ATHLETIC TRAINING, MA

School of Health and Kinesiology, College of Education

Vision Statement
The Athletic Training Program at the University of Nebraska at Omaha is committed to prepare students for successful careers or advanced academic studies in the field of athletic training by providing comprehensive and progressive studies leading to national certification as an athletic trainer. Our students acquire the knowledge, skills, and dispositions of clinicians ready to fulfill critical roles in shaping the future of healthcare delivery to physically active populations. The athletic training program provides resources and opportunities for growth and development of dedicated practitioners, reflective scholars, and responsible citizens through diverse didactic and clinical experiences, based on the competencies set forth by the National Athletic Trainers’ Association (NATA).

Program Contact Information
Dr. Adam Rosen, Graduate Program Chair (GPC)
School of Health and Kinesiology (H&K) 207Y
402-554-2057
arosen@unomaha.edu

Program Website (http://www.unomaha.edu/college-of-education/health-physical-education-recreation/graduate/athletic-training)

Admissions

Application Deadlines
- Summer: January 15 (committee will begin reviewing applications around December 1)

Program-Specific Requirements
- Minimum cumulative undergraduate GPA of 3.0 (on a 4.0 scale) is required for unconditional admission.
- Students with a 2.70-2.99 cumulative GPA may apply and be admitted provisionally. Provisional admission typically means that the admitted student must maintain a 3.0 GPA or higher, and earn “B” or higher on all courses during the first 12 hours of graduate coursework.
- International applicants are required to have a TOEFL score of 550 paper-based, 213 computer-based, 80 internet-based, 6.5 IELTS, or 53 PTE in order to be considered a strong candidate for admission.
- Entrance Exam
  - Minimum cumulative score on the Graduate Record Examination (GRE) General Test of 287 (Verbal + Quantitative)- preferred score is 300
- Two (2) Letters of Recommendation
  - These individuals should be able to speak about your abilities as a student, your leadership and problem-solving skills, and your potential as an athletic training student.
- Statement of Purpose
  - Address the following in under 1000 words:
    - What is/are your primary career goal(s)?
    - What in your life has most directly influenced your choice of becoming an Athletic Trainer?
    - Describe your ATTRIBUTES that you feel are clearly and directly related to the profession of Athletic Training.
    - Why should you be selected for the University of Nebraska at Omaha Graduate Athletic Training Program?
  - Applicants must complete a minimum of 25 hours of observation with a credentialed athletic trainer (ATC).
- These hours should be completed in the 12-month period prior to application to the program. For students with more than 25 hours, a minimum of 25 hours must be completed in the 12-month period prior to application.
- Applicants that are currently enrolled in a prerequisite (“deficiency”) course at the time of application must send in a Deficiency Report for that course. This Deficiency Report must be sent directly to the Athletic Training Program (ATP), H&K 207, University of Nebraska at Omaha, 6001 Dodge St, Omaha, NE 68182.
- All graduate candidates accepted to the UNO Athletic Training Program:
  - Who received their bachelor’s degree from another institution
  - Must provide the course syllabi and course outlines/schedules in order to provide evidence that specific National Athletic Trainers’ Association Educational Competencies and Proficiencies were completed.
  - Must show proof of current Cardiopulmonary Resuscitation for the Professional Rescuer and Healthcare Provider, and Basic First Aid Certification prior to admission. Certification must remain current through April of the applicant’s first year in the program. Certification by the American Red Cross is strongly preferred.
  - Students are required to maintain these certifications throughout the entire academic program.
- Must provide proof of physical examination and required vaccinations prior to admission. The physical exam must be completed within 12 months of the first day of our summer session course (typically the first week of July).

