

# ATHLETIC TRAINING (ATHTR)

## ATHTR 500: Theory and Application of Evidence-Based Practice

3 Credits

This course provides a foundational overview of evidence-based practice (EBP) in the health sciences, which includes an overview of the seven steps of the EBP process. Conceptual models that demystify the process of translating research into clinical practice will be presented; furthermore, common misconceptions of EBP will be explored. Students will be exposed to organizational cultures that foster a spirit of inquiry, and contemporary attitudes to identifying sources of evidence to be considered in answering a focused clinical (or researchable) question. An emphasis will be placed on developing core competencies in the gathering, and scrutiny of information to draw conclusions that are based on robust, inclusive, and meaningful evidence. Additional focus will consist of cultivating skill with implementing EBP in a manner that best fits the context of care/intervention, aligns with targeted goals, addresses priority problems as well as guides a systematic, and evaluative approach to collaborative practice change. Determinants of an EBP environment, and factors that lend to its sustainability or demise will also be discussed. Leveraging population health initiatives as a mechanism to move from silos to synergy will be highlighted given evidence to suggest an interdisciplinary paradigm to problem-solving yields improved health care processes, and patient/client-centered outcomes.

**Concurrents:** ATHTR 804 and ATHTR 805 and PHS 809

## ATHTR 501: Science and Ethics of Human Performance Optimization

3 Credits

This course provides an overview of various biobehavioral factors that underpin the enhancement of human capabilities, including, but not limited to, kinesthesia, physical fitness, and motor coordination in diverse physically active populations. Using the clinician-scientist model, students are exposed to content that augments their skills in the discovery, appraisal, and dissemination of knowledge to benefit the species. Learning activities are structured to promote theory-practice nexus in the health sciences, and the advantages for doing so will be outlined. Gaining novice to advanced beginner competence with tests and measures employed in contemporary human performance science is emphasized. This will include becoming familiar with an array of related technological apparatuses, their utility, and viability in research, and practice settings. The intersections of human performance science, ethics, and regulation are also stressed to guide conscientious and legal practice. Competency in these domains facilitates appropriate application of contemporary theory and scientific findings in patient/client management to yield efficacious performance restoration and optimization of variables such as, but not limited to, postural control, rate of force development, and aerobic endurance. A key takeaway from this course will be the importance of integrating theory, research, and experiential practice to stimulate transformative and innovative environments.

**Prerequisites:** ATHTR 500 Concurrent: ATHTR 813, ATHTR 814

## ATHTR 800: Foundations of Clinical Practice

4 Credits

This course provides a dedicated overview of athletic training using the most current Board of Certification Practice Analysis and Standards of Professional Practice as a framework for learning. Students will be exposed to regulatory determinants that govern athletic training as well as the cultural, ethical, psychosocial, and economical considerations that shape competent and compassionate health care. Factors related to maintaining contemporary expertise, meaningful professional development, and career advancement are also discussed. Emphasis is placed on fostering skill in information fluency/literacy to identify and appropriately use resources to guide safety and efficacy of services rendered. Content is structured to expand the student's knowledge base in health promotion and injury/illness prevention strategies as well as sharpen skills linked to basic evaluation and diagnosis, therapeutic interventions, and restoring or optimizing human performance.

**Concurrent:** ATHTR 801

## ATHTR 801: Principles of Acute Care and Emergency Response

4 Credits

This course provides an opportunity for students to become proficient in the knowledge and skills related to contemporary prehospital emergency medical care provided by athletic trainers. Students will develop skills to evaluate, manage, and make referral decisions for a spectrum of injuries and conditions in patients across a lifespan as part of a comprehensive medical system. Students will develop critical thinking and clinical decision-making techniques in provision of patient care.

**Concurrents:** ATHTR 800

## ATHTR 802: Anatomical Basis of Musculoskeletal Injury

4 Credits

This course uses a regional approach to study the gross anatomical structures of the human body. Emphasis is placed on the musculoskeletal system and its associated neurovascular elements. Synovial joint structure and supporting soft tissue systems will be covered in detail. The thoracic, abdominal, and pelvic cavities will also be explored. Aspects of structure and function as they relate to physical training performance and clinical correlates will be highlighted throughout the course. Experiences with dissection of human cadaveric specimens highlight spatial associations among structures and anatomical variation.

