

# HPS - Human Performance Studies

Courses numbered 100 to 299 = *lower-division*; 300 to 499 = *upper-division*; 500 to 799 = *undergraduate/graduate*.

## **HPS 101V. Pool-Billiards (1).**

An activity course that involves playing pool-billiards as well as instruction on the rules, shots, and strategies of play. Repeatable for credit.

## **HPS 102C. Bowling (1).**

An activity course that involves bowling as well as instruction on skills, equipment, rules, and etiquette. Repeatable for credit.

## **HPS 102M. Horsemanship (1).**

An activity course that involves riding horses and instruction on equipment and proper riding technique. Repeatable for credit.

## **HPS 103O. Meditation (1).**

An activity course that involves instruction and participation in mental techniques that produce calmness and a sense of well-being. Repeatable for credit.

## **HPS 103Y. Yoga (1).**

An activity course that involves participation and instruction in various physical yoga poses and meditation. Repeatable for credit.

## **HPS 106D. Core Fitness (1).**

An activity course that involves participation and instruction in exercises that concentrate on the core of the body. Repeatable for credit.

## **HPS 106E. Weight Training (1).**

An activity course that involves participation and instruction in lifting free weights and utilizing weight machines. Repeatable for credit.

## **HPS 106Q. Exercise and Weight Control (2).**

Designed to help students realize the importance of healthy diet and exercise behaviors in permanent weight control. Behavior modification techniques are used to help students achieve a healthy lifestyle that will result in either a gradual reduction in body weight, and/or the maintenance of a health body weight. Repeatable for credit.

## **HPS 107A. Swimming 1 (1).**

An activity course that involves participation and instruction in various swimming strokes. Repeatable for credit.

## **HPS 107E. Scuba (1).**

An activity course that involves participation and instruction in SCUBA diving. Repeatable for credit.

## **HPS 110. Varsity Athletics (1).**

An elective course for WSU students who are NCAA Division I athletes.

## **HPS 110D. Bowling (1).**

An elective course for members of the WSU bowling team.

## **HPS 110E. Crew (1).**

An elective course for members of the WSU crew team.

## **HPS 110T. Spirit Squad (1).**

An elective course for members of the WSU Spirit Squad.

## **HPS 113. Introduction Exercise Science (3), T**

An overview of the basic physiological, neurological and biomechanical processes associated with physical activity and human movement. This is a Kansas Systemwide Transfer Course.

## **HPS 114. Introduction to Athletic Training (3).**

Covers introductory techniques, applications and theories for the beginning athletic training student. Includes basic skills of fitness program design, emergency procedures, immediate injury care,

pharmacology interactions, modality application and environmental conditions. Corequisite(s): HPS 114L.

## **HPS 114L. Intro Athletic Training Lab (0).**

A laboratory course for introductory techniques and applications for the beginning athletic training student. The student will learn demonstrate basic skills of emergency/immediate care, health history, modality application, and environmental conditions.

## **HPS 121. Professional Practicum (2).**

Covers clinical skills and proficiencies relating to emergency/immediate care, health history, modality application and environmental conditions as well as various methods of athletic taping, bandaging, protective padding and bracing of anatomical regions. Prerequisite(s): admission to the ATP and instructor's consent.

## **HPS 130. Taping and Bandaging in Athletic Training (1).**

Covers techniques used for the care and prevention of athletic injuries. Includes various methods of athletic taping, bandaging, protective padding and bracing of anatomical regions.

## **HPS 131. Instrumentation in Athletic Training (1).**

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.

## **HPS 150. Workshop (1-3).**

An umbrella course created to explore a variety of subtopics differentiated by letter (e.g., 150A, 150B). 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.

## **HPS 150P. Stress Management (1).**

The purpose of this course is to teach students the basic principles, theories, and relaxation techniques to effectively manage personal stress. Students will gain a greater understanding of the mind-body relationship, learn to employ a holistic approach to stress and adopt effective cognitive techniques, coping skills, and relaxation techniques.

## **HPS 152A. Personal Fitness (1-3).**

An activity course designed for older adults.

## **HPS 152B. Flex & Tone (1).**

An activity course designed for older adults that focuses on strength and balance training.

## **HPS 152C. Water Fitness (1).**

An activity course designed for older adults that involves exercising in a swimming pool.

## **HPS 220. Athletic Training Practicum (2).**

Covers clinical skills and proficiencies relating to emergency care, basic treatment of injury, risk management, preventative procedures, equipment intensive and specific medical conditions. Prerequisite(s): admission to the athletic training education program and instructor's consent.

## **HPS 221. Athletic Training Practicum II (2).**

Covers clinical skills and proficiencies relating to assessment and evaluation of the upper extremity, cervical spine, head and face. Prerequisite(s): HPS 220 and instructor's consent.

## **HPS 302. Administration in Exercise Science (3).**

Examines the various issues, policies and procedures involved with administration in exercise science. Emphasis is on facility organization and design, legal liability, personnel management, budgeting, equipment purchasing, and record keeping and promotions. Special topics are related to fitness and wellness center administration.

