

# MASTER OF SCIENCE (M.S.), MAJOR IN ATHLETIC TRAINING (NON-THESIS OPTION)

## Degree Program

The Master of Science (M.S.) degree with a major in Athletic Training is designed as an advanced post-professional athletic training curriculum for the board-certified athletic trainer. The graduate student in athletic training may choose from either the thesis or the non-thesis option.

As background prerequisites, an athletic training major is expected to have graduated from an academic institution that is accredited by the Commission on Accreditation of Athletic Training Education (CAATE) or presently be certified through the Board of Certification, Inc.

This program discontinued admissions as of the Spring 2020 term and beyond.

## Degree Requirements

The Master of Science (M.S.) degree with a major in Athletic Training requires 37 semester credit hours.

## Course Requirements

Code	Title	Hours
<b>Required Courses</b>		
AT 5308	Therapeutic Exercise & Rehabilitation	3
AT 5310	Proprioception and Neuromuscular Control in Rehabilitation	3
AT 5311	Biomechanics of Musculoskeletal Injury	3
AT 5312	Evidence-Based Practice in Sports Medicine	3
AT 5318	Therapeutic Evaluation and Intervention	3
AT 5347	Independent Study in Athletic Training	3
ESS 5346	Research Methods in Health and Human Performance	3
ESS 5356	Applied Statistics in Health and Human Performance	3
PT 5400	Human Structure and Function	4
<b>Prescribed Elective</b>		
Choose 3 hours from the following:		3
AT 5307	Bioenergetics of Exercise & Rehabilitation	
ESS 5306	Advanced Exercise Physiology	
ESS 5307	Advanced Resistance Training and Conditioning	
ESS 5311	Applied Neuromuscular and Skeletal Muscle Physiology	
<b>Electives</b>		
Choose 6 hours from the following:		6
ESS 5304	Motor Learning and Performance	
ESS 5305	Advanced Fitness Assessment and Exercise Prescription	
ESS 5309	Biomechanics for Exercise & Sports Science	
ESS 5310	Cardiopulmonary Exercise Physiology	

ESS 5329	Motor Learning	
NUTR 5364	The Science of Nutrition and Exercise	
Total Hours		37

## Comprehensive Examination Requirements

All candidates for graduate degrees must pass one or more comprehensive examinations.

Master's level courses in Health and Human Performance: AT

## Courses Offered

### Athletic Training (AT)

#### AT 5101. Graduate Assistant Development.

This course is required of all graduate assistants and provides regular in-service and planned periodic evaluations of instructional responsibilities. Graduate assistants are required to register for this course in the spring semester of their employment. This course does not earn graduate degree credit.

**1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.**

**Course Attribute(s):** Graduate Assistantship|Exclude from Graduate GPA  
**Grade Mode:** Leveling/Assistantships

#### AT 5191. Capstone I.

This course is a supervised project to analyze outcomes in a defined area of clinical practice. The course includes patient outcomes data collection in a practice-based research environment. Completion of full research sequence is required for graduation.

**1 Credit Hour. 1 Lecture Contact Hour. 2 Lab Contact Hours.**

**Grade Mode:** Standard Letter

#### AT 5192. Capstone II.

This course is a continuation of the research sequence that culminates in a supervised project to analyze outcomes in a defined area of clinical practice. The course includes completion of data collection and analysis for an oral presentation and final paper and poster. Completion of this last course is required Prerequisite: AT 5191.

**1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

#### AT 5199B. Thesis.

This course represents a student's continuing thesis enrollments. The student continues to enroll in this course until the thesis is submitted for binding.

**1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.**

**Grade Mode:** Credit/No Credit

#### AT 5201. Graduate Assistant Development.

This course is required of all graduate assistants and provides in-service and planned periodic evaluations of instructional responsibilities. Graduate assistants are required to register for this course in the fall semester of their employment. This course does not earn graduate degree credit.

**2 Credit Hours. 2 Lecture Contact Hours. 0 Lab Contact Hours.**

**Course Attribute(s):** Graduate Assistantship|Exclude from Graduate GPA  
**Grade Mode:** Leveling/Assistantships

**AT 5230. Clinical Experience I.**

This course will integrate topics in athletic injury evaluation, management and intervention into an immersive clinical education experience designed to assess professional behaviors, cognitive knowledge, psychomotor skills and proficiency-based case simulations. The course incorporates didactic and clinical education at an assigned clinical site under the supervision of a clinical instructor. Prerequisite: AT 5230.

