

- Harris, John B. (1958) BA, MA, Brigham Young U., 1955, 1956; PhD, Wayne State U., 1965.
- Harris, John S. (1962) BA, MA, Brigham Young U., 1953, 1958.
- Hart, Edward L. (1952) BS, U. of Utah, 1939; MA, U. of Michigan, 1941; DPhil, Oxford U., England, 1950.
- Hayes, Darwin L. (1961) BA, MA, Brigham Young U., 1957, 1963.
- Hooker, Joyce S. (1980) BS, U. of Idaho, 1955; MIE, Utah State U., 1979.
- Hunsaker, O. Glade (1964) BS, Utah State U., 1960; MA, Brigham Young U., 1964; PhD, U. of Illinois, 1970.
- Lambert, Neal E. (1966) BA, PhD, U. of Utah, 1961, 1966.
- McKendrick, John E. (1953) BA, MA, U. of Utah, 1942, 1949.
- Monson, Samuel C. (1952) BS, Utah State U., 1941; MA, PhD, Columbia U., 1948, 1952.
- Murphy, John J. (1984) BA, MA, St. John's U., 1956, 1961.
- Pedersen, Elray (1983) BS, MA, Brigham Young U., 1962, 1964; PhD, U. of Minnesota, 1977.
- Plummer, Louise R. (1993) BS, MA, U. of Minnesota, 1980, 1984.
- Ream, Susan E. (1961) BA, Brigham Young U., 1953; MA, Columbia U., 1958.
- Ridenhour, Ted E. (1959) BA, MA, Brigham Young U., 1957, 1960.
- Rigby, W. Dean (1966) BA, MA, Brigham Young U., 1953, 1970.
- Tanner, Stephen L. (1978) BA, MA, U. of Utah, 1962, 1964; PhD, U. of Wisconsin, Madison, 1969.
- Tate, Charles D. (1960) BS, MS, Utah State U., 1954, 1958; PhD, U. of Colorado, 1966.
- Taylor, Sally T. (1978) BS, MA, Brigham Young U., 1960, 1965; PhD, U. of Utah, 1975.
- Thomas, Gordon K. (1976) BA, MA, Brigham Young U., 1959, 1960; PhD, Tulane U. of Louisiana, 1968.
- Thomas, John Alfred (1962) BA, MA, Brigham Young U., 1953, 1954; PhD, U. of Maryland, College Park, 1962.
- Thomas, Paul R. (1980) BA, Brigham Young U., 1964; MA, U. of Virginia, 1967; DPhil, U. of York, England, 1982.
- Waterstradt, Jean Anne (1945) AA, Weber Coll., 1943; BA, Brigham Young U., 1945; MA, U. of Southern California, 1955.
- Williams, Ray S. (1966) BA, Coker Coll., 1960; MA, PhD, Florida State U., 1962, 1965.
- Wilson, William A., Humanities Professor of Literature and Folklore, (1984) BA, MA, Brigham Young U., 1958, 1962; PhD, Indiana U., 1974.

English as a Second Language

See Linguistics and English Language section of this catalog.

Estonian

See Center for Language Studies.

Exercise Sciences

Larry T. Hall, Chair
106 SFH, (801) 422-7303

College of Health and Human Performance Advisement Center
203 RB, (801) 422-3638

Admission to Degree Program

Some of the degree programs in the Department of Exercise Sciences carry special enrollment limitations. Please see the college advisement center for specific details.

Graduation Requirements

To receive a BYU bachelor's degree a student must complete, in addition to all requirements for a specific major, the following university requirements:

- The university core, consisting of requirements in general and religious education (See the University Core section of this catalog for details. For a complete listing of courses that meet university core requirements, see the current class schedule.)
- A minimum of 30 credit hours in residence
- A minimum of 120 credit hours
- A cumulative GPA of at least 2.0

Undergraduate Programs and Degrees

BS	Athletic Training
BS	Exercise Science
BS	Exercise Sciences
	Emphasis:
	Fitness and Wellness Management
BS	Physical Education Teaching/Coaching (K-12)
Minors	Coaching and Teaching Physical Education
	Elementary Physical Education

Students should see their college advisement center for help or information concerning the undergraduate programs.

Graduate Programs and Degrees

MS	Exercise Sciences
PhD	Exercise Sciences/Wellness

For more information see the BYU 2007-2008 Graduate Catalog.

BS Athletic Training (70 hours*)

The Discipline

The study of athletic training appeals to those who would like to work in a field that combines an athletic setting with health and fitness care. A student in athletic training will learn to apply knowledge of human anatomy, exercise physiology, conditioning, nutrition, and therapy in the prevention, immediate care, and rehabilitation of athletic injuries.

Students must graduate from an accredited athletic training program and pass the BOC examination to certify as an athletic trainer.

