

# Health, Sport and Exercise Science

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## Degree Offered:

Ph.D. in Health, Sport and Exercise Science (HSES)

The Ph.D. program in the Department of Health, Human Performance and Recreation is a research-focused degree that is designed to prepare scholars in advanced study to contribute to the field through teaching, research, and service.

The department is comprised of four divisions and offers the Ph.D. degree with a concentration in each corresponding program area:

1. Exercise Science
2. Health Behavior and Health Promotion
3. Kinesiology Pedagogy
4. Recreation and Sport Management

## Ph.D. in Health, Sport and Exercise with Exercise Science Concentration

### Admission to Ph.D. Degree Program:

The applicant must have 1) completed a master's degree or its equivalent in a field related to their specialization area to which they are applying, 2) meet general admission requirements of the Graduate School, 3) a GPA of at least 3.00 on all graduate course work; and 4) an acceptable score on the Graduate Record Examinations (GRE). Admission will be based on the willingness and ability of a graduate faculty member to accept a new student. Additional prerequisites may be prescribed after review of application materials.

Applications must include the following:

1. Curriculum vitae.
2. Statement of purpose and research interest, including specification of the area of concentration to which you are applying.
3. Academic transcripts
4. Three letters of recommendation

### Requirements for the Doctor of Philosophy Degree:

A minimum of 96 post-baccalaureate graduate semester hours, including 18 hours of dissertation, is required to complete the program. In the event required courses for the Ph.D. program have been taken during a student's master's degree program, they will need to substitute another graduate course in lieu of the required course. A doctoral advisory committee will be established by the student in consultation with the

Coordinator of Graduate Study during the first semester of enrollment subsequent to acceptance into the degree program. The student, in conjunction with the advisory committee, will define the program of study. The degree program requires successful completion of qualifying examinations, dissertation, and an oral defense of the dissertation. These last requirements are described elsewhere in this catalog.

HHPR 5353	Research in Health, Human Performance and Recreation	3
HHPR 5001	Health, Human Performance and Recreation Seminar <sup>1</sup>	1
HHPR 700V	Doctoral Dissertation	18

### Research and Statistical Requirements

A minimum of 18 hours approved by doctoral advisory committee.	18
Concentration (Students must select between Exercise Science, Health Behavior and Health Promotion, Kinesiology Pedagogy, or Recreation and Sport Management)	18
Electives as needed to fulfill total post-baccalaureate graduate semester hours required. May include graduate hours completed as part of another graduate degree program, including hours completed in the master's program, as approved by the student's advisory committee.	36

**Total Hours** **94**

Requirements also include the area of concentration presented below.

<sup>1</sup>Must be repeated 3 times for a total of 3 credit hours

### Requirements for Exercise Science Concentration:

#### Exercise Science Core

EXSC 5323	Biomechanics I	3
EXSC 5513	Physiology Exercise I	3
EXSC 5593	Advanced Exercise Testing and Prescription	3

#### Cognate

The student, in consultation with the doctoral advisory committee, will identify hours of further course work comprising a field of study in an area of interest. Course work may be selected from several related disciplines or a single discipline.

**Total Hours** **18**

## Ph.D. in Health, Sport and Exercise Science with Health Behavior and Health Promotion Concentration

### Admission to Ph.D. Degree Program:

The applicant must have 1) completed a master's degree or its equivalent in a field related to their specialization area to which they are applying, 2) meet general admission requirements of the Graduate School, 3) a GPA of at least 3.00 on all graduate course work; and 4) an acceptable score on the Graduate Record Examinations (GRE). Admission will be based on the willingness and ability of a graduate faculty member to accept a new student. Additional prerequisites may be prescribed after review of application materials.

Applications must include the following:

1. Curriculum vitae.
2. Statement of purpose and research interest, including specification of the area of concentration to which you are applying.

3. Academic transcripts
4. Three letters of recommendation

#### Requirements for the Doctor of Philosophy Degree:

A minimum of 96 post-baccalaureate graduate semester hours, including 18 hours of dissertation, is required to complete the program. In the event required courses for the Ph.D. program have been taken during a student's master's degree program, they will need to substitute another graduate course in lieu of the required course. A doctoral advisory committee will be established by the student in consultation with the Coordinator of Graduate Study during the first semester of enrollment subsequent to acceptance into the degree program. The student, in conjunction with the advisory committee, will define the program of study. The degree program requires successful completion of qualifying examinations, dissertation, and an oral defense of the dissertation. These last requirements are described elsewhere in this catalog.

