



Sports Medicine II

PEIMS Code: N1150041

Abbreviation: SPORTMD2

Grade Level(s): 10-11

Award of Credit: 1.0

Approved Innovative Course

- Districts must have local board approval to implement innovative courses.
- In accordance with Texas Administrative Code (TAC) §74.27, school districts must provide instruction in all essential knowledge and skills identified in this innovative course.
- Innovative courses may only satisfy elective credit toward graduation requirements.
- Please refer to [TAC §74.13](#) for guidance on endorsements.

Course Description:

The purpose of the Sports Medicine II course is to provide 10-11 grade students with a focus on introducing the psychomotor applications of the components in sports medicine and athletic training. The components include cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED); certification rehabilitative techniques; therapeutic modalities; prevention, recognition, and care of injuries to the head, face, spine, upper and lower extremity; taping and bandaging; adolescent sports injuries; substance abuse; and general health concerns in sports medicine. This course aims to provide lab instruction for hands-on experiences and evidence-based curricula within the domains of sports medicine and athletic training. The course requires outside-of-class clinical experience working with the athletes in school programs to accomplish this goal. The course will allow students to demonstrate psychomotor skills and duties needed in the realm of a sports medicine profession and in doing so, will prepare the student for a healthcare major in college.

Essential Knowledge and Skills:

- (a) General Requirements. This course is recommended for students in the 10-11 grade. Required prerequisite: Sports Medicine and the approval of the Licensed Athletic Trainer, who supervises the athletic training students' staff. Students shall be awarded one credit for the successful completion of this course.
- (b) Introduction
 - (1) Sports Medicine II is designed for students continuing in the student athletic trainer program. This course will provide students with hands-on psychomotor skills development in the specified areas of the curriculum. Sports Medicine II complements students' science course education and prepares students for college health care profession courses.
 - (2) Sports Medicine II acknowledges the student interest in sports-related medical fields of study. This course is designed to provide an advanced study and application of the

components of sports medicine including Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) certification; rehabilitative techniques; therapeutic modalities; prevention, recognition, and care of injuries to the head and face, spine, upper and lower extremity; taping and bandaging; injuries to the young athlete; substance abuse in sports; and general health concerns in sports medicine. This course requires homework and out-of-time work with athletes and athletic teams. Students must receive the approval of the Licensed Athletic Trainer, who supervises the athletic training students' staff. There may be other required prerequisites for this course such as a Sports Medicine I course and/or Licensed Athletic Trainer approval.

(c) Knowledge and Skills.

- (1) Physical fitness components. The student identifies and demonstrates knowledge and skills used to test physical fitness. The student is expected to:
 - (A) explain the need for physical fitness;
 - (B) describe and demonstrate how to test physical fitness;
 - (C) describe assessment skills fitness testing;
 - (D) demonstrate and explain exercises for cardiovascular, flexibility, strength, and muscular endurance;
 - (E) describe how to measure and determine body composition; and
 - (F) explain how to record data from body composition, flexibility, and strength testing.
- (2) Cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), and first-aid procedures. The student demonstrates basic first-aid skills. The student is expected to:
 - (A) identify the emergencies that require the use of CPR and AED protocols;
 - (B) demonstrate and explain how to apply CPR and use an AED;
 - (C) demonstrate and explain first aid skills such as acute care and splinting;
 - (D) perform manual conveyance and ambulatory aid;
 - (E) describe and demonstrate how to properly fit crutches;
 - (F) describe how to walk with crutches;
 - (G) describe the signs of shock and explain techniques used to manage shock including laying the victim prone, raising legs, and reassuring the victim; and
 - (H) explain how to provide accurate and relevant information to a 911 operator in a simulated emergency setting.
- (3) Bloodborne pathogens and wound care. The student demonstrates how to care for wounds and implement the use of universal precautions against bloodborne pathogens. The student is expected to:
 - (A) identify types of wounds including abrasions, lacerations, punctures, and avulsions;
 - (B) describe how to provide immediate care for open wounds and how to stop the bleeding;

