

ATHLETIC TRAINING (A TR)

Any experimental courses offered by A TR can be found at:

registrar.iastate.edu/faculty-staff/courses/explistsings/ (<http://www.registrar.iastate.edu/faculty-staff/courses/explistsings/>)

Courses primarily for undergraduates:

A TR 217: Clinical Practicum in Athletic Training I

Cr. 1. S.

Prereq: A TR 221, A TR 222, *Permission of Athletic Training Program Director*

Athletic training clinical experiences for pre-athletic training students.

Offered on a satisfactory-fail basis only.

A TR 218: Orientation to Athletic Training Clinical Experience

(0-2) Cr. 0.5. Repeatable, maximum of 1 credits. F.S.

Pre-athletic training clinical experience designed to orientate students to the athletic training profession prior to enrolling in athletic training course sequence. Students will observe athletic trainers in various athletic training clinical sites. Open to pre-athletic training students only. Offered on a satisfactory-fail basis only.

A TR 219: Anatomy Clinical Practicum

(0-2) Cr. 1. F.

Athletic training clinical experiences designed to review human anatomical structures including origin, insertion, action, innervations of muscles. Students will gain experience with palpation of these structures to help identify location of anatomical landmarks. Students will also gain experience identifying bones, ligaments, and tendons. Open to athletic training students only.

A TR 220: Basic Athletic Training

(1-2) Cr. 2.

Prereq: BIOL 155 or BIOL 255 and BIOL 256

Introduction to methods of prevention and immediate care of athletic injuries. Basic information concerning health supervision of athletes, and some basic wrapping and strapping techniques for common injuries. Non A TR majors only.

A TR 221: Pre-Athletic Training Clinical Practicum

(0-3) Cr. 1. F.

Prereq: Credit or enrollment in A TR 222

Athletic training clinical observation experiences to accompany A TR 222. Utilize knowledge to evaluate, analyze and demonstrate appropriate taping, wrapping and basic skill techniques. Open to students interested in the athletic training option. Offered on a satisfactory-fail basis only.

A TR 222: Basic Athletic Training for Athletic Trainers

(2-2) Cr. 3. F.

Prereq: BIOL 255, BIOL 255L

Provides pre-athletic training students with the knowledge of the profession of a certified athletic trainer, factors associated with injury prevention, treatment, emergency care of athletic injuries, protective equipment, basic organization, administrative, and legal concepts in the athletic training setting. To be taken concurrently with A TR 221.

A TR 223: Preseason Clinical Experience Practicum

(0-3) Cr. 1. F.

Prereq: *Permission of Athletic Training Program Director*

Athletic training clinical experiences for athletic training students during pre-season intercollegiate football. Clinical experiences include: Professional Rescuer CPR, AED certification, emergency splinting and spineboarding, medical record keeping and HIPPA regulations, environmental conditions, prevention of injury screening strategies, athletic training room and education program policies and procedures, review of athletic taping techniques, acute injury management, mouthpiece formation, and anatomy review. Offered on a satisfactory-fail basis only.

A TR 224: Evaluation of Athletic Injuries I

(2-3) Cr. 3. F.

Prereq: *Permission of athletic training program director*

Sport injury assessment procedures and evaluation techniques for lower body injuries. Includes an overview of mechanisms of injury, general musculoskeletal disorders, and spine or neurological dysfunction. Designed for students in the athletic training major.

A TR 225: Athletic Injuries I Clinical Practicum

(0-3) Cr. 1. F.

Prereq: *Permission of athletic training program director*

Athletic training clinical experience to accompany A TR 224. Open to students in the athletic training major. Offered on a satisfactory-fail basis only.

A TR 226: Evaluation of Athletic Injuries II

(2-3) Cr. 3. S.

Prereq: *Permission of athletic training program director*

Sport injury assessment procedures and evaluation techniques for lower body injuries. Includes an overview of common illnesses of athletes and sport specific injuries. Designed for students in the athletic training major.

A TR 227: Athletic Injuries II Clinical Practicum

(0-3) Cr. 1. S.

Prereq: Permission of athletic training program director

Athletic training clinical experience to accompany A TR 226. Open to students in the athletic training major. Offered on a satisfactory-fail basis only.

A TR 228: Basic Orthopedic Assessment and Evaluation Principles

Cr. 3. F.

Prereq: BIOL 255, BIOL 255L, BIOL 256, BIOL 256L, Permission of Athletic Training Program Director

Assessment procedures and evaluation techniques for upper and lower body orthopedic conditions and injuries. Includes an overview of mechanisms of injury, general musculoskeletal disorders, spine or neurological dysfunction.