**2 Credit Hours. 0 Lecture Contact Hours. 20 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5231. Clinical Experience II.**

This course will integrate topics in athletic injury evaluation, management and intervention into an immersive clinical education experience designed to assess professional behaviors, cognitive knowledge, psychomotor skills and proficiency-based case simulations. The course incorporates didactic and clinical education at an assigned clinical site under the supervision of a clinical instructor. Prerequisite: AT 5230.

**2 Credit Hours. 0 Lecture Contact Hours. 20 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5232. Clinical Experience III.**

This course will integrate topics in athletic injury evaluation, management and intervention into an immersive clinical education experience designed to assess professional behaviors, cognitive knowledge, psychomotor skills and proficiency-based case simulations. The course incorporates didactic and clinical education at an assigned clinical site under the supervision of a clinical instructor. Prerequisite: AT 5230; AT 5231.

**2 Credit Hours. 0 Lecture Contact Hours. 20 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5299B. Thesis.**

This course represents a student's continuing thesis enrollments. The student continues to enroll in this course until the thesis is submitted for binding.

**2 Credit Hours. 2 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Credit/No Credit

**AT 5302. Special Topics in Athletic Training.**

This course is designed to educate students in the scientific process and develop an in-depth understanding of the research process in Athletic Training.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5303. Seminar in Athletic Training.**

Current trends in athletic and physical education concerning the care and prevention of injuries with special emphasis on therapeutic and rehabilitation techniques. Taping and bandaging will be practiced in a laboratory situation.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5307. Bioenergetics of Exercise and Rehabilitation.**

This course is designed to provide both a theoretical and clinical basis for the use of therapeutic exercise in physiological basis of muscular, respiratory, cardiovascular, and nervous systems in the rehabilitation of all athletic injuries. Must be admitted to the MS in Athletic Training Program or instructor approval required.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5308. Therapeutic Exercise and Rehabilitation.**

This course is designed to provide both a theoretical and clinical basis for the use of therapeutic exercise in the rehabilitation setting, as well as to impart knowledge pertaining to the physiological effects, indications, contraindications and applications of therapeutic exercise in the rehabilitation of all athletic injuries. Must be admitted to the M.S. in Athletic Training Program.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5310. Proprioception and Neuromuscular Control in Rehabilitation.**

This course provides for an advanced study of the concepts, theories, and current research related to proprioception, postural stability, and neuromuscular control as applied to the prevention, diagnosis, and clinical management of sport-related musculoskeletal injuries and concussions. Must be admitted to the M.S. in Athletic Training Program or instructor approval required.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5311. Biomechanics of Musculoskeletal Injury.**

This course focuses on the application of biomechanical principles to the pathoetiology, diagnosis, and physiological capacity for healing of injuries to bone, ligament, tendon, cartilage, and other human tissues, with an emphasis on current injury research. Must be admitted to the M.S. in Athletic Training Program or instructor approval required.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5312. Evidence-Based Practice in Sports Medicine.**

This course is designed to provide students with advanced study in the elements of evidence-based practice in sports medicine with focus on the role of accessing, retrieving, and critically appraising evidence to answer clinical questions in patient care. Must be admitted to the M.S. in Athletic Training Program or instructor approval required. Prerequisite: ESS 5346 with a grade of "C" or better.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5318. Therapeutic Evaluation and Intervention.**

This course explores the scientific bases of therapeutic musculoskeletal exercise and neuromuscular evaluative techniques in the rehabilitation process. Must be admitted to the M.S. in Athletic Training Program.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5320. General Medical Conditions Assessment and Care.**

This course will enable the student to recognize, evaluate, differentiate and manage common systemic and traumatic conditions and diseases.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**  
**Grade Mode:** Standard Letter

**AT 5333. Internship in Athletic Training.**

This 400-hour internship provides students with professionally related experience. Students may work with diverse clinical populations in varying athletic training settings. Internship is approved and supervised by Program Coordinator or assigned faculty. Prerequisite: Departmental approval.

**3 Credit Hours. 0 Lecture Contact Hours. 40 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5334. Clinical Experience IV.**

This course will integrate topics in athletic injury evaluation, management and intervention into an immersive clinical education experience designed to assess professional behaviors, cognitive knowledge, psychomotor skills and proficiency-based case simulations. The course incorporates didactic and clinical education at an assigned clinical site under the supervision of a clinical instructor. Prerequisite: AT 5230;

AT 5231; AT 5232; AT 5333.