**HPS 313. Exercise and Sport Nutrition (3).**

Study of the role of nutrition as a means to enhance performance in exercise and sport. Topics include principles of healthful nutrition, energy metabolism and nutrients, regulation of metabolism by macro and micro nutrients, weight control and analysis of the validity and safety of proposed nutritional ergogenic aids. In addition, regulatory (FDA and FTC) aspects of sports nutrition are reviewed.

**HPS 313H. Exercise and Sport Nutrition Honors (3).**

Study of the role of nutrition as a means to enhance performance in exercise and sport. Topics include principles of healthful nutrition, energy metabolism and nutrients, regulation of metabolism by macro and micro nutrients, weight control and analysis of the validity and safety of proposed nutritional ergogenic aids. In addition, regulatory (FDA and FTC) aspects of sports nutrition are reviewed.

**HPS 320. Athletic Training Practicum III (2).**

Covers clinical skills and proficiencies relating to assessment and evaluation of the lower extremity, abdomen/ thorax, thoracic, lumbar and sacral spine. Prerequisite(s): HPS 221 and instructor's consent.

**HPS 321. Athletic Training Practicum IV (2).**

Covers clinical skills and proficiencies relating to therapeutic modalities and various treatment protocols involving electrotherapy, ultrasound, traction, joint mobilizations and massage to enhance the healing process. Prerequisite(s): HPS 320 and instructor's consent.

**HPS 328. Kinesiology (3).**

Serves as a link between the general aspects of anatomy and biomechanics, and specific applications in the fields encompassing exercise science. Provides an in-depth review of musculoskeletal anatomy as a foundation for learning components of simple and complex human movement. Emphasizes the qualitative analysis of human movement, while also incorporating quantitative analysis techniques. Prerequisite(s): BIOL 223 or HS 290.

**HPS 331. Care and Prevention of Athletic Injuries (3). †**

The study of acute injury care, prevention and recognition methods for the coach, athletic trainer and physical educator to aid in the management of athletic related injuries. This course has a lab component. This is a Kansas Systemwide Transfer Course. Prerequisite(s): BIOL 223 or HS 290.

**HPS 352. General Medical Conditions in Athletics (3).**

The study of diseases, disorders, illnesses and other general medical conditions affecting the health of the athlete. The student learns to recognize the signs, symptoms and predisposing conditions associated with the skin; eyes, ears, nose and throat; respiratory and cardiovascular system; endocrine system; gastrointestinal and genitourinary tract; gynecological disorders; viral syndromes; and neurological disorders.

**HPS 420. Athletic Training Practicum V (2).**

Covers clinical skills and proficiencies relating to therapeutic exercise and various rehabilitation protocols involving flexibility, muscular strength, physical conditioning and functional progressions. Prerequisite(s): HPS 321 and instructor's consent.

**HPS 421. Athletic Training Practicum VI (2).**

Covers clinical skills and proficiencies relating to organizational, administrative and management skills that formulate the administrative aspects of athletic training. Prerequisite(s): HPS 420 and instructor's consent.

**HPS 430BA. Badge: Mind and Movement (0.5).**

Introduces the interaction between physical exercise and mental, emotional and spiritual well-being, including an overview of potential therapeutic uses in workplace wellness, and use as a complementary modality for serving people struggling to manage stress, anxiety, depression, addiction or PTSD. Movement as a strategy for maintaining

and enhancing cognitive function and memory across the lifespan is addressed. Both scholarly literature and real-world examples of the application of physical activity are employed. Includes opportunities for personal application of the concepts and discussion of the possibilities for professional use. Graded Bg/NBg.

**HPS 440. Concepts in the Prescription of Exercise (3).**

An introduction of techniques appropriate for screening, health appraisal and fitness assessment as required for prescribing exercise programs for persons without disease or with controlled disease, and provision for practical experience in a supervised setting outside the class. *Course includes diversity content.* Prerequisite(s): HPS 113, BIOL 223, HS 290 or departmental consent.

**HPS 440H. Concepts in the Prescription of Exercise Honors (3).**

An introduction of techniques appropriate for screening, health appraisal and fitness assessment as required for prescribing exercise programs for persons without disease or with controlled disease, and provision for practical experience in a supervised setting outside the class. *Course includes diversity content.* Prerequisite(s): HPS 113, BIOL 223, HS 290 or departmental consent.

**HPS 442. Administration of Athletic Training (3).**

The principles of administration components within 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 development. Prerequisite(s): HPS 331, instructor's consent.

**HPS 450. Therapeutic Modalities (3).**

The study of theories, applications and methods of various modalities consisting of cryotherapy, electrotherapy, hydrotherapy and thermotherapy in addition to principles of manual therapy, intermittent compression and massage. Prerequisite(s): HPS 331. Corequisite(s): HPS 450L.

**HPS 451. Therapeutic Exercise (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. This course has a lab component. Prerequisite(s): HS 290 or BIOL 223 or equivalent; HPS 331.

