

Kinesiology/Integrative Exercise Physiology, Ph.D.

COLLEGE OF PUBLIC HEALTH

Learn more about the Doctor of Philosophy in Kinesiology.

About the Program

The research-intensive Ph.D. program in Kinesiology with a concentration in Integrative Exercise Physiology trains students to conduct intellectually rigorous biomedical research on physiological responses to exercise and physical activity, specifically at the molecular and cellular levels. Students collaborate with internationally renowned faculty members on research that examines:

- the molecular links between specific types of exercise interventions and disease prevention;
- the precise mechanisms by which exercise promotes whole-body health; and
- the pathogenic processes underpinning cardiovascular, neuromuscular, and metabolic disorders associated with physical activity.

These strengths set Temple University's Integrative Exercise Physiology program apart:

- Exceptional faculty are recognized experts in translational exercise biology, muscle physiology, sensorimotor control systems, and strength and conditioning.
- Top-tier research facilities with state-of-the-art kinesiology and biomedical science research technology ensure students become competitive candidates for postdoctoral training and future research careers.
- Interdisciplinary collaboration provides students with opportunities to establish unique research agendas that integrate expertise from multiple fields of research, such as athletic training, physical therapy, public health, and more.
- Preparation for a successful academic career is fostered through grantsmanship experience that includes identifying funding sources, preparing grant applications, and navigating the application process. While pursuing the Ph.D., students can also enroll in the Teaching in Higher Education certificate program, offered by Temple University's Center for the Advancement of Teaching.

Time Limit for Degree Completion: 7 years, although students entering with a master's degree can complete the program in 3 to 4 years

Campus Location: Main, with classes occasionally offered at Fort Washington. Electives are also offered at the Center City, Ambler, and Health Sciences Center campuses.

Full-Time/Part-Time Status: Full-time study is required.

Interdisciplinary Study: Interdisciplinary study is available within the Department of Kinesiology and through other departments in the University.

Areas of Specialization: This degree is offered by the Department of Kinesiology in Temple University's College of Public Health. Faculty research emphases within the department include:

- adaptation of tissues to stress and overuse;
- biomarkers associated with sub-concussive cerebrovascular injury;
- exercise addiction;
- human balance and locomotion;
- molecular and cellular mechanisms of cardiovascular adaptation to exercise;
- neural mechanisms of muscle coordination in human upper extremities;
- sensorimotor, perceptual, and psychological influences on human movement control; and
- sport-related concussion.

Job Prospects: The Ph.D. program prepares students for research and teaching careers at institutions of higher education, including Carnegie I institutions, as well as in relevant healthcare industries. Under the guidance of faculty mentors, student hone a research agenda; prepare publications and present research at national and regional conferences; and develop grantsmanship expertise. These experiences position our doctoral students to be competitive candidates for postdoctoral training pathways or biomedical scientist job opportunities, which are standard precursors to academic and research careers.

Non-Matriculated Student Policy: Non-matriculated students are welcome to take classes in the department, assuming they have the requisite knowledge to be successful in the coursework.

Financing Opportunities: The Department of Kinesiology offers all accepted doctoral students a competitive level of support, including tuition, stipend, and health insurance, for four years.

Graduate assistantships are sponsored by the College of Public Health:

- Research Assistants (RAs) perform supervised research activities and work with faculty on grant proposals and ongoing research. Through these experiences, students develop both research and grant-writing competencies.
- Teaching Assistants (TAs) assist in teaching courses, including grading exams and papers or teaching lab sections. TAs learn current pedagogies that prepare them for academic teaching. They can also receive certification in higher education instruction.

Highly qualified candidates are nominated for Presidential or University fellowships.

Admission Requirements and Deadlines

Application Deadline:

Fall: March 1

All applicants to the Ph.D. in Kinesiology with a concentration in Integrative Exercise Physiology must apply via the Centralized Application Service for Public Health (SOPHAS). The system can be accessed at <https://sophas.liaisoncas.com/>. Please contact the graduate program director before applying.

Letters of Reference:

Number Required: 3

From Whom: Letters should be obtained from college/university faculty or an immediate work supervisor who can provide insight into your abilities and talents, as well as comment on your aptitude for graduate study.

Coursework Required for Admission Consideration: It is preferred that applicants have completed laboratory courses in biology, chemistry, human anatomy and physiology, and physics.

Master's Degree in Discipline/Related Discipline: Most applicants have a master's degree in biological sciences, exercise science, kinesiology, medicine, physical therapy, physiology, or a related field.

Bachelor's Degree in Discipline/Related Discipline: All applicants must have a bachelor's degree with a minimum cumulative GPA of 3.25 on a 4.0 scale.

Statement of Goals: A statement of one to two pages should be clearly written.

Standardized Test Scores:

GRE/MAT: Required. The GRE score must total a minimum of 300 combined on the verbal and quantitative sections. Official GRE scores should be sent to SOPHAS using code 0151.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 79 (send officially to SOPHAS using the SOPHAS-specific TOEFL code 5688)
- IELTS Academic: 6.5
- PTE Academic: 53
- Duolingo: 110

Interview: An interview may be required.