Athletic Training Degree Requirements
The following undergraduate prerequisites (deficiencies) must be completed prior to admission with a grade of “C” or better:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 1800</td>
<td>FITNESS FOR LIVING</td>
<td>3</td>
</tr>
<tr>
<td>BMCH 2400</td>
<td>HUMAN PHYSIOLOGY &amp; ANATOMY I</td>
<td>4</td>
</tr>
<tr>
<td>BMCH 2500</td>
<td>HUMAN PHYSIOLOGY AND ANATOMY II</td>
<td>4</td>
</tr>
<tr>
<td>BMCH 4630</td>
<td>BIOMECHANICS</td>
<td>3</td>
</tr>
<tr>
<td>PE 4940</td>
<td>PHYSIOLOGY OF EXERCISE</td>
<td>3</td>
</tr>
<tr>
<td>HPER 3090</td>
<td>APPLIED NUTRITION</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1010</td>
<td>INTRODUCTION TO PSYCHOLOGY I</td>
<td>3</td>
</tr>
</tbody>
</table>

Other Requirements
Once admitted to the Athletic Training Program, the student will obtain clinical hours as part of course requirements. Students will be expected to obtain an average of 20 hours of clinical experience per week during each fall and spring semester, which include some nights, weekends, and travel. Required clinical experiences must be obtained over a minimum of six (6) semesters.

Required Courses
In order to graduate with an MA in Athletic Training, the following courses must be passed with grades of “B” or better and an overall cumulative GPA 3.0 or higher.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 8310</td>
<td>ATHLETIC TRAINING TECHNIQUES</td>
<td>2</td>
</tr>
<tr>
<td>PE 8210</td>
<td>EMERGENCY MANAGEMENT OF INJURY AND ILLNESS</td>
<td>2</td>
</tr>
<tr>
<td>PE 8316</td>
<td>LOWER EXTREMITY EVALUATION</td>
<td>3</td>
</tr>
<tr>
<td>PE 8326</td>
<td>UPPER EXTREMITY EVALUATION</td>
<td>3</td>
</tr>
<tr>
<td>PE 8336</td>
<td>ATHLETIC THERAPEUTIC MODALITIES</td>
<td>3</td>
</tr>
</tbody>
</table>
**PE 8346** REHAB TECH IN ATH TRAINING 3
**PE 8356** ORGANIZATION AND ADMINISTRATION OF ATHLETIC TRAINING 3
**PE 8360** ADV ORTHO & MED ASPECTS 3
**PE 8966** TOPICS IN SPORTS MEDICINE 3
**PE 8710** CLINICAL PRACTICUM IN ATHLETIC TRAINING I 1
**PE 8720** CLINICAL PRACTICUM IN ATHLETIC TRAINING II 1
**PE 8730** CLINICAL PRACTICUM IN ATHLETIC TRAINING III 1
**PE 8740** CLINICAL PRACTICUM IN ATHLETIC TRAINING IV 1
**PE 8910** INTERNSHIP IN EXERCISE SCIENCE 3
**HPER 8030/9031** RESEARCH IN HEALTH, PHYSICAL EDUCATION AND RECREATION 3
**PE 8040/9041** ADVANCED STATISTICS 3

**Electives/Theory**
Select one of the following (with advisor): 1
- Six grade hours of electives
- HPER 8990 THESIS (6 hours)

Total Credits 44

1 For more information, please call (402) 554-2670.

**Exit Requirements**

In order to graduate with an MA in Athletic Training, the following criteria must be met:

- **Successful completion of a Comprehensive Examination** administered during the student’s final semester
- **Successful completion of all clinical education requirements** as given in course syllabi and the Athletic Training Student Handbook

**PE 8040** ADVANCED STATISTICS (3 credits)
This course will be a study in the statistical methods commonly used in descriptive and experimental research in physical education and exercise science. Application, particularly regarding the purpose, selection, and interpretation of statistical procedures will be emphasized. (Cross-listed with PE 9041)

Prerequisite(s)/Corequisite(s): HPER8030

**PE 8076** OPTIMIZING SPORTS PERFORMANCE (3 credits)
The course is designed for coaches, athletes and physically active people, and allied health professionals. Course content emphasizes integration of several disciplines in sports medicine aimed at preparing one for optimal sports performance. Topics include peaking, detraining, overuse injury, efficiency, special foods and nutritional requirements, genetics and trainability, and designing of multi-year training schedules. (Cross-listed with PE 4070)

Prerequisite(s)/Corequisite(s): PE 4630 with a grade of C- or better or BMCH 4630 with a grade of C- or better and PE 4940 with a grade of C- or better.