**HPS 460. Motor Learning (3).**

Designed to examine the principles of motor learning by examining the physiological, psychological and neuromotor factors that affect the acquisition of motor skills. Prerequisite(s): BIOL 223 or HS 290. Corequisite(s): HPS 460L.

**HPS 461. Biomechanics of Human Movement (3).**

Introduces students to concepts of mechanics as they apply to human movement, particularly those pertaining to exercise, sport and physical activity. Students should gain an understanding of the mechanical and anatomical principles that govern human motion and develop the ability to link the structure of the human body with its function from a mechanical perspective. Prerequisite(s): HPS 328 or departmental consent.

**HPS 461H. Biomechanics of Human Movement Honors (3).**

Introduces students to concepts of mechanics as they apply to human movement, particularly those pertaining to exercise, sport and physical activity. Students should gain an understanding of the mechanical and anatomical principles that govern human motion and develop the ability to link the structure of the human body with its function from a mechanical perspective. Prerequisite(s): HPS 328 or departmental consent.

**HPS 470. Experiential Fitness Practicum in Exercise Science (2-3).**

Application of theory to practice by assisting in various activities associated with the field of exercise science (e.g., fitness instruction, weight management, weight training, athletic training, etc.). Minimum of 15 hours per week. Prerequisite(s): HPS 440 or HPS 440H with grade of C or departmental consent.

**HPS 481. Cooperative Education (1-8).**

Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting related to the student's major field of study or career focus. Repeatable for a total of 8 credit hours. Prerequisite(s): 2.500 GPA and admission to College of Applied Studies.

**HPS 490. Physiology of Exercise (3).**

Provides a working knowledge of human physiology as it relates to exercise. Prerequisite(s): BIOL 223 or HS 290. Corequisite(s): HPS 490L.

**HPS 490H. Physiology of Exercise Honors (3).**

Provides a working knowledge of human physiology as it relates to exercise. Prerequisite(s): BIOL 223 or HS 290. Corequisite(s): HPS 490L.

**HPS 490L. Physiol of Exercise Lab (0).**

A laboratory course designed to provide students the opportunity to learn basic skills relevant to an exercise physiologist. The student learns these skills through observation as well as through hands-on opportunities to perform as the technician and/or the client during the structured weekly activities. Students will experience, first hand, the neuromuscular, metabolic, and cardiorespiratory responses to acute exercise. Laboratory to be taken concurrently with HPS 490 lecture. Prerequisite(s): HPS 229, BIO 223, or HS 290. Corequisite(s): HPS 490.

**HPS 495. Internship in Exercise Science (8).**

Culminating activity for students completing the BA in exercise science. Students spend the equivalent of full-time employment in an appropriate agency for one full semester. Prerequisite(s): senior standing, departmental consent, HPS 470, 2.500 minimum GPA overall and for major, admission to College of Applied Studies.

**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): HPS 440 or HPS 440H, 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): HPS 440 or HPS 440H, junior standing, graduate standing or departmental consent.

**HPS 542. Advanced Strength and Conditioning (3).**

Helps prepare students for the NSCA Certified Strength and Conditioning Specialist (CSCS) examination. Covers advanced concepts and skills related to strength and conditioning including test selection and administration, program design, needs analysis, administration and nutrition. For undergraduate credit only. Prerequisite(s): HPS 541/541H and admission in the BS in exercise science with a concentration in strength and conditioning program, or departmental consent.

**HPS 543. Professional Development in Strength and Conditioning (3).**

Helps prepare students to study for and pass the NSCA Certified Strength and Conditioning Specialist (CSCS) examination. This course also helps students develop professional materials and skills to obtain employment upon graduation. For undergraduate credit only. Prerequisite(s): admission in the BS in exercise science with a concentration in strength and conditioning program, 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 591. Internship in Strength and Conditioning I (2).**

Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. For undergraduate credit only. Prerequisite(s): HPS 440 and admission to the BS in exercise science with a concentration in strength and conditioning program, or departmental consent.

**HPS 592. Internship in Strength and Conditioning II (3).**

Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. For undergraduate credit only. Prerequisite(s): HPS 591 and admission to the BS in exercise science with a concentration in strength and conditioning program, or departmental consent.

**HPS 593. Internship in Strength and Conditioning III (3).**

Complements and enhances the student's academic program by providing an opportunity to apply and acquire knowledge in a workplace environment as an intern. For undergraduate credit only. Prerequisite(s): HPS 542 and admission to the BS in exercise science with a concentration in strength and conditioning program, or 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. Pre- or corequisite(s): HPS 490 or HPS 490H.

**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).**

Academic program that expands a student's learning experiences through paid employment in a supervised educational work setting

related to the student's major field of study or career focus. Repeatable for credit. A maximum of 3 credit hours (for nonthesis option) or 6 credit 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. Pre- or corequisite(s): HPS 490 or HPS 490H or HPS 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. Pre- or corequisite(s): HPS 490 or HPS 490H or departmental consent.