

ATHLETIC TRAINING (ATTR)

ATTR 101 - Principles of Athletic Training 3 Credits

Prerequisite(s): Athletic Training majors only. The first course in the Bachelor of Science in Athletic Training. Students in this course will learn introductory theory and skills in the prevention, recognition and care of athletic injuries. In addition, the course will introduce students to concepts in emergency planning, research and writing in the field of athletic training and basic skills in injury care and patient transfer. 2 hours lecture, 2 hours lab.

ATTR 150 - Emergency Care in Athletic Training 3 Credits

Prerequisite(s): Athletic Training majors only. The study of theory, clinical, competencies and proficiencies necessary to provide emergency care to athletes and physically active individuals. Students who successfully demonstrate competence on the learning outcomes will be eligible for certification in CPR for the Professional Rescuer, Automated External Defibrillation and First Aid. Students will also be instructed in and assessed on Athletic Training competencies and proficiencies related to emergency care for injuries in the athletic training setting. This is a required course for students in the Bachelor of Science in Athletic Training. 2 hours lecture, 2 hours lab.

ATTR 199 - Orientation to Athletic Training 1 Credit

Prerequisite(s): Athletic Training majors only. This course will serve as an introduction to the university experience with emphasis on an introduction to the Athletic Training profession. The goal of this course is to provide a forum for the development of strategies, skills and techniques that promote success in University life and in an allied health degree program. Topics will include MSU expectations, critical thinking, study skills, note-taking, course selection, diversity, wellness, and an understanding of the breadth of athletic training and sports medicine in the schools, community, medical and allied health settings. Students will develop skills in oral presentation, general and discipline-specific written expression, and class participation. Meets Gen Ed - New Student Seminar. 1 hour lecture.

ATTR 201 - Pathology of Illness and Injury 3 Credits

Prerequisite(s): ATTR 101 and BIOL 244; Athletic Training majors only. Corequisite(s): ATTR 251. This course provides students with a foundation in understanding the pathology, characteristics, signs, symptoms and progression of injuries and illness that occur in individuals who participate in strenuous physical activity. Students in this course will integrate concepts in anatomy and physiology, injury prevention, and basic concepts in care and rehabilitation of injury and illness as they begin to develop a comprehensive understanding of the processes of injury and illness in the body. This course is a requirement for the B.S. in Athletic Training and is designed for students in that major. 2 hours lecture, 1.5 hours lab.

ATTR 211 - Assessment of Athletic Injuries I - Lower Body 3 Credits

Prerequisite(s): ATTR 201, Athletic Training majors only. Corequisite(s): ATTR 252. The study of theory and techniques required by Athletic Trainers and sports medicine professionals in the evaluation of injuries and conditions to the lower body in physically active individuals. Application of techniques for the assessment of injuries and medical conditions in athletes and physically active individuals will be integrated with laboratory and clinical education experiences. Meets the University Writing Requirement for majors in Athletic Training. 2 hours lecture, 2 hours lab.

ATTR 212 - Assessment of Athletic Injuries II - Upper Body 3 Credits

Prerequisite(s): ATTR 201, Athletic Training majors only. Corequisite(s): ATTR 351. Theory and techniques required by athletic trainers and sports medicine professionals in the evaluation of injuries and conditions to the upper body in physically active individuals. Application of techniques for the assessment of injuries and medical conditions in athletes and physically active individuals will be integrated with laboratory and clinical educational experiences. Concepts of medical assessment will also be covered. 2 hours lecture, 2 hours lab.

ATTR 240 - Clinical Anatomy 3 Credits

Prerequisite(s): Athletic Training majors only. Corequisite(s): BIOL 245 and ATTR 101. In this course, students study the connection between human anatomy and the clinical practice of athletic training. Students will identify human anatomical structures through the palpation, review, and functional testing of illustrations, anatomical and human models, and diagnostic images. Students will apply anatomical knowledge to palpation and manual testing of anatomical structures including bony structures, muscles, nerves, joints, and ligaments. Students will learn to identify musculoskeletal conditions from diagnostic images. Students will also apply knowledge of human anatomy and physiology to perform neurocognitive functional tests of the nervous system. Students will apply the use of auscultation techniques to identify various pathological conditions of the human body. 3 hours lecture.