**PE 8086** CLINICAL EXERCISE PHYSIOLOGY (3 credits)
This course will offer students the knowledge, skills, and abilities to take the American College of Sports Medicine's health fitness instructor certification exam. This course will emphasize health risk assessment, exercise testing, and exercise prescription for healthy and clinical populations. (Cross-listed with PE 4080)

Prerequisite(s)/Corequisite(s): PE 2210 with a grade of C- or better, PE 2500 with a grade of C- or better or BMCH 2500 with a grade of C- or better or BIOL 2840 with a grade of C- or better and PE 4940 with a grade of C- or better.

**PE 8120** CURRENT TOPICS IN WEIGHT MANAGEMENT (3 credits)
This course will focus on current issues related to weight management. Candidates will review the guidelines for physical activity and nutrition, apply them to current reading material sold in book stores, and develop a best practice for weight management using what they have learned.

Prerequisite(s)/Corequisite(s): Not open to non-degree graduate students.

**PE 8130** IMPLEMENTING PHYSICAL ACTIVITY IN DIVERSE POPULATIONS (3 credits)
This course will focus on information necessary to assess, design, implement, and evaluate the need for and effectiveness of physical activity interventions in diverse populations, races, and ethnicities. These populations will include: African American, Native American, Hispanic, Asian American, Pacific Islanders, and Caucasian. Additionally, candidates will complete a health and physical activity service learning project in which they will work with diverse populations in the community. (Cross-listed with PE 9131)

Prerequisite(s)/Corequisite(s): PE 3900 or PE 8905 or PE 8700 or HED 8600. Not open to non-degree graduate students.

**PE 8140** PHYSICAL ACTIVITY ASSESSMENT AND HEALTH RELATED RESEARCH (3 credits)
This course will cover the broad scope of research on physical activity and public health. Emphasis will be placed on the application of physical activity assessment techniques. (Cross-listed with PE 9141)

**PE 8176** MOTOR ASSESSMENT & PRESCRIPTION (3 credits)
An in-depth survey of motor and fitness assessment instruments for use with pre-school, elementary, and secondary school students. The use of test scores for diagnosis and prescription of physical education activities for special populations will be addressed. This course will enhance the skills of the teacher to orchestrate the learning environment for students with special needs. (Cross-listed with PE 4170)

Prerequisite(s)/Corequisite(s): PE 4150

**PE 8186** PRACTICE FOR DISABLED CHILD (3 credits)
This course is designed as a practicum with theoretical and practical experience in addressing the motor needs of young disabled children in a physical education setting. This course will enhance the skills of the teacher to orchestrate the learning environment for students with special needs.

Prerequisite(s)/Corequisite(s): PE 4170 or PE 8176

**PE 8206** PLANNING WORKSITE WELLNESS PROGRAM (3 credits)
This course will focus on the planning of quality worksite wellness programs utilizing standards established by the Association for Worksite Health Promotion. Steps in the planning process such as needs assessment, strategic planning, implementation, and evaluation will be taught with special application to the worksite. Critical issues involving worksite programs also will be addressed such as upper management support, program standards, corporate culture, competencies for worksite health promotion professionals, economic benefits, behavioral theories, legal issues, and the integration of worksite wellness programs and health care. (Cross-listed with PE 4200)

Prerequisite(s)/Corequisite(s): Junior standing.

**PE 8210** EMERGENCY MANAGEMENT OF INJURY AND ILLNESS (2 credits)
The purpose of this course is to prepare students to respond to emergent conditions that affect patients involved in physical activity. Students will learn to recognize the signs and symptoms of acute injury and illness, assess patients using evidence-based methods, apply appropriate treatments, make appropriate referral decisions, and implement effective prevention strategies to reduce the risk of injury and illness.

Prerequisite(s)/Corequisite(s): Admission to the Master of Arts in Athletic Training program. Not open to non-degree graduate students.

