scheduling personnel, and site utilization.

4 - Lists the current injury/illness surveillance and reporting systems such as, but not limited to, National Electronic Injury Surveillance System (NEISS), National Athletic Head and Neck Injury Registry, and the National Collegiate Athletic Association (NCAA).

22 - Recognizes and appraises emergency action plans, which include on-site care, notification of emergency medical services (EMS), location of exits, and other relevant information, for the care of acutely injured or ill individuals.

Care & Prevention of Athletic Injuries Lab

RISK MANAGEMENT AND INJURY PREVENTION

Psychomotor Domain

- 1 - Performs appropriate tests and examinations for pre-participation physical exam as required by the appropriate governing agency and/or physician.
- 2 - Administers static and dynamic postural evaluation procedures, including tests for muscle shortening.
- 4 - Collects and interprets climatic data (temperature, humidity, distance of lightning from practice or competition areas) with use of appropriate instruments or personal observation and applies this data to schedule physical activity.
- 5 - Implements prevention and treatment of environmental stress factors that pertain to acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.
- 8 - Selects, fabricates, and applies appropriate preventive taping and wrappings, splints, braces, and other special protective devices that are consistent with sound anatomical and biomechanical principles.
- 9 - Selects and fits standard protective equipment and clothing according to the physical characteristics and need of the individual.

ASSESSMENT AND EVALUATION

Psychomotor Domain

- 1 - Constructs and phrases appropriate questions to obtain a medical history of an injured or ill individual that includes a previous history and a history of the present injury or illness.
- 2 - Visually identifies clinical signs associated with common injuries and illnesses, such as the integrity of the skin and mucous membranes, structural deformities, edema, and discoloration.
- 3 - Demonstrates active, passive, and resisted range-of-motion testing of the toes, foot, ankle, knee, hip, shoulder, elbow, wrist, hand, thumb, fingers, and spine.
- 5 - Performs appropriate manual muscle-testing techniques and/or break tests, including application of the principles of muscle/muscle group isolation, segmental stabilization resistance/pressure, and grading, to evaluate injuries incurred by athletes and others engaged in physical activity.
- 7 - Applies appropriate stress tests for ligamentous or capsular instability based on the principles of joint positioning, segmental stabilization, and force.
- 8 - Measures the grade of ligamentous laxity during a joint stress test and notes the quality and quantity of the end point.
- 9 - Applies appropriate and commonly used special tests to evaluate athletic injuries to various anatomical areas.
- 12 - Palpates bony and soft tissue structures to determine normal or pathological tissue(s).
- 13 - Performs and interprets appropriate palpation techniques and special tests of the abdomen, chest, cranium, and musculoskeletal system.

ACUTE CARE OF INJURIES AND ILLNESSES

Psychomotor Domain

- 3 - Performs a primary survey/assessment in appropriate situations.
- 4 - Performs a secondary survey/assessment, including obtaining a history, inspection/observation, palpation, and using special tests.
- 6 - Demonstrates proper use of universal precautions and aseptic or sterile techniques when controlling external hemorrhaging.
- 7 - Demonstrates proper wound cleaning and care, including the use of barriers, aseptic protocols, and disposal of biohazardous waste.
- 8 - Administers cryotherapy, elevation, and compression to a limb and/or joint.
- 17 - Applies various types of splints to different body parts, employing different constructions of splinting materials and allowing for distal pulse palpation.
- 18 - Performs short-distance transportation using proper positioning techniques, immobilization, and appropriate transportation methods.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Psychomotor Domain

- 1 - Assesses the patient for congenital or acquired abnormalities, physical disabilities, and diseases that would predispose him or her to other injury or illness, or would exacerbate the existing condition(s).

Principles & Techniques in Athletic Training

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 22 - Explains the basic principles and concepts of protective equipment and material composition (e.g., tensile strength, maximum tolerances, heat dissipation).
- 23 - Relates the principles and concepts involved in the fabrication and appropriate application of dynamic and static splints.

Psychomotor Domain

- 8 - Selects, fabricates, and applies appropriate preventive taping and wrappings, splints, braces, and other special protective devices that are consistent with sound anatomical and biomechanical principles.
- 9 - Selects and fits standard protective equipment and clothing according to the physical characteristics and need of the individual.
- 12 - Constructs and applies functional splints.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 5 - Defines the 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), skeletal muscle contraction, and kinesthesia/proprioception.
- 7 - Describes commonly accepted techniques and procedures for evaluation of the common injuries and illnesses that are incurred by athletes and others involved in physical activity. These techniques and procedures include the following:(a) taking a history, (b) inspection or observation,(c) palpation, (d) functional testing (range of motion, ligamentous or capsular stress, manual muscle, sensory, motor, reflex neurological), (e) special evaluation techniques (e.g., orthopedic tests, auscultation, percussion)
- 10 - Explains how to take measurements of the neurological function of cranial nerves, spinal nerves, and peripheral nerves, and describes their relationships in a neurological examination.
- 11 - Describes the use of myotomes, dermatomes, and reflexes (deep tendon, superficial) including manual muscle-testing, range-of-motion testing, and distinguishes between primary, cortical, and discriminatory forms of sensation.
- 12 - Defines the measurement and grading of dermatomes, myotomes, and reflexes and their relationships in a neurological examination.
- 13 - Describes active, passive, and resisted range-of-motion testing and differentiates the significance of the findings of each test.
- 15 - Explains how to measure resistive range of motion (or strength) of major muscles using manual muscle testing or break tests.
- 27 - Describes components of medical documentation (e.g., subjective, objective, assessment, plan [SOAP] and history, inspection, palpation, special tests [HIPS])

Psychomotor Domain

- 3 - Demonstrates active, passive, and resisted range-of-motion testing of the toes, foot, ankle, knee, hip, shoulder, elbow, wrist, hand, thumb, fingers, and spine.
- 4 - Measures active and passive joint range of motion with a goniometer.
- 5 - Performs appropriate manual muscle-testing techniques and/or break tests, including application of the principles of muscle/muscle group isolation, segmental stabilization resistance/pressure, and grading, to evaluate injuries incurred by athletes and others engaged in physical activity.
- 14 - Assesses the neurological function of cranial nerves, spinal nerves, and peripheral nerves and assesses the level of spinal cord involvement following injury, including the function of dermatomes, myotomes, and reflexes (e.g., deep tendon, superficial).
- 17 - Uses appropriate terminology in the communication and documentation of injuries and illnesses.

Affective Domain

- 2 - Appreciates the importance of documentation of assessment findings and results.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 5 - Recognizes appropriate written medical documentation and abbreviations.
- 8 - Interprets vital signs as normal or abnormal including, but not limited to, blood pressure, pulse, respiration, and body temperature.
- 44 - Recognizes the proper technique for using ambulatory aids, including selecting an aid appropriate for the injury and person.
- 45 - Recommends ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles, and evaluates the patient's technique in using the aids.

Psychomotor Domain

- 19 - Demonstrates the proper techniques for using ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles.

Affective Domain

- 16 - Empathizes with individuals facing the daily challenges of using ambulatory aids.

PHARMACOLOGY

Cognitive Domain

- 4 - Identifies appropriate terminology and pharmaceutical abbreviations used in the prescription and dispensation of medications.

THERAPEUTIC MODALITIES

Cognitive Domain

- 2 - Describes methods of evaluating and recording progress of therapeutic modality treatments.

Psychomotor Domain

- 9 - Formulates progress notes and treatment outcomes that are relevant to the selection and application of therapeutic modalities.

THERAPEUTIC EXERCISE

Cognitive Domain

- 2 - Describes and interprets appropriate measurement and functional testing procedures as they relate to therapeutic exercise (e.g., use of isokinetic devices, goniometers and dynamometers, postural stability test, hop tests, specific function tests).
- 14 - Describes rehabilitation, functional, and reconditioning progress using follow-up notes, progress notes, SOAP notes, etc.

Psychomotor Domain

2 - Measures the physical effects of injury using contemporary methods (isokinetic devices, goniometers, dynamometers, manual muscle testing, calipers, functional testing) and uses this data as a basis for developing individualized rehabilitation or reconditioning programs.

3 - Records rehabilitation or reconditioning progress (e.g., follow-up notes, progress notes).

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Psychomotor Domain

5 - Recognizes and applies the appropriate treatments for diabetic coma and insulin shock.

14 - Assesses body temperature.

15 - Assesses vital signs.

HEALTH CARE ADMINISTRATION

Cognitive Domain

2 - Lists the components of a medical record, such as permission to treat, emergency information, treatment documentation, and release of medical information.

3 - Identifies the advantages and disadvantages associated medical record keeping, including the issues of paperwork, electronic data, security, record keeping systems, and confidentiality.

4 - Lists the current injury/illness surveillance and reporting systems such as, but not limited to, National Electronic Injury Surveillance System (NEISS), National Athletic Head and Neck Injury Registry, and the National Collegiate Athletic Association (NCAA).

5 - Lists the various methods for recording patient information, and compares the strengths and weaknesses of each approach.

14 - Uses accepted medical terminology and abbreviations (SOAP, CPT and HCFA coding).

Psychomotor Domain

5 - Uses appropriate medical documentation to record injuries and illnesses (client encounters, history, progress notes, discharge summary, physician letters, treatment encounters).

6 - Demonstrates the ability to organize a comprehensive patient-file management system that uses both paper and electronic media.

Affective Domain

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

9 - Accepts the responsibility for completing the necessary paperwork and maintaining the records associated with the administration of health care programs.

Physiology of Exercise

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 6 - Describes the principles of effective heat loss and heat illness prevention programs. These principles include, but are not limited to knowledge of the body's thermoregulatory mechanisms for acclimation and conditioning, fluid and electrolyte replacement requirements, proper practice and competition attire, and weight loss.
- 8 - Describes the use of a sling psychrometer, and possesses the ability to apply wet bulb globe thermometer (WBGT) reading and other heat and humidity indices to determine the scheduling, type, and duration of practice.
- 9 - Defines 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.
- 10 - Describes the body's anatomical and physiological adaptation to cardiovascular and muscular conditioning programs.
- 12 - Compares and contrasts the use of various types of flexibility and stretching programs, considering the results athletes and others involved in physical activity would expect if they followed a recommended routine.
- 13 - Compares and contrasts the use of various types of strength training and cardiovascular conditioning programs, considering the effects that athletes and others involved in physical activity would expect if they followed a recommended routine.
- 14 - Lists the safety precautions, hazards, and contraindications of various stretching, strengthening, or flexibility routines and/or equipment.
- 15 - Identifies the precautions and risks associated with exercise in adolescents.
- 16 - Identifies the precautions and risks associated with exercise in individuals who have systemic medical conditions.

Psychomotor Domain

- 4 - Collects and interprets climatic data (temperature, humidity, distance of lightning from practice or competition areas) with use of appropriate instruments or personal observation and applies this data to schedule physical activity.
- 5 - Implements prevention and treatment of environmental stress factors that pertain to acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.
- 6 - Uses commercial fitness equipment to administer standard physical fitness tests and records and interprets the test results.

Affective Domain

- 6 - Accepts and respects the established guidelines for scheduling physical activity to prevent exposure to unsafe environmental conditions.
- 7 - Appreciates the importance of the body's thermoregulatory mechanisms for acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.
- 9 - Appreciates and respects the concepts and theories pertaining to strength, flexibility, and endurance programs or routines.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 3 - Describes and explains cell adaptations (e.g., atrophy, hypertrophy, hyperplasia, metaplasia, and dysplasia).
- 7 - Predicts the body's adaptation to exercise during and following illness and injury.
- 8 - Describes the aging process as it relates to athletes and others involved in physical activity.
- 14 - Analyzes the physiologic responses of diseases to physical activity and inactivity.
- 15 - Describes the pathology of diseases of the blood (e.g., anemia, iron deficiency, hemolysis that would impair strenuous physical activity).
- 18 - Describes the signs and symptoms of deep and superficial vein thromboses, pulmonary embolism and other emboli, and myocardial infarction.

Affective Domain

- 1 - Appreciates that an understanding of pathology is essential to care for athletes and others involved in physical activity.
- 5 - Understands how the use of exercise will improve the non-diseased organ system, thus enhancing overall wellness.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 2 - Distinguishes the anatomical and physiological growth and development characteristics of athletic and physically active males and females in the following stages: pre-adolescent; adolescent; adult; and senior.
- 3 - Describes the physiological and psychological effects of physical activity and their impact on the performance of athletes and individuals involved in other forms of physical activity.
- 17 - Explains the distinction between body weight and body composition.
- 18 - Describes the use of basic somatotyping to quantify objective physical characteristics.
- 19 - Explains how to recognize and evaluate athletes and others involved in physical activity who demonstrate clinical signs and symptoms of environmental stress.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 8 - Interprets vital signs as normal or abnormal including, but not limited to, blood pressure, pulse, respiration, and body temperature.
- 41 - Recognizes the signs, symptoms, and treatment of individuals suffering from adverse reactions to environmental conditions.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 8 - Describes the use of a peak-flow meter in the evaluation and management of respiratory conditions.
- 12 - Recognizes the relationship between changes in blood pressure and changes in activity level.
- 13 - Recognizes the relationship between changes of respiration rate and changes in activity level.

Psychomotor Domain

- 17 - Demonstrates the proper use and interpretation of a peak-flow meter (hand-held spirometer) in the assessment of asthmatic athletes and other asthmatics involved in physical activity.

NUTRITIONAL ASPECTS

Cognitive Domain

- 22 - Describes the principles of body mass index computation.

Clinical Experience I

RISK MANAGEMENT AND INJURY PREVENTION

Psychomotor Domain

- 1 - Performs appropriate tests and examinations for pre-participation physical exam as required by the appropriate governing agency and/or physician.
- 2 - Administers static and dynamic postural evaluation procedures, including tests for muscle shortening.
- 4 - Collects and interprets climatic data (temperature, humidity, distance of lightning from practice or competition areas) with use of appropriate instruments or personal observation and applies this data to schedule physical activity.
- 5 - Implements prevention and treatment of environmental stress factors that pertain to acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.

Affective Domain

- 5 - Accepts moral, professional, and legal responsibility of conducting appropriate pre-participation examinations.
- 6 - Accepts and respects the established guidelines for scheduling physical activity to prevent exposure to unsafe environmental conditions.
- 7 - Appreciates the importance of the body's thermoregulatory mechanisms for acclimation and conditioning, fluid and electrolyte replacements, proper practice and competition attire, and weight loss.
- 8 - Values the importance of collecting data on temperature, humidity, and other environmental conditions that can affect the human body when exercising in adverse weather conditions.

ASSESSMENT AND EVALUATION

Psychomotor Domain

- 1 - Constructs and phrases appropriate questions to obtain a medical history of an injured or ill individual that includes a previous history and a history of the present injury or illness.

ACUTE CARE OF INJURIES AND ILLNESSES

Psychomotor Domain

- 3 - Performs a primary survey/assessment in appropriate situations.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Psychomotor Domain

- 1 - Assesses the patient for congenital or acquired abnormalities, physical disabilities, and diseases that would predispose him or her to other injury or illness, or would exacerbate the existing condition(s).