ATTR 251 - Clinical Education in Athletic Training I 3 Credits

Prerequisite(s): ATTR 101, Athletic Training majors only. Corequisite(s): ATTR 201. The first in a series of courses which provide students in the Athletic Training Education Program with supervised clinical education and experience. Students apply techniques and theory learned in athletic training courses completed to date under the supervision of a clinical instructor. 3 hours lecture.

ATTR 252 - Clinical Education in Athletic Training II 3 Credits

Prerequisite(s): ATTR 201, Athletic Training majors only. Corequisite(s): ATTR 211. The second in a series of courses which provide students in the athletic training education program with supervised clinical education and experience. Students apply techniques and theory learned in athletic training courses with specific emphasis on assessment and evaluation of athletic injuries. 3 hours lecture.

ATTR 310 - General Medical Issues in Athletic Training 3 Credits

Prerequisite(s): ATTR 201. Corequisite(s): ATTR 212 and ATTR 313 and ATTR 351. In this course, students will learn about medical issues, common non orthopedic illnesses, and pharmacologic interventions in an Athletic Training context. Students will identify the pharmaceutical processes and cellular biochemical determinants of therapeutic interventions. Students will describe the fundamental principles of therapies for various conditions. They will evaluate the reasoning processes involved in solving problems that might arise with athletes or patients receiving care for certain conditions. Students will also discuss the constraints placed on athletes in the performance environment. They will also identify the correct protocols with medication management in an Athletic Training Facility. 3 hours lecture.

ATTR 311 - Therapeutic Modalities in Athletic Training 3 Credits

Prerequisite(s): ATTR 211, ATTR 252, Athletic Training majors only. This class is a study involving the design, theory and application of athletic injuries. Upon successful completion of the class, the student should be able to properly select and properly apply modalities commonly found in the training room as part of a comprehensive program of athletic injury care and rehabilitation. 2 hours lecture, 2 hours lab.

ATTR 312 - Therapeutic Exercise in Athletic Training 3 Credits

Prerequisite(s): ATTR 211, ATTR 212, ATTR 311 and Athletic Training majors only. Corequisite(s): ATTR 352. This class is a study involving the theory and application of rehabilitative exercise to individuals with athletic injuries. This includes preparation for return to play. Upon successful completion of the class, the student should be able to properly select and properly use therapeutic exercise as part of a comprehensive program of athletic injury care and rehabilitation. 2 hours lecture, 2 hours lab.

ATTR 320 - Mental Health and Crisis Intervention in Athletic Training 3 Credits

Prerequisite(s): ATTR 201. The study of theory, strategies and interventions used in Athletic Training and health care relating to the recognition, identification and appropriate intervention for psychological, social, emotional and mental behaviors. The course will explore topics in the theoretical background of psychological and emotional responses to injury and/or forced inactivity as well as crisis intervention. Students will learn how to apply psychosocial strategies, mental health interventions and how to identify the need for referral to mental health professionals. Students will study clinical decision making by accessing and incorporating appropriate academic resources to provide evidence based decisions relating to patient care and mental health intervention strategies. Students will also be required to demonstrate clinical application of techniques, strategies and interventions learned in the course. They will be expected to be actively engaged in evidence based application of course concepts under the direction of faculty in the field through laboratory and clinical experiences. 3 hours lecture, 1 hour lab.

ATTR 351 - Clinical Education in Athletic Training III 3 Credits

Prerequisite(s): ATTR 252, Athletic Training majors only. Corequisite(s): ATTR 212. The third course to provide students in the athletic training education program with supervised clinical education and experience. Students apply techniques and theory learned in athletic training courses with specific emphasis on the use of therapeutic modalities in the sports medicine setting. 3 hours lecture.