**PE 8240** SPORT IN AMERICAN CULTURE (3 credits)
Sport in American culture is a study of sport from a theoretical perspective. The relationship between sport and sub-cultures (to include disadvantaged American cultures), economics, global influences, and technology will be analyzed.
PE 8266 INCL INDV W/DISABILITIES IN PE (3 credits)
This course is for physical education, health education, special education and therapeutic recreation candidates interested in the inclusion of children with disabilities in physical education environments. (Cross-listed with PE 4260)
Prerequisite(s)/Corequisite(s): PE 3060 or PE 4000 and PE 4150

PE 8280 CURRICULUM IN PE (3 credits)
A study of the foundations for curriculum development. Special consideration is given to curriculum change, curriculum patterns and programs in physical education which will meet a culturally diverse, global society.

PE 8310 ATHLETIC TRAINING TECHNIQUES (2 credits)
Overview course including basic components of the athletic training profession including the prevention, recognition, evaluation and immediate care of athletic injuries. Medical terminology, tissue healing, taping procedures, and professional considerations will be covered.
Prerequisite(s)/Corequisite(s): Admission to the Master of Arts in Athletic Training. Not open to non-degree graduate students.

PE 8316 LOWER EXTREMITY EVALUATION (3 credits)
This course is designed to provide the candidate with knowledge and skill in the area of advanced athletic injury assessment. The candidate will be exposed to current methodology in the field of orthopedic assessment, pathophysiology of orthopedic injury, and application of current research in injury evaluation. The candidate will receive practical experience in the management of athletic injuries. This course will focus on the low back, hip, and lower extremities. (Cross-listed with PE 4310)
Prerequisite(s)/Corequisite(s): PE 8326 and 8710. Not open to non-degree graduate students.

PE 8326 UPPER EXTREMITY EVALUATION (3 credits)
This course is designed to provide the candidate with knowledge and skill in the area of advanced athletic injury assessment. The candidate will be exposed to current methodology in the field of orthopedic assessment, pathophysiology of orthopedic injury, and application of current research in injury evaluation. The candidate will receive practical experience in the management of athletic injuries. This course will focus on the head, neck, thorax, and upper extremities. (Cross-listed with PE 4320)
Prerequisite(s)/Corequisite(s): PE 8316, 8336, and 8720. Not open to non-degree graduate students.

PE 8336 ATHLETIC THERAPEUTIC MODALITIES (3 credits)
This course will cover the theory, physiology and application of physical agents used in the treatment of injuries and illness. Students will gain practical experience utilizing selected agents to treat injuries and illnesses. (Cross-listed with PE 4330)
Prerequisite(s)/Corequisite(s): PE 8326 and 8710. Not open to non-degree graduate students.

PE 8346 REHAB TECH IN ATH TRAINING (3 credits)
The use of basic theories and principles of athletic injury rehabilitation including therapeutic exercise and the use of physical agents. The development of rehabilitation programs including hands-on practical application. (Cross-listed with PE 4340)
Prerequisite(s)/Corequisite(s): Written Permission Required

PE 8356 ORGANIZATION AND ADMINISTRATION OF ATHLETIC TRAINING (3 credits)
Administration of athletic training programs including the use of records and forms, budgets, facility design and legal concerns. (Cross-listed with PE 4350)
Prerequisite(s)/Corequisite(s): PE 3430, PE 4320.

PE 8360 ADV ORTHO & MED ASPECTS (3 credits)
This course will enhance the candidate’s knowledge of orthopedic aspects and general medical conditions of the athlete. Involves lecture, directed observation, experiential learning, literature review and hands-on experience. Local medical professionals will be providing instruction and supervision within their specialties. The candidate will be exposed to advanced evaluation and treatment skills, including imaging techniques, surgical procedures, rehabilitation and athletic training management.
Prerequisite(s)/Corequisite(s): PE 8316 and PE 8325

PE 8370 ANALYZING PE TCH & SPORT INST (3 credits)
This course will examine the teaching and coaching in physical education and sport. It will identify assessment techniques utilized in teaching and coaching behavior research as well as typical prescriptions in an effort to improve one’s performance.

