

# HPS - Human Performance Studies

Courses numbered 500 to 799 = *undergraduate/graduate*. (Individual courses may be limited to undergraduate students only.) Courses numbered 800 to 999 = *graduate*.

## **HPS 510. Coaching Principles (3).**

Provides the skills and knowledge necessary for individuals to successfully coach and officiate both elementary and secondary school interscholastic and intramural athletics. Instruction for coaching and officiating techniques, coaching progression, skill analysis and skill development is provided. Management techniques for interscholastic and intramural athletics are included. A variety of coaching strategies as well as discipline and motivation techniques are discussed. *Course includes diversity content.*

## **HPS 541. Seminar in Strength and Conditioning (3).**

Helps prepare students for the National Strength and Conditioning Association (NSCA) Certification Commission's Certified Strength and Conditioning Specialist (CSCS) examination and/or the NSCA-Certified Personal Trainer certification examination. Anatomy, biochemistry, biomechanics, endocrinology, nutrition, exercise physiology, psychology and the other sciences that relate to the principles of designing safe and effective training programs are covered. Prerequisite(s): junior standing, graduate standing or departmental consent.

## **HPS 541H. Seminar in Strength and Conditioning Honors (3).**

Helps prepare students for the National Strength and Conditioning Association (NSCA) Certification Commission's Certified Strength and Conditioning Specialist (CSCS) examination and/or the NSCA-Certified Personal Trainer certification examination. Anatomy, biochemistry, biomechanics, endocrinology, nutrition, exercise physiology, psychology and the other sciences that relate to the principles of designing safe and effective training programs are covered. Prerequisite(s): junior standing, graduate standing or departmental consent.

## **HPS 590. Independent Study (1-3).**

Arranged individual independent study in specialized content areas under the supervision of a faculty member. Prerequisite(s): departmental consent.

## **HPS 595. Human Performance Research (3).**

Experiential learning course provides opportunities to engage in research activities conducted in the Human Performance Laboratory. Repeatable for a total of 6 credit hours. Prerequisite(s): departmental consent.

## **HPS 595H. Human Performance Research Honors (3).**

Experiential learning course provides opportunities to engage in research activities conducted in the Human Performance Laboratory. Repeatable for a total of 6 credit hours. Prerequisite(s): departmental consent.

## **HPS 713. Palpatory Evaluation and Assessment in Athletic Training (3).**

In-depth exploration of surface anatomy and palpation of structures essential for athletic training clinical healthcare and evaluation. Students are introduced to joint movement, medical terminology and evaluation performance. Prerequisite(s): admission to graduate athletic training program .

## **HPS 715. Body Composition and Weight Management (3).**

A comprehensive coverage of the theoretical and scientific aspects of body composition assessment and current strategies for effective weight management. The limitations and usefulness of reference and field methods for assessing body composition in research, clinical and health/

fitness settings are addressed. The overall intent of this course is not only to provide classroom-based theory regarding body composition assessment, but also hands-on experience and training in applying the different assessment techniques.

## **HPS 716. Psychosocial Aspects of Sports Injury, Illness and Rehabilitation (3).**

Cross-listed as CLES 750AF. Explores the psychosocial factors related to sport injury and illness and their effects on the rehabilitation process, mostly connected to sports and physical culture. Offers an opportunity to develop critical thinking and applicable skills as students consider the place of injury, illness and pain within the social and psychological worlds of sport. Explores the mechanisms through which psychosocial factors influence sports injury, illness, understanding, prevention, treatment and rehabilitation outcomes.

## **HPS 717. Emergency Care and Management in Athletic Training (3).**

Examines the history and the principles establishing emergency management in the athletic training clinical setting. Describes the four phases of emergency management. Relates processes in conjunction with local government agencies, development of EAPs, life-saving skills and equipment use. Prerequisite(s): admission to graduate athletic training program.

## **HPS 721. Athletic Injury Evaluation I (3).**

Covers clinical assessment related to injury/illness sustained by the competitive athlete specifically involving the cervical spine, face, head and upper extremity. Includes skills of health history, visual inspection, physical palpation of anatomy, and functional stress testing. Prerequisite(s): HPS 713 and HPS 741.

## **HPS 722. Athletic Injury Evaluation II (3).**

Covers clinical assessment related to injury/illness sustained by the competitive athlete specifically involving the thoracic and lumbar spine, abdomen, thorax and lower extremity. Includes skills of health history, visual inspection, physical palpation and functional stress testing. Prerequisite(s): HPS 721.

## **HPS 731. Foundations in Athletic Training (3).**

The study of traditional methods in acute injury management, prevention and symptom identification as well as understanding injury mechanisms corresponding to specific athletic injuries. This course develops foundational knowledge in injury recognition to aid in the management of the patient's health care. Prerequisite(s): instructor's consent.