A TR 229: Clinical Practicum in Athletic Training II

Cr. 1. F.

Prereq: Concurrent enrollment in A TR 228. Permission of Athletic Training Program Director.

Pre-Athletic training clinical experiences designed to orientate students to the assessment and evaluation principles of upper and lower body orthopedic conditions and injuries. Pre-athletic training students will observe athletic trainers in various athletic training clinical sites. Concurrent enrollment in A TR 228. Offered on a satisfactory-fail basis only.

A TR 240: Introduction to Taping, Equipment, and Bracing Techniques

(0-3) Cr. 1. F.

Prereq: Permission of athletic training program director

Basic information and laboratory instruction regarding basic taping techniques, athletic equipment fitting procedures, and the use and proper fitting of prophylactic braces. Open to students in the athletic training major. Offered on a satisfactory-fail basis only.

A TR 323: Therapeutic Modalities for Athletic Trainers

(2-2) Cr. 3. F.

Prereq: Permission of athletic training program director

Theory and technique of therapeutic modalities used in the management of injuries.

A TR 324: Therapeutic Modalities Clinical Practicum

(0-3) Cr. 1. F.

Prereq: Permission of athletic training program director

Athletic training clinical experience to accompany A TR 323. Open to students in athletic training major. Offered on a satisfactory-fail basis only.

A TR 326: Rehabilitation of Athletic Injuries

(2-2) Cr. 3. S.

Prereq: Permission of athletic training program director

Theory and practical application of rehabilitation principles used in the management of athletic injuries.

A TR 327: Rehabilitation of Athletic Injuries Clinical Practicum

(0-3) Cr. 1. S.

Prereq: Permission of athletic training program director

Athletic training clinical experience to accompany A TR 326. Open to students in the athletic training major. Offered on a satisfactory-fail basis only.

A TR 328: Athletic Injuries Clinical Practicum

Cr. 1.

Prereq: Permission of athletic training program director

Athletic training clinical experiences for pre-athletic training students. Clinical experiences include: prevention of injury screening strategies, athletic training room and education program policies and procedures, review of athletic taping techniques, acute injury management, and anatomy review. Offered on a satisfactory-fail basis only.

A TR 425: Organization and Administration of Athletic Training

(3-0) Cr. 3. F.

Prereq: Permission of athletic training program director, senior classification

Current administrative, professional, and legal issues pertaining to athletic training. Job search techniques and strategies including preparation of materials for athletic training students.

A TR 450: Medical Concerns for the Athletic Trainer

(3-0) Cr. 3. F.

Prereq: Permission of athletic training program director

Current medical issues and concerns, including pathology of illness and injury, dermatological conditions, exposure to allied health care professionals, and pharmacological indications in relation to the profession of athletic training and in patient/athlete care.

A TR 488: Evidence Based Practice in Athletic Training

Cr. 2. F.S.

Prereq: Permission of athletic training program director

Clinical experiences in application of athletic training techniques under the supervision of certified athletic trainers. Introduction and utilization of evidence-based practice methodology via online instruction and integration of evidence-based practice into the clinical experience.

A TR 489: Review of Athletic Training Competencies and Clinical Proficiencies

Cr. 1. F.S.

Prereq: Senior classification, permission of athletic training program director
Preparation for professional endorsement and certification by review of required competencies and clinical proficiencies. Required for endorsement or approval to sit for Board of Certification Exam. Offered on a satisfactory-fail basis only.

Courses primarily for graduate students, open to qualified undergraduates:

A TR 501: Bracing, Wrapping, and Taping Techniques

(0-3) Cr. 1.

Prereq: Acceptance into Athletic Training program

Methods to select, fabricate, and/or customize prophylactic, assistive, and restrictive devices, material, and techniques into plan of care (durable medical equipment, orthotic devices, taping, bracing, splinting, protective padding, and casting). Methods of taping and wrapping for injury care, prevention of injury, and return to play. Exposure to different brands of bracing, how to fit a brace, and their use as well as casting techniques. Discussions of when to refer for prosthetics and overview of gait training.

A TR 502: Emergency Care Procedures in Athletic Training

(2-2) Cr. 3. SS.

Prereq: Acceptance into Athletic Training program

Development, implementation, and revision of policies pertaining to the prevention, preparedness and response to medical emergencies and other critical incidents. Evaluate and manage patients with acute conditions including triaging conditions and internal/external hemorrhage. Cardiac, respiratory, and cervical spine compromise.

