

MASTER OF SCIENCE IN KINESIOLOGY (EXERCISE PHYSIOLOGY)

Web Site: <https://twu.edu/kinesiology/graduate-programs/exercise-physiology/>

The M.S. in Kinesiology, Exercise Physiology emphasis area prepares students for positions within the healthcare industry in hospital-based cardiac rehabilitation programs, as strength and conditioning specialists at universities or athletic performance venues, or to pursue doctoral studies. The primary focus of the master's program is the acute response and training adaptation to exercise and the role that exercise plays in diminishing the risk of developing various hypokinetic, chronic diseases. Biomechanics, exercise physiology, biochemistry, and motor behavior/pedagogy laboratories are dedicated specifically to teaching and research.

Marketable Skills

Marketable skills prepare students for success in a variety of professional settings. Developed through academic coursework, co-curricular engagement, and extracurricular involvement, these skills include communication, critical thinking, teamwork, ethical reasoning, adaptability, and digital literacy. Whether directly related to a student's major or serving as complementary strengths, marketable skills enhance career readiness and reflect TWU's commitment to producing graduates who are prepared to thrive in today's dynamic workforce.

1. Understand and implement exercise programming to reduce disability, promote health, and prevent disease.
2. Demonstrate and interpret results from common exercise testing measures, including heart rate, blood pressure, ECG, and respiratory gas analysis.
3. Administer aspects of health-related physical fitness testing, and communicate results to clients.

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.

Degree Requirements

Prerequisites

- Anatomy & Physiology
- Exercise Physiology
- Three hours of upper-level Exercise Science

Prerequisite courses may be taken during the program but will not be counted toward the degree.

Total Semester Credit Hours Required

Thesis Option: 30 semester credit hours (SCH).

Internship/Professional Affiliation Option: 36 semester credit hours (SCH).

Thesis Option (30 SCH)

Code	Title	SCHs
Kinesiology Core		
KINS 5023	Methods of Research	3
KINS 5033	Applied Statistical Principles	3
Exercise Physiology Emphasis		
KINS 5553	Advanced Exercise Physiology	3
KINS 5573	Graded Exercise Testing	3
KINS 5593	Environmental Exercise Physiology	3
KINS 5613	Cardiovascular Response to Exercise	3
KINS 5683	Exercise Evaluation and Prescription	3
Electives		
Choose 3 SCH in consultation with advisor		3
KINS 5263	Sport Psychology	
KINS 5273	Sport Conditioning and Nutrition	
KINS 5503	Physiological Responses During Alternative Modes of Exercise	
KINS 5513	Mechanical Analysis of Human Motion	
KINS 5583	Hormonal Responses during Exercise	
KINS 5693	Applied Techniques in Biomechanics and Exercise Physiology	
KINS 5813	Research in Kinesiology	
KINS 5883	APA II: Disability Sport and Fitness	
KINS 5913	Independent Study	
KINS 5963	APA I: Disability Sport and Fitness	
KINS 6223	Neuromuscular Physiology	
KINS 6563	Human Motor Control	
KINS 6573	Motor Learning and Performance	
NFS 5363	Human Nutrition in Disease	
NFS 5423	Nutrition and Gerontology	
NFS 5443	Nutrition and Women's Health	
NFS 5473	Advanced Preventive Nutrition	
NFS 5583	Nutrition and Exercise	
Other options are available – consult your advisor or the Graduate Coordinator		

Culminating Experience

KINS 5983	Thesis	3
KINS 5993	Thesis	3
Total SCHs		30

Internship/Professional Affiliation Option (36 SCH)

Code	Title	SCHs
Kinesiology Core		
KINS 5023	Methods of Research	3
KINS 5033	Applied Statistical Principles	3
Exercise Physiology Emphasis		
KINS 5553	Advanced Exercise Physiology	3
KINS 5573	Graded Exercise Testing	3
KINS 5593	Environmental Exercise Physiology	3
KINS 5613	Cardiovascular Response to Exercise	3
KINS 5683	Exercise Evaluation and Prescription	3

Electives		
Choose 12 SCH in consultation with advisor		12
KINS 5263	Sport Psychology	
KINS 5273	Sport Conditioning and Nutrition	
KINS 5503	Physiological Responses During Alternative Modes of Exercise	
KINS 5513	Mechanical Analysis of Human Motion	
KINS 5583	Hormonal Responses during Exercise	
KINS 5693	Applied Techniques in Biomechanics and Exercise Physiology	
KINS 5813	Research in Kinesiology	
KINS 5883	APA II: Disability Sport and Fitness	
KINS 5913	Independent Study	
KINS 5963	APA I: Disability Sport and Fitness	
KINS 6223	Neuromuscular Physiology	
KINS 6563	Human Motor Control	
KINS 6573	Motor Learning and Performance	
NFS 5363	Human Nutrition in Disease	
NFS 5423	Nutrition and Gerontology	
NFS 5443	Nutrition and Women's Health	
NFS 5473	Advanced Preventive Nutrition	
NFS 5583	Nutrition and Exercise	
Other options are available – consult your advisor or the Graduate Coordinator		
Culminating Experience		
KINS 5123	Professional Affiliation	3
Certification Exam		
Total SCHs		36

SHPK Master's Program Policies

Culminating Experience

After completing 24 semester credit hours of required coursework (including core courses), School of Health Promotion and Kinesiology students are eligible to complete their culminating experience. Students in the Exercise Physiology emphasis area may choose one of two culminating options: 1) Thesis or 2) Internship/Professional Affiliation. Students are responsible for reviewing their emphasis area degree requirements, consulting with emphasis area faculty, and familiarizing themselves with the available options. Specific steps to complete each culminating experience option are located within the School of Health Promotion and Kinesiology (SHPK) Graduate Student Handbook.

Thesis

All School of Health Promotion and Kinesiology master's students who select the thesis option are required to prepare, present, and orally defend a thesis reflecting substantial and independent research. The Thesis Research Committee must be formed according to Graduate School policies. Committees must include a minimum of three faculty members, with one faculty member being from outside the major/emphasis area. The School of Health Promotion and Kinesiology stipulates that a 10-class day reading period be granted to every research committee member for any thesis-related documents. No thesis research committee meetings may be scheduled or conducted during the last two weeks (last week of classes and finals week) of any semester. Refer to the Graduate School policy for Thesis grading options. Any student in SHPK receiving two consecutive enrolled semesters of LP (Lack of Adequate Progress)

and/or NP (No Progress) grades or three cumulative semesters of LP and/or NP grades will be dismissed from the program.

Internship/Professional Affiliation

To complete an internship or professional affiliation, a master's student must enroll in a three-hour internship/professional affiliation course. A student may not register for the internship/professional affiliation course if final grade(s) for core course(s) are pending or if the student has an incomplete grade pending for any core course. Each master's student must contact their major professor to confirm eligibility and request approval to enroll in the internship/professional affiliation course.

The internship/professional affiliation site must be approved by the major professor and/or faculty member directing the internship/professional affiliation. The internship/professional affiliation must include at least 350 hours of site work for academic credit; however, the internship/professional affiliation site may require additional hours. Students must submit a log or logs of work hours completed and an evaluation of the internship/professional affiliation site. Students must also have the site supervisor submit two evaluations (midterm and final) to the internship/professional affiliation instructor.

National Certification Exam plus 250 Internship/Professional Affiliation Hours

The internship/professional affiliation must be completed according to the above internship/professional affiliation policy, but only 250 hours of site work are required. The major professor must approve the national certification exam before sitting for the exam. Students must pass the exam to be eligible for graduation.