ATTR 352 - Clinical Education in Athletic Training IV 3 Credits

Prerequisite(s): ATTR 351, Athletic Training majors only. Corequisite(s): ATTR 312. The fourth course in the professional sequence that provides students in the athletic training education program with instruction in clinical competencies and proficiencies and supervised clinical education and experience. Students apply techniques and theory learned in athletic training courses with specific emphasis on the use of therapeutic modalities in the sports medicine setting. 3 hours lecture.

ATTR 360 - Clinical Measurement and Instrumentation in Athletic Training and Exercise Science 3 Credits

Prerequisite(s): ATTR 212 or PEMJ 320. The study of methodology and instrumentation used in the fields of Athletic Training and Exercise Science for the investigation of clinical and research questions, problems and hypotheses. The course will explore topics in clinical evaluation, research and investigation. Students will investigate clinical decision making, development of research questions, investigation of scientific literature, experimental designs, methodology, instrumentation, analysis and interpretation of data and methods of incorporating the results of investigation into clinical practice. Students will also be required to demonstrate clinical application of instrumentation and technology into professional practice. Students will be expected to be actively engaged in application of course concepts under the direction of faculty in the field through laboratory and research based experiences. 2 hour lecture, 2 hours lab.

ATTR 411 - Administration of Athletic Training Programs 3 Credits

Prerequisite(s): ATTR 311, ATTR 312, Athletic Training majors only. Corequisite(s): ATTR 451. An overview of administrative components of an athletic training program for high school, college, and professional athletic organizations. Topics include financial management, training room management, personnel management, health care services, and pharmacology for athletic trainers. Practical experiences in budget management, facility organization, pharmacological procedures and issues, and a case study approach to issue resolution are included. 3 hours lecture.

ATTR 451 - Clinical Education in Athletic Training V 3 Credits

Prerequisite(s): ATTR 352, Athletic Training majors only. Corequisite(s): ATTR 411. Fifth course to provide students in the athletic training education program with supervised clinical education and experience. Students apply techniques and theory learned in athletic training courses with specific emphasis on the use of therapeutic exercise and rehabilitation in the sports medicine setting. Students will also be required to incorporate theory and clinical skills from other courses in the program in evaluation and treatment decision making. 3 hours lecture.

ATTR 479 - Internship in Athletic Training 4 Credits

Prerequisite(s): ATTR 411, ATTR 451, Athletic Training majors only. An upper-level course for students in the B.S. in Athletic Training. In this course students will be able to apply theoretical and practical information learned in the program in a working athletic training setting. Students will work with an Athletic Training Clinical Supervisor at an off-campus venue. The course also provides the student the opportunity to discuss and evaluate the fieldwork experience as well as the field of athletic training through class meetings. Fifth course to provide students in the athletic training education program with supervised clinical education and experience. Students apply techniques and theory learned in athletic training courses with specific emphasis on the use of therapeutic exercise and rehabilitation in the sports medicine setting. Students will also be required to incorporate theory and clinical skills from other courses in the program in evaluation and treatment decision making. 3 hours lecture.

ATTR 495 - Seminar in Athletic Training 3 Credits

Prerequisite(s): ATTR 411, Athletic Training majors only, senior status. The capstone course for students in the athletic training education program. Students summarize and draw together their didactic and clinical education in preparation for the National Athletic Trainers' Association Board of Certification Examination. Students also explore subjects and current issues germane to the field of athletic training. 3 hours lecture.

ATTR 500 - Athletic Training Principles 3 Credits

Prerequisite(s): Athletic Training majors only. Students in this course will learn introductory theory and skills in the prevention, recognition and care of athletic injuries. In addition the course will introduce students to concepts in emergency planning, research and writing in the field of athletic training and basic skills in injury care and patient transfer. 2 hours lecture, 2 hours lab.

ATTR 501 - Theory of Professional Practice in Athletic Health Care **3 Credits**

Prerequisite(s): Admission to the Master of Science in Athletic Training or departmental approval. In this course, students investigate the theory, regulations and current best practices in Athletic Training and health care as they relate to various practice settings. They explore practice settings and venues, the impact of legislation and regulation on professional practice, and current trends in health care for individuals who participate in strenuous physical activity. Students also study third party compensation methods and administrative concerns relating to the various practice venues of Athletic Training and Sports Medicine. 3 hours lecture.