NUTRITIONAL ASPECTS

Psychomotor Domain

- 3 - Designs a pre-participation meal.
- 4 - Includes the proper percentages of carbohydrates, protein, and fat in a diet based on age, gender, and type and level of physical activity.

HEALTH CARE ADMINISTRATION

Affective Domain

- 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 that is tailored for a specific venue or setting.

Strength & Conditioning Fundamentals

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 9 - Defines 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.
- 10 - Describes the body's anatomical and physiological adaptation to cardiovascular and muscular conditioning programs.
- 11 - Identifies the components of a physical conditioning program (pre-season, in-season, post-season, off-season).
- 12 - Compares and contrasts the use of various types of flexibility and stretching programs, considering the results athletes and others involved in physical activity would expect if they followed a recommended routine.
- 13 - Compares and contrasts the use of various types of strength training and cardiovascular conditioning programs, considering the effects that athletes and others involved in physical activity would expect if they followed a recommended routine.
- 14 - Lists the safety precautions, hazards, and contraindications of various stretching, strengthening, or flexibility routines and/or equipment.
- 15 - Identifies the precautions and risks associated with exercise in adolescents.

Psychomotor Domain

- 6 - Uses commercial fitness equipment to administer standard physical fitness tests and records and interprets the test results.
- 7 - Able to operate contemporary isometric, isotonic, and isokinetic strength testing devices.
- 10 - Provides supervision and instruction to an individual in the use of commercial weight training equipment.
- 11 - Implements and administers fitness programs, including correction or modification of inappropriate, unsafe, or dangerous fitness routines.

Affective Domain

- 1 - Accepts the moral, professional, and legal responsibilities to conduct safe programs to minimize injury and illness risk factors for individuals involved in physical activity.
- 9 - Appreciates and respects the concepts and theories pertaining to strength, flexibility, and endurance programs or routines.

PATHOLOGY OF INJURIES AND ILLNESSES

Affective Domain

- 5 - Understands how the use of exercise will improve the non-diseased organ system, thus enhancing overall wellness.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 17 - Explains the distinction between body weight and body composition.
- 18 - Describes the use of basic somatotyping to quantify objective physical characteristics.

THERAPEUTIC EXERCISE

Cognitive Domain

- 10 - Describes the indications, contraindications, theory, and principles for the incorporation and application of various contemporary therapeutic exercises, including: a. isometric, isotonic, & isokinetic exercise, b. eccentric vs concentric exercise, c. open-vs closed-chain exercise, d. elastic, mechanical, & manual resistance exercise, e. joint mob exercise, f. plyometrics-dynamic reactive exercise, g. PNF for muscular strength/endurance, stretching, and improved ROM, h. exercises to improve neuromuscular coordination & proprioception, i. passive, active, & active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation And reconditioning, m. sport-specific activity, n. soft tissue mobilization

Psychomotor Domain

- 4 - Demonstrates the appropriate application of contemporary therapeutic exercises including the following: a. isometric, isotonic, and isokinetic exercise, b. eccentric vs concentric exercise, c. open- vs closed-kinematic chain exercise, d. elastic, mechanical, and manual resistance exercise, e. joint mobilization exercise, f. plyometrics-dynamic reactive exercise, g. proprioceptive neuromuscular facilitation (PNF) for muscular strength/endurance, muscle stretching, and improved range of motion, h. exercises to improve neuromuscular coordination and proprioception, i. passive, active, and active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation and reconditioning, m. sport-specific activity, n. soft tissue mobilization

NUTRITIONAL ASPECTS

Cognitive Domain

- 12 - Paraphrases the prevailing misconceptions regarding the proper use of food, fluids, and nutritional supplements (common food fads and fallacies and strength or weight gain diets).
- 17 - Analyzes the principles of weight control, including body fat percentage, caloric requirements, effects of exercise, and fluid loss.
- 18 - Identifies the consequences of improper fluid replacement.

Psychomotor Domain

- 1 - Accesses and uses information regarding the principles of fluid and electrolyte replacement.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Psychomotor Domain

- 4 - Uses motivational techniques with athletes and others involved in physical activity.
- 6 - Develops and implements mental imagery techniques for athletes and others involved in physical activity.

Orthopedic Injury & Pathology

ASSESSMENT AND EVALUATION

Cognitive Domain

- 20 - Describes the etiological factors, signs, symptoms, and management procedures for injuries of the toes, foot, ankle, lower leg, knee, thigh, hip, pelvis, shoulder, upper arm, elbow, forearm, wrist, hand, thumb, fingers, spine, thorax, abdomen, head, and face.
- 21 - Explains how to identify and evaluate various postural deformities.

THERAPEUTIC EXERCISE

Cognitive Domain

- 4 - Describes common surgical techniques, pathology, and any subsequent anatomical alterations that may affect the implementation of a rehabilitation or reconditioning exercise program.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 1 - Describes congenital or acquired abnormalities, physical disabilities, and diseases.
- 2 - Identifies common illnesses and diseases of the body's systems based on contemporary epidemiological studies of the injuries of athletes and others involved in physical activity.
- 29 - Recognizes conditions that affect bones and joints (e.g., epiphysitis, apophysitis, aseptic necrosis, arthritis, gout, and felon).
- 30 - Describes common conditions that affect muscles (e.g., myositis, rhabdomyolysis).

Sport Psychology for Allied Health Professionals

ASSESSMENT AND EVALUATION

Cognitive Domain

- 3 - Describes the physiological and psychological effects of physical activity and their impact on the performance of athletes and individuals involved in other forms of physical activity.

ACUTE CARE OF INJURIES AND ILLNESSES

Affective Domain

- 16 - Empathizes with individuals facing the daily challenges of using ambulatory aids.

THERAPEUTIC MODALITIES

Cognitive Domain

- 19 - Illustrates the typical physiological and psychological responses to trauma as they relate to the use of therapeutic modalities.

THERAPEUTIC EXERCISE

Cognitive Domain

- 8 - Recommends the appropriate therapeutic exercise plan and determines appropriate therapeutic goals and objectives based on the initial assessment, frequent reassessments, and appropriate goal setting.
- 11 - Revises goals and objectives, and develops criteria for progression and return to activity, based on the level of functional outcomes.

NUTRITIONAL ASPECTS

Cognitive Domain

- 24 - Explains the referral system for individuals with disordered eating.

Affective Domain

- 4 - Recognizes the need for and implements proper referral for eating disorders.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

- 2 - Compares the psychosocial requirements of various sports activities to the readiness of the injured or ill individual to resume physical participation.
- 3 - Understands the psychological and emotional responses (motivation, anxiety, apprehension) to trauma and forced physical inactivity as they relate to the rehabilitation and reconditioning process.
- 4 - Describes 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.
- 5 - Provides health care information to patients, parents/guardians, athletic personnel, and others regarding the psychological and emotional well being of athletes and others involved in physical activity.
- 6 - Disseminates information regarding the roles and functions of various community-based health care providers (sport psychologists, counselors, social workers).
- 7 - Describes the accepted protocols that govern the referral of athletes and other physically active individuals to psychological, community health, or social services.
- 8 - Describes the theories and techniques of interpersonal and cross-cultural communication among certified athletic trainers, athletes, athletic personnel, patients, administrators, health care professionals, parents/guardians, and others.
- 9 - Employs the basic principles of counseling, including discussion, active listening, and resolution.
- 10 - Describes the various strategies that certified athletic trainers may employ to avoid and resolve conflicts among superiors, peers, and subordinates.
- 11 - Identifies the symptoms and clinical signs of common disordered eating (anorexia nervosa, bulimia) and the psychological and sociocultural factors associated with these disorders.
- 12 - Identifies the psychological issues that relate to physically active women of childbearing years.
- 15 - Recognizes the signs and symptoms of drug abuse and the use of ergogenic aids and other substances.
- 16 - Identifies the societal influences toward substance abuse in the athletic and physically active population.
- 17 - Contrasts psychological and physical dependence, tolerance, and withdrawal syndromes that may be seen in individuals addicted to alcohol, prescription or nonprescription medications, and/or 'street' drugs.
- 18 - Describes the basic signs and symptoms of mental disorders (psychoses), emotional disorders (neuroses, depression), or personal/social conflict (family problems, academic or emotional stress, personal assault or abuse, sexual assault, sexual harassment) and the appropriate referral.
- 20 - Formulates a plan for appropriate psychological intervention and referral with all involved parties when confronted with a catastrophic event.
- 21 - Describes the acceptance and grieving processes that follow a catastrophic event.
- 22 - Identifies the stress-response model and how it may parallel an injury.
- 23 - Defines seasonal affective disorder (SAD).
- 24 - Cites the potential need for psychosocial intervention and referral when dealing with populations requiring special consideration (e.g., those with exercise-induced asthma, diabetes, seizure disorders, drug allergies and interactions, or unilateral organs).
- 25 - Describes the motivational techniques that the certified athletic trainer must use during injury rehabilitation and reconditioning.

Psychomotor Domain

- 1 - Intervenes, when appropriate, with an individual with a suspected substance abuse problem.
- 4 - Uses motivational techniques with athletes and others involved in physical activity.
- 5 - Develops and implements stress reduction techniques for athletes and others involved in physical activity.
- 6 - Develops and implements mental imagery techniques for athletes and others involved in physical activity.

Affective Domain

- 4 - Accepts the need for appropriate interpersonal relationships between all of the parties involved with athletes and other involved in physical activity.
- 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.
- 8 - Accepts the individual's physical complaint(s) without personal bias or prejudice.
- 10 - Accepts the role of social support during the injury rehabilitation process.

HEALTH CARE ADMINISTRATION

Psychomotor Domain

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

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Field Experience

ASSESSMENT AND EVALUATION

Cognitive Domain

- 9 - Demonstrates knowledge of a systematic process that uses the medical or nursing model to obtain a history of an injury or illness that includes, but is not limited to, the mechanism of injury, chief complaint, and previous relevant injuries or illnesses.
- 11 - Describes the use of myotomes, dermatomes, and reflexes (deep tendon, superficial) including manual muscle-testing, range-of-motion testing, and distinguishes between primary, cortical, and discriminatory forms of sensation.
- 12 - Defines the measurement and grading of dermatomes, myotomes, and reflexes and their relationships in a neurological examination.
- 13 - Describes active, passive, and resisted range-of-motion testing and differentiates the significance of the findings of each test.
- 14 - Explains the role of special tests, testing joint play, and postural examination in injury assessment.
- 15 - Explains how to measure resistive range of motion (or strength) of major muscles using manual muscle testing or break tests.
- 16 - Differentiates the use of diagnostic tests (x-rays, arthrograms, MRI, CAT scan, bone scan, ultrasound, myelogram) based on their applicability in the assessment of an injury or illness when prescribed by a physician.
- 26 - Uses the terminology necessary to communicate the results of an athletic training assessment to physicians and other health professionals.
- 27 - Describes components of medical documentation (e.g., subjective, objective, assessment, plan [SOAP] and history, inspection, palpation, special tests [HIPS])

Psychomotor Domain

- 3 - Demonstrates active, passive, and resisted range-of-motion testing of the toes, foot, ankle, knee, hip, shoulder, elbow, wrist, hand, thumb, fingers, and spine.
- 4 - Measures active and passive joint range of motion with a goniometer.
- 5 - Performs appropriate manual muscle-testing techniques and/or break tests, including application of the principles of muscle/muscle group isolation, segmental stabilization resistance/pressure, and grading, to evaluate injuries incurred by athletes and others engaged in physical activity.
- 6 - Administers static and dynamic postural evaluation and screening procedures, including functional tests for postural deformities and muscle length assessment.
- 7 - Applies appropriate stress tests for ligamentous or capsular instability based on the principles of joint positioning, segmental stabilization, and force.
- 8 - Measures the grade of ligamentous laxity during a joint stress test and notes the quality and quantity of the end point.
- 9 - Applies appropriate and commonly used special tests to evaluate athletic injuries to various anatomical areas.
- 12 - Palpates bony and soft tissue structures to determine normal or pathological tissue(s).
- 13 - Performs and interprets appropriate palpation techniques and special tests of the abdomen, chest, cranium, and musculoskeletal system.
- 17 - Uses appropriate terminology in the communication and documentation of injuries and illnesses.

Affective Domain

- 1 - Appreciates the importance of a systematic assessment process in the management of injuries and illness.
- 2 - Appreciates the importance of documentation of assessment findings and results.
- 5 - Appreciates the practical importance of thoroughness in a clinical evaluation.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 4 - Interprets standard nomenclature of athletic injuries and illnesses.
- 5 - Recognizes appropriate written medical documentation and abbreviations.
- 16 - Recommends the appropriate use of aseptic or sterile techniques, approved sanitation methods, and universal precautions for the cleansing and dressing of wounds.
- 44 - Recognizes the proper technique for using ambulatory aids, including selecting an aid appropriate for the injury and person.
- 45 - Recommends ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles, and evaluates the patient's technique in using the aids.

Psychomotor Domain

- 19 - Demonstrates the proper techniques for using ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles.

PHARMACOLOGY

Cognitive Domain

- 4 - Identifies appropriate terminology and pharmaceutical abbreviations used in the prescription and dispensation of medications.

THERAPEUTIC MODALITIES

Psychomotor Domain

- 9 - Formulates progress notes and treatment outcomes that are relevant to the selection and application of therapeutic modalities.

THERAPEUTIC EXERCISE

Cognitive Domain

- 13 - Interprets physician notes, post-operative notes, and physician prescriptions as they pertain to a rehabilitation or reconditioning plan.
- 14 - Describes rehabilitation, functional, and reconditioning progress using follow-up notes, progress notes, SOAP notes, etc.
- 15 - Compares the effectiveness of taping, wrapping, bracing, and other supportive/protective methods for facilitation of safe progression to advanced therapeutic exercises and functional activities.

Psychomotor Domain

- 3 - Records rehabilitation or reconditioning progress (e.g., follow-up notes, progress notes).
- 4 - Demonstrates the appropriate application of contemporary therapeutic exercises including the following: a. isometric, isotonic, and isokinetic exercise, b. eccentric vs concentric exercise, c. open- vs closed-kinematic chain exercise, d. elastic, mechanical, and manual resistance exercise, e. joint mobilization exercise, f. plyometrics-dynamic reactive exercise, g. proprioceptive neuromuscular facilitation (PNF) for muscular strength/endurance, muscle stretching, and improved range of motion, h. exercises to improve neuromuscular coordination and proprioception, i. passive, active, and active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation and reconditioning, m. sport-specific activity, n. soft tissue mobilization

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Psychomotor Domain

- 5 - Recognizes and applies the appropriate treatments for diabetic coma and insulin shock.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Psychomotor Domain

- 2 - Communicates with appropriate health care professionals in a confidential manner.

Affective Domain

- 1 - Accepts the professional, ethical, and legal parameters that 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 between the physically active, athletic personnel, health care professionals, parents/guardians, and the public.
- 7 - Recognizes athletes and other physically individuals as deserving of quality professional health care.

HEALTH CARE ADMINISTRATION

Cognitive Domain

- 31 - Describes the necessary communication skills for interaction with physicians, allied health care providers, caretakers, and others who work closely with the certified athletic trainer.