**Concurrents:** ATHTR 803

## ATHTR 803: Fundamentals of Musculoskeletal Evaluation

4 Credits

This will be the first in a series of evaluation-based courses for the Master of Athletic Training degree program, and will cover key concepts of the evaluative process. Material covered in this course will be reinforced in more detail throughout the curricular progression. Content will focus on the World Health Organization's International Classification of Functioning, Disability, and Health (ICF) as a basis for delivery, and communication of patient care. This will be the framework for integrating evaluation findings, and developing a plan of care including referral to the appropriate provider when indicated. This course will establish ethical standards of the profession that are congruent with clinical

practice, which will be consistent throughout the curriculum. While the course will center on developing foundational musculoskeletal evaluation techniques, emphasis will also be placed on the management of patients with acute conditions that are life threatening or otherwise emergent. Students will learn to perform an evaluation that formulates a diagnosis, and plan of care for patients with health conditions commonly seen in athletic training practice. This evaluation includes the following: obtaining a medical history from the patient or other individual; identifying comorbidities and patients with complex medical conditions; selecting an appropriate outcomes measurement tool; observing function (including gait, posture and tissue appearance); performing strength and range of motion testing for the upper and lower quarters and the spine, and being able to select appropriate tests for individual scenarios; determining end-feel, and somatic responses associated with special tests that selectively examine the integrity of capsuloligamentous, and musculotendinous structures; performing a neurologic screening exam including dermatomes, myotomes, deep tendon reflexes and cranial nerve testing; understanding contemporary pain theory and how to assess pain in a patient scenario; analyzing functional tasks specific to the individual, sport/activity and body part or injury. This course will also include an overview of the tissue healing cascade following injury as well as inflammatory response, swelling and dysfunction in the context of the ICF model.

#### ATHTR 804: Evaluation and Treatment of the Lower Extremities

##### 4 Credits

This course will focus on the etiology, evaluation and rehabilitation of injuries to the lower extremities typically encountered by physically active individuals. Injuries to the lower extremities from the hip to the foot will be covered. Evaluation techniques along with manual therapy and exercise interventions will be explored. Appropriate use of devices, braces and taping as they apply to rehabilitation will be discussed. Both isolated and integrated function of lower extremity joints and related tissues will be emphasized.

**Prerequisites:** ATHTR 800 and ATHTR 801 and ATHTR 802 and ATHTR 803  
**Concurrents:** ATHTR 500, and PHS 809, and ATHTR 805

#### ATHTR 805: Experiential Learning I

##### 2 Credits

This represents the initial opportunity for athletic training students to engage in the application of theory and foundational athletic training, knowledge, and skills through hands-on patient/client care experiences for 10-to-15 hours per week (150-to-225 total hours for the semester). This clinical experience increases student awareness for the role of the athletic trainer as an allied health care professional. Students become familiar with the daily operating procedures of an athletic training facility while being exposed to the culture of the profession. Students at this level are able to apply clinical skills under the supervision of preceptors. These clinical techniques consist of neuromusculoskeletal injury prevention/screening strategies, prophylactic taping/wrapping practices, and fundamentals of injury examination, acute care, and emergency response. Application of therapeutic agents is limited to those categorized as infrared (e.g. cryotherapy and superficial thermotherapy). Rehabilitation techniques applied are limited in scope to basic interventions that consist of administering range of motion and progressive resistance exercises, as well as elementary neuromuscular control techniques as prescribed by supervising preceptors. Exposure to documentation and record-keeping is also characteristic of this

experience. Patient/client populations for this level are student-athletes participating in collegiate or secondary school sports.

**Prerequisite:** ATHTR 800, ATHTR 801, ATHTR 802, ATHTR 803;  
**Concurrent:** PHS 809, ATHTR 804, ATHTR 500

#### ATHTR 806: Evaluation and Treatment of the Upper Extremities

##### 4 Credits

This course will focus on the etiology, evaluation and rehabilitation of injuries to the upper extremities typically encountered by physically active individuals. Injuries to the upper extremities from the shoulder to the hand will be covered. Examination techniques along with manual therapy and exercise interventions will be explored. Appropriate use of devices, braces and taping as they apply to rehabilitation will be discussed. Both isolated and integrated function of upper extremity joints and related tissues will be emphasized.

**Prerequisites:** ATHTR 804  
**Concurrents:** ATHTR 807, and ATHTR 808, and ATHTR 809

#### ATHTR 807: Clinical Interventions and Implementation: General Treatment Strategies

##### 4 Credits

This course will provide athletic training students will the knowledge and skills necessary to effectively function as a versatile primary care service provider. This is accomplished by exposing students to an array of diagnostic and management strategies used across a broad range of health care services for diverse patient populations. Emphasis is placed on fostering critical thinking ability for guiding proper selection, and efficacious application of interventions with consideration to the unique parameters associated with a patient case and various practice settings. The breadth of knowledge acquired will prepare athletic trainers to function in a spectrum of clinical environments that span from sports medicine to ambulatory care.

