ATHLETIC TRAINING

This major prepares students for a career as an athletic trainer in a variety of settings such as high school, college and professional settings. There are additional settings in sports medicine clinics, hospitals, military, industry, and in performing arts. The accredited program will prepare students for the Board of Certification exam upon graduation. Admission to the athletic training program is competitive and based on available departmental resources. Admission procedures and technical standards can be found at http://www.kin.hs.iastate.edu/programs/athletic-training/#program-information-and-requirements.

Iowa State University’s Athletic Training Program has transitioned to a Professional Master’s degree program. Undergraduate students will be enrolled in the 3+2 athletic training program with a 3-year Pre-Athletic Training undergraduate curriculum and a 2-year Masters of Athletic Training program in the Department of Kinesiology. Students with a B.S. or B.A. degree may apply directly to the Master’s program with completion of prerequisite coursework, program requirements, and observation hours. For more information, please contact the program director, Dr. Mary Meier, at mary@iastate.edu.

Mission

Athletic training is the art and science of the prevention, recognition, care, and rehabilitation of athletic injuries. It includes the organization and administration of athletic training education programs, as well as the education and counseling physically active individuals and athletes. The Iowa State University athletic training program provides high quality education striving to instill intellectual curiosity, evidence-based knowledge, and clinical skills essential for individual development. The athletic training program enrolls academically qualified students who represent diverse socio-economic levels, ethnic heritage and who provide a gender balance. The program faculty and clinical preceptors strive to prepare athletic training students to be productive and responsible citizens of the world and to foster affective, caring individuals to promote the profession of athletic training.

The Athletic Training faculty and clinical preceptors continually update educational curriculum to keep athletic training students current with field knowledge and to ensure the best possible undergraduate and graduate education in both the didactic and clinical settings.

Goals

1. We prepare athletic training students for the BOC Certification Exam.
2. We produce high quality athletic trainers prepared for employment in educational, clinical, and professional settings.
3. We promote professional and ethical conduct at all times.
4. We provide athletic training students equal opportunity to develop their skills both in the classroom and in the clinical settings.
5. We continually update the curricular offerings to provide the athletic training student current evidence based knowledge in the profession.
6. We provide high quality instruction in the classroom and clinical experiences.
7. We assist the athletic training student in gaining employment.
8. We promote the concept of establishing professional contacts by attending professional and educational meetings.
9. We foster an appreciation of athletic training as a component of sports medicine.
10. We foster the affective, caring side of athletic training.

Undergraduate Study

The Department of Kinesiology offers a Bachelor of Science degree in Kinesiology & Health. The B.S. in Athletic Training degree is only offered upon completion of the 3+2 B.S./M.A.TR. Athletic Training program.

The undergraduate curriculum major/option is comprised of three components: general education, required departmental courses and the component courses. The intent of the general education component is to promote intellectual and personal growth and to prepare students for success in the basic, advanced and major/option components. Required courses provide an introduction to the field and fundamental principles of physical activity, fitness, health and disease.

B.S./M.A.TR. degree in Athletic Training

Certified Athletic Trainers are allied medical health care professionals who specialize in the prevention, assessment, diagnosis, emergency care, and treatment and rehabilitation of injuries. To gain certification as an athletic trainer, candidates must graduate from a CAATE accredited athletic training education program and successfully pass the Board of Certification (BOC) examination. In addition, most states have licensure requirements to practice athletic training. The ISU Athletic Training education program has been CAATE accredited since 2001 and has transitioned to a Professional Master’s program. The Athletic Training program at Iowa State University includes various athletic training clinical rotations including high school settings, physical therapy and hospital clinics, college and university settings, surgical and emergency room observations, and immersive clinical opportunities in orthopedic and non-orthopedic settings.

Curriculum in Athletic Training

This major prepares students for a career as an athletic trainer in high school, college, professional sport settings. Additional settings include sports medicine clinics, hospitals, military, industry, and with the performing arts. The 3+2 program prepares students for the Board of Certification exam upon graduation from the Master’s program. Admission to the Athletic Training Master’s degree program is competitive. Admission requirements for the Professional Master’s in Athletic Training program can be found at http://www.kin.hs.iastate.edu/
Curriculum in Athletic Training

Communication Proficiency
In order to meet graduation requirements, all students must earn an average of C (2.0) or better in ENGL 150 and ENGL 250, with neither grade being lower than a C-. Students not meeting this condition must earn a C or better in an advanced writing course:

- ENGL 302 Business Communication
- or ENGL 314 Technical Communication
- LIB 160 Information Literacy
- SP CM 212 Fundamentals of Public Speaking

U.S. Diversity and International Perspectives
In order to meet graduation requirements, all students must complete 3 cr. of course work in U.S. Diversity and 3 cr. in International Perspectives. See university approved list.