Psychomotor Domain

- 5 - Uses appropriate medical documentation to record injuries and illnesses (client encounters, history, progress notes, discharge summary, physician letters, treatment encounters).

Affective Domain

- 8 - Recognizes and accepts the need for organizing and conducting health care programs for athletes and other physically active individuals on the basis of sound administrative policies and procedures.
- 9 - Accepts the responsibility for completing the necessary paperwork and maintaining the records associated with the administration of health care programs.

PROFESSIONAL DEVELOPMENT AND RESPONSIBILITIES

Cognitive Domain

- 13 - Distinguishes that issues and concerns regarding the health care of athletes and other involved in physical activity (e.g., public relations, third-party payment, and managed care).

Affective Domain

- 10 - Appreciates the dynamic nature of issues and concerns as they relate to the health care of athletes and others involved in physical activity.

Musculoskeletal Anatomy I

ASSESSMENT AND EVALUATION

Cognitive Domain

- 1 - Demonstrates knowledge of the normal anatomical structures of the human body systems and their physiological functions, including the musculoskeletal (including articulations), nervous (central and peripheral), cardiovascular, respiratory, digestive, urogenital, endocrine, dermatological, reproductive, and special sensory systems.
- 5 - Defines the 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), skeletal muscle contraction, and kinesthesia/proprioception.

Musculoskeletal Anatomy II

ASSESSMENT AND EVALUATION

Cognitive Domain

- 1 - Demonstrates knowledge of the normal anatomical structures of the human body systems and their physiological functions, including the musculoskeletal (including articulations), nervous (central and peripheral), cardiovascular, respiratory, digestive, urogenital, endocrine, dermatological, reproductive, and special sensory systems.
- 5 - Defines the 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), skeletal muscle contraction, and kinesthesia/proprioception.

Clinical Experience II

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

18 - Describes the basic principles regarding protective equipment, including standards for design, construction, maintenance, and reconditioning of protective sports equipment (e.g., football, hockey, and lacrosse pads and headgear).

Affective Domain

10 - Understands the values and benefits of correctly selecting and using prophylactic taping and wrapping or prophylactic padding.
11 - Appreciates and respects the importance of correct and appropriate fitting in the use of protective equipment.

ASSESSMENT AND EVALUATION

Cognitive Domain

26 - Uses the terminology necessary to communicate the results of an athletic training assessment to physicians and other health professionals.

Psychomotor Domain

16 - Performs an appropriate examination to evaluate the return to activity of an individual who has sustained a head injury.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

10 - Applies the current standards of first aid, emergency care, rescue breathing, and cardiopulmonary resuscitation for the professional rescuer, including (1) use of a bag-valve-mask, (2) use of a pocket mask, and (3) the chin lift-jaw thrust maneuver.
11 - Describes the role and function of an automated external defibrillator in the emergency management of acute heart failure and abnormal heart rhythms.
12 - Describes the role and function of oxygen administration as an adjunct to cardiopulmonary resuscitation techniques.
20 - Recognizes signs and symptoms of head trauma, including loss of consciousness, changes in standardized neurological, cranial nerve assessment, and other symptoms that indicate underlying trauma.
21 - Explains and interprets the signs and symptoms associated with increasing intracranial pressure.
22 - Explains the importance of monitoring a patient following a head injury, including obtaining clearance from a physician before further patient participation.
23 - Defines cerebral concussion and lists the signs and symptoms used to classify cerebral concussions according to accepted grading scales (e.g., Cantu, Colorado, Torg, American Neurology Association standards).
25 - Selects a cervical stabilization device that is appropriate to the circumstances of the injury.
26 - Recites the indications and guidelines for removing the helmet and shoulder pads from an athlete with a suspected cervical spine injury.
27 - Describes the proper techniques for removing the helmet and shoulder pads from an athlete with a suspected cervical spine injury.
28 - Describes the proper techniques and necessary supplies for removing equipment and clothing in order to evaluate and/or stabilize the involved area.
29 - Recognizes proper positioning and immobilization of a person with a suspected spinal cord injury when using a spine board or body splint, including preparatory positioning prior to placement of the spine board or body splint.
30 - Explains the need for leadership and teamwork when using a spine board or body splint.
31 - Identifies the appropriate short-distance transportation method for an injured athlete or other physically active individual, including immobilization if applicable.
32 - Recognizes the signs and symptoms of shock.
34 - Differentiates the signs and symptoms of diabetic coma and insulin shock.
35 - Describes the proper treatments of diabetic coma and insulin shock.
36 - Describes the appropriate treatment of a seizure.
39 - Recognizes the differences between infestations, insect bites, and other skin conditions.
43 - Describes the proper immobilization techniques and selects the appropriate splinting material to stabilize the injured joint or limb and maintain distal circulation.

Psychomotor Domain

1 - Acquires and maintains skills in first aid and emergency care.
2 - Acquires and maintains skill in rescue breathing and CPR, including two-person skills and the use of a bag-valve-mask and a pocket mask.
9 - Assesses a patient for possible closed-head trauma using standard neurological tests and tests for cranial nerve function.
10 - Demonstrates the proper technique for removing a face from a helmeted athlete in respiratory distress or arrest.
11 - Demonstrates the proper technique for removing the helmet, shoulder pads, and other protective equipment from an athlete with a possible cervical injury.
12 - Demonstrates the proper technique for removing the helmet, shoulder pads, and other protective equipment from an athlete with an injury to the trunk or extremities.
13 - Applies various cervical stabilization devices correctly, with the victim in various positions.
14 - Performs the correct technique for moving an injured person safely onto a spine board for stabilization and transportation purposes.
16 - Performs proper care and positioning of an individual suffering from shock.
17 - Applies various types of splints to different body parts, employing different constructions of splinting materials and allowing for distal pulse palpation.
18 - Performs short-distance transportation using proper positioning techniques, immobilization, and appropriate transportation methods.
20 - Fabricates, applies, adjusts, and removes commonly used immobilization devices.
21 - Fabricates, applies, adjusts, and removes special protective equipment (braces, special pads, modified taping procedures).

Affective Domain

7 - Realizes the importance of identifying signs and symptoms in cases of possible shock, internal bleeding, and closed-head trauma.
8 - Advocates the principles of proper splinting techniques to prevent further injury.
9 - Appreciates the construction of various splinting devices and the appropriate uses for each.
11 - Values the proper positioning and securing of a person with a suspected spinal injury onto a spine board or body splint, including preparatory positioning prior to placement of the spine board or body splint, as critical for prevention of further trauma.
12 - Appreciates the need for leadership and teamwork when using a spine board or body splint.
13 - Respects short-distance transportation techniques as a crucial means of moving an injured person.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Psychomotor Domain

2 - Manages acute asthma attacks and takes appropriate steps to reduce the frequency and severity of asthma attacks.
7 - Takes the appropriate steps to treat a seizure.
11 - Uses a penlight to examine pupil responsiveness, equality, and ocular motor function.

NUTRITIONAL ASPECTS

Psychomotor Domain

2 - Applies the principles of nutrition, including the roles of fluids and electrolytes, vitamins, minerals, and ergogenic aids, as they relate to the dietary and nutritional needs of athletes and others involved in physical activity.

HEALTH CARE ADMINISTRATION

Affective Domain

11 - Recognizes and accepts the importance of good public relations with the media (radio, TV, press), the general public, other medical and allied health care personnel, and legislators.

General Medical Aspects

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 1 - Identifies the physical and environmental risk factors associated with specific activities the physically active person may engage in.
- 2 - Appraises the risk factors associated with common congenital and acquired abnormalities, disabilities, and diseases.
- 16 - Identifies the precautions and risks associated with exercise in individuals who have systemic medical conditions.
- 17 - Describes the components of an educational program for self-identification of the warning signs of cancer, including self-examination of the breasts and testicles.

Psychomotor Domain

- 3 - Implements appropriate screening procedures to identify common acquired or congenital risk factors that would predispose athletes and others engaged in physical activity to certain types of injuries.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 6 - Analyzes the normal physiological responses of the human body to trauma and inactivity of specific body tissues (ligaments/capsules, muscles, tendons, and bones).
- 7 - Predicts the body's adaptation to exercise during and following illness and injury.
- 8 - Describes the aging process as it relates to athletes and others involved in physical activity.
- 12 - Defines tissue lesions by body system in terms of etiology, pathogenesis, pathomechanics, treatment options, and expected outcomes.
- 13 - Outlines the autoimmune and immunodeficiency responses and their associated diseases (e.g., lupus, HIV/AIDS).
- 14 - Analyzes the physiologic responses of diseases to physical activity and inactivity.
- 15 - Describes the pathology of diseases of the blood (e.g., anemia, iron deficiency, hemolysis that would impair strenuous physical activity).
- 16 - Recognizes the common warning signs and symptoms of cancer.
- 18 - Describes the signs and symptoms of deep and superficial vein thromboses, pulmonary embolism and other emboli, and myocardial infraction.

Affective Domain

- 1 - Appreciates that an understanding of pathology is essential to care for athletes and others involved in physical activity.
- 2 - Recognizes that physician consultation is a moral and ethical necessity in the diagnosis and treatment of pathologic conditions.
- 3 - Accepts the moral and ethical responsibility of maintaining current knowledge of the pathologic conditions of athletes and others involved in physical activity.
- 4 - Promotes accountability for moral and ethical decision-making in the treatment of pathologic conditions.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 9 - Demonstrates knowledge of a systematic process that uses the medical or nursing model to obtain a history of an injury or illness that includes, but is not limited to, the mechanism of injury, chief complaint, and previous relevant injuries or illnesses.
- 16 - Differentiates the use of diagnostic tests (x-rays, arthrograms, MRI, CAT scan, bone scan, ultrasound, myelogram) based on their applicability in the assessment of an injury or illness when prescribed by a physician.
- 24 - Demonstrates familiarity with the function of an ophthalmoscope in the examination of the eye.
- 25 - Demonstrates familiarity with the function of a stethoscope in the examination of the heart, lungs, and bowel.

Psychomotor Domain

- 10 - Demonstrates the proper use of the otoscope for ear and nasal examination, including the proper positioning of the patient and examiner and proper technique of use.
- 11 - Conducts auscultation of normal heart, breath, and bowel sounds, demonstrating proper position and location of stethoscope.

Affective Domain

- 7 - Values the skills and knowledge necessary to competently assess the injuries and illnesses of athletes and others involved in physical activity.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 8 - Interprets vital signs as normal or abnormal including, but not limited to, blood pressure, pulse, respiration, and body temperature.
 - 9 - Assesses pathological signs of injury including, but not limited to, skin temperature, skin color, skin moisture, pupil reaction, and neurovascular function.
 - 19 - Cites the signs, symptoms, and pathology of acute inflammation.
 - 34 - Differentiates the signs and symptoms of diabetic coma and insulin shock.
 - 35 - Describes the proper treatments of diabetic coma and insulin shock.
 - 36 - Describes the appropriate treatment of a seizure.
 - 38 - Describes the signs, symptoms, and causes of allergic, thermal, and chemical reactions of the skin.
 - 39 - Recognizes the differences between infestations, insect bites, and other skin conditions.
 - 40 - Recognizes the signs and symptoms of common infectious diseases, and takes appropriate steps to prevent disease transmission through appropriate medical referral (see General Medical Clinical Proficiencies, 61-64, for a list of common infectious diseases).
- {-X-REF}

Psychomotor Domain

- 3 - Performs a primary survey/assessment in appropriate situations.

Affective Domain

- 1 - Appreciates the medical-legal and ethical protocol governing the referral of injured and ill athletes and other individuals engaged in physical activity.
- 7 - Realizes the importance of identifying signs and symptoms in cases of possible shock, internal bleeding, and closed-head trauma.

PHARMACOLOGY

Affective Domain

- 2 - Recognizes the importance of pharmacological concepts in health care.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 1 - Describes congenital or acquired abnormalities, physical disabilities, and diseases.
- 2 - Identifies common illnesses and diseases of the body's systems based on contemporary epidemiological studies of the injuries of athletes and others involved in physical activity.
- 4 - Recognizes common eye pathologies (e.g., conjunctivitis, hyphema, corneal injury, and scleral trauma).
- 5 - Recognizes common ear pathologies (e.g., otitis, ruptured tympanic membrane, and impacted cerumen).
- 6 - Recognizes common pathologies of the mouth, sinus, oropharynx, and nasopharynx.
- 7 - Lists the common causes, signs, and symptoms of respiratory infections (e.g., pneumonia, bronchitis, sinusitis, URI, and asthma).
- 9 - Describes strategies for reducing the frequency and severity of asthma attacks.
- 10 - Compares and contrasts the signs and symptoms of respiratory tract conditions (e.g., common cold, influenza, allergic rhinitis, sinusitis, bronchitis, asthma, pneumonia, and pleurisy).
- 11 - Identifies the possible causes of sudden death syndrome among athletes and others involved in physical activity.
- 14 - Explains the typical history, signs, and symptoms associated with cardiopulmonary conditions.
- 15 - Describes common heart conditions, such as coronary artery disease, hypertrophic cardiomyopathy, heart murmurs, and mitral valve prolapse.
- 16 - Identifies the typical symptoms and clinical signs of an injury or illness, including those associated with local tissue inflammation (cellulitis) and systemic infection (lymphangitis, lymphadenitis, bacteremia).
- 17 - Describes the common conditions that affect the liver, gall bladder, and pancreas (e.g., jaundice, hepatitis, diabetes mellitus, and pancreatitis).
- 18 - Explains and recognizes the etiology, signs, symptoms, and management of diabetes mellitus.
- 19 - Describes the signs and symptoms of the common disorders of the gastrointestinal tract.
- 20 - Lists examples of the common conditions of the urinary tract, kidneys, and bladder (e.g., urinary tract infection (UTI) and kidney stones).
- 21 - Lists the common infections and conditions of the male reproductive organs (e.g., epididymitis, varicocele, hydrocele, undescended testicle, and testicular cancer).
- 22 - Lists the common infections and conditions of the female reproductive organs (e.g., pelvic inflammatory disease (PID), ectopic pregnancy, and pregnancy).
- 23 - Describes the common conditions of the breast (e.g., gynecomastia, cancer, and fibrous cysts).
- 24 - Describes the various menstrual irregularities, the relationship that physical activity plays in their development, their resolutions, and their implications on performance, as well as detrimental systemic effects (e.g., oligomenorrhea, amenorrhea, and dysmenorrhea).
- 26 - Describes the signs, symptoms, and management of common sexually transmitted diseases (STD).
- 27 - Recognizes skin lesions (e.g., wounds and thermal, electrical, and radiation injury), infections (e.g., bacterial, fungal, and viral), and disorders (e.g., bites, acne, dermatitis, folliculitis, and eczema); ;
- 28 - Identifies skin infections that are potentially contagious (e.g., impetigo, staph infection).
- 30 - Describes common conditions that affect muscles (e.g., myositis, rhabdomyolysis).
- 31 - Recognizes the main cerebral lesions caused by trauma (e.g., subdural, epidural hematoma, aneurysm).
- 32 - Describes the etiology, signs, symptoms, and management of convulsive disorders.
- 34 - Identifies the common signs and symptoms of contagious viral diseases.
- 35 - Lists the advantages and disadvantages of sports participation by individuals with hepatitis B virus or human immunodeficiency virus (HIV).
- 36 - Describes the etiology, signs, symptoms, and management of common viruses (e.g., human papillomavirus, Epstein-Barr virus, and hepatitis B virus).
- 37 - Describes where and how to seek appropriate medical assistance on disease control, notification, and epidemic prevention.