HHPR 5353	Research in Health, Human Performance and Recreation	3
HHPR 5001	Health, Human Performance and Recreation Seminar <sup>1</sup>	1
HHPR 700V	Doctoral Dissertation	18

#### Research and Statistical Requirements

A minimum of 18 hours approved by doctoral advisory committee.	18
Concentration (Students must select between Exercise Science, Health Behavior and Health Promotion, Kinesiology Pedagogy, or Recreation and Sport Management)	18
Electives as needed to fulfill total post-baccalaureate graduate semester hours required. May include graduate hours completed as part of another graduate degree program, including hours completed in the master's program, as approved by the student's advisory committee.	36

**Total Hours** **94**

Requirements also include the area of concentration presented below.

<sup>1</sup>Must be repeated 3 times for a total of 3 credit hours

#### Requirements for the Health Behavior and Health Promotion Concentration:

The Health Behavior and Health Promotion concentration trains health behavior researchers for academic positions in university settings, for positions in federal health agencies such as the Centers for Disease Control and Prevention and the National Institutes of Health, and for post-doctoral research fellowships.

#### Health Behavior Core

PBHL 5533	Theories of Social and Behavioral Determinants of Health	3
PBHL 5563	Public Health: Practices and Planning	3
PBHL 5573	Foundations of Public Health	3
PBHL 5613	Epidemiology for Public Health Practice	3

#### Cognate

The student, in consultation with the doctoral advisory committee, will identify hours of further course work comprising a field of study in an area of interest. Course work may be selected from several related disciplines or a single discipline.

**Total Hours** **18**

## Ph.D. in Health, Sport and Exercise Science with Kinesiology Pedagogy Concentration

#### Admission to Ph.D. Degree Program:

The applicant must have 1) completed a master's degree or its equivalent in a field related to their specialization area to which they are applying, 2) meet general admission requirements of the Graduate School, 3) a GPA of at least 3.00 on all graduate course work; and 4) an acceptable score on the Graduate Record Examinations (GRE). Admission will be based on the willingness and ability of a graduate faculty member to accept a new student. Additional prerequisites may be prescribed after review of application materials.

Applications must include the following:

1. Curriculum vitae.
2. Statement of purpose and research interest, including specification of the area of concentration to which you are applying.
3. Academic transcripts
4. Three letters of recommendation

#### Requirements for the Doctor of Philosophy Degree:

A minimum of 96 post-baccalaureate graduate semester hours, including 18 hours of dissertation, is required to complete the program. In the event required courses for the Ph.D. program have been taken during a student's master's degree program, they will need to substitute another graduate course in lieu of the required course. A doctoral advisory committee will be established by the student in consultation with the Coordinator of Graduate Study during the first semester of enrollment subsequent to acceptance into the degree program. The student, in conjunction with the advisory committee, will define the program of study. The degree program requires successful completion of qualifying examinations, dissertation, and an oral defense of the dissertation. These last requirements are described elsewhere in this catalog.

HHPR 5353	Research in Health, Human Performance and Recreation	3
HHPR 5001	Health, Human Performance and Recreation Seminar <sup>1</sup>	1
HHPR 700V	Doctoral Dissertation	18

#### Research and Statistical Requirements

A minimum of 18 hours approved by doctoral advisory committee.	18
Concentration (Students must select between Exercise Science, Health Behavior and Health Promotion, Kinesiology Pedagogy, or Recreation and Sport Management)	18
Electives as needed to fulfill total post-baccalaureate graduate semester hours required. May include graduate hours completed as part of another graduate degree program, including hours completed in the master's program, as approved by the student's advisory committee.	36

**Total Hours** **94**

Requirements also include the area of concentration presented below.

