

PhD Degree in Exercise Sciences

Effective Fall 2017 – Last Updated: August 2016 ❖ **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 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 REQUIREMENT – 7 credit hours:

STAT	512	Statistical Methods for Research 2 (3)
EXSC	797R	Individual Research and Study (4)

EXERCISE SCIENCES REQUIRED SEMINARS – 5 credit hours:

EXSC	691	Graduate Seminar (1)
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)
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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	560	Orthopaedic Pathomechanics (2)
EXSC	668	Orthopaedic Anatomy (4)
EXSC	625R	Adv Topics in P M & Rehab (12)

SUPPORTING AREAS – *Enroll in enough hours (Ex Phys: +19 minimum; HP: +19 minimum; PM&R: +12 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)