

**UNIVERSITY OF NORTH ALABAMA**  
**DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND RECREATION**

**COURSE NUMBER:** HPE 378  
**COURSE TITLE:** Athletic Training and Conditioning  
**SEMESTER HOURS:** 3 hours  
**PREREQUISITES:** HPE 233 and HPE 352  
**REVISED:** December 2010

**Athletic Training and Conditioning**

**CATALOG DESCRIPTION:** Application of athletic training principles and techniques necessary for the care and prevention of athletic injuries.

**TEXT:** Arnhein, Daniel D. *Modern Principles of Athletic Training*, 13th edition. St. Louis: Times Mirror/Mosby College Publishing, 2005.

College LiveText – Student Edition

**COURSE OBJECTIVES:** Upon the completion of this course, the student will :

- Know the history of athletic training.
- Know the most serious injuries occurring in sports activities.
- Know what injuries are most common to a specific sport.
- Know the major procedures of injury prevention.
- Know the qualifications of athletic trainers.
- Know the ethics associated with athletic training.
- Know the duties of athletic trainers.
- Know the importance of positive working relationships with other professionals.
- Know the legal responsibilities associated with athletic training.
- Know the value of nutrition in athletics.
- Know areas of the body most vulnerable to athletic injuries.
- Be able to use superficial heat.
- Be able to provide immediate care for acute injuries.
- Know when to refer an injury to a physician.
- Be able to use cold for immediate and follow-up care.
- Understand the purpose of deep heat.
- Be able to put on a figure-of-eight and/or spiral elastic wrap to every major joint with the correct tension and pattern.
- Be able to manipulate athletic tape effectively.
- Be able to execute an ankle wrap with the correct tension and pattern.
- Know the supportive anatomy of the ankle.
- Know how to recognize an ankle sprain in terms of mild, moderate, or severe.
- Be able to execute a game ankle taping with proper tension and pattern.
- Be able to do a figure-of-eight arch taping with proper tension and pattern.
- Recognize, treat, and support shin splints.
- Be able to care for a muscle cramp.
- Be able to recognize and care for a knee sprain.
- Be able to perform a collateral ligament knee taping.
- Be able to treat a charley horse.
- Know how to tape-support large surface areas of the body with the crisscross taping method.

- Know the major signs of internal injuries (kidney and spleen).
- Know the sign of a rib fracture.
- Know the signs of mild, moderate, and severe acromioclavicular sprains.
- Know the signs of a sternoclavicular sprain.
- Know the signs of a clavicular sprain.
- Know the signs of and treatment procedures for a shoulder strain.
- Know the signs of a glenohumeral dislocation.
- Know the signs of a concussion and its immediate care.
- Know the signs of a dislocated elbow.
- Be able to tape an elbow strain.
- Know the signs of a sprained wrist.
- Be able to tape a sprained wrist.
- Know the signs of a navicular fracture.
- Know the signs of a finger dislocation.
- Know the signs of a hand fracture.
- Be able to tape a sprained thumb.
- Develop reasonable competence in on-field injury assessment.
- Know the sign of lumbosacral spasm.
- Understand referring the athlete to other medical and non-medical support services and personnel.
- Know the employment settings for the athletic trainer.
- Understand the recognition and accreditation of the athletic trainer as an Allied Health Professional.
- Know requirements for the certification as an athletic trainer.
- Know the state regulations of the athletic trainer.
- Know the future directions for the athletic trainer.
- Understand use of the computer as a tool for the athletic trainer.
- Know how to collect injury data.
- Know how to establish a system for athletic training health care.
- Understand the environmental considerations as related to sports.

**PROFESSIONAL STANDARDS AND ASSESSMENT:** Content included in this course fulfill Alabama Physical Education Knowledge and Ability Standard 290-3-3-33

- (2)(d)2.(iv) Emergency procedures, including first aid and CPR.

Content of this course links with UNA College of Education Conceptual Framework References 1, 2, 3, 6.

Standard Code	Standard	Assessment	Instrument
290-3-3-.33(2)(d)2.(iv)	Emergency procedures, including first aid and CPR.	Written exam Laboratory sessions	Grading scale Rubric

**COURSE CONTENT:**

Introduction

- Athletic training
- General considerations
- The athletic training program

The Athletic Trainer

- Define sports medicine and athletic training
- Specify the qualifications and functions of a certified athletic trainer and where he/she carries out these functions

- The athletic trainer's relationship with other professionals

#### The Athletic Training Program

- Components of a properly maintained training room and training program
- Appropriate personnel policies and program operations
- Outfitting a training program with supplies and equipment

#### Physical Conditioning and Training

- Describe the most effective way to achieve strength, flexibility, and endurance
- Describe the physiological effects of stress, acclimatization, and jet lag
- Explain the major physiological and morphological characteristics of the female athlete