Psychomotor Domain

- 3 - Recognizes and refers individuals exhibiting a history, signs, and symptoms of cardiopulmonary conditions to the appropriate medical authority.
- 4 - Recognizes and manages the common disorders of the gastrointestinal tract.
- 6 - Acts quickly to contain skin infections that are potentially contagious, and refers the patient when appropriate.
- 7 - Takes the appropriate steps to treat a seizure.
- 8 - Recognizes and takes the appropriate steps to manage and control common contagious viral and infectious diseases.
- 9 - Uses an otoscope correctly to examine the ear and nasal passages.
- 13 - Uses the stethoscope correctly to auscultate the heart, lungs, and bowel.
- 14 - Assesses body temperature.
- 16 - Refers an individual who presents with complaints, signs, and/or symptoms of genitourinary or reproductive disorders to a physician.
- 17 - Demonstrates the proper use and interpretation of a peak-flow meter (hand-held spirometer) in the assessment of asthmatic athletes and other asthmatics involved in physical activity.

Affective Domain

- 2 - Recognizes the moral and ethical responsibility of taking situational control in the containment of common contagious viral and infectious diseases.
- 3 - Accepts the roles of medical and allied health personnel in the referral, management, and treatment of athletes and others involved in physical activity suffering from general medical conditions.

NUTRITIONAL ASPECTS

Cognitive Domain

- 7 - Describes the common illnesses and injuries that are attributed to poor nutrition.
- 9 - Delineates the effects of poor dietary habits on bone loss, injury, and long term health.

Affective Domain

- 3 - Appreciates the long-term effects of disordered eating, bone density loss, and secondary amenorrhea on the skeletal health of the physically active.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Psychomotor Domain

- 3 - Uses appropriate community-based resources for psychosocial intervention.

Advanced Athletic Injury Management: UE Lab

ASSESSMENT AND EVALUATION

Psychomotor Domain

- 2 - Visually identifies clinical signs associated with common injuries and illnesses, such as the integrity of the skin and mucous membranes, structural deformities, edema, and discoloration.
- 3 - Demonstrates active, passive, and resisted range-of-motion testing of the toes, foot, ankle, knee, hip, shoulder, elbow, wrist, hand, thumb, fingers, and spine.
- 4 - Measures active and passive joint range of motion with a goniometer.
- 5 - Performs appropriate manual muscle-testing techniques and/or break tests, including application of the principles of muscle/muscle group isolation, segmental stabilization resistance/pressure, and grading, to evaluate injuries incurred by athletes and others engaged in physical activity.
- 6 - Administers static and dynamic postural evaluation and screening procedures, including functional tests for postural deformities and muscle length assessment.
- 7 - Applies appropriate stress tests for ligamentous or capsular instability based on the principles of joint positioning, segmental stabilization, and force.
- 8 - Measures the grade of ligamentous laxity during a joint stress test and notes the quality and quantity of the end point.
- 9 - Applies appropriate and commonly used special tests to evaluate athletic injuries to various anatomical areas.
- 10 - Demonstrates the proper use of the otoscope for ear and nasal examination, including the proper positioning of the patient and examiner and proper technique of use.
- 11 - Conducts auscultation of normal heart, breath, and bowel sounds, demonstrating proper position and location of stethoscope.
- 12 - Palpates bony and soft tissue structures to determine normal or pathological tissue(s).
- 13 - Performs and interprets appropriate palpation techniques and special tests of the abdomen, chest, cranium, and musculoskeletal system.
- 14 - Assesses the neurological function of cranial nerves, spinal nerves, and peripheral nerves and assesses the level of spinal cord involvement following injury, including the function of dermatomes, myotomes, and reflexes (e.g., deep tendon, superficial).
- 15 - Performs appropriate examination of injuries to the trunk and upper and lower extremities prior to an individual's return to activity.
- 16 - Performs an appropriate examination to evaluate the return to activity of an individual who has sustained a head injury.

ACUTE CARE OF INJURIES AND ILLNESSES

Psychomotor Domain

- 4 - Performs a secondary survey/assessment, including obtaining a history, inspection/observation, palpation, and using special tests.
- 5 - Palpates a variety of anatomic locations to assess the pulse in resting (non-emergency) and trauma situations.
- 9 - Assesses a patient for possible closed-head trauma using standard neurological tests and tests for cranial nerve function.
- 10 - Demonstrates the proper technique for removing a face from a helmeted athlete in respiratory distress or arrest.
- 11 - Demonstrates the proper technique for removing the helmet, shoulder pads, and other protective equipment from an athlete with a possible cervical injury.
- 12 - Demonstrates the proper technique for removing the helmet, shoulder pads, and other protective equipment from an athlete with an injury to the trunk or extremities.
- 13 - Applies various cervical stabilization devices correctly, with the victim in various positions.
- 14 - Performs the correct technique for moving an injured person safely onto a spine board for stabilization and transportation purposes.
- 15 - Palpates for the rigidity, guarding, and rebound tenderness of the abdomen associated with internal injury or illness.
- 21 - Fabricates, applies, adjusts, and removes special protective equipment (braces, special pads, modified taping procedures).

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Psychomotor Domain

- 9 - Uses an otoscope correctly to examine the ear and nasal passages.
- 11 - Uses a penlight to examine pupil responsiveness, equality, and ocular motor function.
- 12 - Palpates the abdominal quadrants for tenderness and rigidity.
- 13 - Uses the stethoscope correctly to auscultate the heart, lungs, and bowel.
- 15 - Assesses vital signs.

Advanced Athletic Injury Management : Upper Extremity

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 21 - Describes the principles and concepts relating to prophylactic taping, wrapping, and bracing and protective pad fabrication.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 6 - Differentiates injury recognition, assessment, and diagnosis.
- 7 - Describes commonly accepted techniques and procedures for evaluation of the common injuries and illnesses that are incurred by athletes and others involved in physical activity. These techniques and procedures include the following:(a) taking a history, (b) inspection or observation,(c) palpation, (d) functional testing (range of motion, ligamentous or capsular stress, manual muscle, sensory, motor, reflex neurological), (e) special evaluation techniques (e.g., orthopedic tests, auscultation, percussion)
- 8 - Explains the relationship of injury assessment to the systematic observation of the person as a whole.
- 9 - Demonstrates knowledge of a systematic process that uses the medical or nursing model to obtain a history of an injury or illness that includes, but is not limited to, the mechanism of injury, chief complaint, and previous relevant injuries or illnesses.
- 10 - Explains how to take measurements of the neurological function of cranial nerves, spinal nerves, and peripheral nerves, and describes their relationships in a neurological examination.
- 11 - Describes the use of myotomes, dermatomes, and reflexes (deep tendon, superficial) including manual muscle-testing, range-of-motion testing, and distinguishes between primary, cortical, and discriminatory forms of sensation.
- 12 - Defines the measurement and grading of dermatomes, myotomes, and reflexes and their relationships in a neurological examination.
- 14 - Explains the role of special tests, testing joint play, and postural examination in injury assessment.
- 15 - Explains how to measure resistive range of motion (or strength) of major muscles using manual muscle testing or break tests.
- 16 - Differentiates the use of diagnostic tests (x-rays, arthrograms, MRI, CAT scan, bone scan, ultrasound, myelogram) based on their applicability in the assessment of an injury or illness when prescribed by a physician.
- 20 - Describes the etiological factors, signs, symptoms, and management procedures for injuries of the toes, foot, ankle, lower leg, knee, thigh, hip, pelvis, shoulder, upper arm, elbow, forearm, wrist, hand, thumb, fingers, spine, thorax, abdomen, head, and face.
- 21 - Explains how to identify and evaluate various postural deformities.
- 23 - Describes the signs and symptoms of injuries to the abdominal viscera.
- 24 - Demonstrates familiarity with the function of an ophthalmoscope in the examination of the eye.
- 25 - Demonstrates familiarity with the function of a stethoscope in the examination of the heart, lungs, and bowel.

Affective Domain

- 1 - Appreciates the importance of a systematic assessment process in the management of injuries and illness.
- 4 - Recognizes the initial clinical evaluation by the certified athletic trainer as an assessment and screening procedure, rather than as a diagnostic procedure.
- 5 - Appreciates the practical importance of thoroughness in a clinical evaluation.
- 7 - Values the skills and knowledge necessary to competently assess the injuries and illnesses of athletes and others involved in physical activity.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 6 - Describes the principles and rationale for a primary survey of the airway, breathing, and circulation.
- 7 - Differentiates the components of a secondary survey, including obtaining a history, inspection and observation, palpation, and the use of special tests to determine the type and severity of the injury or illness sustained.
- 9 - Assesses pathological signs of injury including, but not limited to, skin temperature, skin color, skin moisture, pupil reaction, and neurovascular function.
- 13 - Recognizes the characteristics of common life-threatening conditions that can occur either spontaneously or as the result of direct trauma to the throat, thorax and viscera, and identifies the management of these conditions.
- 15 - Recognizes signs and symptoms associated with internal hemorrhaging.
- 17 - Discriminates those wounds that require medical referral.
- 20 - Recognizes signs and symptoms of head trauma, including loss of consciousness, changes in standardized neurological, cranial nerve assessment, and other symptoms that indicate underlying trauma.
- 21 - Explains and interprets the signs and symptoms associated with increasing intracranial pressure.
- 22 - Explains the importance of monitoring a patient following a head injury, including obtaining clearance from a physician before further patient participation.
- 23 - Defines cerebral concussion and lists the signs and symptoms used to classify cerebral concussions according to accepted grading scales (e.g., Cantu, Colorado, Torg, American Neurology Association standards).
- 24 - Recognizes the signs and symptoms of trauma to the cervical, thoracic and lumbar spines, the spinal cord, and spinal nerve roots, including neurological signs, referred symptoms, and other symptoms that indicate underlying trauma.
- 25 - Selects a cervical stabilization device that is appropriate to the circumstances of the injury.
- 26 - Recites the indications and guidelines for removing the helmet and shoulder pads from an athlete with a suspected cervical spine injury.
- 27 - Describes the proper techniques for removing the helmet and shoulder pads from an athlete with a suspected cervical spine injury.
- 28 - Describes the proper techniques and necessary supplies for removing equipment and clothing in order to evaluate and/or stabilize the involved area.
- 29 - Recognizes proper positioning and immobilization of a person with a suspected spinal cord injury when using a spine board or body splint, including preparatory positioning prior to placement of the spine board or body splint.
- 30 - Explains the need for leadership and teamwork when using a spine board or body splint.
- 31 - Identifies the appropriate short-distance transportation method for an injured athlete or other physically active individual, including immobilization if applicable.
- 32 - Recognizes the signs and symptoms of shock.
- 33 - Identifies the different types of shock type (traumatic, hypovolemic, anaphylactic, septic) and the proper management of each.
- 42 - Uses the information obtained during the examination to determine when to refer an injury or illness for further or immediate medical attention (e.g., a life- or limb-threatening situation).
- 43 - Describes the proper immobilization techniques and selects the appropriate splinting material to stabilize the injured joint or limb and maintain distal circulation.

Affective Domain

- 1 - Appreciates the medical-legal and ethical protocol governing the referral of injured and ill athletes and other individuals engaged in physical activity.
- 7 - Realizes the importance of identifying signs and symptoms in cases of possible shock, internal bleeding, and closed-head trauma.
- 8 - Advocates the principles of proper splinting techniques to prevent further injury.
- 9 - Appreciates the construction of various splinting devices and the appropriate uses for each.

- 11 - Values the proper positioning and securing of a person with a suspected spinal injury onto a spine board or body splint, including preparatory positioning prior to placement of the spine board or body splint, as critical for prevention of further trauma.
- 12 - Appreciates the need for leadership and teamwork when using a spine board or body splint.
- 13 - Respects short-distance transportation techniques as a crucial means of moving an injured person.
- 14 - Supports the application of cryotherapy, elevation, and compression as primary care for a non-threatening injury.

PHARMACOLOGY

Affective Domain

- 1 - Recognizes that pharmacology applies to the immediate and ongoing care of injury and illness.

THERAPEUTIC EXERCISE

Cognitive Domain

- 4 - Describes common surgical techniques, pathology, and any subsequent anatomical alterations that may affect the implementation of a rehabilitation or reconditioning exercise program.

Psychomotor Domain

- 6 - Performs a functional assessment for safe return to physical activity.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 1 - Describes congenital or acquired abnormalities, physical disabilities, and diseases.
- 4 - Recognizes common eye pathologies (e.g., conjunctivitis, hyphema, corneal injury, and scleral trauma).
- 5 - Recognizes common ear pathologies (e.g., otitis, ruptured tympanic membrane, and impacted cerumen).
- 16 - Identifies the typical symptoms and clinical signs of an injury or illness, including those associated with local tissue inflammation (cellulitis) and systemic infection (lymphangitis, lymphadenitis, bacteremia).
- 29 - Recognizes conditions that affect bones and joints (e.g., epiphysitis, apophysitis, aseptic necrosis, arthritis, gout, and felon).
- 31 - Recognizes the main cerebral lesions caused by trauma (e.g., subdural, epidural hematoma,aneurysm).
- 33 - Recognizes postconcussional syndrome.

Therapeutic Modalities

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 19 - Identifies the implications of various underlying pathologies and uses this knowledge to select appropriate therapeutic modalities and therapeutic exercise protocols.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 18 - Explains the application principles of cold application, elevation, and compression in treatment of acute non-limb-threatening pathologies.
- 38 - Describes the signs, symptoms, and causes of allergic, thermal, and chemical reactions of the skin.
- 46 - Constructs and educates the patient regarding home care and self-treatment plans.

Affective Domain

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

PHARMACOLOGY

Affective Domain

- 8 - Advocates moral and ethical behavior of self and colleagues in dealing with issues of a pharmacological nature.
- 9 - Promotes accountability for moral and ethical decision-making in pharmacological issues.