Career Opportunities

Career possibilities include working with athletic teams at all levels of competition or in a sports medicine clinical setting or other allied health facilities or in a corporate/industrial setting. NATA certification is required, and an advanced degree is recommended.

Major Requirements

1. Complete a minimum of 45 major hours in residence at BYU.
2. Complete application into the athletic training program during semester of enrollment in ExSc 320. See the program director or ExSc 320 instructor for an application packet.
 - a. Have a physical examination.
 - b. Submit two letters of recommendation.
 - c. Interview with the athletic training staff.
 - d. Complete 30 hours of clinical observation or experience in a college or high school athletic training setting.
3. Complete the senior exit interview.
4. Maintain CPR certification.
5. Meet the technical standards associated with the athletic training education program.
6. Complete the following:
 - ExSc 202, 302, 320, 321, 362, 400, 414, 415, 416, 417, 418, 419, 423, 460, 463, 464, 468, 501.
 - Hlth 320.
 - MMBio 221.
 - NDFS 310.
 - PDBio 220, 305.
 - Psych 111.
 - Stat 221.
7. Complete the following:
 - ExSc 498 (to be taken last semester prior to graduation).
8. Complete the following:
 - ExSc 394, 395, 494, 495 (clinical internship; must be completed over a two-calendar-year period).

*Hours include courses that may fulfill university core requirements.

BS Exercise Science (58.5–60.5 hours*)

The Discipline

Designed to provide the basics from which the student can pursue specialized training in physical therapy, occupational therapy, medicine, physician assistant, chiropractic, and other health-care professions, the exercise science emphasis explores the intriguing relationship between exercise and the functioning of the human body. The basic concepts of human anatomy, physiology, biomechanics, motor learning, chemistry, physics, and nutrition are mastered to help understand this relationship. The impact that movement and exercise have on the human organism is almost interminable, making study of this discipline enthralling.

Students considering medicine as a profession may want to select this major. While providing most requisite courses for medical school acceptance, it also conveys a healthy-lifestyle, preventive-medicine health care perspective.

Career Opportunities

The exercise science emphasis provides excellent preparation for students interested in graduate work in exercise physiology (MS, PhD) or those desiring to pursue training in medicine, physical therapy, cardiac rehabilitation, podiatry, chiropractic, and other health care professions. Graduates with this major may also find opportunities in community, corporate, or hospital wellness centers and health promotion programs. Positions requiring only a bachelor's degree may be difficult to find.

Major Requirements

1. Complete senior exit interview.

2. Complete the following:
 - Chem 105.
 - ExSc 302, 362, 400, 460, 463, 464.
 - NDFS 100.
 - PDBio 220, 305.
 - Stat 221.
3. Complete one course from the following:
 - Chem 285, 351.
4. Complete one course from the following:
 - Math 112, 119.
5. Complete one course from the following:
 - NDFS 201, 310, 424.
6. Complete one of the following options:
 - Either** Phscs 105, 107
 - Or** Phscs 121.
7. Complete 15 hours from the following:
 - Biol 120, 240, 241, 340, 360.
 - Chem 106, 107, 352, 353, 468, 481.
 - C S 142.
 - ExSc 202, 320, 321, 387, 468, 470, 485, 497R, 501.
 - Hlth 320, 365, 461.
 - InBio 370.
 - MMBio 221, 222.
 - NDFS 200, 305.
 - PDBio 225, 320, 362, 363, 365, 484, 561, 565.
 - Phscs 106, 108.
 - Psych 111, 220, 342.
 - Soc 111, 112.
 - StDev 227, 229, 239, 329, 399R, 439.

Note: Watch prerequisites for the elective courses.

Note to Premed Students: Some medical schools require select classes not required by BYU. For more information contact the Preprofessional Advisement Center, 3326 WSC, (801) 422-2318. Contact potential schools of choice for a complete list of entrance requirements.

*Hours include courses that may fulfill university core requirements.

BS Exercise Sciences: Fitness and Wellness Management Emphasis (60.5 hours*)

The Discipline

Fitness and wellness management is a departure from the typical U.S. medical model in that the focus is on helping individuals achieve optimal health and fitness, rather than on discovering and treating disease. Recent research findings, along with rising health-care costs, have spurred an interest in keeping people healthy to improve their quality of life and also to avoid unnecessary medical expenses.

Depending on electives completed, there are several excellent graduate school options to pursue. Earning a master's degree in exercise science/physical education, for example, can give the added knowledge and experience needed to direct a private, commercial, corporate, or clinical health/fitness program. Other graduate opportunities include a master's in public health (MPH), business administration (MBA), recreational therapy (MS), or nutrition, dietetics, and food science (MS), to name a few.

