Master of Athletic Training (MAT)

Courses

MAT 6000R. Integrated Clinical Experience. 1-2 Hours.
This course provides comprehensive educational experiences in the Educational Competencies and Clinical Integration Proficiency to be supervised/mentored in multiple Clinical Integration sections through athletic training clinical experiences (160-320 hours/semester). The course is in accordance with the Commission on Accreditation of Athletic Training Education (CAATE) standards that provides for the opportunity to complete a required clinical experience contained in a class, over two academic years. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Demonstrate the ability to interact with other medical and health care personnel. 2. Apply knowledge, skills, and abilities, learned previously in the classroom, in a practical setting. 3. Gain increasing amounts of clinically supervised experiences leading to autonomous clinical practice upon graduation. Prerequisite: Admission to the Master’s in Athletic Training program.

MAT 6030. Advanced Acute Care in Athletic Training. 3 Hours.
The theory, ethics, components, indications, and psychomotor skills of emergency care in athletic training. Evidence-based research and practices are explored in relation to standard practices. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Summarize the etiology and prevention guidelines associated with the leading causes of sudden death during physical activity, including but not limited to: Cardiac arrhythmia or arrest; Asthma; Traumatic brain injury; Exertional heat stroke; Hyponatremia; Exertional sickling; Anaphylactic shock; Cervical spine injury; Lightning strike. 2. Assess the severity of catastrophic and emergent conditions and formulate appropriate referral decisions. 3. Modify the diagnostic examination process according to the demands of the situation and patient responses. 4. Identify cases when rescue breathing, CPR, and/or AED use is indicated according to current accepted practice protocols. 5. Explain the proper procedures for managing external hemorrhage (e.g., direct pressure, pressure points, tourniquets) and the rationale for use of each. Prerequisite: Admission to the DSU Professional Master’s in Athletic Training program. SU.

MAT 6032. Advanced Acute Care Clinical Skills. 1 Hour.
Didactic and psychomotor skill instruction with practical examinations covering the material taught in Advanced Acute Care in Athletic Training Lecture AT 6030. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Demonstrate the ability to perform scene, primary, and secondary surveys; obtain a medical history appropriate for the patient’s ability to respond. 2. Assess and interpret findings from a physical examination that is based on the patient's clinical presentation. 3. Demonstrate the ability to perform one- and two- person CPR, on an infant, child and adult and utilizing a bag valve and pocket mask supplemental oxygen. 4. Utilize an automated external defibrillator (AED) according to current accepted practice protocols. 5. Select and use appropriate procedures for the cleaning, closure, and dressing of wounds, identifying when referral is necessary. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SU.

MAT 6060. Athletic Training Organization and Professional Responsibility. 3 Hours.
Theoretical and practical study of organization, administration, professional development and responsibility in the field of Athletic Training. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Describe the role and function of the Board of Certification, the Commission on Accreditation of Athletic Training Education, and state regulatory boards. 2. Explain the role and function of state athletic training practice acts and registration, licensure, and certification agencies including, basic legislative processes for the implementation of practice acts, rationale for state regulations that govern the practice of athletic training, and consequences of violating federal and state regulatory acts. 3. Access, analyze, and differentiate between the essential documents of the national governing, credentialing and regulatory bodies, including, but not limited to, the NATA Athletic Training Educational Competencies, the BOC Standards of Professional Practice, the NATA Code of Ethics, and the BOC Role Delineation Study/Practice Analysis. Prerequisite: Admission to the DSU Professional Master’s in Athletic Training program. SP.

MAT 6070. Advanced Therapeutic Interventions I. 3 Hours.
Advanced study of the effects, advantages, disadvantages, indications, contraindications, precautions, and the application parameters of therapeutic interventions of the physically active. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Understand the methods of assessing patient status and progress (e.g., global rating of change, minimal clinically important difference, minimal detectable difference) with clinical outcomes assessments. 2. Apply and interpret clinical outcomes to assess patient status, progress, and change using psychometrically sound outcome instruments. 3. Compare and contrast contemporary theories of pain perception and pain modulation. 4. Compare and contrast the variations in the physiological response to injury and healing across the lifespan. 5. Design therapeutic interventions to meet specified treatment goals. Prerequisite: Admission to the DSU Professional Master’s in Athletic Training program. FA.