PE 8460 OCCUPATIONAL BIOMECHANICS (3 credits)
The course will address the biomechanical basis of human performance in work places and provide candidates with information in the application of biomechanics, engineering for designing industrial tools, equipment, products, and jobs that take into consideration human physical capabilities and limitations.
Prerequisite(s)/Corequisite(s): PE 4630 or equivalent and PE 2880. Not open to non-degree students.

PE 8506 BEHAVIORAL ASPECTS OF COACHING (3 credits)
This course is designed to provide the physical education teacher and athletic coach with an overview of the behavioral aspects of coaching athletes. The course will provide information which will enable the coach to enhance as well as orchestrate performance of elementary, junior high, senior high, college, and post-college athletes. (Cross-listed with PE 4500)

PE 8700 PSYCHOLOGY OF PHYSICAL ACTIVITY (3 credits)
The central purpose of this course is to examine the psychological antecedents and consequences of exercise and physical activity behaviors. The course will focus on traditional theories/principles of psychology as they relate to various physical activity settings. (Cross-listed with PE 9701)
Prerequisite(s)/Corequisite(s): Undergraduate or graduate course in either: Motivation for Physical Activity (PE 3900), or equivalent; Behavioral Aspects of Coaching (PE 4500/8506), or equivalent; or instructor permission.

PE 8710 CLINICAL PRACTICUM IN ATHLETIC TRAINING I (1 credit)
Clinical Practicum in Athletic Training I is the first course in the Clinical Practica series for students admitted to the Master of Arts in Athletic Training Program. Students will perform required clinical experiences under the supervision of a licensed athletic trainer in order to improve clinical and decision-making skills.
Prerequisite(s)/Corequisite(s): Admission to the MA in Athletic Training program, instructor permission, & continued compliance with published Athletic Training Program Technical Standards for Admission. Co-requisite with enrollment in PE 8326. Not open to non-degree graduate students.

PE 8720 CLINICAL PRACTICUM IN ATHLETIC TRAINING II (1 credit)
Clinical Practicum in Athletic Training II is the second course in the Clinical Practica series for students admitted to the Master of Arts in Athletic Training Program. Students will perform required clinical experiences under the supervision of a licensed athletic trainer in order to improve clinical and decision-making skills.
Prerequisite(s)/Corequisite(s): Admitted to MA in Athletic Training program. PE 8710 Clinical Practicum AT I, instructor permission, & continued compliance w/published Athletic Training Program Technical Standards for Admission. Co-reqs: PE 8316 & 8336. Not open to non-degree grads.
**PE 8730 CLINICAL PRACTICUM IN ATHLETIC TRAINING III (1 credit)**
Clinical Practicum in Athletic Training III is the third course in the Clinical Practica series for students admitted to the Master of Arts in Athletic Training Program. Students will perform required clinical experiences under the supervision of a licensed athletic trainer in order to improve clinical and decision-making skills.

**Prerequisite(s)/Corequisite(s):** Admitted to MA in Athletic Training program, PE 8720 Clinical Practicum AT II, instructor permission, & continued compliance w/published Athletic Training Program Technical Standards for Admission. Co-reqs: PE 8346 & 8356. Not open to non-degree grads.

**PE 8740 CLINICAL PRACTICUM IN ATHLETIC TRAINING IV (1 credit)**
Clinical Practicum in Athletic Training IV is the fourth course in the Clinical Practica series for students admitted to the Master of Arts in Athletic Training Program. Students will perform required clinical experiences under the supervision of a licensed athletic trainer in order to improve clinical and decision-making skills.

**Prerequisite(s)/Corequisite(s):** Admission to the MA in Athletic Training program, PE 8730 Clinical Practica in Athletic Training III, instructor permission, and continued compliance with published Athletic Training Program Technical Standards for Admission. Co-req: PE 8966.