Career Opportunities

Personal fitness professionals find employment primarily in commercial or community fitness centers but may also work in hospital wellness programs or corporate health-promotion programs. Job responsibilities typically involve teaching clients how to achieve optimal wellness through effective exercise, wholesome nutrition, and successful stress-management strategies.

Major Requirements

1. Complete the senior exit interview.
2. Complete the following:
ExSc 285, 365, 387, 463, 464, 468, 485.
Hlth 320.
NDFS 100, 201.
PDBio 220, 305.
3. Complete 4 hours of the following:
ExSc 399R.
4. Complete 26 hours of the following elective requirements:
Track 1: Lifestyle Management. Students interested in lifestyle management should complete 15–26 hours in Track 1 and 0–11 hours in Track 2.
Dance 336.
ExSc 202, 302, 410, 455.
Hlth 365, 370, 375, 450, 460, 461, 466.
NDFS 200, 310.
Stat 221.
Track 2: Fitness/Business Management. Students interested in fitness/business management should complete 15–18 hours in Track 2 and 8–11 hours in Track 1.
Acc 200.
Bus M 300, 340, 371R, 372.
ExSc 351.
Org B 320.
Note: Students interested in Track 2 may also wish to minor in management (in the Marriott School of Management).

*Hours include courses that may fulfill university core requirements.

BS Physical Education Teaching/Coaching (K–12)

(76–77 hours*, including licensure hours)

This is a limited-enrollment program requiring departmental admissions approval. Please see the college advisement center or department office for information regarding requirements for admission to this emphasis.

The Discipline

Students preparing to teach and/or coach physical education will have a variety of experiences that will enhance proficiency in the knowledge and skills requisite to working in the contemporary school setting. Majors learn to perform a variety of sport, fitness, and dance activities personally. After becoming proficient, students take courses and have practical experiences in teaching and coaching children, adolescents, and adults. The discipline is interesting and rewarding, and those in a teaching/coaching career help others pursue and practice healthy lifestyle habits.

Career Opportunities

Graduates seek teaching and physical education/coaching careers in elementary and secondary education settings. With an advanced degree, teaching and coaching positions at institutions of higher learning are available.

It is recommended that students desiring to be optimally employable in secondary schools complete an approved teaching minor and an American Sport Education Program (ASEP) coaching certification.

Major Requirements

1. Prior to beginning course work in the major, students must apply for admittance into the Flight Program. The program requires that all students take the major courses together as a cohort group. See the flight advisor during January of the sophomore year (249 SFH).
2. Complete the senior exit interview.

3. A teaching minor is not required for licensure. However, it is strongly recommended.
4. Complete the following required prerequisite and general education courses:
HEPE 129.
MFHD 210.
PDBio 220, 305.
5. Complete the following:
Dance 356.
ExSc 206, 230, 231, 233, 239, 300, 302, 320, 321, 352, 360, 361, 362, 369, 399R, 430.
6. Complete one course from the following:
ExSc 330R, 335, 341, 342, 344, 345, 346, 347.
7. Complete one course from the following:
ExSc 171, 172, 277, 278.
Note: ExSc 277 or 278 is preferred.
8. If ExSc 171 or 172 is taken in item 7 above, complete one course from the following:
ExSc 125, 136, 137, 146, 147, 155 (or other approved course).
9. Complete the Professional Education Component:
 - a. Complete the following:
ExSc 374, 377, 380, 461.
Sc Ed 276R (3 hours required), 350.
Note: Fingerprinting and FBI clearance must be completed prior to enrolling in ExSc 377.
 - b. Complete 12 hours of one of the following:
Sc Ed 476R, 496R.

*Hours include courses that may fulfill university core requirements.

Minor Coaching and Teaching Physical Education

(23.5–27.5 hours)

Students can choose this minor to prepare to coach. Students who have met the university's teacher licensure requirements will also be qualified to teach physical education with this minor.

Minor Requirements

1. Complete the following:
ExSc 206, 229, 234, 235, 320, 321, 351, 364, 365, 366, 399R, 430, 450.
2. Complete one course from the following:
ExSc 330R, 335, 341, 342, 344, 345, 346, 347.

Minor Elementary Physical Education (19–21.5 hours*)**Minor Requirements**

1. Be an elementary education major.
2. Complete the following:
Dance 326.
ExSc 169, 364, 366, 375, 376, 461.
Hlth 320.
3. Complete one course from the following:
ExSc 230, 231.
4. Complete one dance or exercise science activity course.

*Hours include courses that may fulfill university core requirements.

Health/Physical Education (HEPE)

Undergraduate Course

105. Healthy Living. (0.5:1:0)

Scientific evidence supporting the importance of a healthy lifestyle. Students will engage in healthy nutritional and exercise practices.