MAT 6072. Advanced Therapeutic Intervention I Clinical Skills. 1 Hour.
Didactic and psychomotor skill instruction with practical examinations covering the material taught in the Therapeutic Interventions I course. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Summarize the principles and concepts related to the fabrication, modification, and appropriate application or use of orthotics and other dynamic and static splints. 2. Identify and describe the standard tests, test equipment, and testing protocols that are used for measuring fitness, body composition, posture, flexibility, muscular strength, power, speed, agility, and endurance. 3. Compare and contrast the various types of flexibility, strength training, and cardiovascular conditioning programs to include expected outcomes, safety precautions, hazards, and contraindications. 4. Determine the effectiveness and efficacy of an athletic training intervention utilizing evidence-based practice concepts. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. FA.
MAT 6080. Advanced Therapeutic Interventions II. 3 Hours.
Advanced study of the effects, advantages, disadvantages, indications, contraindications, precautions, and the application parameters of therapeutic interventions of the physically active. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to:
1. Summarize the principles and concepts related to the fabrication, modification, and appropriate application or use of orthotics and other dynamic and static splints. 2. Identify and describe the standard tests, test equipment, and testing protocols that are used for measuring fitness, body composition, posture, flexibility, muscular strength, power, speed, agility, and endurance. 3. Compare and contrast the various types of flexibility, strength training, and cardiovascular conditioning programs to include expected outcomes, safety precautions, hazards, and contraindications. 4. Determine the effectiveness and efficacy of an athletic training intervention utilizing evidence-based practice concepts. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SP.

MAT 6082. Advanced Therapeutic Interventions II Clinical Skills. 1 Hour.
Didactic and psychomotor skill instruction with practical examinations covering the material taught in MAT 6080. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Instruct clients/patients in the basic principles of ergodynamics and their relationship to the prevention of illness and injury. 2. Design therapeutic interventions to meet specified treatment goals. 3. Instruct the patient how to correctly perform rehabilitative exercises. 4. Reassess the patient to determine the immediate impact of the intervention. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SP.

MAT 6100. Advanced Clinical Anatomy. 3 Hours.
Didactic and psychomotor skills instruction with practical examinations covering the material necessary to begin the physical training clinical experience, and clinical anatomy of the human body including palpation, range of motion, neurological testing, and structure identification and function. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Define key anatomical and kinesiological terms. 2. Identify, palpate, & describe specific aspects of the human skeletal system, including the types of joints in the body. 3. Identify, palpate, and describe anatomical components & basic physiological processes of the human muscular system. 4. Demonstrate a basic functional understanding of biomechanics as they relate to human movement. 5. Identify and describe the anatomical movements of the spine and the extremities. 6. Perform correct goniometric measurements at each joint. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SU.

MAT 6130. General Medical Assessment and Referral. 3 Hours.
Study of general medical conditions and disabilities commonly seen by certified athletic trainers. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Determine the effectiveness and efficacy of an athletic training intervention utilizing evidence-based practice concepts. 2. Explain the principles of environmental illness prevention programs to include acclimation and conditioning, fluid and electrolyte replacement requirements, proper practice and competition attire, hydration status, and environmental assessment (e.g., sling psychrometer, wet bulb globe temperature [WBGT], heat index guidelines). 3. Explain the etiology and prevention guidelines associated with the leading causes of sudden death during physical activity, including but not limited to: Cardiac arrhythmia or arrest; Asthma; Traumatic brain injury; Exertional heat stroke; Hypothermia; Exertional sickness; Anaphylactic shock. 4. Optimize therapeutic outcomes by communicating with patients and/or appropriate healthcare professionals regarding compliance issues, drug interactions, adverse drug reactions, and sub-optimal therapy. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. FA.

MAT 6150. Advanced Athletic Training Clinical Skills. 2 Hours.
Didactic and psychomotor skills instruction with practical examinations covering the material necessary to begin the athletic training clinical experience. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Summarize the basic principles associated with the design, construction, fit, maintenance, and reconditioning of protective equipment, including the rules and regulations established by the associations that govern its use. 2. Fit standard protective equipment following manufacturers' guidelines. 3. Fabricate and apply taping, wrapping, supportive, and protective devices to facilitate return to function. 4. Obtain a thorough medical history that includes the pertinent past medical history, underlying systemic disease, use of medications, the patient's perceived pain, and the history and course of the present condition. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SU.

MAT 6210. Pathoetiology & Orthopaedic Assessment I. 3 Hours.
In-depth study of pathological, etiological, and neuromuscular mechanisms of musculoskeletal injuries with emphasis on advanced orthopaedic assessment techniques of the upper body. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Explain diagnostic accuracy concepts including reliability, sensitivity, specificity, likelihood ratios, prediction values, and pre-test and post-test probabilities in the selection and interpretation of physical examination and diagnostic procedures. 2. Apply clinical prediction rules (e.g., Ottawa Ankle Rules) during clinical examination procedures. 3. Differentiate between an initial injury evaluation and follow-up/reassessment as a means to evaluate the efficacy of the patient's treatment/rehabilitation program, and make modifications to the patient's program as needed. 4. Use clinical reasoning skills to formulate an appropriate clinical diagnosis for common illness/disease and orthopedic injuries/conditions. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. FA.