A TR 505: Therapeutic Modalities and Clinical Interventions

(2-2) Cr. 3. F.

Prereq: A TR 502, A TR 520, acceptance into Athletic Training program

Knowledge and skills to utilize a variety of therapeutic modalities. Detailed understanding of the psychological and physiological process of pain, healing and a problem-based approach to apply theories, principles, and techniques of thermal, electrical, mechanical, light, and alternative therapies (laser, cryotherapy). Incorporation interventions (for pre-, post-, and non-surgical conditions) designed to address a patients' identified impairments, activity limitations, injuries, and participation restrictions. Home care to include self-treatment, soft tissue techniques.

A TR 509: Athletic Training Clinical Education I

Cr. 2. SS.

Prereq: Acceptance into Athletic Training program

Clinical experiences under the direct supervision of a certified athletic trainer. Techniques and clinical skills provided in both the clinical and classroom settings including: Special Olympics, emergency room rotation, environmental conditions, off season practice and conditioning sessions, biometrics/physiological monitoring systems and translation of data into effective preventative measures, clinical interventions, and performance enhancement. Offered on a satisfactory-fail basis only. Offered on a satisfactory-fail basis only.

A TR 510: Evaluation Methods and Treatment Techniques - Lower Body

(2-2) Cr. 3. F.

Prereq: A TR 502, A TR 520, acceptance into Athletic Training program

Proper methods of musculoskeletal evaluation of the lower extremity. Evaluate and manage patient (s) with acute conditions including triaging conditions that are life threatening or otherwise emergent. Obtain a medical history, proper methods of documentation, patient overview, identification of comorbidities, assessment of function, selection and use of special tests and measures assessing patient's clinical presentation, evaluation of all results to determine a plan of care, including referral when warranted. Selection and incorporations of interventions designed to address a patient's identified impairments, activity limitations, and participation restriction.

A TR 513: Evaluation methods and Treatment Techniques - Upper Body

(2-2) Cr. 3. S.

Prereq: A TR 510, A TR 521, acceptance into Athletic Training program

Instruction on the proper methods of musculoskeletal evaluation of the upper extremity, thorax, spine, and head. Evaluate and manage patient (s) with acute conditions including triaging conditions that are life threatening or otherwise emergent. Obtain a medical history, proper methods of documentation, patient overview, and determination of participation status (PPE), identification of comorbidities, assessment of function, selection and use of special tests and measures assessing patient's clinical presentation, evaluation of all results to determine a plan of care, including referral when warranted. Selection and incorporations of interventions designed to address a patient's identified impairments, activity limitations, and participation restriction.

A TR 515: Evidence-based Practice in Athletic Training

(2-0) Cr. 2. SS.

Prereq: A TR 522, A TR 545, acceptance into Athletic Training program

Principles of evidence-based practice, search for evidence, grading and evaluating literature. Use of systems of quality assurance and improvement to enhance patient care, search, retrieve, and incorporating the use of contemporary principles and practices information from health informatics for clinical decisions and communication with patients/clients, family members, coaches, administrators, other healthcare providers, consumers, payors, and/or policy makers. Use of the International Classification of Functioning, Disability, and Health (ICF) as a framework for delivery and communication about patient care.

A TR 519: Athletic Training Clinical Education II

Cr. 2. F.

Prereq: A TR 510, A TR 521, acceptance into Athletic Training program

Clinical experiences under the supervision of a certified athletic trainer with client/patient populations in competitive, recreational, individual and team activities, high and low intensity activities, non-sport client/patient populations, different sexes and throughout the lifespan (pediatric, adult, elderly). Real client/patient interactions as well as assessment of clinical component procedures and policies. Clinical hours occur in a variety of settings with patients and the student will complete the clinical hours that may extend prior to and/or beyond the academic semester end date. Clinical opportunities provide a basis for evaluating the athletic training student's clinical progression through the program. Offered on a satisfactory-fail basis only. Offered on a satisfactory-fail basis only.

A TR 520: Athletic Training Seminar: Foundations and Policies

(1-0) Cr. 1. SS.

Prereq: Acceptance into Athletic Training program

Introduction to athletic training program and to explore the following topics: environmental issues and concerns, wound care/closure, fractures/dislocations, hemostatic agents/tourniquet applications. Blood borne pathogen training, communicable and infectious disease prevention, FERPA/HIPAA, concussion/brain injury with consideration of established protocols including: comprehensive examination, recognition, and treatment, implementation of a plan of care, referral, and return to participation. Use of C3Logic, Impact testing, and other methods will be introduced. Ankle and knee injury focus.