#### Injury prevention Through Physical Conditioning

- The merits of conditioning and sports injury prevention
- Major conditioning seasons and the types of exercises carried out in each
- Ten cardinal conditioning principles
- Differences between muscle soreness and stiffness

#### Nutritional Considerations

- Importance of good nutrition in sports training
- Harmful eating practices
- Pros and cons of dietary supplementation
- Problems inherent in weight problems
- Nutrients that supply energy and promote growth and tissue repair

#### Protective Sports Equipment

- Differentiate between good and bad features of selective equipment
- Properly fitted, selected equipment
- Equipment for various body parts

#### Body Characteristics and Mechanisms of Injury

- Structural characteristics of the body that predispose it to sports injuries
- Characteristics of soft tissue when mechanical stress is applied
- Faulty posture
- Faulty mechanic in running, throwing, and jumping

#### Classifying, recognizing, inspecting, and evaluating sports injuries

- Categorize the major exposed and unexposed sports injuries
- Explain the major characteristics of musculoskeletal sports injuries
- Steps in on-site and off-site inspection and evaluation of sports injuries

#### Tissue Healing and Pain

- Phases of both soft tissue and fracture healing
- Reactive phase
- Acute traumatic injury
- Repair and regenerative phase
- Remodeling phase
- Proper fracture care
- Pain perception
- Referred pain

#### Emergency procedures in sports

- Assess vital signs of an injured athlete
- Perform lifesaving emergency procedures
- Carry out emergency procedures and first aid for musculoskeletal sports injuries
- Demonstrate proper emergency procedures of environmental emergencies

#### Wound dressing, taping, and bandaging

- Training room practices
- Field practices
- Materials
- Tape Usage
- Linen adhesive tape qualities

- Using adhesive tape in sports
- Rules for taping
- Common types of bandages used in sports medicine
- Pads and orthoses

#### Therapeutic Modalities

- Differentiate between the physiological responses to therapeutic cold and heat
- Application of therapeutic cold and heat modalities
- Application of electrical muscle stimulation
- Describe the major principles of penetrating heat
- Therapeutic massage, manual stretching and trigger point therapy

#### Basics in exercise rehabilitation

- Major aspects of a good exercise rehabilitation program in a sports medicine setting
- Exercise rehabilitation designed to increase strength, endurance, flexibility coordination, and speed of movement
- Establish an exercise rehabilitation plan for an athlete's individual needs
- Demonstrate a number of special exercise rehabilitation approaches
- Fit and instruct in crutch and cane usage

#### Pharmacology in sports

- Understand the dangers and intricacies inherent in the use of pharmaceuticals
- Specify the legal ramifications related to dispensing pharmaceuticals
- Classify pharmaceuticals that may be used by the sports participant
- Describe how selective drugs work physiologically

#### The foot, ankle, and lower leg: acute injuries

- Identify the major anatomical components the foot, ankle, and lower leg that are commonly injured in sports
- Evaluate the foot, ankle, and lower leg following acute injury
- Report on the etiological factors, symptoms, and signs
- Management procedures for the major acute injuries in the foot, ankle, and lower leg

#### The foot, ankle, and lower leg: chronic and overuse injuries

- Foot biomechanical implications
- Biomechanical relationship to chronic and overuse sports injuries
- Develop a management plan for chronic and overuse sports injuries
- Relate etiological factors, symptoms, and signs for major chronic sports injuries
- Relate etiological factors, symptoms, and signs for major overuse sports injuries

#### The knee and related structures

- Anatomy and structural relationship to the knee
- Relate the anatomy and structure of the functional knee to major sports injuries
- Evaluate the knee and related structures following injury
- Establish a knee prevention program
- Mechanisms of acute knee injuries
- Knee joint injuries
- Extensor mechanism problems related to the knee
- Knee joint rehabilitation phases

#### The thigh, hip, and pelvis

- Major anatomical features of the thigh region as they relate to sports injuries
- Major anatomical features of the hip region as they relate to sports injuries
- Major anatomical features of the pelvis as they relate to sports injuries
- Evaluate the major sports injuries to the thigh, hip, and pelvis
- Establish a management plan for a sports injury to the thigh, hip, and pelvis

#### The abdomen, thorax, and low back

- Recognize major sports injuries of the abdomen
- Recognize, evaluate, and manage sports injuries of the thorax

- Recognize, evaluate, and manage low back conditions
- Anatomical ramifications of sports injuries of the abdomen, thorax, and low back
- Mechanisms of low back pain in the athlete
- Conditions causing low back pain
- Rehabilitation of low back pain

#### The upper spine, head, and face

- Anatomy of the upper spine, head, and face; its relation to a sports injury
- Recognize major sports injuries of the upper spine, head, and face
- Evaluate major sports injuries of the upper spine, head, and face
- Management and follow-up of injuries of the upper spine, head, and face
- Rehabilitation of the neck