ATTR 503 - Advanced Treatment and Rehabilitation Programming **3 Credits**

Prerequisite(s): Admission to the Graduate Athletic Training program or departmental approval. Students investigate evidence based theories and best practices in the design, implementation and evaluation of rehabilitation programs in Athletic Training and Sports Medicine. Students explore and apply methods for integrating therapeutic exercise, therapeutic modalities and higher-level rehabilitation techniques into clinical practice. Students research and apply patient evaluation skills in the rehabilitation process. Students learn to participate in a multidisciplinary approach to patient care. 3 hours lecture.

ATTR 510 - Sports Medicine Issues for Athletes in Special Populations **3 Credits**

Prerequisite(s): Admission to the Master of Science in Athletic Training or departmental approval. Students study the impact of selected cognitive, physical, sensory and developmental disabilities on competitive athletic participation and participation in strenuous physical activity. Students learn about the pathophysiology, etiology, body adaptation and accommodation to a variety of physical and cognitive disabilities. They also investigate the effect of the disability culture on injury care in this population. They develop strategies to effectively and sensitively communicate with these athletes regarding injury care and management. 3 hours lecture.

ATTR 511 - Technology in Sports Medicine **3 Credits**

In this course students investigate the development, selection and impact of technological resources in the practice and management of Athletic Training and Sports Medicine facilities. Students study how to incorporate technology into patient record keeping, outcome analysis, billing and reimbursement, patient evaluation and evidence-based practice. They examine the use of innovative technology solutions for patient care as well as the future directions of technology in sports medicine. 3 hours lecture.

ATTR 520 - Instructional Methods and Assessment of Students in Athletic Training Clinical Education **3 Credits**

Students study and apply theory and strategies for the instruction, supervision and evaluation of Athletic Training students in the clinical education setting. They study the nature and requirements of Athletic Training Education, teaching and evaluation of Athletic Training educational competencies, supervision of Athletic Training students in clinical practice and topics related to certification and licensure of Athletic Trainers. Students explore issues concerning accreditation of Athletic Training educational programs. 3 hours lecture.

ATTR 530 - Pathology of Physical Trauma **3 Credits**

Prerequisite(s): Athletic Training majors only. This course provides students with a foundation in understanding the pathology, characteristics, signs, symptoms and progression of injuries and illness that occur in individuals who participate in physical activity. Students in this course will integrate concepts in anatomy and physiology, injury prevention, and basic concepts in care and rehabilitation of injury and illness as they begin to develop a comprehensive understanding of the processes of injury and illness in the body. 2 hours lecture, 2 hours lab.

ATTR 531 - Psychosocial Issues in Athletic Training **3 Credits**

Prerequisite(s): Athletic Training majors only. The study of theory, strategies and interventions used in Athletic Training and health care relating to the recognition, identification and appropriate intervention for psychological, social, emotional and mental behaviors. The course will explore topics in the theoretical background of psychological and emotional responses to injury and/or forced inactivity as well as crisis intervention. Students will learn how to apply psychosocial strategies, mental health interventions and how to identify the need for referral to mental health professionals. 3 hours lecture.

ATTR 532 - Medical Issues in Athletic Training **3 Credits**

Prerequisite(s): Athletic Training majors only. In this course, students will learn about medical issues, common non-orthopedic illnesses, and pharmacologic interventions in an Athletic Training context. Students will identify the pharmaceutical processes and cellular biochemical determinants of therapeutic interventions. Students will examine the fundamental principles of therapies for various conditions. They will evaluate the reasoning processes involved in solving problems that might arise with athletes or patients receiving care for certain conditions. Students will also discuss the constraints placed on athletes in the performance environment. They will also practice the correct protocols with medication management in an Athletic Training Facility. 2 hours lecture, 2 hours lab.