- (C) describe the procedures used to clean wounds;
 - (D) describe and explain different methods to dress and bandage acute wounds;
 - (E) describe and demonstrate the proper technique to apply and remove gloves;
 - (F) explain how to properly dispose of saturated bandages; and
 - (G) explain the benefits of and demonstrate how to use personal protective equipment (PPE).
- (4) Bandaging and taping. The student identifies and demonstrates bandaging and taping skills. The student is expected to:
- (A) explain the purpose of taping sports injuries;
 - (B) explain the need for and demonstrate the application of roller, triangular, and cravat bandages;
 - (C) identify available taping materials such as micropore paper tape, medical adhesive tape, and surgical tape;
 - (D) describe the relationship between dressing selection and wound healing;
 - (E) describe and explain the purpose of each strip in the application of tape to an arch, ankle, shin, hand, wrist, and thumb; and
 - (F) explain how to properly remove tape and bandages from an extremity.
- (5) Injury rehabilitation. The student demonstrates skills that provide basic-level injury rehabilitation. The student is expected to:
- (A) demonstrate and explain isometric and isotonic exercises;
 - (B) demonstrate proper instruction of rehab exercise as specified by instructor;
 - (C) describe and demonstrate rehab exercises for each upper and lower extremity;
 - (D) describe and demonstrate examples of a functional progression exercise;
 - (E) demonstrate and explain how to use rehab equipment such as bike, weights, and TheraBand;
 - (F) demonstrate and explain proper sport-specific rehab exercises;
 - (G) identify the criteria for return to play; and
 - (H) maintain proper record keeping of a rehab session.
- (6) Therapeutic modalities. The student demonstrates the use of therapeutic modalities. The student is expected to:
- (A) identify and describe the five basic therapeutic modalities;
 - (B) identify and describe the thermal modalities;
 - (C) compare the effects of cold versus heat as a therapeutic modality;
 - (D) describe the effect of electric and sound modalities on the healing process of athletic injuries, including electrical stimulation and ultrasound;
 - (E) demonstrate and explain the proper set-up of modalities such as thermal, electrical, sound, light, and mechanical; and

- (E) perform the proper application of a modality(s) such as thermal, electrical, sound, light, and mechanical and explain its benefits in the healing process.
- (7) Injury recognition. The student demonstrates how to recognize sports injuries. The student is expected to:
- (A) differentiate between acute and chronic injury;
 - (B) describe acute traumatic injuries, including fractures, dislocations and subluxations, contusions, ligament sprains, muscle strains, muscle soreness, and nerve injuries;
 - (C) identify chronic overuse injuries in sports such as shin splints, plantar fasciitis, and stress fractures and their causes;
 - (D) describe the phases of the inflammatory process due to injury;
 - (E) identify the phases of the healing process; and
 - (F) demonstrate and explain the steps used in the evaluation of injury.
- (8) Head and face injuries. The student demonstrates how to manage injuries to the head and face. The student is expected to:
- (A) identify anatomical surface landmarks, including skull and facial bones; the temporomandibular joint, occipital bone, and frontal bone; the temporal and parietal bones, and the mastoid process; and
 - (B) demonstrate and explain head and face assessment skills, including strength testing, blowout fracture test, bite test, cranial-neurological assessment, and Sports Concussion Assessment Tool 3 (SCAT3).
- (9) Spine injuries. The student demonstrates how to manage spine injuries. The student is expected to:
- (A) identify spinal anatomical surface landmarks, including cervical, thoracic, lumbar, sacral vertebrae, and spinous processes;
 - (B) describe the physiology of and demonstrate spinal active ranges of motion including flexion, extension, lateral flexion, and rotation; and
 - (C) demonstrate and explain how to assess the spine such as active flexion, extension, rotational movements, and active strength testing in each range of motion.
- (10) Thorax and abdominal injuries. The student demonstrates how to manage the injuries in the thorax and abdomen. The student is expected to:
- (A) identify thorax and abdominal anatomical surface landmarks including ribs, sternum, xiphoid process, liver, spleen, kidneys, stomach, and intestines;
 - (B) describe the physiology of the thorax and abdominal active range of motion including lateral flexion, flexion, and phases of breathing; and
 - (C) demonstrate and explain how to assess the thorax and abdominal by using the rib squeeze test, organ palpation, and rebound test.
- (11) Shoulder injuries. The student demonstrates how to manage shoulder injuries. The student is expected to:

