

# HEALTH & HUMAN PERFORMANCE (HHP)

## **HHP-6950: Independent Study in Health and Human Performance (1-6 hours)**

### **HHP-7000: Cardiovascular Responses to Exercise (3 hours)**

This course examines cardiovascular adaptations to acute and chronic exercise. The course will provide an in-depth analysis of metabolic, systemic and hormonal responses to the stress of exercise and the adaptive changes that occur with training, as well as the underlying mechanisms. Prerequisite: B or higher in HHP-7005 and HHP-7900.

### **HHP-7005: Scientific Communication (3 hours)**

Effective communication in scientific writing. Emphasis on professional scientific language and field-appropriate stylistic convention.

### **HHP-7010: Neuromuscular Responses to Exercise (3 hours)**

This course examines neuromuscular adaptations to acute and chronic exercise. Students will engage in an in-depth analysis of neuromuscular structure and function, motor unit recruitment during different types of movement, and muscle adaptations to resistance and endurance training. Prerequisite: B or higher in HHP-7005 and HHP-7900.

### **HHP-7020: Exercise for Disease Prevention and Management (3 hours)**

The purpose of this course is to provide the student with a framework for evaluating current information on exercise recommendations for special populations. Students will engage in an in-depth analysis of the implications for exercise in preventing and managing obesity, coronary heart disease, diabetes, cancer, asthma, neurological conditions and musculoskeletal conditions. Prerequisite: B or higher in HHP-7005, HHP-7900, and RES-7605.

### **HHP-7030: Advanced Exercise and Sports Nutrition (3 hours)**

This course examines the latest evidence-based principles and recommendations on meal, energy and nutrient timing for optimal fueling and performance. Topics include principles of nutrient timing, regulation of metabolism by micronutrients and macronutrients and their role in weight control in athletes, safety and validity of supplements and ergogenic aids, and nutritional aspects of optimal performance. Prerequisite: B or higher in HHP-7005, HHP-7900, and RES-7605.

### **HHP-7040: Measurement and Evaluation in Health and Human Performance (3 hours)**

This course develops skills for the selection, development and implementation of various types of instruments and techniques for measuring and evaluating health and human performance interventions. Evaluation of these interventions includes general health behaviors, health-related fitness, nutritional and dietary intake, body composition, and other areas related to an individual's quality of life. Students will learn methods for developing/choosing psychometric and biometric tools, choosing appropriate evaluation designs, procedures for data collection, and describing evaluation results. Prerequisite: B or higher in HHP-7005 and HHP-7900.

### **HHP-7050: Program Design in Physical Activity and Health (3 hours)**

This course examines planning and organization of health programs. Students will investigate, contrast, develop and evaluate a variety of intervention activities. Theories regarding techniques to enhance behavior change and instructional design strategies to meet the health needs of a diverse population will be explored. Prerequisite: B or higher in HHP 7000, HHP-7010, and RES-7605.

### **HHP-7060: Health Promotion and Disease Prevention (3 hours)**

The course examines the process of disease prevention and control through the education and advocacy of health promotion. Students will examine the physiological and medical factors associated with common diseases/conditions including asthma, obesity, diabetes, hypertension, heart disease and other metabolic disease states. Students examine various topics while utilizing methods of health communication for prevention/control of chronic diseases. Prerequisite: B or higher in HHP-7050.

### **HHP-7070: The Professoriate (3 hours)**

This course examines the latest evidence-based principles and experiential recommendations on the professoriate in higher education. Topics include principles and strategies of teaching and learning; professional relationships; philosophy of education; issues of race and gender, promotion and tenure, and the scholarship of teaching, research and service.

### **HHP-7090: Ethical Issues in HHP (3 hours)**

This course examines the ethical conflicts and challenges around autonomy, liberty, individual rights, and the common good in regard to healthful living and quality of life. Human rights, civil rights, influence of race, social class, and gender/sex will be examined in the context of health issues, such as social determinants of illness, health promotion and behavior modification, social justice, and research equity. Ethical considerations will center on the program design, evaluation and research aspects related to Health and Human Performance with special attention to inclusion.

### **HHP-7100: Seminar in Health & Human Performance (3 hours)**

This course is designed to provide an opportunity for the students to study a specific topic/area of interest within the field and develop an academically sound project with the aid of an advisor. Topics/area of interest will be approved by the Program Director. Independent study should be related to specific program design of Health & Human Performance interventions, grant proposals for agency submission, or academic manuscript preparation for professional presentation and/or publication. This course will culminate in an independent study that will directly demonstrate program competencies. Prerequisite: B or higher in HHP-7020, HHP-7030, HHP-7050, HHP-7090, HHP-7500, HHP-7520, RES-7620, RES-7700, and RES-7800.

### **HHP-7500: Advanced Biomechanics (3 hours)**

Application of mechanics to biological systems including tissue mechanics, human performance, and limb dynamics. Investigation of biomechanics in healthy, aging, and pathological populations. Applying tools of engineering analysis to biological systems from cellular to whole body. Prerequisite: B or higher in HHP-7010 and RES-7605.

### **HHP-7510: Advanced Topics in Endocrinology and Metabolism (3 hours)**

Review of hormonal regulation and function of endocrine systems at both a molecular and whole-species level, as well as endocrine & exercise interactions related to key metabolic pathways. Emphasis on hormones that regulate growth, stress, metabolism, and reproduction, as well as diseases associated with these processes. Prerequisite: B or higher in HHP-7000 and HHP-7010.

### **HHP-7520: Advanced Exercise Physiology and Special Population Considerations (3 hours)**

Advanced concepts in exercise physiology related to cardiovascular, pulmonary, kidney, and immune system pathologies. Implementation and interpretation of clinical exercise tests with a special focus on ECG and pulmonary function. Prerequisite: B or higher in HHP-7000 and RES-7605.

**HHP-7900: Research Design (3 hours)**

Principles of research theory, methods, inquiry, problem formulation, data collection, literature searches, and ethical considerations. Emphasis on how to design a doctoral-level research study in the field of Health and Human Performance.

**HHP-7910: Remediation for Comprehensive Exam (3 hours)**

A remediation course for students who do not pass their Comprehensive Exam (COMP-7100). A review of scientific writing, critical analysis of literature, and writing comprehensive literature reviews. Must be completed with Pass before re-enrollment in COMP-7100. Pass/Fail only.