Resume: Current resume required.

Writing Sample: The required paper/article should be no more than 15 pages in length. The topic should be relevant to kinesiology, but is otherwise flexible.

Advanced Standing: Students who enter the doctoral program with the master's degree may receive advanced standing toward the Ph.D. degree. The maximum number of advanced standing credits awarded is 9.

Program Requirements

General Program Requirements:

Number of Credits Required to Earn the Degree: 45

Required Courses:

Code	Title	Credit Hours
Core Courses		
EPBI 5002	Biostatistics	3

EPBI 8012	Multivariable Biostatistics	3
EPBI 8212	Grantsmanship in Health Research	3
HRPR 5001	Current and Emerging Issues in Public Health and Health Professions	0
HRPR 5999	Research Experience in Health Professions ¹	0
KINS 5311	Physiology of Exercise	3
KINS 9201	Cardiovascular Exercise Physiology	3
KINS 9203	Appl Ex Physio-Neuromusc	3
KINS 9204	Cellular Adapt to Exer	3
KINS 9901	Research Methods in Kinesiology	3
Electives		15
Select courses from the following to complete a minimum of 15 credits: ²		
BIOL 5111	Genomics in Medicine	
BIOL 5254	Animal Behavior	
BIOL 5301	Cell Biology	
BIOL 5403	Genomics	
BIOL 5433	Advanced Techniques in Microscopy	
BIOL 5454	Neurological Basis of Animal Behavior	
BIOL 5467	Endocrinology	
BIOL 5471	Cell Proliferation	
BIOL 5475	General Biochemistry I	
BMSC 8001	Introduction to Biochemistry and Molecular Biology	
BMSC 8002	Introduction to Cell Biology and Immunology	
BMSC 8003	Introduction to Molecular and Cell Biology	
BMSC 8101	Molecules to Cells	
BMSC 8201	Organ Systems: Function, Dysfunction and Therapeutics	
BMSC 8205	Cell Structure & Function	
BMSC 8206	Molecular, Cellular and Systems Signal Transduction	
BMSC 8207	Molecular Approaches to Research	
BMSC 8503	Genetics and Epigenetics	
BMSC 8803	Molecular and Cellular Neuroscience	
BMSC 8902	Mechanisms of Cardiovascular Pathophysiology	
BMSC 8906	Development, Function and Diseases of the Musculoskeletal System	
KINS 5202	Biomechanical Skeletal Tissue	
KINS 5312	Exercise and Nutrient Metabolism	
KINS 5313	Exercise and Aging	
KINS 8349	Cadaver Anatomy	
KINS 9401	Psychological Bases of Motor Behavior	
KINS 9402	Psychology of Human Motivation and Development	
MEDS 5003	Fundamentals of Biochem	
MEDS 5004	Fundamentals of Physiology	
Research Courses		
KINS 9994	Preliminary Examination Preparation	1
KINS 9998	Dissertation Proposal Research	2
KINS 9999	Doctoral Dissertation in Kinesiology	3
Total Credit Hours		45

¹ HRPR 5999 is taken twice.

² Other KINS or graduate courses in other departments may be taken as electives to tailor the coursework to the interests and skills of the student. Approval from two graduate faculty members is required for the student to select an alternate elective course.

Minimum Grade to be Earned for All Required Courses: B-

Culminating Events:

Preliminary Examination:

All Ph.D. candidates in Kinesiology must complete the preliminary examination, which includes two requirements:

- successful completion of a set of four questions that examine the doctoral student's competency in her/his subdiscipline, and
- submission of a research article of publishable quality, as first author, to a refereed journal.

Note that a literature review does not fulfill the second requirement.

Proposal:

The dissertation proposal encompasses the first part of the dissertation: introduction, review of literature, and methodology. It is a substantive document that spells out clearly the rationale for the research, reviews the literature, and precisely identifies the methodology to be used in answering the research problem. The proposal is reviewed and approved by the Doctoral Advisory Committee (DAC), which is composed of three Graduate Faculty members. Two of the DAC members, including the chair, must be Graduate Faculty in the student's degree program.

Dissertation:

The dissertation represents an original research study that provides a substantive contribution to the literature and is worthy of publication. As such, it is a rigorous examination of a research problem that requires extensive investigation, using quantitative and/or qualitative methodology. The Dissertation Examining Committee (DEC) must include the chair and all members of the DAC and at least one external examiner not previously involved with the dissertation writing or DAC. The defense is scheduled at the mutual convenience of the student and the members of the DEC. Notice is provided to the College of Public Health, which completes the necessary paperwork to announce the defense date, time, and location. The DEC reviews and discusses the defense. Overall evaluation of pass/fail with recommendations for improvements of the dissertation result.

Contacts

Program Web Address:

<https://www.temple.edu/academics/degree-programs/kinesiology-phd-hp-kins-phd>

Department Information:

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Submission Address for Application Materials:

<https://sophas.liaisoncas.com/>

Department Contacts:

Admissions:

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