General Education

Physical and Life Sciences:
- BIOL 255 Fundamentals of Human Anatomy
- BIOL 255L Fundamentals of Human Anatomy Laboratory
- BIOL 256 Fundamentals of Human Physiology
- BIOL 256L Fundamentals of Human Physiology Laboratory

Additional major-specific requirements are:
- CHEM 163 College Chemistry
- or CHEM 177 General Chemistry I
- CHEM 163L Laboratory in College Chemistry
- or CHEM 177L Laboratory in General Chemistry I
- FS HN 167 Introduction to Human Nutrition
- PHYS 111 General Physics
- or PHYS 115 Physics for the Life Sciences

Mathematics and Statistics:
From the following:
- MATH 140 College Algebra
  - or MATH 141 Preparation for Calculus
  - or MATH 141 Applied Trigonometry
  - or MATH 161 Calculus I
- STAT 101 Principles of Statistics
- or STAT 104 Introduction to Statistics

Social Sciences: 9 cr. min required
- PSYCH 101 Introduction to Psychology
- or PSYCH 230 Developmental Psychology
- SOC 134 Introduction to Sociology

Humanities: 6 cr. min required
Choose from department approved list.

Communications:
- ENGL 150 Critical Thinking and Communication
- ENGL 250 Written, Oral, Visual, and Electronic Composition
- LIB 160 Information Literacy
- SP CM 212 Fundamentals of Public Speaking
- One of the following
  - ENGL 302 Business Communication
  - or ENGL 314 Technical Communication
  - or SP CM 312 Business and Professional Speaking

Program requirements:
The following courses are required in all majors and options:
- H S 110 Personal and Consumer Health
- H S 350 Human Diseases (*)
- KIN 252 Introduction to the Discipline of Kinesiology
- KIN 253 Orientation and Learning Community in Kinesiology and Health
- KIN 258 Principles of Physical Fitness and Conditioning
- KIN 358 Exercise Physiology (*)
- KIN 359 Exercise Physiology Lab

* A grade of C- or better is required.

Courses for Athletic Training Major

Option Requirements:
- A TR 219 Anatomy Clinical Practicum
- A TR 220 Basic Athletic Training
- A TR 221 Pre-Athletic Training Clinical Practicum
- A TR 223 Preseason Clinical Experience Practicum
- KIN 355 Biomechanics (*)
- KIN 365 Sport Psychology (*)
- or KIN 366 Exercise Psychology
- KIN 480 Functional Anatomy
- Electives

* A grade of C- or better is required.

Athletic Training B.S./Masters (B.S./M.A.T.R.) Degree
Sample Five-Year Plan
First Year

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Optional experiences: A TR 549A and A TR 549B Athletic Training
Clinical Education Study Abroad (3 credits).

*: Fall Only Course

**: Spring Only Course
Planned course offerings may change, and students need to check the online Schedule of Classes each term to confirm course offerings: https://classes.iastate.edu/.

Humanities, Social Science, International Perspectives, and US Diversity courses: https://www.kin.hs.iastate.edu/find-majors/general-ed-requirements/

This sequence is only an example.

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. S.
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 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 228: Basic Orthopedic Assessment and Evaluation Principles
Cr. 2. 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 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.

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
(3-0) Cr. 3. SS.
Prereq: Acceptance into Athletic Training program
Overview of medical emergencies and other critical incidents that may occur. Evaluate and manage patients with acute conditions including triaging conditions and internal/external hemorrhage. Cardiac, respiratory, and cervical spine compromise. Conditions related to environment, fractures, dislocations, and wound care and closure. 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.

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. 1. 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.

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
(3-0) Cr. 3. S.
Prereq: A TR 510, A TR 521, acceptance into Athletic Training program
Proper methods of musculoskeletal evaluation of the upper extremity including spine. Evaluate and manage patient(s) with acute conditions. Obtaining a medical history, methods of documentation, assessment of function, selection and use of special tests and measures assessing patient’s clinical presentation, 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 restrictions. Review of concussion evaluation, protocols, and return to play following a head injury/concussion.

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. 3. 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 A - An Introduction to Athletic Training  
(1-0) Cr. 1. SS.  
Prereq: Acceptance into Athletic Training program  
Introduction to athletic training program and an overview of policies and procedures. History of athletic training, professional domains, electronic health records, legal and administrative topics, ethics, confidentiality, and professionalism.