## **HPS 732. Pathophysiology of Cardiovascular Disease (3).**

Introduces the pathophysiology of multiple cardiovascular conditions and the developing industry of cardiac rehabilitation. Introduces assessment techniques in electrocardiography (ECG) to assist in the diagnosis of cardiovascular disease. Includes an introduction to ECG leads, rate and rhythm, ECG complexes and intervals, conduction disturbances, arrhythmia, ECG identification of myocardial infarction location and drug effects on an ECG. Prerequisite(s): HPS 490.

## **HPS 741. Clinical Techniques in Athletic Training (3).**

Covers instrumentation use in the profession of athletic training consisting of, but not limited to: stethoscope, ophthalmoscope, goniometers, weight/height scale, percussion hammers, etc. Students learn, practice and become proficient in the use of athletic training instrumentation. Prerequisite(s): admission to graduate athletic training program .

## **HPS 750L. Motivation (3).**

This course is designed to provide the skills and knowledge necessary to properly motivate individuals, groups and teams in a leadership role. Focus is placed on enhancing, creating or maintaining intrinsic

motivation through the comprehension of motivation theory, primarily Self-Determination Theory, Achievement Goal Theory and The Progressive Motivation Cycle. In addition, techniques will be developed to apply concepts learned from theory and research to real situations. The knowledge and skills gained from this course will help students excel as leaders in sport, education, business or any chosen career.

**HPS 750Q. ACE Personal Training Course (1-2).**

Gives students the knowledge and understanding necessary to prepare for the ACE personal training certification exam. Students learn a comprehensive system for designing individualized programs based on the unique health and fitness goals of clients. Students can take the exam for an additional \$249.

**HPS 762. Statistical Concepts in Human Performance Studies (3).**

Covers descriptive statistics, elementary probability, distributional properties, one- and two-population mean and variance comparisons, ANOVA, linear regression and correlations. In addition, more advanced principles in parametric and nonparametric statistics are emphasized. Prerequisite(s): junior classification or graduate student status.

**HPS 770. Therapeutic Interventions I (3).**

The study of theories, applications and methods of various modalities consisting of cryotherapy, electrotherapy, hydrotherapy and thermotherapy in addition to principles intermittent compression and massage to be utilized in the profession of athletic training.

**HPS 771. Applied Learning I (4).**

Covers clinical skills and proficiencies relating to immediate care, general treatment of injury, risk management, preventative measures, equipment applications and procedures, general medical conditions, and health care methods. Prerequisite(s): admission to athletic training graduate program.

**HPS 772. Applied Learning II (4).**

Focuses on clinical skills, techniques and proficiencies relating to injury evaluation of the upper extremity, cervical spine, head and face in the athletic training environment. Students gain hands-on practical experience with patients under the supervision of an allied health care provider. Prerequisite(s): HPS 771.

**HPS 780. Physical Dimensions of Aging (3).**

Cross-listed as PHS 780. Develops an understanding of the complex physiological changes that accompany advancing age and the effects of physical activity on these factors. Also develops an appreciation for how functional consequences affect mental and social dimensions of life. Attention is given to sensory, motor, cognitive and psychological changes. Emphasizes factors associated with the preparation, implementation and evaluation of research projects involving older adult populations.

**HPS 781. Cooperative Education (1-3).**

Provides the graduate student with a field placement which integrates theory with a planned and supervised professional experience designed to complement and enhance the student's academic program. Individualized programs must be formulated in consultation with appropriate graduate faculty. The plan of study for a graduate degree-bound student must be filed before approval of enrollment for cooperative education graduate credit. Repeatable for credit. A maximum of 3 hours (for nonthesis option) or 6 hours (for thesis option) may count toward the graduate degree.

**HPS 790. Applied Exercise Physiology (3).**

Focuses on the applied aspect of exercise physiology. Includes the areas of environmental influences on performance; optimizing performance through training, nutrition and ergogenic aids; training and performance of the adolescent athlete and the differences in performance and training between genders. Prerequisite(s): HPS 490 or 830.

**HPS 795. Physiology of Athletic Performance (3).**

Explores the physiological responses involved with various athletic performances, including sports requiring endurance, speed and power. Includes such areas of physiological study as metabolic energy systems, cardiovascular and skeletal muscle adaptation, muscle fiber type differentiation and responses to extreme environmental conditions. Discovers parameters for performance and establishes guidelines for training at high levels of performance.

**HPS 797. Exercise in Health and Disease (3).**

Introduction to the physiology of disease and the effects of short- and long-term exercise on specific conditions. Understanding the guidelines for exercise testing and prescription in high risk populations. Prerequisite(s): HPS 490.

**HPS 800. Recent Literature in the Profession (3).**

Survey and critical analysis of research and other pertinent materials in the field.

**HPS 810. Evidence Based Practice in Athletic Training (3).**

Instructs students on the basic principles of evidence based research with an emphasis on the evaluation and clinical application. Foundational groundwork is utilized in upcoming courses that relate to their upcoming research projects. Prerequisite(s): HPS 860.