**Prerequisite:** ATHTR 500 and ATHTR 801; **Concurrent:** ATHTR 806, ATHTR 808, ATHTR 809

#### ATHTR 808: Therapeutic Interventions: Approaches and Techniques

##### 4 Credits

This course provides the theoretical underpinnings that drive clinical applications of therapeutic interventions in health care and human performance restoration practice settings. Bridging the gap between concepts and applications will be a cornerstone of this course as a means to promote knowledge translation that lends to efficacious use in the care of patient/client populations. An evidence-based practice approach is emphasized to account for and effectively balance the influence of scientific data, clinician expertise, and patient/client values in the critical decision-making process, which adheres to ethical standards, and recognizes financial implications. In this structure, students will be presented with problem-based learning activities aimed at developing critical thinking abilities when operating in diverse practice settings. The basis of such activities will serve to nurture the efficient identification of viable solutions, and their prioritization given available resources, and constraints associated with various simulated clinical scenarios. Students will be exposed to a wide array of contemporary interventions with a focus on implementation in the management of acute, persistent, and chronic neuromusculoskeletal pathology as well as human performance restoration for the physically active. Acquisition of

knowledge will be complemented with activities that build clinical skills that foster practitioner awareness for proper use, which promotes sound habits in operational procedures.

#### ATHTR 809: Experiential Learning II

3 Credits

This reflects the second clinical education experience in the professional degree program. Students at this level build on the theory that underpins the psychomotor skills they were exposed to in preceding coursework. This is accomplished through patient/client encounters, and applicable simulation learning activities that range from 15-to-20. This reflects the second clinical education experience in the professional degree program. Students at this level build on the theory that underpins the psychomotor skills they were exposed to in preceding coursework. This is accomplished through patient/client encounters, and applicable simulation learning activities that range from 15-to-20 hours per week (225-to-300 total hours for the semester). In addition to the supervised application of clinical techniques in real-world practice or simulated settings, students are provided with opportunities to advance their skills in the evaluation and treatment of neuromusculoskeletal injuries to the lower extremity and lumbopelvic spine. In this capacity, students begin to link evidence-based practice principles with the selection of relevant health care and human performance restoration/optimization interventions. Patient/client populations for this level are student-athletes participating in collegiate or secondary school sports. hours per week (225-to-300 total hours for the semester). In addition to the supervised application of clinical techniques in real-world practice or simulated settings, students are provided with opportunities to advance their skills in the evaluation and treatment of neuromusculoskeletal injuries to the lower extremity and lumbopelvic spine. In this capacity, students begin to link evidence-based practice principles with the selection of relevant health care and human performance restoration/optimization interventions. Patient/client populations for this level are student-athletes participating in collegiate or secondary school sports.

**Prerequisite:** ATHTR 500 and ATHTR 804 and ATHTR 805; Concurrent: ATHTR 806, ATHTR 807, ATHTR 808

#### ATHTR 810: Evaluation and Treatment of the Spine and Thoracic Cage

4 Credits

This course will focus on the etiology, evaluation and rehabilitation of injuries to the pelvic girdle, spine, thoracic cage and head typically encountered by physically active individuals. Evaluation techniques along with manual therapy and exercise interventions will be explored. Both isolated and integrated function of pelvic girdle, spine and thoracic cage and related tissues will be emphasized.

#### ATHTR 811: Experiential Learning III

2 Credits

This reflects the third clinical education experience in the professional degree program. Students at this level build on the theory that underpins the psychomotor skills they were exposed to in preceding coursework. This is accomplished through patient/client encounters and applicable simulation learning activities that range from 20-to-30 hours per week (120-to-180 total hours for a six-week summer session). In addition to the supervised application of clinical techniques in real-world practice or simulated settings, students are provided with opportunities to advance their skills in the evaluation and treatment of neuromusculoskeletal

injuries to the upper extremity and implementation of interventions for a broad spectrum of conditions encountered in the daily operation of a comprehensive sports health care enterprise. In this capacity, students enhance their proficiency in using evidence-based practice to guide selection of relevant health care and human performance restoration/optimization practices. Patient/client populations for this level are student-athletes participating in collegiate or secondary school sports. This course also provides students with exposure to the primary care of non-orthopaedic conditions and in the supervised application of practices with non-sport populations. Organized inter-professional education activities are designed to expand the scope of student awareness for criticality of interdisciplinary collaboration to prevent errors and improve patient experiences that yield efficient clinical outcomes.