**3 Credit Hours. 0 Lecture Contact Hours. 30 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5335. Clinical Experience V.**

This course will integrate topics in athletic injury evaluation, management and intervention into an immersive clinical education experience designed to assess professional behaviors, cognitive knowledge, psychomotor skills and proficiency-based case simulations. The course incorporates didactic and clinical education at an assigned clinical site under the supervision of a clinical instructor. Prerequisite: AT 5230;

AT 5231; AT 5232; AT 5333; AT 5334.

**3 Credit Hours. 0 Lecture Contact Hours. 30 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5340. Research Methods and Evidence Based Practice in Athletic Training.**

This course is designed to provide the student with an understanding of the statistical terminology when reading and appraising research studies in order to use evidence to inform clinical practice.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5341. Pathopharmacology.**

This course will examine the physiological responses and progression of injuries, illnesses, and diseases to the physically active individual. Additionally, this course will provide instruction in the principles and issues of the physiological and psychological response to the pharmacological use and/or abuse of substances. Prerequisite: AT 5320.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5342. Administration and Leadership in Athletic Training.**

This course will evaluate administrative aspects of an athletic training program management such as: risk management, medical record keeping, facilities, third-party reimbursement, health informatics and other current professional issues.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5343. Interdisciplinary Approach to Athletic Training.**

This course will examine the practice and educational implications of effective and efficient interprofessional teamwork and collaboration in patient care.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5344. Advanced Clinical Decision Making.**

This course provides students various settings to explore aspects of patient evaluation, intervention and outcomes in a simulated learning environment. Students will identify issues in patient care including physical and psychosocial characteristics. Students will apply clinical decision-making skills learned in all courses leading up to this final semester class.

**3 Credit Hours. 0 Lecture Contact Hours. 3 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5347. Independent Study in Athletic Training.**

This course may be taken by a student who desires to work on a research problem or investigation in Athletic Training. The student gathers and analyzes pertinent data and submits a report of the results of the research. Repeatable once for credit. Prerequisite: ESS 5346 with a grade of "C" or better.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5399A. Thesis.**

This course represents a student's initial thesis enrollment. No thesis credit is awarded until student has completed the thesis in AT 5399B. Graded on a credit (CR), progress (PR), no credit (F) basis.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Credit/No Credit

**AT 5399B. Thesis.**

This course represents a student's continuing thesis enrollment. The student continues to enroll in this course until the thesis is submitted for binding.

**3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Credit/No Credit

**AT 5400. Gross Applied Anatomy.**

This course will examine the structure and function of the human body with emphasis on the skeletal and muscular systems. The course focuses on anatomy and physiology of systems of special interest to students preparing to become athletic trainers. Laboratory study of the human cadaver is included.

**4 Credit Hours. 3 Lecture Contact Hours. 4 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5401. Musculoskeletal Assessment of Upper and Lower Extremities.**

This course will examine the injury and illness signs and symptoms as well as specific tests and skills used in the clinical evaluation and assessment involving the upper and lower extremities. Prerequisite: AT 5400.

**4 Credit Hours. 3 Lecture Contact Hours. 4 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5402. Musculoskeletal Assessment of Head/Face/Spine and Neurological Systems.**

This course will enable the student to critically analyze the specific tests and skills used in the clinical evaluation and assessment involving the head, spine and neurological systems. Prerequisite: AT 5400; AT 5401.

**4 Credit Hours. 3 Lecture Contact Hours. 4 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5413. Therapeutic Interventions I.**

This course is designed to provide both a theoretical and clinical basis for the standardized systems approach to therapeutic modality applications to treat patients with musculoskeletal conditions and injury. Prerequisite: AT 5400.

**4 Credit Hours. 3 Lecture Contact Hours. 4 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5414. Therapeutic Interventions II.**

This course is designed to examine both a theoretical and clinical basis for the standardized systems approach to therapeutic exercise applications to treat patients with musculoskeletal conditions and injury. Prerequisite: AT 5400; AT 5413.

**4 Credit Hours. 3 Lecture Contact Hours. 4 Lab Contact Hours.**

**Grade Mode:** Standard Letter

**AT 5599B. Thesis.**

This course represents a student's continuing thesis enrollments. The student continues to enroll in this course until the thesis is submitted for binding.

**5 Credit Hours. 5 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Credit/No Credit

**AT 5999B. Thesis.**

This course represents a student's continuing thesis enrollments. The student continues to enroll in this course until the thesis is submitted for binding.

**9 Credit Hours. 9 Lecture Contact Hours. 0 Lab Contact Hours.**

**Grade Mode:** Credit/No Credit