MAT 6215. Pathoetiology and Orthopedic Assessment I Clinical Skills. 1 Hour.
Didactic and psychomotor skill instruction with practical examinations covering the material taught in the Pathoetiology and Orthopedic Assessment I course. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Use standard techniques and procedures for the clinical examination of common injuries, conditions, illnesses, and diseases including, but not limited to: history taking; inspection/observation; palpation; functional assessment; selective tissue testing techniques / special tests; neurological assessments (sensory, motor, reflexes, balance, cognitive function). 2. Assess and interpret findings from a physical examination that is based on the patient's clinical presentation. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. FA.
MAT 6220. Pathoetiology & Orthopaedic Assessment II. 3 Hours.
In-depth study of pathological, etiological, and neuromuscular mechanisms of musculoskeletal injuries with emphasis on advanced orthopaedic assessment techniques of the lower body. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Explain diagnostic accuracy concepts including reliability, sensitivity, specificity, likelihood ratios, prediction values, and pre-test and post-test probabilities in the selection and interpretation of physical examination and diagnostic procedures. 2. Apply clinical prediction rules (e.g., Ottawa Ankle Rules) during clinical examination procedures. 3. Differentiate between an initial injury evaluation and follow-up/reassessment as a means to evaluate the efficacy of the patient's treatment/rehabilitation program, and make modifications to the patient's program as needed. 4. Use clinical reasoning skills to formulate an appropriate clinical diagnosis for common illness/disease and orthopedic injuries/conditions. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SP.

MAT 6225. Pathoetiology and Orthopedic Assessment II Clinical Skills. 1 Hour.
Didactic and psychomotor skill instruction with practical examinations covering the material taught in conjunction with the Pathoetiology and Orthopedic Assessment II course. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Use standard techniques and procedures for the clinical examination of common injuries, conditions, illnesses, and diseases including, but not limited to: history taking; inspection/observation; palpation; functional assessment; selective tissue testing techniques / special tests; neurological assessments (sensory, motor, reflexes, balance, cognitive function). 2. Assess and interpret findings from a physical examination that is based on the patient's clinical presentation. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SP.

MAT 6250. Advanced Preventative Health Techniques. 3 Hours.
Theoretical and practical study of strategies and programs to prevent the incidence and/or severity of injuries, illnesses and cardiovascular disease and optimize patients' overall health and quality of life. This includes assessment of health status, level of physical fitness and implementation of nutritional support and physical activity in maintaining a healthy lifestyle and preventing chronic disease. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Instruct clients/patients in the basic principles of ergodynamics and their relationship to the prevention of illness and injury. 2. Compare and contrast the various types of flexibility, strength training, and cardiovascular conditioning programs to include expected outcomes, safety precautions, hazards, and contraindications. 3. Identify and describe the standard tests, test equipment, and testing protocols that are used for measuring fitness, body composition, posture, flexibility, muscular strength, power, speed, agility, and endurance. 4. Administer and interpret fitness tests to assess a client's/patient's physical status and readiness for physical activity. 5. Design a fitness program to meet the individual needs of a client/patient based on the results of standard fitness assessments and wellness screening. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SP.

MAT 6260. Orthopedic Surgical Interventions. 3 Hours.
Study of orthopaedic surgical interventions commonly performed for musculoskeletal injuries suffered by the physically active. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Identify, review, discuss, and reinforce the overall surgical process, from patient history to anesthesiology to recovery. 2. Identify, review, discuss, and reinforce the surgical interventions and techniques for the most prevalent orthopaedic conditions of the physically active. 3. Identify, review, discuss, and reinforce the current treatment options for common non-orthopaedic conditions requiring physician referral. 4. Locate, comprehend, and critique peer-reviewed literature describing the outcomes of surgical interventions and techniques for the most prevalent orthopaedic conditions of the physically active. 5. Describe and discuss surgical procedures (condition, anatomy, procedure, recovery) observed during surgical rotations. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. SP.

MAT 6275. Mental Health Care in AT Practice. 3 Hours.
This course promotes the understanding of mental health care as it relates to athletic training practice and the coordination of care as it pertains to athletic training patients. The focus of this course includes the understanding of mental health disorders, diagnostic criteria, appropriate referral to qualified health care providers, and treatment options. The course will also address patient response to orthopedic injury and its interdependent relationship with activity limitations and participation restrictions. **COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Identify and describe the signs, symptoms, physiological, and psychological responses of clients/patients with disordered eating or eating disorders. 2. Describe the method of appropriate management and referral for clients/patients with disordered eating or eating disorders in a manner consistent with current practice guidelines. 3. Describe the role of various mental healthcare providers (e.g., psychiatrists, psychologists, counselors, social workers) that may comprise a mental health referral network. 4. Identify and describe the basic signs and symptoms of mental health disorders (e.g., psychosis, neurosis; sub-clinical mood disturbances (e.g., depression, anxiety); and personal/social conflict (e.g., adjustment to injury, family problems, academic or emotional stress, personal assault or abuse, sexual assault or harassment) that may indicate the need for referral to a mental healthcare professional. 5. Formulate a referral for an individual with a suspected mental health or substance abuse problem. Prerequisite: Admission to the DSU Professional Master's in Athletic Training program. FA.