THERAPEUTIC MODALITIES

Cognitive Domain

- 1 - Determines the appropriate modality according to the treatment goals and objectives as they relate to wound healing and tissue repair.
- 2 - Describes methods of evaluating and recording progress of therapeutic modality treatments.
- 3 - Illustrates the use volumetric and anthropometric measurements to determine the effectiveness of treatment outcomes.
- 4 - Identifies the body's physiological responses during and following the application of therapeutic modalities.
- 5 - Describes the role and function of the common prescription and nonprescription pharmacological agents that are used in conjunction with therapeutic modalities (e.g., topical ointments, phonophoresis, iontophoresis).
- 6 - Explains the principles of physics, including basic concepts associated with the electromagnetic and acoustic spectra (e.g., frequency, wavelength).
- 7 - Interprets terminology, principles, and basic concepts of electrical units (e.g., amperes, volts, watts, ohms).
- 8 - Compares and contrasts contemporary pain-control theories.
- 9 - Assesses the selection and use of therapeutic modalities for the control of acute and chronic pain.
- 10 - Describes the electrophysics, biophysics, set-up, indications, contraindications, and specific physiological effects associated with stimulating electrical currents.
- 11 - Describes the electrophysics, biophysics, set-up, indications, contraindications, and specific physiological effects associated with short-wave diathermy.
- 12 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with the application of superficial heat and cold.
- 13 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with therapeutic ultrasound.
- 14 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with the application of intermittent compression units.
- 15 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with cervical and lumbar traction devices.
- 16 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with therapeutic LASER.
- 17 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with the application of electromyogram (EMG) and biofeedback devices.
- 18 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with therapeutic soft-tissue massage.
- 19 - Illustrates the typical physiological and psychological responses to trauma as they relate to the use of therapeutic modalities.
- 20 - Interprets local, state, and federal standards for the operation and safety standards of therapeutic modalities.
- 21 - Describes the manufacturer's protocol for use to ensure safe and proper application.
- 22 - Applies manufacturer's guidelines for the inspection and maintenance of therapeutic modalities.

Affective Domain

- 1 - Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the use of therapeutic agents to treat, rehabilitate, and recondition athletes and others involved in physical activity.
- 2 - Respects the role of attending physicians and other medical and allied health personnel in the use of therapeutic agents to treat, rehabilitate, and recondition athletes and others involved in physical activity.
- 3 - Advocates the accepted medical protocol regarding the confidentiality of medical information relative to therapeutic modality treatments.
- 4 - Initiates accepted medical protocol regarding therapeutic prescriptions.
- 5 - Promotes the accepted medical protocol regarding health care referral in the rehabilitation and reconditioning process.

THERAPEUTIC EXERCISE

Affective Domain

- 3 - Respects the proper role of attending physicians and other medical and paramedical personnel in the treatment and rehabilitation or reconditioning of athletes and others involved in physical activity.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 27 - Recognizes skin lesions (e.g., wounds and thermal, electrical, and radiation injury), infections (e.g., bacterial, fungal, and viral), and disorders (e.g., bites, acne, dermatitis, folliculitis, and eczema); ;

Therapeutic Modalities Lab

ACUTE CARE OF INJURIES AND ILLNESSES

Psychomotor Domain

- 8 - Administers cryotherapy, elevation, and compression to a limb and/or joint.

THERAPEUTIC MODALITIES

Psychomotor Domain

- 1 - Utilizes assessment skills to determine a patient's specific therapeutic modality indications, contraindications, and precautions.
- 2 - Measures limb edema and effusion using volumetric tank and anthropometric measurements.
- 3 - Takes into account patient-specific indications, contraindications, and precautions when applying a specific therapeutic modality (e.g., age, underlying pathology, disease processes).
- 4 - Performs appropriate patient preparation and positioning for therapeutic modality application.
- 5 - Performs the appropriate set-up for therapeutic modalities.
- 6 - Selects and applies appropriate therapeutic modality parameters (e.g., intensity, length of time, duration, frequency), and modifies them as required.
- 7 - Operates and applies contemporary therapeutic modalities (electrical stimulating currents, thermotherapy, cryotherapy, diathermy, ultrasound, intermittent compression, cervical and lumbar traction, laser, EMG and biofeedback, soft tissue massage, and other contemporary therapeutic modalities) according to established guidelines.
- 8 - Evaluates patient response to therapeutic modalities during and following the application of therapeutic modalities.
- 9 - Formulates progress notes and treatment outcomes that are relevant to the selection and application of therapeutic modalities.
- 10 - Inspects the therapeutic modalities and treatment area for potential safety hazards.

Therapeutic Exercise & Rehabilitation I Lab

RISK MANAGEMENT AND INJURY PREVENTION

Psychomotor Domain

- 7 - Able to operate contemporary isometric, isotonic, and isokinetic strength testing devices.
- 10 - Provides supervision and instruction to an individual in the use of commercial weight training equipment.
- 12 - Constructs and applies functional splints.

ACUTE CARE OF INJURIES AND ILLNESSES

Psychomotor Domain

- 19 - Demonstrates the proper techniques for using ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles.
- 20 - Fabricates, applies, adjusts, and removes commonly used immobilization devices.

THERAPEUTIC MODALITIES

Psychomotor Domain

- 2 - Measures limb edema and effusion using volumetric tank and anthropometric measurements.

THERAPEUTIC EXERCISE

Psychomotor Domain

- 1 - Demonstrates appropriate methods of evaluating rehabilitation and reconditioning progress and interpreting results.
- 2 - Measures the physical effects of injury using contemporary methods (isokinetic devices, goniometers, dynamometers, manual muscle testing, calipers, functional testing) and uses this data as a basis for developing individualized rehabilitation or reconditioning programs.
- 3 - Records rehabilitation or reconditioning progress (e.g., follow-up notes, progress notes).
- 4 - Demonstrates the appropriate application of contemporary therapeutic exercises including the following: a. isometric, isotonic, and isokinetic exercise, b. eccentric vs concentric exercise, c. open- vs closed-kinematic chain exercise, d. elastic, mechanical, and manual resistance exercise, e. joint mobilization exercise, f. plyometrics-dynamic reactive exercise, g. proprioceptive neuromuscular facilitation (PNF) for muscular strength/endurance, muscle stretching, and improved range of motion, h. exercises to improve neuromuscular coordination and proprioception, i. passive, active, and active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation and reconditioning, m. sport-specific activity, n. soft tissue mobilization
- 5 - Demonstrates the proper techniques for the performance of commonly prescribed rehabilitation and reconditioning exercises.
- 6 - Performs a functional assessment for safe return to physical activity.
- 7 - Inspects therapeutic exercise equipment to ensure safe operating condition.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Psychomotor Domain

- 4 - Uses motivational techniques with athletes and others involved in physical activity.

Therapeutic Exercise & Rehabilitation I

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 23 - Relates the principles and concepts involved in the fabrication and appropriate application of dynamic and static splints.
- 24 - Describes the basic principles and concepts of orthotic fabrication. This includes, but is not limited to, evaluating the need for orthotics, selecting the appropriate manufacturing material, manufacturing the orthosis, and fitting the orthosis.
- 25 - Identifies the basic principles and concepts of home, school, and work place ergonomics and their relationship to the prevention of illness and injury.

Affective Domain

- 12 - Appreciates and respects the principles and concepts of home, school, and work place ergonomics.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 6 - Analyzes the normal physiological responses of the human body to trauma and inactivity of specific body tissues (ligaments/capsules, muscles, tendons, and bones).
- 7 - Predicts the body's adaptation to exercise during and following illness and injury.
- 9 - Describes the integration and coordination of cell function in response to injury (e.g., sources of cell injury, inflammation, healing, and repair).
- 11 - Defines the inflammatory response to acute and chronic injury and illness.
- 17 - Describes the healing process of bone.
- 19 - Identifies the implications of various underlying pathologies and uses this knowledge to select appropriate therapeutic modalities and therapeutic exercise protocols.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 44 - Recognizes the proper technique for using ambulatory aids, including selecting an aid appropriate for the injury and person.
- 45 - Recommends ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles, and evaluates the patient's technique in using the aids.
- 46 - Constructs and educates the patient regarding home care and self-treatment plans.

Affective Domain

- 8 - Advocates the principles of proper splinting techniques to prevent further injury.
- 9 - Appreciates the construction of various splinting devices and the appropriate uses for each.
- 16 - Empathizes with individuals facing the daily challenges of using ambulatory aids.

THERAPEUTIC MODALITIES

Cognitive Domain

- 3 - Illustrates the use volumetric and anthropometric measurements to determine the effectiveness of treatment outcomes.

Affective Domain

- 2 - Respects the role of attending physicians and other medical and allied health personnel in the use of therapeutic agents to treat, rehabilitate, and recondition athletes and others involved in physical activity.
- 4 - Initiates accepted medical protocol regarding therapeutic prescriptions.
- 5 - Promotes the accepted medical protocol regarding health care referral in the rehabilitation and reconditioning process.

THERAPEUTIC EXERCISE

Cognitive Domain

- 1 - Predicts the physiological process of wound healing and tissue repair and its implications (limitations, contraindications) on the development and progression of an appropriate rehabilitation or reconditioning program.
- 2 - Describes and interprets appropriate measurement and functional testing procedures as they relate to therapeutic exercise (e.g., use of isokinetic devices, goniometers and dynamometers, postural stability test, hop tests, specific function tests).
- 3 - Uses objective measurement results (muscular strength/endurance, range of motion) as a basis for developing individualized rehabilitation or reconditioning programs.
- 4 - Describes common surgical techniques, pathology, and any subsequent anatomical alterations that may affect the implementation of a rehabilitation or reconditioning exercise program.
- 5 - Interprets the results of injury assessment and determines an appropriate rehabilitation or reconditioning plan to return the patient to physical activity.
- 6 - Defines the basic components of activity-specific functional progressions in a therapeutic exercise program.
- 7 - Describes the mechanical principles applied to the design and use of rehabilitation or reconditioning exercise equipment (leverage, force).
- 8 - Recommends the appropriate therapeutic exercise plan and determines appropriate therapeutic goals and objectives based on the initial assessment, frequent reassessments, and appropriate goal setting.
- 9 - Describes the appropriate selection and application of therapy taking into consideration: 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 primary and reconstructive surgery, d. the physiological adaptations induced by the various forms of therapeutic exercise, such as fast- versus slow-twitch muscle fibers, e. the physiological responses of additional factors, such as age and disease.
- 10 - Describes the indications, contraindications, theory, and principles for the incorporation and application of various contemporary therapeutic exercises, including: a. isometric, isotonic, & isokinetic exercise, b. eccentric vs concentric exercise, c. open-vs closed-chain exercise, d. elastic, mechanical, & manual resistance exercise, e. joint mobility exercise, f. plyometrics-dynamic reactive exercise, g. PNF for muscular strength/endurance, stretching, and improved ROM, h. exercises to improve neuromuscular coordination & proprioception, i. passive, active, & active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation and reconditioning, m. sport-specific activity, n. soft tissue mobilization
- 11 - Revises goals and objectives, and develops criteria for progression and return to activity, based on the level of functional outcomes.
- 12 - Describes appropriate methods of assessing rehabilitation and reconditioning progress and interprets the results.
- 13 - Interprets physician notes, post-operative notes, and physician prescriptions as they pertain to a rehabilitation or reconditioning plan.
- 14 - Describes rehabilitation, functional, and reconditioning progress using follow-up notes, progress notes, SOAP notes, etc.
- 15 - Compares the effectiveness of taping, wrapping, bracing, and other supportive/protective methods for facilitation of safe progression to advanced therapeutic exercises and functional activities.

16 - Applies manufacturer's guidelines for the inspection and maintenance of therapeutic exercise equipment.

Affective Domain

1 - Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the treatment, rehabilitation, or reconditioning of athletes and others involved in physical activity.

2 - Accepts the moral and ethical obligation to provide rehabilitation or reconditioning to athletes and others involved in physical activity to the fullest extent possible.

4 - Respects accepted medical and paramedical protocols regarding the confidentiality of medical information, medical and therapeutic prescriptions, and health care referral as they relate to the rehabilitation or reconditioning process.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Affective Domain

1 - Supports the moral and ethical behavior of athletic trainers in issues dealing with diseases of athletics and physical activity.

NUTRITIONAL ASPECTS

Cognitive Domain

5 - Identifies the nutritional considerations in rehabilitation, including nutrients involved in healing and nutritional risk factors.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

2 - Compares the psychosocial requirements of various sports activities to the readiness of the injured or ill individual to resume physical participation.

3 - Understands the psychological and emotional responses (motivation, anxiety, apprehension) to trauma and forced physical inactivity as they relate to the rehabilitation and reconditioning process.

22 - Identifies the stress-response model and how it may parallel an injury.

25 - Describes the motivational techniques that the certified athletic trainer must use during injury rehabilitation and reconditioning.

Affective Domain

9 - Respects the various social and cultural attitudes, beliefs, and values regarding health care practices when caring for patients.

10 - Accepts the role of social support during the injury rehabilitation process.

Organization & Administration for Health Care Professionals

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 5 - Identifies areas that athletic personnel or supervisors must be familiar with in order to avoid or reduce the possibility of injury or illness occurring to athletes and others engaged in physical activity (e.g., CPR and first aid).
- 19 - Identifies basic legal concepts and considerations associated with protective equipment, including product and personal liability.

Affective Domain

- 1 - Accepts the moral, professional, and legal responsibilities to conduct safe programs to minimize injury and illness risk factors for individuals involved in physical activity.
- 2 - Acknowledges the importance of developing and implementing a thorough, comprehensive injury and illness prevention program.
- 3 - Understands the need for cooperation among administrators, athletic personnel, certified athletic trainers, parents/guardians, other health care professionals, and athletes and others engaged in physical activity in the implementation of effective injury and illness prevention programs.
- 4 - Appreciates and respects the role of athletic personnel and supervisors in injury and illness prevention programs.
- 5 - Accepts moral, professional, and legal responsibility of conducting appropriate pre-participation examinations.
- 8 - Values the importance of collecting data on temperature, humidity, and other environmental conditions that can affect the human body when exercising in adverse weather conditions.

PATHOLOGY OF INJURIES AND ILLNESSES

Affective Domain

- 2 - Recognizes that physician consultation is a moral and ethical necessity in the diagnosis and treatment of pathologic conditions.
- 3 - Accepts the moral and ethical responsibility of maintaining current knowledge of the pathologic conditions of athletes and others involved in physical activity.
- 4 - Promotes accountability for moral and ethical decision-making in the treatment of pathologic conditions.

ASSESSMENT AND EVALUATION

Affective Domain

- 2 - Appreciates the importance of documentation of assessment findings and results.
- 6 - Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the evaluation and appropriate medical referral of injuries and illnesses of athletes and others involved in physical activity.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 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, contents, purposes, and maintenance of contemporary first aid and emergency care equipment.
- 3 - Determines what emergency care supplies and equipment are necessary for event coverage, such as biohazardous waste disposal containers, splints, short-distance transportation equipment, emergency access tools, primary survey instruments (CPR mask, bag-valve-mask), and ice.

Affective Domain

- 1 - Appreciates the medical-legal and ethical protocol governing the referral of injured and ill athletes and other individuals engaged in physical activity.
- 2 - Appreciates the legal, moral, and ethical parameters that define the scope of first aid and emergency care, and values the proper role of the certified athletic trainer in providing this care.
- 3 - Appreciates the roles and responsibilities of various community-based emergency care personnel (paramedics, emergency medical technicians, emergency room personnel).
- 4 - Appreciates the role and function of various medical/paramedical specialties, and values their respective areas of expertise in the definitive treatment of acute injuries and illnesses.
- 5 - Values the importance of certification in first aid and emergency care and cardiopulmonary resuscitation.
- 6 - Appreciates the systematic approach to acute injury or illness of the secondary survey components of obtaining a history, inspection/observation, palpation, and using special tests.
- 10 - Appreciates state laws, rules, and regulations governing the application of immobilization devices
- 15 - Accepts the approved aseptic and sterile methods for cleaning, treating, and bandaging wounds and for disposing of biohazardous waste.