**HPS 813. Athletic Training Board of Certification Review (1).**

This course is a comprehensive review of materials that are guided by the BOC exam. In addition, this course uses interactive case-based questions hosted by clinical educators to strengthen the students' confidence, along with teaching a number of test-taking strategies. Students complete a comprehensive exam to demonstrate knowledge that would exceed acceptable benchmarks to be successful on the BOC exam. Prerequisite(s): instructor's consent.

**HPS 815. Fitness Assessment/Exercise Recommendations (3).**

Introduces techniques appropriate for screening, health appraisal and fitness assessment as required for prescribing exercise programs for individuals without disease or with controlled disease. Requires out-of-class laboratory experiences. Prerequisite(s): HPS 490 or equivalent and graduate standing.

**HPS 830. Advanced Physiology and Anatomy of Exercise (3).**

In-depth study of the physiological and anatomical basis of exercise and training. Includes respiratory dynamics, cardiovascular function, energy metabolism, regulation during rest, steady state and exhaustive physical activity, identification of joint movements, and the recognition of muscles and nerves that are involved in movement. Emphasizes immediate and long-term adaptation to exercise and training. Prerequisite(s): HPS 490.

**HPS 851. Applied Research in Athletic Training (3).**

Examines various types of research methods in athletic training, education, allied health professions or exercise-related fields. The student develops a research project based on a topic of interest under the supervision of a graduate faculty member. The student identifies a research problem, sample population, methodology, statistical analysis and completes the research project. Students then successfully present their research project. Prerequisite(s): HPS 810 and HPS 860.

**HPS 853. Applied Learning III (4).**

Focuses on a practice-intensive experience that allows the student to participate in the totality of care provided by athletic trainers which includes but is not limited to: injury prevention, clinical evaluations, modality application, therapeutic exercise as well as organizational and administrative functions. Students gain hands-on practical experience with patients under the supervision of an allied health care provider. Prerequisite(s): HPS 772.

**HPS 854. Applied Learning IV (4).**

Focuses on clinical skills, techniques and proficiencies relating to the totality of health care deliverer in the athletic training environment. In addition, students participate in organizational and administrative duties of the athletic trainer. Students gain hands-on practical experience with patients under the supervision of an allied health care provider. Prerequisite(s): HPS 853.

**HPS 857. Internship in Exercise Science/Wellness (6).**

Internship in selected area of specialization within the exercise science program. Students spend the equivalent of full-time employment in an appropriate agency for one full semester. Prerequisite(s): departmental consent.

**HPS 860. Research Methods in the Profession (3).**

Examination of research methodology as related to topics in health, PE, sports studies and exercise science/wellness. Includes review and critical evaluation of the literature, research design and statistical processes, methodology, data collection techniques, computer-based analysis of data and thesis/report writing. Fulfills the university's professional and scholarly integrity training requirement covering research misconduct, publication practices and responsible authorship, conflict of interest and commitment, ethical issues in data acquisition, management, sharing and ownership. Students design and complete a mini research project.

**HPS 871. Therapeutic Interventions II (3).**

A broad range of interventions, methods and techniques are designed to enhance function by identifying, remediating and preventing impairments and activity restrictions in athletic populations to maximize participation. This course includes the use of prescription and nonprescription medication, nutrition and manual therapy techniques to ensure each athlete (patient) is ready for competition. Prerequisite(s): HPS 770.

**HPS 872. General Medical Conditions in Athletic Populations (3).**

The study of acute injury care, prevention and recognition methods for the athletic trainer to aid in the management of general medical conditions. Specific content focuses on the anatomical and physiological systems of the body, signs, symptoms and predisposing conditions associated with various disorders, syndromes, illnesses and diseases. Prerequisite(s): HPS 713.

**HPS 873. Organization and Administration in Athletic Training (3).**

The principles of organization and administration in the athletic training profession. The student plans, coordinates and supervises areas of health care services, financial expenditures, personnel management, public relations and athletic training facility design. Prerequisite(s): instructor's consent.

**HPS 875. Thesis Research (1-2).**

Development of a research problem and proposal with the direction of a graduate faculty member. Repeatable for credit. Prerequisite(s): admission to graduate school in good standing, HPS 860, departmental consent.

**HPS 876. Thesis (1-2).**

Student-driven research experience to address a specific research question. Potential topics should be formulated by the student and discussed with their advisor. Students must be enrolled in this course during the semester in which all requirements for the thesis are met. Repeatable for credit. Prerequisite(s): HPS 875 and consent of the student's committee chair.

**HPS 882. Athletic Injury Rehabilitation (3).**

The study of a comprehensive rehabilitation/reconditioning program involving techniques of flexibility, muscular strength, muscular

endurance and cardiorespiratory training including anaerobic and aerobic principles. Prerequisite(s): instructor's consent.

**HPS 890. Special Topics (1-4).**

An umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 890A, 890B). Not all subtopics are offered each semester – see the course schedule for availability. Students enroll in the lettered courses with specific topics in the titles rather than in this root course. Prerequisite(s): departmental consent.

**HPS 895. Applied Research (1-4).**

Provides opportunity for the student to develop, in collaboration with a departmental faculty member, objectives and protocol for independent work.