**Prerequisite:** ATHTR 806 and ATHTR 807 and ATHTR 808 and ATHTR 809; Concurrent: NURS 802 and NURS 802A

#### ATHTR 812: Elective Clerkship

1-6 Credits/Maximum of 6

This elective course offers students a broad array of potential clerkships that foster growth of professional knowledge, skills, attitude, and habits through direct patient/client care experiences, pedagogical, and/or research training opportunities. The engaged learning experiences that students may participate in are many and diverse. Students are assigned to a faculty member who provides direction in shaping objectives of the clerkship. Faculty will also be responsible for organizing individualized learning activities that contribute to the student achieving their identified goals for the experience. For clerkships that entail patient/client care, students will be assigned to a preceptor who supervises related duties. Students may also pursue pedagogical or research training opportunities to prepare them for a potential career as a clinician-educator or clinician-scientist through this clerkship. The course provides opportunities to augment critical thinking skills via deliberate active learning exercises, and hands-on activities. The role of the elective is to provide experiences that enrich and expand knowledge to help prepare students for choosing and succeeding in the professional practice setting or advanced training program of their choice.

**Prerequisite:** ATHTR 809

#### ATHTR 813: Administrative and Professional Aspects of Health Care

3 Credits

This course is designed to provide students with professional knowledge of the administrative aspects of delivering athletic training services in healthcare systems. General topics include theory and application of management strategies, healthcare policies and procedures, law and ethics, and leadership evaluation and assessment.

**Concurrents:** ATHTR 501, ATHTR 814

#### ATHTR 814: Experiential Learning IV

6 Credits

This represents the fourth clinical education experience in the professional degree program. Students at this level are challenged to progress their professional knowledge and skills through graduated supervised clerkship activities that allow for autonomous experiences needed to prepare them to make clinical decisions. In order to maximize such opportunities through patient/client interactions, students are exposed to learning exercises that are carefully structured to elevate their

competence from novice to advanced beginner. Along with connecting theory to practice across a spectrum of clinical conditions, students are presented with activities that accentuate biomedical and ethical considerations in human performance and optimization interventions. Corresponding links to health care administration and professional responsibility are also emphasized to ensure fluency/literacy in this practice domain.

**Prerequisite:** ATHTR 810 and NURS 802 and NURS 802A and ATHTR 811;  
**Concurrent:** ATHTR 501 and ATHTR 813

ATHTR 815: Seminars in Sports Health Care

3 Credits

This course is designed to provide students with knowledge that lends to their professional development through interactions with an array of personnel who operate in the broad spectrum of sports health care. Content spans domains and tasks linked to the most current edition of the practice analysis established by the Board of Certification for the Athletic Trainer. Examples include, but are not limited to: health conditions and occupational risks in novel groups, telehealth, and mass causality incident response. Potential benefits, limitations, and harms of clinical guidelines will also be explored. The significance of meaningful continuing education, lifelong learning, and developing leadership attributes to preserve contemporary expertise will be emphasized. Scholarship is structured to cultivate appreciation for diverse disciplines that contribute to evolving the art and science of the craft. The course will reinforce the criticality of integrating theory, research, and experiential practice to stimulate transformative and innovative environments in health care and human performance optimization industries.

**Concurrent:** ATHTR 816 and ATHTR 817

ATHTR 816: Experiential Learning V

6 Credits

This final experiential learning course facilitates the graduating athletic training student's entry into the profession. Active learning centers on the ever-changing health care delivery system, human performance improvement industry, and the athletic trainer's evolving roles, responsibilities, and scope of practice within them. Legal, ethical, and socio-political considerations of the profession are also explored. Moreover, accountability for integrating sound quantitative evidence, and experience into clinical practice is stressed. Guidance in completing applications for the national board of certification exam and state credentialing to legally practice athletic training is provided.

**Prerequisite:** ATHTR 814; **Concurrent:** ATHTR 815 and ATHTR 817

ATHTR 817: Creative Knowledge Translation

3 Credits

This course is designed to serve as a mechanism by which students engage in scholarly work through a series of guided, and self-directed knowledge translation activities that involve the integration of skills acquired throughout the academic plan. Project-based learning is tailored to yield a culminating experience in the professional degree program that prepares students for transition to practice. The outcome of these knowledge translation activities manifests through the completion of an independent project that demonstrates a student's aptitude for generating solutions to real-world challenges or problems in clinical, academic or administrative affairs linked to the profession. Projects

may take various creative forms and are developed to be personally meaningful. Examples of projects may include, but are not limited to, a systematic review, meta-analysis, critically-appraised topic, case study or series, and original research. The course also serves to provide interactions that help shape a student's projected career trajectory as it pertains to post-graduate practice settings or pursuing advanced training programs.

**Prerequisites:** ATHTR 501, ATHTR 813, ATHTR 814 **Concurrent:** ATHTR 815, ATHTR 816

ATHTR 897: Special Topics

1-9 Credits/Maximum of 9

Formal course given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.