DOCTOR OF PHILOSOPHY IN KINESIOLOGY (BIOMECHANICS AND MOTOR BEHAVIOR)

Web Site: https://twu.edu/kinesiology/graduate-programs/ biomechanics/

The Ph.D. in Kinesiology with an emphasis in Biomechanics and Motor Behavior prepares students with the experimental and analytical tools to be researchers and leaders. Well-equipped facilities in Pioneer Hall permit research studies on persons with and without disabilities in the areas of stress testing, body composition assessment, bone density, cardiovascular respiratory analysis, blood biochemistry analysis that includes glucose, lactate, insulin, C-peptide, and a variety of other hormones and metabolites; isokinetic, isometric, and isotonic strength testing; anthropometry; telemetry; and high-speed motion analysis.

Marketable Skills

Defined by the Texas Higher Education Coordinating Board's 60x30 Strategic Plan (https://reportcenter.highered.texas.gov/agencypublication/miscellaneous/thecb-60x30-strategic-plan/) as, "Those skills valued by employers that can be applied in a variety of work settings, including interpersonal, cognitive, and applied skills areas. These skills can be either primary or complementary to a major and are acquired by students through education, including curricular, co-curricular, and extracurricular activities."

- 1. Successfully solicit meaningful, noble biomechanical research questions.
- 2. Successfully plan and design biomechanical research studies with valid research hypotheses.
- 3. Successfully conduct biomechanical studies and draw valid conclusions.
- 4. Successfully disseminate and apply the research findings and bridge the gap between academia and practice.

Admissions

All students must meet the University requirements as outlined in the Admission to the TWU Graduate School (https://catalog.twu.edu/graduate/graduate-school/admission-graduate-school/) section of the catalog.

The academic program may have additional admission criteria that must also be completed as outlined on the program's website.

Total Semester Credit Hours Required

96 semester credit hours, including approved semester credit hours from master's level work and 6 semester credit hours for dissertation.

Code	Title	SCHs		
Required Courses: SHPK Core				
KINS 5033	Applied Statistical Principles (Research tools)	3		
KINS 6043	Statistical Inference (Research tools)	3		
KINS 6113	Seminar	3		

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Total SCHs		19		
KINS 6993	Dissertation (II)	3		
KINS 6983	Dissertation (I)	3		
Dissertation				
HSC 6831	Integration of Theory and Research in Health Sciences	1		
KINS 6143	Research Design in Kinesiology (Research tools)	3		

Biomechanics and Motor Behavior Emphasis

Code	Title	SCHs
KINS 5513	Mechanical Analysis of Human Motion	3
KINS 6523	Advanced Biomechanics	3
KINS 6563	Human Motor Control	3
KINS 6573	Motor Learning and Performance	3
KINS 6623	Biomechanical Analysis I: Motion Analysis	3
KINS 6643	Biomechanical Analysis II: Data Acquisition and Instrumentation	3
KINS 6813	Advanced Research in Kinesiology (Taken 4 times)	12
Minor, Related Studies or Electives (As approved by Advisory Committee)		
Appropriate Coursework from Master's Degree (As approved by Advisory Committee)		26
Total SCHs		77

Required Courses

13 semester credit hours.

Emphasis

77 semester credit hours, depending on the emphasis area and recommendations of the Advisory Committee. Includes Minor, Related Studies, Electives, and Appropriate Coursework from Master's Degree in consultation with the Advisory Committee.

Dissertation

6 semester credit hours of dissertation work with the committee chair. The first 3 credit course focuses on the development and oral defense of the research proposal. The student enrolls in a second 3 credit course to conduct the dissertation study, analyze results, and present findings. Both courses may be repeated, but only three hours of credit count toward the degree for each course.

Research Tools

The student, in consultation with the Advisory Committee, will determine 12 semester credit hours designated as research tools.

Qualifying Examination

Candidates for the doctoral degree must pass a qualifying process and comprehensive examination ascertaining a student's:

1. breadth and depth of knowledge requisite to perform successfully within the profession,

2. understanding and application of a discipline's foundational literature, and

3. readiness to complete a dissertation.

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The exam is comprised of four written sections covering selected areas of the student's emphases and an oral defense of written responses. It may be repeated once. Students are eligible to begin the comprehensive exam process during their final semester of coursework and after completing all prerequisites (if admitted conditionally), all research tools, and all core courses. The exams may be repeated only once. A student who fails a second comprehensive exam attempt will be removed from the Kinesiology doctoral program.

Final Examination

The Dissertation Committee conducts an oral examination of the candidate's research after the dissertation is completed. At the committee's discretion, the examination may be repeated only once.