A TR 521: Athletic Training Seminar B - Diagnostic Imaging and Lab Principles  
(1-0) Cr. 1. F.  
Prereq: A TR 502, A TR 520, acceptance into Athletic Training program  
Procedures on obtaining via the appropriate physician and medical staff the necessary and appropriate diagnostic tests or labs to facilitate diagnosis, referral, and treatment planning. Using evidence to inform practice and utilize systems of quality assurance and improvement to enhance patient care. Communicate and collaborate with other medical interprofessionals including radiologists, x-ray technicians, medical laboratory scientists and clinical lab technicians for best patient care and outcomes.

A TR 522: Athletic Training Seminar C - Interprofessional Collaboration and Leadership  
(1-0) Cr. 1. S.  
Prereq: A TR 510, 521, acceptance into Athletic Training program  
Explore other allied health care 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 D - Advanced Topics in Athletic Training  
(1-0) Cr. 1. SS.  
Prereq: A TR 522, A TR 545, acceptance into Athletic Training program  
Advanced clinical experiences and specialty training and exposure to cupping, ART, Graston, or ASTM technique for soft tissue mobilization and dry needling. Case study analysis utilizing previous coursework including individual self-assessment of clinical skills. Extra course fee may be needed to cover the cost of training.

A TR 524: Athletic Training Seminar E - Professional Development in Athletic Training  
(2-0) Cr. 1. S.  
Prereq: A TR 515, A TR 550, 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, continuing education, and self-assessment. Utilizes a case study approach 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. 3. 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. 1. 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: 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 515, A TR 550, A TR 560 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: Concurrently enrolled in A TR 569.
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.

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. S.
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 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 228: Basic Orthopedic Assessment and Evaluation Principles
Cr. 2. 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 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.

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
(3-0) Cr. 3. SS.
Prereq: Acceptance into Athletic Training program
Overview of medical emergencies and other critical incidents that may
occur. Evaluate and manage patients with acute conditions including
triaging conditions and internal/external hemorrhage. Cardiac, respiratory,
and cervical spine compromise. Conditions related to environment,
fractures, dislocations, and wound care and closure. 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.

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 patient’s 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. 1. 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
(3-0) Cr. 3. S.
Prereq: A TR 510, A TR 521, acceptance into Athletic Training program
Proper methods of musculoskeletal evaluation of the upper extremity including spine. Evaluate and manage patient(s) with acute conditions. Obtaining a medical history, methods of documentation, assessment of function, selection and use of special tests and measures assessing patient's clinical presentation, 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 restrictions. Review of concussion evaluation, protocols, and return to play following a head injury/concussion.

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. 3. 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 A - An Introduction to Athletic Training
(1-0) Cr. 1. SS.
Prereq: Acceptance into Athletic Training program
Introduction to athletic training program and an overview of policies and procedures. History of athletic training, professional domains, electronic health records, legal and administrative topics, ethics, confidentiality, and professionalism.

A TR 521: Athletic Training Seminar B - Diagnostic Imaging and Lab Principles
(1-0) Cr. 1. F.
Prereq: A TR 502, A TR 520, acceptance into Athletic Training program
Procedures on obtaining via the appropriate physician and medical staff the necessary and appropriate diagnostic tests or labs to facilitate diagnosis, referral, and treatment planning. Using evidence to inform practice and utilize systems of quality assurance and improvement to enhance patient care. Communicate and collaborate with other medical interprofessionals including radiologists, x-ray technicians, medical laboratory scientists and clinical lab technicians for best patient care and outcomes.

A TR 522: Athletic Training Seminar C - Interprofessional Collaboration and Leadership
(1-0) Cr. 1. S.
Prereq: A TR 510, 521, acceptance into Athletic Training program
Explore other allied health care 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 D - Advanced Topics in Athletic Training
(1-0) Cr. 1. SS.
Prereq: A TR 522, A TR 545, acceptance into Athletic Training program
Advanced clinical experiences and specialty training and exposure to cupping, ART, Graston, or ASTM technique for soft tissue mobilization and dry needling. Case study analysis utilizing previous coursework including individual self-assessment of clinical skills. Extra course fee may be needed to cover the cost of training.

A TR 524: Athletic Training Seminar E - Professional Development in Athletic Training
(2-0) Cr. 1. S.
Prereq: A TR 515, A TR 550, 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, continuing education, and self-assessment. Utilizes a case study approach 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. 3. 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. 1. 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 of 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: 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 515, A TR 550, A TR 560 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: Concurrently enrolled in A TR 569.
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.