A TR 521: Athletic Training Seminar: Diagnostic Imaging and Lab Studies

(1-0) Cr. 1. F.

Prereq: A TR 502, A TR 520, acceptance into Athletic Training program

Procedures on how to obtain via the appropriate team physicians and medical staff the necessary and appropriate diagnostic tests (including imaging, bloodwork, urinalysis, electrocardiogram) to facilitate diagnosis, referral, and treatment planning. Surgical observation experience including pre-, post- care designed to address a patient/s identified impairments, activity limitations, and participation restrictions. Shoulder and lower back injury focus.

A TR 522: Athletic Training Seminar: Professional Behaviors, Ethics, and Life Balance

(1-0) Cr. 1. S.

Prereq: A TR 510, 521, acceptance into Athletic Training program

Explore other allied health professions and interprofessional collaboration for optimal patient care and referral. Total patient care and how different professions can impact the care will be explored and discussed. Participation in roundtable discussions with other interprofessional health professions and students are exposed to foundational behaviors of professional practice including but not limited to: work/family balance, ethics, mentorship, leadership, professional involvement, and promotion of the profession.

A TR 523: Athletic Training Seminar: Advanced Therapeutic Interventions

(1-0) Cr. 1. SS.

Prereq: A TR 522, A TR 545, acceptance into Athletic Training program

Training and exposure in cupping, graston or ASTM technique for soft tissue mobilization, and dry needling. Case study analysis utilizing previous coursework including individual self-assessment of clinical skills.

A TR 524: Athletic Training Seminar: Advanced Topics

(1-0) Cr. 1. S.

Prereq: A TR 515X, A TR 550X, A TR 565X and permission of the Athletic Training Program Director

Assess the athletic training students' mastery of knowledge and clinical skills in athletic training, prepare students for employment, and self-assessment. Case study covering all of the domains of athletic training and demonstrates interprofessional and interdisciplinary connections. Review of all of the athletic training domains via specific exams (written, simulation and computer based) will be utilized to prepare the student to challenge the BOC examination.

A TR 529: Athletic Training Clinical Education III

Cr. 2. S.

Prereq: A TR 510, A TR 521, A TR 519, acceptance into Athletic Training program

Clinical experiences under the direct supervision of a certified athletic trainer where foundational behaviors of professional practice with emphasis being placed on evaluation of clinical skills. Reinforcement and instruction about therapeutic modalities, upper and lower extremity assessments. Clinical hours occur in a variety of settings with patients and the student will complete the clinical hours that may extend prior to and/or beyond the academic semester end date. Clinical opportunities provide a basis for evaluating the athletic training student's clinical progression through the program. Offered on a satisfactory-fail basis only.

A TR 539: Athletic Training Clinical Education IV

Cr. 2. SS.

Prereq: A TR 522, A TR 545, A TR 529, acceptance into Athletic Training program

Clinical experiences under the direct supervision of a certified athletic trainer. Advanced issues in the athletic training profession with emphasis on practical application and professional development. Utilization of evidenced based research and approaches to clinical practice with emphasis placed on lab reports, imaging results, life-span issues, and diverse patient populations. Foundational behaviors of professional practice and emphasis will focus on evaluation, treatment, rehabilitation, and clinical skills. Offered on a satisfactory-fail basis only.

A TR 545: Therapeutic Exercise and Rehabilitation Interventions

(2-2) Cr. 3. S.

Prereq: A TR 510, A TR 521, acceptance into Athletic Training program

Therapeutic and corrective exercise, joint mobilization, soft tissue techniques, movement training (including gait training), motor control/proprioceptive activities, task-specific functional training, home care including self-treatment and exercise, cardiovascular training. Pre, post, and non-surgical conditions and addressing activity limitations, participation restrictions and return to play guidelines.

A TR 549A: Athletic Training Clinical Education Study Abroad: Preparing for the Experience

Cr. 1. S.

Prereq: In addition to the study abroad application requirements, students must be accepted into their intended program, junior classification or graduate student majoring in Athletic Training, minimum GPA of 3.0, and completion of A TR 220, or A TR 228 and A TR 229.

Preparation for a study abroad experience that is focused on the discipline of athletic training in another country. Pre-travel for A TR 549B study abroad experience.

Meets International Perspectives Requirement.

A TR 549B: Athletic Training Clinical Education Study Abroad

Cr. 2. SS.

Prereq: Accepted to study abroad by the A TR Program Director and passing A TR 549A.

First-person perspective into the athletic training profession in another country as well as provide enrichment experiences related to the history and culture of that country. Follow-up course and experience of one credit A TR 549A which was intended to prepare the student for the study abroad experience.

Meets International Perspectives Requirement.

A TR 550: Pharmacological Issues in Athletic Training

(2-0) Cr. 2. SS.

Prereq: A TR 522, A TR 545, acceptance into Athletic Training program

General medical and pharmacological issues generally found in the field of athletic training. Medications used to treat medical conditions and the ability to educate patients regarding appropriate pharmacological agents for the management of their condition, including indications, contraindications, dosing, interactions, and adverse reactions.

Administration of medications by the appropriate route upon the order of a physician or other provider with legal prescribing authority.

A TR 559: Athletic Training Clinical Education V

Cr. 5. F.

Course monitors student progression of athletic training proficiencies, acquiring clinical skills under the direct supervision of a certified A TR. Reinforce and instruct new info about general medical conditions and administrative topics and begin the immersive clinical experience required prior to graduation. Field experience provides immersive and additional athletic training experiences and clinical responsibilities for a minimum two 5 week rotations under the direct supervision of a certified A TR or allied health care professional. Required to complete a minimum of 25 hrs per week of field clinical experience. Site approved by the preceptor and A TR program director prior to beginning the immersion clinical experience. Clinical experience may extend beyond the academic semester end date and the clinical hours are a component of this course. Offered on a satisfactory-fail basis only.

A TR 560: General Medical and Behavioral Health Issues

(3-0) Cr. 3. SS.

Prereq: A TR 522, A TR 545, acceptance into Athletic Training program

Medical issues generally observed in the athletic training profession. Development and implementation of wellness strategies to mitigate the risk for long-term health conditions across the lifespan and in an active population. Topics including dermatology, mental illness, neurological disorders, pulmonary disease, respiratory infections, viral infections, autoimmune disorders, oncology, gastrointestinal conditions and sexually transmitted infections. Identify, refer, give support to patients with behavioral health conditions; educate clients/patients about effects, participation consequences, risks of misuse and abuse of alcohol, performance-enhancing drugs/substances; and over the counter, prescription and recreational drugs including drug testing policies and procedures.

A TR 569: Athletic Training Immersion Clinical Education VI

Cr. 5. S.

Prereq: A TR 565X, permission of Athletic Training Program Director

Cumulative clinical experience to gain a more in-depth experience in the field of athletic training. Student selects a field or site experience that meets their professional goals. Field experience is designed to provide immersive and additional athletic training experiences for a minimum of 10 weeks under the direct supervision of a certified athletic trainer. Site approved by the preceptor and A TR program director prior to beginning the immersion clinical experience. Required to complete a minimum of 25 hours per week of field experience. Clinical experience may extend beyond the academic semester end date and the clinical hours are a component of this course. Offered on a satisfactory-fail basis only.

A TR 570: Injury Intervention, Rehabilitation and Patient Care

(2-2) Cr. 3. F.

Prereq: A TR 515X, A TR 550X, A TR 560X and acceptance into Athletic Training program

Basic understanding of injury and sport psychology and its application to the overall health and well-being of athletic and general population clients. Psychological, social, socio-economical, and environmental factors that influence a client/patient and in their injury susceptibility, reaction, immediate care, and adherence to rehabilitation will be explored. Assessment and intervention techniques to promote and facilitate rehabilitation in a variety of professional settings and with patients from different backgrounds and social issues that may impact a patient. Overview of special populations (adolescent, female, special populations of athletes/physically active patients). Foundational behaviors of professional practice and working with other allied health care professionals in the overall health and well-being of a patient will be explored.

A TR 575: Athletic Training Organization and Administration

(3-0) Cr. 3. S.

Prereq: A TR 565X, concurrently enrolled in A TR 569X

Knowledge and skills necessary for the administration aspect of an athletic training program. Course content includes but is not limited to: PPEs, how to manage physical, human, and financial resources in the delivery of healthcare services. Discussion of patient and insurance management, working relationships with interprofessional members of the health care team, policies and procedures for guidance in the daily operation of athletic training services including EAP or other critical incidents (concussion or other brain injuries), patients in behavioral health crisis, record keeping, athletic training facility design, resume development, and administrative/leadership skills and mentoring.