ATTR 533 - Administration in Athletic Training **3 Credits**

Prerequisite(s): Athletic Training majors only. An overview of the administrative components of an Athletic Training program for high school, college, and professional athletic organizations. Topics include financial management, training room management, insurance management, personnel management, health care services, and pharmacology for athletic trainers. Practical experiences in budget management, facility organization, pharmacological procedures and issues and a case study approach to issue resolution are included. 2 hours lecture, 2 hours lab.

ATTR 540 - Clinical Examination and Diagnosis I **3 Credits**

Prerequisite(s): ATTR 500; and ATTR 552 may be taken as prerequisite or corequisite; Athletic Training majors only. The study of theory and techniques required by Athletic Trainers and sports medicine professionals in the evaluation of injuries and conditions to the lower body in physically active individuals. Application of techniques for the assessment of injuries and medical conditions in athletes and physically active individuals will be integrated with laboratory and clinical education experiences. 3 hours lecture.

ATTR 541 - Therapeutic Interventions I**3 Credits**

Prerequisite(s): ATTR 530; and ATTR 552 may be taken as prerequisite or corequisite. Upon the completion of the course students will be able to select and administer therapeutic modalities to individuals with musculoskeletal and neurological conditions. The student will have an understanding of the physiological principles by which selected modalities function and the electromagnetic and acoustical theory behind the operation of selected modalities. Students will also understand and demonstrate the assessment of treatment effectiveness and decision making regarding treatment goals and objectives and select and apply therapeutic modalities to meet those goals. 2 hours lecture, 2 hours lab.

ATTR 542 - Clinical Examination and Diagnosis II**3 Credits**

Prerequisite(s): ATTR 540; and ATTR 552 may be taken as prerequisite or corequisite; Athletic Training majors only. Theory and techniques required by athletic trainers and sports medicine professionals in the evaluation of injuries and conditions to the upper body in physically active individuals. Application of techniques for the assessment of injuries and medical conditions in athletes and physically active individuals will be integrated with laboratory and clinical education experiences. Concepts of medical assessment will also be covered. 2 hours lecture, 2 hours lab.

ATTR 543 - Therapeutic Interventions II**3 Credits**

Prerequisite(s): ATTR 541; and ATTR 552 may be taken as prerequisite or corequisite; Athletic Training majors only. The study of theory and application of rehabilitative exercise to individuals with athletic injuries. This includes preparation for return to play. Upon successful completion of the class, the student should be able to properly select and properly use therapeutic exercise as part of a comprehensive program of athletic injury care and rehabilitation. 2 hours lecture, 2 hours lab.

ATTR 552 - Clinical Practicum**3-12 Credits**

Prerequisite(s): ATTR 500. The first in a series of courses which provide students in the Athletic Training Program with supervised clinical education and experience. Students apply techniques and theory learned in athletic training courses completed to date under the supervision of a clinical preceptor. May be repeated for a maximum of 12 credits. 3 hours field experience.

ATTR 560 - Theory of Evidence Based Practice**3 Credits**

Prerequisite(s): ATTR 501 and PEMJ 502. Students explore the methodology and instrumentation used in the fields of Athletic Training and Exercise Science for the investigation of clinical and research questions and problems. They explore topics in clinical evaluation, research and investigation. Students study clinical decision making, development of research questions, methods of reviewing scientific literature, experimental designs, methodology and instrumentation. Students learn about Evidence Based Practice by conducting analyses and interpretation of data, incorporating the results of their investigation into solutions for clinical problems. Students demonstrate evidence based application of instrumentation and technology into professional practice. They apply course concepts in the field through laboratory and research based experiences. The course is presented using hybrid teaching methods. 3 hours lecture.

ATTR 591 - Graduate Athletic Training Mentorship**3 Credits**

Prerequisite(s): ATTR 501 and ATTR 510 and ATTR 511. In this advanced course students in the Master of Science in Athletic Training learn and apply theory, methods and structured experiences in professional mentoring in Athletic Training and the medical professions. Students learn about the value and use of professional mentoring relationships and the relationships between leaders and novices. The students gain practical experience by serving as mentors to young professionals and/or undergraduate students in the final phases of their professional preparation. The course uses hybrid teaching methods. 3 hours lecture.