

Brigham Young University
College of Life Sciences ❖ Department of Exercise Sciences

PhD Degree in Exercise Sciences

Effective Fall 2022 – Last Updated: June 2022 ❖ **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.

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. 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 (commitment to BYU and Exercise Sciences)
 6. Statement of research interests
- E. Master's thesis or a publishable first-author research manuscript.
- F. Letters of recommendation – one LOR must be from your 1st choice faculty mentor (but not all three faculty choices).

Note: A student who has not completed a master's thesis is required to have a publishable first-author research manuscript.

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 – 3 credit hours:

EXSC 693R Graduate Seminar Readings (1)
EXSC 751 Doctoral Seminar: Prof & Scholarly Writing (1)
EXSC 753 Doctoral Seminar: Res & Grantsmanship (1)

DISSERTATION – 18 credit hours:

EXSC 799R Dissertation (18)

AREA OF STUDY – Enroll in enough hours to complete your 60-hour program that add depth and breadth to your program of study from: 1) one or more of the following Primary Curriculum and Supporting Areas, or 2) any additional grad classes approved by your dissertation committee and graduate coordinator.

Exercise Physiology:

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:

EXSC 640 Physical Activity and Health (3)
EXSC 661 Advanced Worksite Wellness (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:

EXSC 501 Pathophysiology for AT (3)
EXSC 668 Orthopaedic Anatomy (4)
EXSC 625R Adv Topics in P M & Rehab (20)
- Clinical & Educational Admin (TC 011)
- Electrotherapy, US, & Diathermy (TC 013)
- Functional Testing & Exercise (TC 014)
- Joint Mobilization & Manual Therapy (TC 015)
- Neural Basis of Rehab (TC 016)
- Musculoskeletal & Vascular Imaging (TC 024)
- Mechanical Spinal Impairment & Mobilization (TC 023)

SUPPORTING AREAS

Biomechanics:

EXSC 662 Kinematics (2)
EXSC 663 Neuromechanical Signal Collection and Processing (2)
EXSC 664 Biomechanical Modeling (3)
EXSC 665 Computer Programming for Kinesiology (3)

Cell Biology and Physiology (Prerequisites: CELL 362 or CELL 363)

CELL 561 Physiology of Drug Mechanisms (3)
CELL 562 Reproductive Physiology (3)
CELL 565 Endocrinology (3)
CELL 601 Cellular & Molecular Physiology (3)
CELL 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 611 Quantitative and Qualitative Methods for PH I (3)
HLTH 614 Program Planning and Evaluation I (3)
HLTH 621 Quantitative and Qualitative Methods for PH II (3)
HLTH 622 Foundations of Hlth Behavior Change & Hlth Comm (3)
HLTH 624 Program Planning, Eval, and Mgmt I (3)
HLTH 630 Community Building for Public Health (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)