PHARMACOLOGY

Cognitive Domain

- 2 - Recalls and can access the laws, regulations, and procedures that govern storage, transportation, dispensation, and recording prescription and nonprescription medications (Controlled Substance Act, scheduled drug classification, and state statutes).

Psychomotor Domain

- 2 - Follows federal, state, and local regulations regarding storing, transporting, dispensing, and recording medications.
- 3 - Documents tracking of medications by name, manufacturer, amount, dosage, lot number, and expiration date.
- 4 - Replicates procedures for storage and inventory of medications.
- 5 - Reviews and adheres to a policies-and-procedures manual as it relates to medications.

Affective Domain

- 3 - Accepts physician (or other qualified health care provider) and pharmacist consultation as a legal, moral, and ethical necessity in the prescription and dispensation of medication.
- 5 - Accepts the laws and regulations that govern the storage, transportation, and dispensation of all drugs.
- 6 - Supports the moral and ethical behavior of athletic trainers in dealing with the issues of drug use and abuse in sports.
- 7 - Accepts moral and ethical responsibility for maintaining current knowledge of the medications commonly prescribed to athletes and others involved in physical activity.
- 8 - Advocates moral and ethical behavior of self and colleagues in dealing with issues of a pharmacological nature.
- 9 - Promotes accountability for moral and ethical decision-making in pharmacological issues.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 37 - Describes where and how to seek appropriate medical assistance on disease control, notification, and epidemic prevention.

Affective Domain

- 2 - Recognizes the moral and ethical responsibility of taking situational control in the containment of common contagious viral and infectious diseases.
- 3 - Accepts the roles of medical and allied health personnel in the referral, management, and treatment of athletes and others involved in physical activity suffering from general medical conditions.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

- 5 - Provides health care information to patients, parents/guardians, athletic personnel, and others regarding the psychological and emotional well being of athletes and others involved in physical activity.
- 7 - Describes the accepted protocols that govern the referral of athletes and other physically active individuals to psychological, community health, or social services.
- 8 - Describes the theories and techniques of interpersonal and cross-cultural communication among certified athletic trainers, athletes, athletic personnel, patients, administrators, health care professionals, parents/guardians, and others.
- 10 - Describes the various strategies that certified athletic trainers may employ to avoid and resolve conflicts among superiors, peers, and subordinates.
- 19 - Identifies contemporary personal, school, and community health service agencies, such as community-based psychological and social support services.
- 20 - Formulates a plan for appropriate psychological intervention and referral with all involved parties when confronted with a catastrophic event.

Psychomotor Domain

- 2 - Communicates with appropriate health care professionals in a confidential manner.

Affective Domain

- 1 - Accepts the professional, ethical, and legal parameters that 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 between the physically active, athletic personnel, health care professionals, parents/guardians, and the public.
- 4 - Accepts the need for appropriate interpersonal relationships between all of the parties involved with athletes and other involved in physical activity.
- 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 - Recognizes athletes and other physically individuals as deserving of quality professional health care.
- 8 - Accepts the individual's physical complaint(s) without personal bias or prejudice.
- 9 - Respects the various social and cultural attitudes, beliefs, and values regarding health care practices when caring for patients.

HEALTH CARE ADMINISTRATION

Cognitive Domain

- 1 - Describes the organization and administration of pre-participation examination and screening including, but not limited to, maintaining medical records, developing record keeping forms, scheduling personnel, and site utilization.
- 2 - Lists the components of a medical record, such as permission to treat, emergency information, treatment documentation, and release of medical information.
- 3 - Identifies the advantages and disadvantages associated medical record keeping, including the issues of paperwork, electronic data, security, record keeping systems, and confidentiality.
- 4 - Lists the current injury/illness surveillance and reporting systems such as, but not limited to, National Electronic Injury Surveillance System (NEISS), National Athletic Head and Neck Injury Registry, and the National Collegiate Athletic Association (NCAA).
- 5 - Lists the various methods for recording patient information, and compares the strengths and weaknesses of each approach.
- 6 - Identifies common human-resource policy and federal legislation regarding employment regarding, but not limited to, The Americans with Disabilities Act, Wage and Hour, Family Medical Leave Act, Family Educational Rights Privacy Act, Fair Labor Standards Act, Sexual Harassment, and the Equal Opportunity Employment Commission.
- 7 - Describes the universal precautions mandated by the Occupational Safety and Health Administration (OSHA), and discusses how they apply to the athletic trainer.
- 8 - Summarizes the function of accrediting agencies for health care facilities.
- 9 - Identifies the process of obtaining state regulatory acts for athletic trainers, and becomes familiar with locally relevant statutes, rules, and regulations.
- 10 - Explains the advantages and disadvantages of the various commercial software programs and technologies used by a certified athletic trainer (statistical, educational, injury record keeping).
- 11 - Explains the computer needs of an effectively operated athletic training facility.
- 12 - Describes the various types of insurance policies (health maintenance organization [HMO], personal provider organization [PPO], fee-for-service) and the procedures for filing health care insurance claims.
- 13 - Identifies the common insurance benefits and exclusions identified within health care insurance policies.
- 14 - Uses accepted medical terminology and abbreviations (SOAP, CPT and HCFA coding).
- 15 - Explains the components of the budgeting process, including purchasing, requisition, and bidding.
- 16 - Illustrates the basic architectural considerations that relate to the design of a safe and efficient clinical practice setting.
- 17 - Describes the duties of personnel management, including (1) recruitment and selection of employees, (2) retention of employees, (3) development of policies-and-procedures manual, and (4) employment performance evaluation.
- 18 - Lists the components of a strategic plan that uses a model that helps in the development of a vision and mission statement and in the analysis of strengths, weaknesses, opportunities, and threats (SWOT).
- 19 - Identifies the principles of recruiting, selecting, and employing physicians and other medical and allied health care personnel in the deployment of athletic health care services.
- 20 - Interprets the role and function of nondiscriminatory and unbiased employment practices, which do not base decisions on race, gender, sexual orientation, disability, religion, national origin, or age.
- 21 - Describes typical community-based emergency health care delivery plans, including communication and transportation systems.
- 22 - Recognizes and appraises emergency action plans, which include on-site care, notification of emergency medical services (EMS), location of exits, and other relevant information, for the care of acutely injured or ill individuals.
- 23 - Identifies the typical availability, capabilities, and policies of community-based emergency care facilities and community-based managed care systems.
- 24 - Interprets the typical administrative policies and procedures that govern first aid and emergency care, such as those pertaining to parents/guardians, informed consent, media relations, incident reports, and appropriate record keeping.

- 25 - Identifies the basic components of a comprehensive athletic injury emergency care plan, which include (1) personnel training, (2) equipment needs, (3) availability of emergency care facilities, (4) communication, (5) transportation, (6) activity or event coverage, and (7) record keeping.
- 26 - Assembles an emergency action plan for all settings that includes on-site care, notification of EMS or appropriate personnel, and location of exit and evacuation routes.
- 27 - Selects sideline emergency care supplies and equipment that are necessary and appropriate for the setting.
- 28 - Summarizes basic legal concepts, such as, but not limited to, standard of care, scope of practice, liability, negligence, informed consent, and confidentiality, as they apply to a medical or allied health care practitioner's performance of his or her responsibilities.
- 29 - Describes federal and state infection control regulations and guidelines as they pertain to the prevention, exposure, and control of infectious disease.
- 30 - Lists the components of a comprehensive risk management plan that addresses the issues of security, fire, electrical and equipment safety, emergency preparedness, and hazardous chemicals.
- 31 - Describes the necessary communication skills for interaction with physicians, allied health care providers, caretakers, and others who work closely with the certified athletic trainer.
- 32 - Formulates a plan to promote the profession of athletic training and those services that certified athletic trainers perform in a variety of employment settings, such as high schools and colleges, professional and industrial settings, and community-based health care facilities.
- 33 - Differentiates the roles and responsibilities of the certified athletic trainer and other medical and allied health personnel to provide care to athletes and others involved in physical activity.
- 34 - Identifies contemporary personal and community health issues and the commonly available school health services, community health agencies, and community-based psychological and social support services.
- 35 - Describes the role and function of various community-based medical, paramedical, and other health care providers.
- 36 - Describes the roles of various personnel in the organization of activity sessions and methods of instruction for athletes and others involved in physical activity.
- 37 - Explains the protocol that governs the referral of patients to medical or paramedical specialists and other health care providers.
- 38 - Describes the basic components of organizing and coordinating a drug testing and screening program.
- 40 - Describes the continuing education process for certified athletic trainers as outlined by the NATABOC and the relationship between continuing education and state athletic training practice acts.
- 41 - Identifies the current developments, missions, objectives, and professional activities of other allied health and medical organizations and professions.
- 42 - Understands the NATA Code of Professional Practice and the NATABOC Standards of Professional Practice.
- 43 - Understands how to locate Commission on the Accreditation of Allied Health Education Programs (CAAHEP) accreditation standards and recognizes their impact on the educational system.
- 44 - Describes the relationship between the National Athletic Trainers' Association, Inc. (NATA), NATA Board of Certification, Inc./National Organization for Competency Assurance (NATABOC/NOCA), National Commission for Certifying Agencies (NCCA), and Joint Review Committee-Athletic Training/Commission on the Accreditation of Allied Health Education Programs (JRC-AT/CAAHEP).
- 45 - Identifies the roles and responsibilities of allied health care personnel in providing services to athletes and others involved in physical activity.
- 46 - Constructs a basic research design and statistical interpretation pertaining to the formulation and interpretation of a case study, outcome measurement, and literature review and interpretation.

Psychomotor Domain

- 2 - Develops a risk management plan that addresses issues of liability reduction, security, fire, facility hazards, electrical and equipment safety, emergency preparedness, and hazardous chemicals (manufacturer safety data sheets [MSDS]).
- 3 - Develops a policies-and-procedures manual for a health care facility that meets the guidelines set forth by the accrediting agencies.
- 4 - Demonstrates the ability to access medical and health care information through electronic media.
- 6 - Demonstrates the ability to organize a comprehensive patient-file management system that uses both paper and electronic media.
- 7 - Develops an operational and capital budget based on a supply inventory and needs assessment.
- 8 - Demonstrates the ability to prepare a sample design for scientific research in the areas of a case study, outcome measurement, and literature review.

Affective Domain

- 1 - Appreciates the roles and responsibilities of medical and allied health care providers, and respects the systems that each provider works within.
- 2 - Appreciates the roles and functions of various medical and paramedical specialties as well as their respective areas of expertise in the acute care of injuries and illnesses to athletes and others involved in physical activity.
- 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 that is tailored for a specific venue or setting.
- 5 - Accepts the value of a common medical language and terminology 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 - Appreciates the roles and relationship between the NATA, NATABOC/NOCA, NCCA, and JRC-AT/CAAHEP.
- 8 - Recognizes and accepts the need for organizing and conducting health care programs for athletes and other physically active individuals on the basis of sound administrative policies and procedures.
- 9 - Accepts the responsibility for completing the necessary paperwork and maintaining the records associated with the administration of health care programs.
- 10 - Respects the roles and cooperation of medical personnel, administrators, and other staff members in the organization and administration of athletic training service programs.
- 11 - Recognizes and accepts the importance of good public relations with the media (radio, TV, press), the general public, other medical and allied health care personnel, and legislators.
- 12 - Recognizes the certified athletic trainer's role as a liaison between athletes, physically active individuals, caretakers, employers, physicians, coaches, other health care professionals, and any individual who may be involved with the care provided by the certified athletic trainer.

PROFESSIONAL DEVELOPMENT AND RESPONSIBILITIES

Cognitive Domain

- 1 - Compares and contrasts the role and function of state athletic training practice acts and registration, licensure, and certification agencies.
- 2 - Explains the basic legislative processes for the implementation of practice acts for athletic trainers.
- 3 - Defines the rationale for state regulations that govern the practice of athletic training.
- 4 - Describes the consequences of violating federal and state regulatory acts.
- 5 - Outlines the process of attaining and maintaining an athletic training professional credential.
- 6 - Describes the current professional development requirements for the continuing education of certified athletic trainers.
- 7 - Locates available, approved continuing education opportunities for certified athletic trainers.

- 8 - Describes the role and function of the governing structures of the National Athletic Trainers' Association.
- 9 - Differentiates the essential documents of the NATA, including, but not limited to, the Role Delineation Study, the Code of Ethics, JRC-AT Standards and Guidelines, Athletic Training Educational Competencies, and the Standards of Practice of the Profession.
- 10 - Summarizes the position statements regarding the practice of athletic training (NATA, NCAA, National Association of Intercollegiate Athletics [NAIA], National Federation of State High School Associations, American College of Sports Medicine [ACSM], American Academy of Pediatrics [AAP], American Academy of Family Physicians [AAFP], American Orthopedic Society for Sports Medicine [AOSSM]).
- 11 - Locates and accesses the current activities and requirements for the professional preparation of the certified athletic trainer (NATA Education Council, JRC-AT, CAAHEP, NATABOC).
- 12 - Able to access the professional objectives, scope of practice, and services of other health care providers.
- 13 - Distinguishes that issues and concerns regarding the health care of athletes and other involved in physical activity (e.g., public relations, third-party payment, and managed care).
- 14 - Properly interprets the role of the certified athletic trainer as a health care provider, and provides information regarding the role of the certified athletic trainer to athletes, the physically active, parents/guardians, athletic department personnel, and others.
- 15 - Describes the availability of educational materials and programs in health-related subject matter areas (audiovisual aids, pamphlets, newsletters, computers, software, workshops, and seminars).
- 16 - States the 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.

Psychomotor Domain

- 1 - Demonstrates the techniques and methods for disseminating injury prevention and health care information to health care professionals, athletes, athletic personnel, parents/guardians, and the general public (e.g., via team meetings, parents' nights, parent/teacher organizations [PTO] meetings, booster clubs, workshops, and seminars).
- 2 - Demonstrates the ability to construct a resume.
- 3 - Demonstrates the ability to access the policy-making and governing bodies that regulate the certified athletic trainer (state regulatory boards, NATA, NATABOC).

Affective Domain

- 1 - Accepts the professional responsibility to satisfy certified athletic trainers' continuing education requirements.
- 2 - Appreciates the need for and the process and benefits of athletic training regulatory acts (registration, licensure, certification).
- 3 - Realizes that the state regulatory acts regarding the practice of athletic training vary from state to state.
- 4 - Understands the consequences of noncompliance 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 to athletes and others involved in physical activity.
- 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 that relate to athletic training practice.
- 8 - Advocates the NATA as an allied health professional organization dedicated to the care of athletes and others involved in physical activity.
- 9 - Respects the role and responsibilities of the other health care professions.
- 10 - Appreciates the dynamic nature of issues and concerns as they relate to the health care of athletes and others involved in physical activity.
- 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.