**PE 8800 RISK MGT MGT HLTH/FIT PROFESISSNS (3 credits)**
A study of risk management for health fitness professionals with a focus on minimizing liability exposures for health fitness facilities and their personnel. Principles of risk management such as the assessment of liability exposures, the development and implementation of risk management strategies, and the evaluation of these strategies will be explored as well as the law as it pertains to health fitness liability. Candidates will develop the knowledge and skill to manage high quality health fitness programs in various settings.

**Prerequisite(s)/Corequisite(s):** PE 4010 or PE 8016

**PE 8856 CARDIOVASCULAR DISEASE PREVENTION & REHABILITATION (3 credits)**
The purpose of this course is to provide candidates with an introduction to the theories and practices involved in all phases of cardiac rehabilitation. (Cross-listed with PE 4850)

**Prerequisite(s)/Corequisite(s):** PE 8946

**PE 8865 SCIENTFIC ASPECTS STRENGTH DEV (3 credits)**
This course is designed to explore the nature of muscular strength development, to investigate the physiological basis of physical conditioning, and to provide teachers, coaches and trainers with practical experience in designing specialized conditioning programs for a variety of sports and cultures. (Cross-listed with PE 3860)

**PE 8900 MGMT & LEAD SKILLS FOR FIT MGRS (3 credits)**
This course is a study of management and leadership skills necessary for the successful management of fitness and wellness facilities and programs. Candidates will develop knowledge and practical skills in the areas of personnel and financial management, marketing, and operating policies procedures as well as develop a personal leadership philosophy based on sound principles of leaders.

**Prerequisite(s)/Corequisite(s):** PE 8016 or ACSM Health Fitness Certification.

**PE 8910 INTERNSHIP IN EXERCISE SCIENCE (3 credits)**
This course is an off-campus, supervised, educational work experience of at least 150 clock hours at an approved worksite offering programs and experiences in fitness development or health promotion. Candidates must have current CPR certification.

**Prerequisite(s)/Corequisite(s):** The prerequisites for this course include 90 hours completed, 2.5 GPA, PE 4900 and permission of instructor.

**PE 8950 ADVANCED EXERCISE PHYSIOLOGY (3 credits)**
A detailed analysis of selected topics including acute and chronic effects of exercise on metabolic, pulmonary, and cardiovascular function; and sports nutrition. Current research findings and methodology will be emphasized. (Cross-listed with PE 9951)

**Prerequisite(s)/Corequisite(s):** PE 4940 or equivalent

**PE 8966 TOPICS IN SPORTS MEDICINE (3 credits)**
This course covers selected topics regarding the science and medicine of sports participation. Some areas to be covered include the medical supervision of the athlete, special populations, conditioning, environmental concerns and sports nutrition. (Cross-listed with PE 4960)

**Prerequisite(s)/Corequisite(s):** PE 8346, PE 8356, and PE 8730, or Instructor consent.

**PE 9040 PHYSICAL ACTIVITY EPIDEMIOLOGY (3 credits)**
This course will cover the broad scope of the issues related to epidemiological methods that are relevant to the study of physical activity populations. It is intended to enhance students' ability to understand and apply epidemiological methods to physical activity related research.

**Prerequisite(s)/Corequisite(s):** PE 8130 Implementing Physical Activity I and PE 8040 Advanced Statistics in PE or related course or permission by the instructor; not open to non-degree graduate students

**PE 9041 ADVANCED STATISTICS (3 credits)**
This course will be a study in the statistical methods commonly used in descriptive and experimental research in physical education and exercise science. Application, particularly regarding the purpose, selection, and interpretation of statistical procedures will be emphasized. (Cross-listed with PE 9041)

**PE 9131 IMPLEMENTING PHYSICAL ACTIVITY IN DIVERSE POPULATIONS (3 credits)**
This course will focus on information necessary to assess, design, implement, and evaluate the need for and effectiveness of physical activity interventions in diverse populations, races, and ethnicities. These populations will include: African American, Native American, Hispanic, Asian American, Pacific Islanders, and Caucasian. Additionally, candidates will complete a health and physical activity service learning project in which they will work with diverse populations in the community. (Cross-listed with PE 8130)