<sup>1</sup>Must be repeated 3 times for a total of 3 credit hours

#### Requirements for the Kinesiology Pedagogy Concentration:

#### Pedagogy Core

PHED 6363	Supervision in Physical Education	3
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PHED 5253	The Physical Education Curriculum	3
PHED 5273	Professional Issues in Physical Education and Sport	3
<b>Cognate</b>		
A minimum of 6 hours approved by doctoral advisory committee.		6
<b>Electives</b>		
The student, in consultation with the doctoral advisory committee, will identify further course work comprising a field of study in kinesiology and consistent with the goals and objectives of the student and institution. Course work may be selected from several related disciplines or a single discipline.		3
<b>Total Hours</b>		<b>18</b>

## Ph.D. in Health, Sport and Exercise Science with Recreation and Sport Management Concentration

### Admission to Ph.D. Degree Program:

The applicant must have 1) completed a master's degree or its equivalent in a field related to their specialization area to which they are applying, 2) meet general admission requirements of the Graduate School, 3) a GPA of at least 3.00 on all graduate course work; and 4) an acceptable score on the Graduate Record Examinations (GRE). Admission will be based on the willingness and ability of a graduate faculty member to accept a new student. Additional prerequisites may be prescribed after review of application materials.

Applications must include the following:

1. Curriculum vitae.
2. Statement of purpose and research interest, including specification of the area of concentration to which you are applying.
3. Academic transcripts
4. Three letters of recommendation

### Requirements for the Doctor of Philosophy Degree:

A minimum of 96 post-baccalaureate graduate semester hours, including 18 hours of dissertation, is required to complete the program. In the event required courses for the Ph.D. program have been taken during a student's master's degree program, they will need to substitute another graduate course in lieu of the required course. A doctoral advisory committee will be established by the student in consultation with the Coordinator of Graduate Study during the first semester of enrollment subsequent to acceptance into the degree program. The student, in conjunction with the advisory committee, will define the program of study. The degree program requires successful completion of qualifying examinations, dissertation, and an oral defense of the dissertation. These last requirements are described elsewhere in this catalog.

HHPR 5353	Research in Health, Human Performance and Recreation	3
HHPR 5001	Health, Human Performance and Recreation Seminar <sup>1</sup>	1
HHPR 700V	Doctoral Dissertation	18

### Research and Statistical Requirements

A minimum of 18 hours approved by doctoral advisory committee.	18
Concentration (Students must select between Exercise Science, Health Behavior and Health Promotion, Kinesiology Pedagogy, or Recreation and Sport Management)	18

Electives as needed to fulfill total post-baccalaureate graduate semester hours required. May include graduate hours completed as part of another graduate degree program, including hours completed in the master's program, as approved by the student's advisory committee.

**Total Hours 94**

Requirements also include the area of concentration presented below.

<sup>1</sup>Must be repeated 3 times for a total of 3 credit hours

### Requirements for the Recreation and Sport Management Concentration:

The Recreation and Sport Management concentration prepares students to become teachers, researchers, and leaders in the area of recreation, sport management and leisure in university settings.

### Recreation and Sport Management Core

RESM 612V	Directed Reading in Recreation and Sport	3
RESM 6133	Issues in RESM	3
HHPR 6233	Management in HHPR	3

### Cognate

The student, in consultation with the doctoral advisory committee, will identify hours of further course work comprising a field of study in an area of interest. Course work may be selected from several related disciplines or a single discipline.

**Total Hours 18**

## Courses

### EXSC 5023. Advanced Teaching in Exercise Science. 3 Hours.

Examination and practical exposure to the principles and practices of undergraduate teaching in exercise science. Includes course planning, teaching techniques, assessment strategies, and supervised practice. (Typically offered: Fall, Spring and Summer) May be repeated for up to 6 hours of degree credit.

### EXSC 5323. Biomechanics I. 3 Hours.

Intended to serve as an introduction to biomechanics and focuses on scientific principles involved in understanding and analyzing human motion. (Typically offered: Fall)

### EXSC 5333. Instrumentation in Biomechanics. 3 Hours.

The application of knowledge and skills necessary for data collection for sports analysis. Provides valuable information on instrumentation used specifically in biomechanics. Prerequisite: EXSC 5323. (Typically offered: Irregular)

### EXSC 5353. Exercise Psychology. 3 Hours.

Exercise Psychology is a lecture and discussion format for students interested in learning about theoretical and research information related to exercise adherence. (Typically offered: Fall)

**EXSC 5453. Physical Activity and Health. 3 Hours.**

The course is designed to give graduate students from a variety of disciplines a broad introduction to the role of physical activity and how it affects the public's health across the lifespan. Throughout the semester, we will cover topics such as the current recommendations for physical activity, the beneficial effects of physical activity on various health-related outcomes, determinants of physical activity, how to measure physical activity at both the individual and population levels, and strategies used to promote physical activity. Graduate students within all areas of exercise science, public health and disciplines outside of public health (e.g., education, healthcare, social work, and psychology) could benefit from this course at the Masters or Doctoral level. Students will complete a physical activity research project in their field of study and review both historical and current literature. (Typically offered: Irregular)

**EXSC 5463. Promoting Physical Activity in the Community. 3 Hours.**

This course will give students in the area of public health or physical activity the opportunity to survey community physical activity interventions in diverse settings and populations (i.e. workplaces, schools, urban planning, children). The course will examine evidence-based strategies to promote physical activity, and students will apply program planning and physical activity evaluation skills in the field of physical activity. (Typically offered: Fall)

**EXSC 5513. Physiology Exercise I. 3 Hours.**

A study of the foundation literature in exercise physiology. Emphasis is placed on the muscular, cardiovascular, and respiratory systems. (Typically offered: Fall)

**EXSC 5523. Muscle Metabolism in Exercise. 3 Hours.**

A study of the metabolic changes that occur in muscle as a result of exercise, exercise training, and other stressors. Prerequisite: EXSC 5513 or equivalent. (Typically offered: Spring)

**EXSC 5533. Cardiac Rehabilitation Program. 3 Hours.**

An examination of the concepts, design, and implementation of cardiac rehabilitation programs. Emphasis on exercise programs but reference to nutrition, psychology, and other lifestyle interventions. (Typically offered: Spring Even Years)

**EXSC 5543. Cardiovascular Function in Exercise. 3 Hours.**

Study of the effects of exercise training and other stressors on the cardiovascular system. Detailed study of the components of the cardiovascular system and the responses and adaptations of those components to selected stimuli. Corequisite: EXSC 5513 or equivalent. (Typically offered: Fall Even Years)

**EXSC 5593. Advanced Exercise Testing and Prescription. 3 Hours.**

Practical experience in testing physical fitness utilizing laboratory equipment. Objective is to quantify physiological parameters, leading to the individualized exercise prescription. (Typically offered: Fall and Summer)

**EXSC 5613. Physical Dimensions of Aging. 3 Hours.**

This course will focus on the physiological changes with healthy aging, pathophysiology of age-related diseases, testing issues, exercise interventions, and the psychosocial aspects of aging. Prerequisite: EXSC 5513. (Typically offered: Spring Odd Years)

**EXSC 5643. Advanced Psychology of Sports Injury and Rehabilitation. 3 Hours.**

The purpose of this course is to explore and discuss factors related to the psychological aspects of athletic injuries. These factors include the sociocultural, mental, emotional, and physical dimensions of injury rehabilitation. (Typically offered: Spring)

**EXSC 5773. Performance and Drugs. 3 Hours.**

The pharmacological and physiological effects of ergogenic aids upon the athlete and performance coupled with the ethical and moralistic viewpoints of drug taking. Practical laboratory experiences are provided with pertinent statistical surveys of athletes; their drug taking habits and relevant psychological impact on performance. (Typically offered: Spring)

**EXSC 6313. Muscle Physiology. 3 Hours.**

To expand the student's knowledge of the skeletal muscle form and function. Specifically, how muscle is formed to how it can adapt as a post-mitotic tissue. This course will focus on the morphological, physiological, cellular, and molecular factors that affect skeletal muscle form and function. (Typically offered: Fall Even Years)

**EXSC 6343. Physiology of Exercise II. 3 Hours.**

Detailed study of the body systems affected by exercise, the functions of these systems during exercise, the effects of age, sex, body type, and nutrition on capacity for exercise, the techniques of assessing work capacity, and a critical analysis of research literature in this area. (Typically offered: Irregular)

**EXSC 6443. Thermoregulation and Fluid Balance. 3 Hours.**

Comprehensive overview of human thermoregulatory responses to exercise in heat and cold. (Typically offered: Spring Even Years)