Practicum

ASSESSMENT AND EVALUATION

Cognitive Domain

- 26 - Uses the terminology necessary to communicate the results of an athletic training assessment to physicians and other health professionals.
- 27 - Describes components of medical documentation (e.g., subjective, objective, assessment, plan [SOAP] and history, inspection, palpation, special tests [HIPS])

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 19 - Cites the signs, symptoms, and pathology of acute inflammation.
- 46 - Constructs and educates the patient regarding home care and self-treatment plans.

Seminar in Athletic Training

HEALTH CARE ADMINISTRATION

Cognitive Domain

- 9 - Identifies the process of obtaining state regulatory acts for athletic trainers, and becomes familiar with locally relevant statutes, rules, and regulations.
- 10 - Explains the advantages and disadvantages of the various commercial software programs and technologies used by a certified athletic trainer (statistical, educational, injury record keeping).
- 40 - Describes the continuing education process for certified athletic trainers as outlined by the NATABOC and the relationship between continuing education and state athletic training practice acts.
- 42 - Understands the NATA Code of Professional Practice and the NATABOC Standards of Professional Practice.

PROFESSIONAL DEVELOPMENT AND RESPONSIBILITIES

Cognitive Domain

- 1 - Compares and contrasts the role and function of state athletic training practice acts and registration, licensure, and certification agencies.
- 2 - Explains the basic legislative processes for the implementation of practice acts for athletic trainers.
- 3 - Defines the rationale for state regulations that govern the practice of athletic training.
- 4 - Describes the consequences of violating federal and state regulatory acts.
- 5 - Outlines the process of attaining and maintaining an athletic training professional credential.
- 6 - Describes the current professional development requirements for the continuing education of certified athletic trainers.
- 7 - Locates available, approved continuing education opportunities for certified athletic trainers.
- 10 - Summarizes the position statements regarding the practice of athletic training (NATA, NCAA, National Association of Intercollegiate Athletics [NAIA], National Federation of State High School Associations, American College of Sports Medicine [ACSM], American Academy of Pediatrics [AAP], American Academy of Family Physicians [AAFP], American Orthopedic Society for Sports Medicine [AOSSM]).
- 11 - Locates and accesses the current activities and requirements for the professional preparation of the certified athletic trainer (NATA Education Council, JRC-AT, CAAHEP, NATABOC).

Psychomotor Domain

- 3 - Demonstrates the ability to access the policy-making and governing bodies that regulate the certified athletic trainer (state regulatory boards, NATA, NATABOC).

Affective Domain

- 1 - Accepts the professional responsibility to satisfy certified athletic trainers' continuing education requirements.
- 2 - Appreciates the need for and the process and benefits of athletic training regulatory acts (registration, licensure, certification).
- 3 - Realizes that the state regulatory acts regarding the practice of athletic training vary from state to state.
- 4 - Understands the consequences of noncompliance with regulatory athletic training practice acts.
- 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 that relate to athletic training practice.
- 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.

Therapeutic Exercise & Rehabilitation II

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 13 - Compares and contrasts the use of various types of strength training and cardiovascular conditioning programs, considering the effects that athletes and others involved in physical activity would expect if they followed a recommended routine.
- 23 - Relates the principles and concepts involved in the fabrication and appropriate application of dynamic and static splints.
- 24 - Describes the basic principles and concepts of orthotic fabrication. This includes, but is not limited to, evaluating the need for orthotics, selecting the appropriate manufacturing material, manufacturing the orthosis, and fitting the orthosis.
- 25 - Identifies the basic principles and concepts of home, school, and work place ergonomics and their relationship to the prevention of illness and injury.

Affective Domain

- 12 - Appreciates and respects the principles and concepts of home, school, and work place ergonomics.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 7 - Predicts the body's adaptation to exercise during and following illness and injury.
- 19 - Identifies the implications of various underlying pathologies and uses this knowledge to select appropriate therapeutic modalities and therapeutic exercise protocols.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 44 - Recognizes the proper technique for using ambulatory aids, including selecting an aid appropriate for the injury and person.
- 45 - Recommends ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles, and evaluates the patient's technique in using the aids.
- 46 - Constructs and educates the patient regarding home care and self-treatment plans.

Affective Domain

- 8 - Advocates the principles of proper splinting techniques to prevent further injury.
- 9 - Appreciates the construction of various splinting devices and the appropriate uses for each.
- 16 - Empathizes with individuals facing the daily challenges of using ambulatory aids.

THERAPEUTIC MODALITIES

Cognitive Domain

- 3 - Illustrates the use of volumetric and anthropometric measurements to determine the effectiveness of treatment outcomes.

Affective Domain

- 2 - Respects the role of attending physicians and other medical and allied health personnel in the use of therapeutic agents to treat, rehabilitate, and recondition athletes and others involved in physical activity.
- 4 - Initiates accepted medical protocol regarding therapeutic prescriptions.
- 5 - Promotes the accepted medical protocol regarding health care referral in the rehabilitation and reconditioning process.

THERAPEUTIC EXERCISE

Cognitive Domain

- 1 - Predicts the physiological process of wound healing and tissue repair and its implications (limitations, contraindications) on the development and progression of an appropriate rehabilitation or reconditioning program.
- 2 - Describes and interprets appropriate measurement and functional testing procedures as they relate to therapeutic exercise (e.g., use of isokinetic devices, goniometers and dynamometers, postural stability test, hop tests, specific function tests).
- 3 - Uses objective measurement results (muscular strength/endurance, range of motion) as a basis for developing individualized rehabilitation or reconditioning programs.
- 4 - Describes common surgical techniques, pathology, and any subsequent anatomical alterations that may affect the implementation of a rehabilitation or reconditioning exercise program.
- 5 - Interprets the results of injury assessment and determines an appropriate rehabilitation or reconditioning plan to return the patient to physical activity.
- 6 - Defines the basic components of activity-specific functional progressions in a therapeutic exercise program.
- 7 - Describes the mechanical principles applied to the design and use of rehabilitation or reconditioning exercise equipment (leverage, force).
- 8 - Recommends the appropriate therapeutic exercise plan and determines appropriate therapeutic goals and objectives based on the initial assessment, frequent reassessments, and appropriate goal setting.
- 9 - Describes the appropriate selection and application of therapeutic exercise taking into consideration: 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 primary and reconstructive surgery, d. the physiological adaptations induced by the various forms of therapeutic exercise, such as fast- versus slow-twitch muscle fibers, e. the physiological responses of additional factors, such as age and disease.
- 10 - Describes the indications, contraindications, theory, and principles for the incorporation and application of various contemporary therapeutic exercises, including: a. isometric, isotonic, & isokinetic exercise, b. eccentric vs concentric exercise, c. open-vs closed-chain exercise, d. elastic, mechanical, & manual resistance exercise, e. joint mobility exercise, f. plyometrics-dynamic reactive exercise, g. PNF for muscular strength/endurance, stretching, and improved ROM, h. exercises to improve neuromuscular coordination & proprioception, i. passive, active, & active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation and reconditioning, m. sport-specific activity, n. soft tissue mobilization
- 11 - Revises goals and objectives, and develops criteria for progression and return to activity, based on the level of functional outcomes.
- 12 - Describes appropriate methods of assessing rehabilitation and reconditioning progress and interprets the results.
- 13 - Interprets physician notes, post-operative notes, and physician prescriptions as they pertain to a rehabilitation or reconditioning plan.
- 14 - Describes rehabilitation, functional, and reconditioning progress using follow-up notes, progress notes, SOAP notes, etc.
- 15 - Compares the effectiveness of taping, wrapping, bracing, and other supportive/protective methods for facilitation of safe progression to advanced therapeutic exercises and functional activities.
- 16 - Applies manufacturer's guidelines for the inspection and maintenance of therapeutic exercise equipment.

Affective Domain

1 - Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the treatment, rehabilitation, or reconditioning of athletes and others involved in physical activity.

2 - Accepts the moral and ethical obligation to provide rehabilitation or reconditioning to athletes and others involved in physical activity to the fullest extent possible.

4 - Respects accepted medical and paramedical protocols regarding the confidentiality of medical information, medical and therapeutic prescriptions, and health care referral as they relate to the rehabilitation or reconditioning process.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Affective Domain

1 - Supports the moral and ethical behavior of athletic trainers in issues dealing with diseases of athletics and physical activity.

NUTRITIONAL ASPECTS

Cognitive Domain

5 - Identifies the nutritional considerations in rehabilitation, including nutrients involved in healing and nutritional risk factors.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

2 - Compares the psychosocial requirements of various sports activities to the readiness of the injured or ill individual to resume physical participation.

3 - Understands the psychological and emotional responses (motivation, anxiety, apprehension) to trauma and forced physical inactivity as they relate to the rehabilitation and reconditioning process.

22 - Identifies the stress-response model and how it may parallel an injury.

25 - Describes the motivational techniques that the certified athletic trainer must use during injury rehabilitation and reconditioning.

Affective Domain

9 - Respects the various social and cultural attitudes, beliefs, and values regarding health care practices when caring for patients.

10 - Accepts the role of social support during the injury rehabilitation process.

Therapeutic Exercise & Rehabilitation II Lab

RISK MANAGEMENT AND INJURY PREVENTION

Psychomotor Domain

- 7 - Able to operate contemporary isometric, isotonic, and isokinetic strength testing devices.
- 10 - Provides supervision and instruction to an individual in the use of commercial weight training equipment.
- 12 - Constructs and applies functional splints.

ACUTE CARE OF INJURIES AND ILLNESSES

Psychomotor Domain

- 19 - Demonstrates the proper techniques for using ambulatory aids to coordinate movement on flat, slippery, or uneven terrain and to navigate steps, ramps, doors, or obstacles.
- 20 - Fabricates, applies, adjusts, and removes commonly used immobilization devices.

THERAPEUTIC MODALITIES

Psychomotor Domain

- 2 - Measures limb edema and effusion using volumetric tank and anthropometric measurements.

THERAPEUTIC EXERCISE

Psychomotor Domain

- 1 - Demonstrates appropriate methods of evaluating rehabilitation and reconditioning progress and interpreting results.
- 2 - Measures the physical effects of injury using contemporary methods (isokinetic devices, goniometers, dynamometers, manual muscle testing, calipers, functional testing) and uses this data as a basis for developing individualized rehabilitation or reconditioning programs.
- 3 - Records rehabilitation or reconditioning progress (e.g., follow-up notes, progress notes).
- 4 - Demonstrates the appropriate application of contemporary therapeutic exercises including the following: a. isometric, isotonic, and isokinetic exercise, b. eccentric vs concentric exercise, c. open- vs closed-kinematic chain exercise, d. elastic, mechanical, and manual resistance exercise, e. joint mobilization exercise, f. plyometrics-dynamic reactive exercise, g. proprioceptive neuromuscular facilitation (PNF) for muscular strength/endurance, muscle stretching, and improved range of motion, h. exercises to improve neuromuscular coordination and proprioception, i. passive, active, and active-assisted exercise, j. cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber, k. aquatic therapy, l. functional rehabilitation and reconditioning, m. sport-specific activity, n. soft tissue mobilization
- 5 - Demonstrates the proper techniques for the performance of commonly prescribed rehabilitation and reconditioning exercises.
- 6 - Performs a functional assessment for safe return to physical activity.
- 7 - Inspects therapeutic exercise equipment to ensure safe operating condition.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Psychomotor Domain

- 4 - Uses motivational techniques with athletes and others involved in physical activity.

Advanced Athletic Injury Management: Lower Extremity

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 21 - Describes the principles and concepts relating to prophylactic taping, wrapping, and bracing and protective pad fabrication.
- 24 - Describes the basic principles and concepts of orthotic fabrication. This includes, but is not limited to, evaluating the need for orthotics, selecting the appropriate manufacturing material, manufacturing the orthosis, and fitting the orthosis.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 18 - Describes the signs and symptoms of deep and superficial vein thromboses, pulmonary embolism and other emboli, and myocardial infraction.

ASSESSMENT AND EVALUATION

Cognitive Domain

- 6 - Differentiates injury recognition, assessment, and diagnosis.
- 7 - Describes commonly accepted techniques and procedures for evaluation of the common injuries and illnesses that are incurred by athletes and others involved in physical activity. These techniques and procedures include the following:(a) taking a history, (b) inspection or observation,(c) palpation, (d) functional testing (range of motion, ligamentous or capsular stress, manual muscle, sensory, motor, reflex neurological), (e) special evaluation techniques (e.g., orthopedic tests, auscultation, percussion)
- 8 - Explains the relationship of injury assessment to the systematic observation of the person as a whole.
- 9 - Demonstrates knowledge of a systematic process that uses the medical or nursing model to obtain a history of an injury or illness that includes, but is not limited to, the mechanism of injury, chief complaint, and previous relevant injuries or illnesses.
- 10 - Explains how to take measurements of the neurological function of cranial nerves, spinal nerves, and peripheral nerves, and describes their relationships in a neurological examination.
- 11 - Describes the use of myotomes, dermatomes, and reflexes (deep tendon, superficial) including manual muscle-testing, range-of-motion testing, and distinguishes between primary, cortical, and discriminatory forms of sensation.
- 12 - Defines the measurement and grading of dermatomes, myotomes, and reflexes and their relationships in a neurological examination.
- 14 - Explains the role of special tests, testing joint play, and postural examination in injury assessment.
- 15 - Explains how to measure resistive range of motion (or strength) of major muscles using manual muscle testing or break tests.
- 20 - Describes the etiological factors, signs, symptoms, and management procedures for injuries of the toes, foot, ankle, lower leg, knee, thigh, hip, pelvis, shoulder, upper arm, elbow, forearm, wrist, hand, thumb, fingers, spine, thorax, abdomen, head, and face.
- 21 - Explains how to identify and evaluate various postural deformities.

Psychomotor Domain

- 3 - Demonstrates active, passive, and resisted range-of-motion testing of the toes, foot, ankle, knee, hip, shoulder, elbow, wrist, hand, thumb, fingers, and spine.

Affective Domain

- 1 - Appreciates the importance of a systematic assessment process in the management of injuries and illness.
- 4 - Recognizes the initial clinical evaluation by the certified athletic trainer as an assessment and screening procedure, rather than as a diagnostic procedure.
- 5 - Appreciates the practical importance of thoroughness in a clinical evaluation.
- 7 - Values the skills and knowledge necessary to competently assess the injuries and illnesses of athletes and others involved in physical activity.

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 7 - Differentiates the components of a secondary survey, including obtaining a history, inspection and observation, palpation, and the use of special tests to determine the type and severity of the injury or illness sustained.
- 9 - Assesses pathological signs of injury including, but not limited to, skin temperature, skin color, skin moisture, pupil reaction, and neurovascular function.
- 17 - Discriminates those wounds that require medical referral.
- 24 - Recognizes the signs and symptoms of trauma to the cervical, thoracic and lumbar spines, the spinal cord, and spinal nerve roots, including neurological signs, referred symptoms, and other symptoms that indicate underlying trauma.
- 28 - Describes the proper techniques and necessary supplies for removing equipment and clothing in order to evaluate and/or stabilize the involved area.
- 31 - Identifies the appropriate short-distance transportation method for an injured athlete or other physically active individual, including immobilization if applicable.
- 42 - Uses the information obtained during the examination to determine when to refer an injury or illness for further or immediate medical attention d (e.g., a life- or limb-threatening situation).
- 43 - Describes the proper immobilization techniques and selects the appropriate splinting material to stabilize the injured joint or limb and maintain distal circulation.