#### The shoulder complex

- The major structural and functional anatomical features of the shoulder
- Relate the shoulder to sports injuries
- Evaluate major sports injuries of the shoulder complex
- Carry out proper, immediate, and follow-up injury management to the shoulder
- Movements of the shoulder complex
- Preventing shoulder injuries
- Rehabilitation of the shoulder complex
- Rotator cuff injury rehabilitation

#### The elbow, forearm, wrist, and hand

- Anatomy of the elbow
- Evaluation of the elbow
- Injuries to the elbow region
- Rehabilitation of the elbow
- Evaluation of forearm injuries
- Evaluation of the wrist and hand

#### Common illnesses and other health conditions

- Symptoms and signs of common respiratory and gastrointestinal track problems
- Symptoms and signs of common contagious viral diseases
- Respond appropriately to an athlete having an epileptic seizure
- Symptoms and signs of hypertension
- Symptoms and signs of epileptic seizure

### **COURSE ACTIVITIES:**

Lectures/discussions

Small group projects

Skills practice sessions

Field trips

Professional readings

Article critiques

Slides and/or video-tape presentations

Skills evaluations

Written exams

### **GRADING PROCEDURE:**

During the semester four (4) written exams will be administered. These exams will be scores on a 100 points basis. All exam grades will be averaged and the student's final course grade determined according to the following scale:

A	90-100
B	80-89
C	70-79

D        60-69  
F        Below 60

**ATTENDANCE POLICY:**

Regular and punctual attendance at all scheduled classes and activities is expected of all students.

Official written excuses for absences are issued only for group absences of activities representing the University, otherwise, the only acceptable excused absences are written from a:

- Physician
- Dean or,
- Official representative from the school concerning activity.

When a student accumulates ten cuts for any reason, an automatic "F" will be given.

If you come in late, it is your responsibility to see me after class and make sure you have not been counted absent.

**PERSONAL TECHNOLOGY POLICY:**

Use of cell phones or other electronic devices will not be allowed in class without prior instructor approval. Phones should be off or in silent mode. There is no reason for a student to have to send or address calls or messages during class. If the student has extenuating circumstances and needs to be available for an emergency, permission should be secured from the course instructor before class begins. The first time a cell phone rings in class may be attributed to poor judgment. If this occurs a second time the person who brought the phone to class will be dismissed from class for the day and counted absent and receive a grade of zero (0) for the day's class work. This cell phone policy applies to all classes including exams and presentations.

**UNIVERSITY OF NORTH ALABAMA ACCOMMODATION STATEMENT:**

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Amendment Act of 2008, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Disability Support Services to initiate the process to develop an accommodation plan. This accommodation plan will not be applied retroactively. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Disability Support Services (256-765-4214).

**ACADEMIC HONESTY:**

Students of the university academic community are expected to adhere to commonly accepted standards of academic honesty. Allegations of academic dishonesty can reflect poorly on the scholarly reputation of the University including students, faculty and graduates. Individuals who elect to commit acts of academic dishonesty such as cheating, plagiarism, or misrepresentation will be subject to appropriate disciplinary action in accordance with university policy.

Incidents of possible student academic dishonesty will be addressed in accordance with the following guidelines:

1. The instructor is responsible for investigating and documenting any incident of alleged academic dishonesty that occurs under the instructor's purview.
2. If the instructor finds the allegation of academic dishonesty to have merit, then the instructor, after a documented conference with the student, will develop a plan for disciplinary action. If the student agrees to this plan, then both instructor and student will sign the agreement. The faculty member will forward a copy of the signed agreement to the Office of Student Conduct for record-keeping purposes.
3. If the student disagrees with the instructor's proposed plan for disciplinary action and wishes to take further action, he/she is responsible for scheduling a meeting with the chair of the department where the course is housed to appeal the proposed disciplinary plan. The department chair shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. If a resolution is reached, the disposition of the case will be forwarded to the Office of Student Conduct. If a resolution at the departmental level is not reached and the student wishes to take further action, he/she is responsible for scheduling a meeting with the dean of the college where the course is housed to appeal the proposed disciplinary plan. The college dean shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. If a resolution is reached, the disposition of the case will be forwarded to the Office of Student Conduct. If a resolution at the college level is not reached and the student wishes to take further action, he/she is responsible for scheduling a meeting with the Vice President for Academic Affairs and Provost (VPAA/P) to appeal the proposed disciplinary plan. The VPAA/P shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. After reviewing all documentation, the VPAA/P may, at his/her discretion, choose either to affirm the proposed action, to refer the case to the Office of Student Conduct for further review, or to dismiss the matter depending on the merits of the case. The final disposition of the case will be disseminated to appropriate parties, including the Office of Student Conduct.
4. If a student is allowed academic progression but demonstrates a repeated pattern of academic dishonesty, the VPAA/P may, after consultation with the Office of Student Conduct, assign additional penalties to the student, including removal from the University.