**Prerequisite(s)/Corequisite(s):** PE 3900 or PE 8905 or PE 8700 or HED 8600. Not open to non-degree graduate students.

**PE 9141 PHYSICAL ACTIVITY ASSESSMENT AND HEALTH RELATED RESEARCH (3 credits)**
This course will cover the broad scope of research on physical activity and public health. Emphasis will be placed on the application of physical activity assessment techniques. (Cross-listed with PE 8140)

**PE 9701 PSYCHOLOGY OF PHYSICAL ACTIVITY (3 credits)**
The central purpose of this course is to examine the psychological antecedents and consequences of exercise and physical activity behaviors. The course will focus on traditional theories/principles of psychology as they relate to various physical activity settings. (Cross-listed with PE 8700)

**Prerequisite(s)/Corequisite(s):** Undergraduate or graduate course in either: Motivation for Physical Activity (PE 3900), or equivalent; Behavioral Aspects of Coaching (PE 4500/8506), or equivalent; or instructor permission.

**PE 9810 HIGHER EDUCATION TEACHING SEMINAR (3 credits)**
The seminar is designed to prepare students for entry into a higher education teaching career. This seminar requires doctoral students to teach an undergraduate or graduate lecture course relevant to their field of preparation. The seminar includes an examination of the roles, responsibilities, and privileges associated with teaching in higher education.

**Prerequisite(s)/Corequisite(s):** Admittance to the UNO Doctoral Program in Exercise Science and successful completion of 24 hours of doctoral coursework and approval from advisor. Not open to non-degree students.
PE 9820  SERVICE EXPERIENCE IN HIGHER EDUCATION (3 credits)
This seminar will allow students the opportunity to gain valuable knowledge of the service expectations of faculty in higher education settings. The seminar will focus on service opportunities within the university, within the profession and within the community. Participants in the seminar will complete appropriate service activities.
Prerequisite(s)/Corequisite(s): Admittance to the UNO Doctoral program in Exercise Science, successful completion of 24 hours of doctoral coursework, and approval from advisor. Not open to non-degree students.

PE 9910  DOCTORAL SEMINAR (3 credits)
The major goal of this course is to teach the graduate student how to write manuscripts/grants and be an effective academician with strong ethics. The outcome of this course is for the student to produce a manuscript based on data acquired in the laboratory from the ideas developed in the seminar or submit a grant that will support the research ideas developed in at least one semester. The material covered is intended to equip students with the skills necessary to be successful in their academic careers with emphasis given on writing scientific papers. (Cross-listed with BMCH 9910)
Prerequisite(s)/Corequisite(s): Admission into the PhD program. Not open to non-degree graduate students.

PE 9951  ADVANCED EXERCISE PHYSIOLOGY (3 credits)
A detailed analysis of selected topics including acute and chronic effects of exercise on metabolic, pulmonary, cardiovascular function, skeletal muscle function, and sports nutrition. Current research findings and methodology will be emphasized. (Cross-listed with PE 8950)
Prerequisite(s)/Corequisite(s): PE 4940 or equivalent.

PE 9960  ADVANCED EXERCISE PHYSIOLOGY II (3 credits)
The focus of this course is a detailed analysis of the mechanisms responsible for acute and chronic responses to exercise at the cellular and molecular level. Current and historical research will be emphasized.
Prerequisite(s)/Corequisite(s): PE 8950/9951. Not open to non-degree graduate students.

PE 9990  DISSERTATION (1-15 credits)
The course provides doctoral candidates in Exercise Science with a process to complete a dissertation research plan. The course learning activities will focus on the completion of a candidate’s dissertation. The course is designed to allow advanced doctoral candidates to demonstrate technical mastery of the discipline and to advance knowledge by completing an investigation. (Cross-listed with BMCH 9990)
Prerequisite(s)/Corequisite(s): Admittance to the UNO Doctoral Program in Exercise Science, successful completion of doctoral coursework & comprehensive exams, approval of the dissertation supervisory committee chair & advancement to candidacy. Not open to non-degree graduate students.