- (A) identify shoulder anatomical surface landmarks, including the humerus, glenoid fossa, clavicle, scapula, glenohumeral joint, sternoclavicular joint, and acromioclavicular joint;
 - (B) describe the physiology of and demonstrate shoulder active range of motions, including flexion, extension, adduction, abduction, circumduction, and rotation;
 - (C) demonstrate and explain the major selected shoulder assessment skills such as active flexion, extension, adduction, abduction, and active strength testing in each range of motion; and
 - (D) demonstrate and explain a selected shoulder taping and wrapping technique such as shoulder spica wrap, acromioclavicular support taping and wrapping, and sternoclavicular support taping and wrapping.
- (12) Elbow, wrist, and hand injuries. The student demonstrates how to manage elbow, forearm, wrist, hand, and fingers injuries. The student is expected to:
- (A) identify elbow, hand, and wrist anatomical surface landmarks, including radius, ulna, olecranon process, carpals, scaphoid, metacarpals, and phalanges;
 - (B) describe the physiology of and demonstrate major selected elbow, wrist, and hand active ranges of motion including flexion, extension, rotation, and opposition;
 - (C) demonstrate the major selected elbow, wrist, and hand assessment skills such as active flexion, extension, rotational movements, and active strength testing in each range of motion; and
 - (D) demonstrate and explain elbow, wrist, and hand taping and wrapping techniques such as elbow hyperextension elbow taping, wrist sprain taping, hand contusion taping, thumb taping, and finger taping.
- (13) Thigh, hip, groin, and pelvis injuries. The student demonstrates how to manage thigh, hip, and pelvis sports injuries. The student is expected to:
- (A) identify thigh, hip, and pelvis anatomical surface landmarks, including femur, ilium, ischium, sacrum, quadriceps, hamstrings, groin muscles, abductor muscles, and the sartorius muscle;
 - (B) describe the physiology of and demonstrate active ranges of motion of the thigh, hip, and pelvis, including extension, flexion, adduction, abduction, and circumduction;
 - (C) demonstrate and explain the thigh, hip, and pelvis assessment skills such as active muscle strength assessment of quadriceps, hamstrings, abductors, hip flexors, hip extensors, adductors, and circumduction; and
 - (D) demonstrate and explain thigh, hip, and pelvis support wrapping techniques such as for the quadriceps, hamstring, groin spica, and hip flexor.
- (14) Knee injuries. The student demonstrates how to manage knee injuries. The student is expected to:
- (A) identify knee anatomical surface landmarks, including femur, tibia, patella, medial collateral ligament, lateral collateral ligament, medial and lateral meniscus, and tibial tubercle;

- (B) describe the physiology of and demonstrate knee active ranges of motion, including flexion, extension, adduction, abduction, and rotation;
 - (C) demonstrate and explain the knee assessment skills and define their purposes such as the valgus test, varus test, anterior drawer test, and Lachman test; and
 - (D) demonstrate and explain knee taping and wrapping techniques such as knee compression wrap, knee ligament taping, and patellofemoral taping.
- (15) Ankle and lower leg injuries. The student demonstrates how to manage ankle and lower leg sports injuries. The student is expected to:
- (A) identify ankle and lower leg anatomical surface landmarks, including fibula, tibia, Achilles tendon, calcareous, lateral, and medial malleolus, cuboid, tarsals, and metatarsals;
 - (B) describe the physiology of and demonstrate ankle and lower leg active ranges of motion, including plantar flexion, dorsiflexion, circumduction, eversion, and inversion;
 - (C) demonstrate and explain ankle and lower leg assessments such as the anterior drawer, bump test, squeeze test, and Thompson test; and
 - (D) demonstrate and explain ankle and lower leg taping and wrapping techniques, including ankle taping, Achilles tendon taping, plantar fascia taping, and heel taping.
- (16) Foot injuries. The student demonstrates how to manage foot injuries. The student is expected to:
- (A) identify foot anatomical surface landmarks, including medial and lateral malleolus, calcareous, talus, navicular, tarsals, metatarsals, and phalanges;
 - (B) describe the physiology of and demonstrate foot active ranges of motion, including dorsiflexion, plantar flexion, circumduction, eversion, and inversion;
 - (C) demonstrate and explain foot assessment skills for injuries such as phalange sprains, great toe sprains, plantar fasciitis, and Achilles tendinitis; and
 - (D) demonstrate and explain foot taping and wrapping techniques such as blister bandaging, toe sprains, and arch sprain taping.
- (17) Substance abuse. The student demonstrates how to conduct a drug test for anabolic steroids and performance-enhancing drugs. The student is expected to:
- (A) describe illegal substances that are currently used by athletes such as prescription stimulants such as Adderall and Ritalin and prescription pain medications such as opiates and cocaine;
 - (B) explain the dangers of anabolic steroids and performance-enhancing drugs; and
 - (C) research and discuss current statistics regarding the use of performance-enhancing drugs and anabolic steroids by adolescent athletes.
- (18) Health concerns and disorders. The student identifies non-skeletal health concerns and explains how to address and care for disorders that affect athletic performance. The student is expected to:

- (A) describe the causes, prevention, and care of the common skin infections in sports, including impetigo, staphylococcal disease, MRSA, folliculitis, carbuncle, herpes simplex, herpes zoster (chicken pox), and tinea corporis (ringworm);
 - (B) identify and describe respiratory tract illnesses;
 - (C) identify disorders of the gastrointestinal tract;
 - (D) describe the management of the diabetic athlete;
 - (E) identify the danger ranges of hypertension related to blood pressure;
 - (F) describe and demonstrate how to take blood pressure;
 - (G) describe and demonstrate taking minute pulse rate;
 - (H) describe and demonstrate taking minute respirations;
 - (I) describe the adverse effects of anemia;
 - (J) demonstrate and explain the proper first aid treatment for a grand mal seizure;
 - (K) identify contagious viral diseases that are common to athletes; and
 - (L) identify the concerns inherent in medical and non-medical drug use among athletes.
- (19) Athletic training room management. The student identifies and demonstrates how to assist in the management of the athletic training room. The student is expected to:
- (A) describe and demonstrate cleaning and maintenance of the athletic training room;
 - (B) describe and demonstrate record-keeping procedures;
 - (C) explain and perform skills in field set-up and breakdown of athletic facilities;
 - (D) explain and perform specified modality and rehab area management skills; and
 - (E) explain and perform rehabilitation supervision and assistance skills.

Recommended Resources and Materials:

- Classroom set of textbooks
- Videos and DVDs for injury evaluation associated therapeutic exercises and issues in sports medicine or medical health care
- Athletic training room will be used as a laboratory
- Professional journals and periodicals
- Computer software
- Computer lab
- School library
- Local and area health care professionals
- Anatomical models
- Equipment for lab practicum

Recommended Course Activities:

- Complete writing projects concerning situations, signs, or symptoms involved in the suspicion of internal injury.

Sports Medicine II

- Complete writing projects regarding special health concerns like respiratory infections, asthma, obesity, diabetes, and seizures.
- Design emergency action plans for special concerns like diabetes and asthma.
- Measure the volume of air exchanged with a peak flow meter.
- Conduct demonstrations with modality equipment in the training room.

Optional activities:

- Participate in field trips to hospitals, sports medicine facilities, physical therapy facilities, health clubs, athletic training rooms, and other health care professional facilities.
- Schedule a field trip to (or invite) a local Emergency Medical Service (EMS) professional to visit with students about their role in the care of athletes.
- Select a sport and design a pre-season, in-season, and off-season conditioning program.
- Demonstrate the proper preparation of a moist heat pack and ice pack.
- Demonstrate the proper preparation of the hot and cold whirlpool.
- Write daily treatment and rehab notes for an injury, until the athlete's full return.
- List the proper performance of tests involving a shoulder injury.
- Debate modern issues in sports medicine.
- Present at a student health fair.
- Role play a sports medicine team involved in the care of an injury to a professional athlete witnessed on television.
- Research the local opportunities available for volunteer service in health care.
- Design a strength and conditioning program for an employee injured on the job, with a goal of a full return to work.
- Measure the joint range of motion with a goniometer.
- Create and present a written and oral summary of a National Athletic Trainers' Association (NATA) Position Statement regarding a particular sports medicine issue.
- Create and present a video project on a weightlifting exercise and its proper demonstration.
- Create and present a video of the demonstration of various rehabilitation exercises or certain conditioning exercises.
- Perform a lab exercise on the effect of exercise on heart rate and blood pressure.

Suggested methods for evaluating student outcomes:

- Written exams
- Oral exams
- Practical exams (demonstration of various injury evaluations, injury management situations, and taping skills)
- First Aid/Cardiopulmonary Resuscitation/Automated External Defibrillator certification
- Demonstration of taping techniques
- Demonstration of precautions for bloodborne pathogens
- Demonstration of the application of various modalities (ice, heat, ultrasound, electric stimulation, whirlpool, etc.)
- Demonstration of the application of various modalities (ice, heat, ultrasound, electric stimulation, whirlpool, etc)
- Demonstration of stretching techniques
- Demonstration of therapeutic exercises (including isometric, isotonic, and isokinetic)
- Teacher made labs

Sports Medicine II

Teacher qualifications:

An assignment for the Texas State Athletic Trainers Association (TSATA) Sports Medicine I, II, and III courses must hold a valid Texas secondary teacher certificate and shall also:

- Be a licensed athletic trainer by the Texas Department of Licensing and Regulation
- Have completed the TSATA Sports Medicine Instructor’s Curriculum Training Course
- Hold the TSATA Sports Medicine Instructor certificate of completion

The school district board of trustees has the option to issue a school district teaching permit (SDTP) for individuals who are not certified to teach. The type of SDTP for sports medicine courses would be “Noncore Academic CTE Courses” certified by the superintendent of the school district and issued by authority of the local district board of trustees. As directed on the form, the employing school district shall submit the completed application form.

TSATA Sports Medicine Instructor’s Curriculum Course: Cost \$425.00 (One-time fee)

Update Courses are available, but not required: Cost \$100.00

Additional information: