PhD Degree in Exercise Sciences

Effective Fall 2019 – Last Updated: Feb 2019  ▶ Application Deadline: FEBRUARY 1

- 60 Credits beyond bachelor’s degree with a minimum of 36 credit hours residence requirement beyond master’s degree
- Comprehensive Exam and Dissertation required

This program prepares students for leadership at the highest level of their profession. Most students become university or college faculty. Students are prepared in the scientific bases of exercise science, well acquainted with the scientific literature, able to teach college courses, and conduct independent research. Three areas of specialization are available.

ADMISSION REQUIREMENTS
A. Fulfill requirements for BYU Graduate School admission
B. Bachelor’s or master’s degree in Exercise Sciences or a related field with competencies in a majority of the following areas:
   1. College Human Physiology
   2. College Chemistry
   3. College Physics
   4. College Algebra
   5. Kinesiology/Biomechanics (graduate level)
   6. Exercise Physiology / Ex Phys Lab (graduate level)
   7. Human Anatomy (graduate level)
   8. Statistics (graduate level)
C. GPA of 3.5 for last 60 semester hours of academics
D. Satisfactory scores on the GRE – minimum 300 and a 4.0 on the analytical writing portion. GRE scores must be within 5 years.
E. A letter of intent that includes:
   1. Preparation and background for the program
   2. Areas of interest and professional goals
   3. Reasons for career choice
   4. Special qualities and talents that enhance success
   5. Particular reasons for applying at BYU
   6. Statement of research interests
F. Master’s thesis or a publishable research manuscript.

Note: A student who has not completed a master’s thesis is required to complete a publishable first-author research manuscript before beginning work on a dissertation (these hours are in addition to the 4-hour EXSC 797R requirement for the 60-hour program).

COURSE WORK
Minimum of 60 hours beyond bachelor’s degree in addition to all undergraduate prerequisites. No 100 through 400 level classes apply. All doctoral students are expected to engage in a continual program of research during their studies, either original or collaborative, and to present at a regional, national, or international conference or submit a manuscript to a refereed journal. This is in addition to the thesis (or manuscript described above in lieu of a thesis) and dissertation.

PhD students are also required to gain teaching experience by teaching or team-teaching appropriate courses in the undergraduate major curriculum.

EXERCISE SCIENCES SKILL REQUIRED CLASSES – 7 credit hours:
STAT 512  Statistical Methods for Research 2 (3)
EXSC 797R  Individual Research and Study (4)

EXERCISE SCIENCES REQUIRED SEMINARS – 4 credit hours:
EXSC 693R  Graduate Seminar Readings (2)
EXSC 751  Doctoral Seminar: Prof & Scholarly Writing (1)
EXSC 753  Doctoral Seminar: Res & Grantsmanship (1)

Dissertation – 18 credit hours:
EXSC 799R  Dissertation (18)

EXERCISE PHYSIOLOGY SPECIALIZATION – 11 credit hours:
EXSC 666  Exercise Physiology (3)
EXSC 667  Exercise Physiology Laboratory Methods (2)
EXSC 766  Advanced Exercise Physiology: Cardiopulmonary (3)
EXSC 769  Advanced Exercise Physiology: Skeletal Muscle (3)

HEALTH PROMOTION SPECIALIZATION – 11 credit hours:
EXSC 640  Physical Activity and Health (3)
EXSC 669  Exercise, Testing, and Prescription (2)
EXSC 671  Advanced Lifestyle and Chronic Disease Prevention (3)
EXSC 673  Advanced Obesity and Weight Management (3)

PHYSICAL MED & REHAB SPECIALIZATION – 18 credit hours:
EXSC 668  Orthopaedic Anatomy (4)
EXSC 625R  Adv Topics in P M & Rehab (12)

SUPPORTING AREAS – Enroll in enough hours (Ex Phys: +20 minimum; HP: +20 minimum; PM&R: +13 minimum) to complete your 60-hour program that add depth and breadth to your program of study from: 1) one or more of the following suggested supporting areas, 2) any required EXSC class from any specialization, or 3) any additional classes approved by your dissertation committee and graduate coordinator.

Exercise Sciences (Prerequisites: EXSC 362, 455, or equivalents.
EXSC 661  Advanced Worksite Wellness (3)
EXSC 662  Kinematics (2)
EXSC 663  Neuromechanical Signal Collection and Processing (2)
EXSC 664  Biomechanical Modeling (3)
EXSC 665  Computer Programming for Kinesiology (3)

Physiology and Developmental Biology (Prerequisites: PDBio 362 or PDBio 363)
PDBio 561  Physiology of Drug Mechanisms (3)
PDBio 562  Reproductive Physiology (3)
PDBio 565  Endocrinology (3)
PDBio 601  Cellular & Molecular Physiology (3)
PDBio 664  Cardiovascular and Respiratory Physiology (2)

Chemistry & Biochemistry and Microbiology & Molecular Biology (Prerequisites: Chem 481, Chem 482)
Chem 581  Advanced Biochemical Methodology 1 (3)
Chem 583  Advanced Biochemical Methodology 2 (3)
Chem 584  Advanced Biochemistry Methods 1 (2)

Health/Wellness
HLTH 602  Principles of Epidemiology (3)
HLTH 604  Principles of Biostatistics (3)
HLTH 608  Determinants of Health Behavior (3)
HLTH 612  Program Planning and Evaluation (3)
HLTH 618  Survey and Research Methods (3)
HLTH 630  Small-Group Health Promotion Interventions (3)

Nutrition (Prerequisites: NDFS 300, 356, 435, 466, 601, 602 or instructor’s consent)
NDFS 601  Advanced Human Nutrition 1 (3)
NDFS 602  Advanced Human Nutrition 2 (3)
NDFS 631R  Selected Topics in FSN (0.5–3)
NDFS 632  Diet & Cancer (2)