Psychomotor Domain

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

Affective Domain

- 1 - Appreciates the medical-legal and ethical protocol governing the referral of injured and ill athletes and other individuals engaged in physical activity.
- 7 - Realizes the importance of identifying signs and symptoms in cases of possible shock, internal bleeding, and closed-head trauma.
- 8 - Advocates the principles of proper splinting techniques to prevent further injury.
- 9 - Appreciates the construction of various splinting devices and the appropriate uses for each.
- 13 - Respects short-distance transportation techniques as a crucial means of moving an injured person.
- 14 - Supports the application of cryotherapy, elevation, and compression as primary care for a non-threatening injury.

PHARMACOLOGY

Affective Domain

- 1 - Recognizes that pharmacology applies to the immediate and ongoing care of injury and illness.

THERAPEUTIC EXERCISE

Cognitive Domain

- 4 - Describes common surgical techniques, pathology, and any subsequent anatomical alterations that may affect the implementation of a rehabilitation or reconditioning exercise program.

Psychomotor Domain

6 - Performs a functional assessment for safe return to physical activity.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

1 - Describes congenital or acquired abnormalities, physical disabilities, and diseases.

16 - Identifies the typical symptoms and clinical signs of an injury or illness, including those associated with local tissue inflammation (cellulitis) and systemic infection (lymphangitis, lymphadenitis, bacteremia).

29 - Recognizes conditions that affect bones and joints (e.g., epiphysitis, apophysitis, aseptic necrosis, arthritis, gout, and felon).

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Advanced Athletic Injury Management: Lower Extremity lab

ASSESSMENT AND EVALUATION

Psychomotor Domain

- 2 - Visually identifies clinical signs associated with common injuries and illnesses, such as the integrity of the skin and mucous membranes, structural deformities, edema, and discoloration.
- 3 - Demonstrates active, passive, and resisted range-of-motion testing of the toes, foot, ankle, knee, hip, shoulder, elbow, wrist, hand, thumb, fingers, and spine.
- 4 - Measures active and passive joint range of motion with a goniometer.
- 5 - Performs appropriate manual muscle-testing techniques and/or break tests, including application of the principles of muscle/muscle group isolation, segmental stabilization resistance/pressure, and grading, to evaluate injuries incurred by athletes and others engaged in physical activity.
- 6 - Administers static and dynamic postural evaluation and screening procedures, including functional tests for postural deformities and muscle length assessment.
- 7 - Applies appropriate stress tests for ligamentous or capsular instability based on the principles of joint positioning, segmental stabilization, and force.
- 8 - Measures the grade of ligamentous laxity during a joint stress test and notes the quality and quantity of the end point.
- 9 - Applies appropriate and commonly used special tests to evaluate athletic injuries to various anatomical areas.
- 12 - Palpates bony and soft tissue structures to determine normal or pathological tissue(s).
- 13 - Performs and interprets appropriate palpation techniques and special tests of the abdomen, chest, cranium, and musculoskeletal system.
- 14 - Assesses the neurological function of cranial nerves, spinal nerves, and peripheral nerves and assesses the level of spinal cord involvement following injury, including the function of dermatomes, myotomes, and reflexes (e.g., deep tendon, superficial).
- 15 - Performs appropriate examination of injuries to the trunk and upper and lower extremities prior to an individual's return to activity.

ACUTE CARE OF INJURIES AND ILLNESSES

Psychomotor Domain

- 4 - Performs a secondary survey/assessment, including obtaining a history, inspection/observation, palpation, and using special tests.
- 5 - Palpates a variety of anatomic locations to assess the pulse in resting (non-emergency) and trauma situations.
- 21 - Fabricates, applies, adjusts, and removes special protective equipment (braces, special pads, modified taping procedures).

Personal Health

RISK MANAGEMENT AND INJURY PREVENTION

Cognitive Domain

- 17 - Describes the components of an educational program for self-identification of the warning signs of cancer, including self-examination of the breasts and testicles.

PATHOLOGY OF INJURIES AND ILLNESSES

Cognitive Domain

- 13 - Outlines the autoimmune and immunodeficiency responses and their associated diseases (e.g., lupus, HIV/AIDS).
- 15 - Describes the pathology of diseases of the blood (e.g., anemia, iron deficiency, hemolysis that would impair strenuous physical activity).
- 16 - Recognizes the common warning signs and symptoms of cancer.

ASSESSMENT AND EVALUATION

Cognitive Domain

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

ACUTE CARE OF INJURIES AND ILLNESSES

Cognitive Domain

- 8 - Interprets vital signs as normal or abnormal including, but not limited to, blood pressure, pulse, respiration, and body temperature.
- 34 - Differentiates the signs and symptoms of diabetic coma and insulin shock.
- 37 - Recognizes the signs and symptoms of toxic drug overdose.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 1 - Describes congenital or acquired abnormalities, physical disabilities, and diseases.
- 2 - Identifies common illnesses and diseases of the body's systems based on contemporary epidemiological studies of the injuries of athletes and others involved in physical activity.
- 3 - Describes the general principles of health maintenance and personal hygiene, including skin care, dental hygiene, sanitation, immunizations, avoidance of infectious and contagious diseases, diet, rest, exercise, and weight control.
- 18 - Explains and recognizes the etiology, signs, symptoms, and management of diabetes mellitus.
- 22 - Lists the common infections and conditions of the female reproductive organs (e.g., pelvic inflammatory disease (PID), ectopic pregnancy, and pregnancy).
- 23 - Describes the common conditions of the breast (e.g., gynecomastia, cancer, and fibrous cysts).
- 25 - Identifies the physiological effects and the changes to woman's body caused by pregnancy, and describes the body's response to exercise during pregnancy. Also identifies the indications and contraindications for exercise throughout pregnancy.
- 26 - Describes the signs, symptoms, and management of common sexually transmitted diseases (STD).

NUTRITIONAL ASPECTS

Cognitive Domain

- 1 - Describes personal health habits (hygiene, diet, nutrition, weight control, proper amount of sleep, effects of alcohol, tobacco, and drugs) and their role in preventing injury or illness and in maintaining a healthy lifestyle.
- 3 - Describes the nutritional food pyramid and explains its use.
- 6 - Explains the importance of good nutrition in enhancing performance and preventing injury and illness.
- 7 - Describes the common illnesses and injuries that are attributed to poor nutrition.
- 16 - Locates, obtains, and interprets scientific position papers describing healthy weight loss, fluid maintenance, disordered eating, nutritional ergogenic aids, diet supplements, and assessment of body composition in athletes and others involved in physical activity.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

- 11 - Identifies the symptoms and clinical signs of common disordered eating (anorexia nervosa, bulimia) and the psychological and sociocultural factors associated with these disorders.
- 12 - Identifies the psychological issues that relate to physically active women of childbearing years.
- 13 - Identifies the medical and community-based resources that disseminate information regarding safe sexual activity and the health risk factors associated with sexually transmitted diseases.
- 14 - Describes commonly abused substances (e.g., alcohol, tobacco, stimulants, nutritional supplements, steroids, marijuana, and narcotics) and their impact on an individual's health and physical performance.
- 15 - Recognizes the signs and symptoms of drug abuse and the use of ergogenic aids and other substances.
- 16 - Identifies the societal influences toward substance abuse in the athletic and physically active population.
- 17 - Contrasts psychological and physical dependence, tolerance, and withdrawal syndromes that may be seen in individuals addicted to alcohol, prescription or nonprescription medications, and/or 'street' drugs.
- 18 - Describes the basic signs and symptoms of mental disorders (psychoses), emotional disorders (neuroses, depression), or personal/social conflict (family problems, academic or emotional stress, personal assault or abuse, sexual assault, sexual harassment) and the appropriate referral.
- 19 - Identifies contemporary personal, school, and community health service agencies, such as community-based psychological and social support services.
- 21 - Describes the acceptance and grieving processes that follow a catastrophic event.
- 23 - Defines seasonal affective disorder (SAD).

Psychomotor Domain

- 5 - Develops and implements stress reduction techniques for athletes and others involved in physical activity.

PROFESSIONAL DEVELOPMENT AND RESPONSIBILITIES

Cognitive Domain

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

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Nutrition Fundamentals

NUTRITIONAL ASPECTS

Cognitive Domain

- 1 - Describes personal health habits (hygiene, diet, nutrition, weight control, proper amount of sleep, effects of alcohol, tobacco, and drugs) and their role in preventing injury or illness and in maintaining a healthy lifestyle.
- 2 - Constructs methods to determine the recommended daily allowances (RDAs) of a healthy diet for athletes and others involved in physical activity.
- 3 - Describes the nutritional food pyramid and explains its use.
- 4 - Lists the primary organizations responsible for nutritional information.
- 6 - Explains the importance of good nutrition in enhancing performance and preventing injury and illness.
- 7 - Describes the common illnesses and injuries that are attributed to poor nutrition.
- 9 - Delineates the effects of poor dietary habits on bone loss, injury, and long term health.
- 11 - Illustrates the physiological processes and time factors involved in the digestion, absorption, and assimilation of food, fluids, and nutritional supplements as they relate to the design and planning of pre- and post-activity meals, considering menu content, time scheduling, and the effect of tension and anxiety before activity.
- 12 - Paraphrases the prevailing misconceptions regarding the proper use of food, fluids, and nutritional supplements (common food fads and fallacies and strength or weight gain diets).
- 16 - Locates, obtains, and interprets scientific position papers describing healthy weight loss, fluid maintenance, disordered eating, nutritional ergogenic aids, diet supplements, and assessment of body composition in athletes and others involved in physical activity.
- 19 - Describes and applies the principle of caloric balance.
- 20 - Summarizes the proper use of food, fluids, and exercise in weight control to dispel the prevailing misconceptions regarding weight control diet fads and fallacies.
- 21 - Explains the guidelines for safe weight loss and weight gain.
- 23 - Describes the signs, symptoms, and physical consequences of disordered eating.
- 25 - Describes the differences between saturated, unsaturated, and polyunsaturated fats and the effects of each on diet, performance, health care, heart disease, diabetes, and cancer.
- 26 - Describes the signs, symptoms, and physiological effects of iron deficiency and anemia and identifies foods that enhance iron absorption and are high in iron.
- 27 - Demonstrates how to determine the recommended daily allowances and identifies common food sources of essential vitamins and minerals.

Affective Domain

- 1 - Appreciates the role of proper nutrition in the health care of athletes and others involved in physical activity.
- 2 - Respects the various recognized position papers that discuss nutrition wellness.

Sports Nutrition

ASSESSMENT AND EVALUATION

Cognitive Domain

- 17 - Explains the distinction between body weight and body composition.

GENERAL MEDICAL CONDITIONS AND DISABILITIES

Cognitive Domain

- 24 - Describes the various menstrual irregularities, the relationship that physical activity plays in their development, their resolutions, and their implications on performance, as well as detrimental systemic effects (e.g., oligomenorrhea, amenorrhea, and dysmenorrhea).

NUTRITIONAL ASPECTS

Cognitive Domain

- 2 - Constructs methods to determine the recommended daily allowances (RDAs) of a healthy diet for athletes and others involved in physical activity.
- 3 - Describes the nutritional food pyramid and explains its use.
- 4 - Lists the primary organizations responsible for nutritional information.
- 5 - Identifies the nutritional considerations in rehabilitation, including nutrients involved in healing and nutritional risk factors.
- 6 - Explains the importance of good nutrition in enhancing performance and preventing injury and illness.
- 7 - Describes the common illnesses and injuries that are attributed to poor nutrition.
- 8 - Evaluates the energy and nutritional demands of specific activities and the nutritional demands placed on athletes and others involved in physical activity.
- 9 - Delineates the effects of poor dietary habits on bone loss, injury, and long term health.
- 10 - Applies the principles of nutrition, including the roles of fluids and electrolytes, vitamins, minerals, ergogenic aids, macronutrients, carbohydrates, protein, fat, and dietary supplements, as they relate to the dietary and nutritional needs of athletes and others involved in physical activity.
- 11 - Illustrates the physiological processes and time factors involved in the digestion, absorption, and assimilation of food, fluids, and nutritional supplements as they relate to the design and planning of pre- and post-activity meals, considering menu content, time scheduling, and the effect of tension and anxiety before activity.
- 12 - Paraphrases the prevailing misconceptions regarding the proper use of food, fluids, and nutritional supplements (common food fads and fallacies and strength or weight gain diets).
- 13 - Describes the advantages or disadvantages of supplementing nutrients in the athlete's diet.
- 14 - Describes the principles, advantages, and disadvantages of the ergogenic aids and dietary supplements used by athletes and others involved in physical activity, in an effort to improve performance.
- 15 - Recognizes the implications of FDA endorsement of nutritional products.
- 16 - Locates, obtains, and interprets scientific position papers describing healthy weight loss, fluid maintenance, disordered eating, nutritional ergogenic aids, diet supplements, and assessment of body composition in athletes and others involved in physical activity.
- 17 - Analyzes the principles of weight control, including body fat percentage, caloric requirements, effects of exercise, and fluid loss.
- 18 - Identifies the consequences of improper fluid replacement.
- 19 - Describes and applies the principle of caloric balance.
- 20 - Summarizes the proper use of food, fluids, and exercise in weight control to dispel the prevailing misconceptions regarding weight control diet fads and fallacies.
- 21 - Explains the guidelines for safe weight loss and weight gain.
- 22 - Describes the principles of body mass index computation.
- 23 - Describes the signs, symptoms, and physical consequences of disordered eating.
- 24 - Explains the referral system for individuals with disordered eating.
- 25 - Describes the differences between saturated, unsaturated, and polyunsaturated fats and the effects of each on diet, performance, health care, heart disease, diabetes, and cancer.
- 26 - Describes the signs, symptoms, and physiological effects of iron deficiency and anemia and identifies foods that enhance iron absorption and are high in iron.
- 27 - Demonstrates how to determine the recommended daily allowances and identifies common food sources of essential vitamins and minerals.

Psychomotor Domain

- 1 - Accesses and uses information regarding the principles of fluid and electrolyte replacement.
- 3 - Designs a pre-participation meal.
- 4 - Includes the proper percentages of carbohydrates, protein, and fat in a diet based on age, gender, and type and level of physical activity.

Affective Domain

- 1 - Appreciates the role of proper nutrition in the health care of athletes and others involved in physical activity.
- 2 - Respects the various recognized position papers that discuss nutrition wellness.
- 3 - Appreciates the long-term effects of disordered eating, bone density loss, and secondary amenorrhea on the skeletal health of the physically active.
- 4 - Recognizes the need for and implements proper referral for eating disorders.

PSYCHOSOCIAL INTERVENTION AND REFERRAL

Cognitive Domain

- 11 - Identifies the symptoms and clinical signs of common disordered eating (anorexia nervosa, bulimia) and the psychological and sociocultural factors associated with these disorders.

Affective Domain

- 4 - Accepts the need for appropriate interpersonal relationships between all of the parties involved with athletes and other involved in physical activity.