129. Fitness and Lifestyle Management. (2:2:1)

Why a healthy lifestyle is needed and how to write individualized programs to meet these needs.

Exercise Sciences (ExSc)

Undergraduate Courses

100R. Intercollegiate Athletics. (0.5:2:10.5 ea.)

101R. Activities for Fitness and Weight Control. (0.5:0:2 ea.)

102R. Adapted Physical Education. (0.5:0:2 ea.) Prerequisite: medical referral.

106. Badminton, Beginning. (0.5:0:2)

111. Basketball, Beginning. (0.5:0:2)

112. Basketball, Intermediate. (0.5:0:2) Prerequisite: ExSc 111 or equivalent.

116. Bowling, Beginning. (0.5:0:2) Fee.

117. Bowling, Intermediate. (0.5:0:2) Fee.

120. Cycling. (0.5:0:2)

Basic knowledge and skills in cycling and bike maintenance.

121. Diving, Springboard. (0.5:0:2)

125. Flexibility. (0.5:0:2)

130. Weight Management. (0.5:0:2) F, W, Sp

Improving fitness levels and body composition by participating in regular physical activity and monitoring and reducing dietary intake.

131. Golf, Beginning. (0.5:0:2)

132. Golf, Intermediate. (0.5:0:2) Prerequisite: ExSc 131 or equivalent.

136. Gymnastics, Beginning. (0.5:0:2)

137. Gymnastics, Intermediate. (0.5:0:2) Prerequisite: ExSc 136 or equivalent.

139. Jogging. (0.5:0:2) Independent Study also.

141. Martial Arts. (0.5:0:2)

143R. Physical Training—ROTC. (0.5:0:2 ea.) For ROTC students only.

146. Racquetball, Beginning. (0.5:0:2)

147. Racquetball, Intermediate. (0.5:0:2)

150. Ice Skating. (0.5:0:2)

Developing figure and ice hockey skills. Taught off campus. Fee.

151. Ice Hockey. (0.5:0:2) Prerequisite: beginning ice skating or instructor's consent.

Basic power skates, puck and stick handles, and game strategies. Fee.

152 Intermediate Ice Skating. (0.5:0:2) F, W, Sp, Su Prerequisite: ExSc 150 or equivalent.

Developing intermediate ice skating skills. Taught off campus. Fee.

153. Intermediate Ice Hockey. (0.5:0:2) F, W, Sp, Su Prerequisite: ExSc 151 or equivalent.

Developing intermediate ice hockey skills. Taught off campus. Fee.

155. Self-Defense. (0.5:0:2)

Fundamental principles, skills, and techniques.

156. Soccer, Beginning. (0.5:0:2)

157. Soccer, Intermediate. (0.5:0:2) Prerequisite: ExSc 156 or equivalent.

161. Skiing, Beginning. (0.5:0:2)

Sections formed on basis of ability. Students responsible for following costs: bus transportation, ski equipment, lift fees. Students required to use bus transportation provided. Fee.

162. Skiing, Intermediate. (0.5:0:2)

Sections formed on basis of ability. Students responsible for following costs: bus transportation, ski equipment, lift fees. Students required to use bus transportation provided. Fee.

164. Skiing, Cross-Country. (0.5:0:2)

Students responsible for following costs: bus transportation, ski equipment. Students required to use bus transportation provided. Fee.

169. Elementary Skills and Activities. (0.5:0:2) F, W, Sp, Su

Physical skills and activities specific to elementary-age children. Required for elementary education majors. Meets one Wellness physical education activity requirement.

170. Swimming for Nonswimmers. (0.5:0:2)

171. Swimming, Beginning. (0.5:0:2)

172. Swimming, Intermediate. (0.5:0:2) Independent Study also. Prerequisite: ExSc 171 or equivalent.

174R. Swimming for Students with Disabilities. (0.5:0:2 ea.)

Can be taken repeatedly to fulfill the university physical education activity requirement for any student with special needs.

175. Beginning Scuba Diving. (0.5:0:2)

Developing scuba diving skills. Taught off campus. Fee.

176. Advanced Scuba Diving. (0.5:0:2) Prerequisite: ExSc 175 or Open Water Diver Certification.

Advanced open water skills and concepts. Advanced open water certification upon successful completion. Fee.

177. Rescue Scuba. (0.5:0:2) Prerequisite: ExSc 176 or Advanced Open Water Diver Certification.

CPR, first aid, and diving rescue procedures and concepts. Rescue certification upon successful completion. Fee.

179. Water Aerobics. (0.5:0:2) For nonswimmers and swimmers.

Exercise workout in water emphasizing flexibility, strength, and endurance.

181. Tennis, Beginning. (0.5:0:2)

182. Tennis, Intermediate. (0.5:0:2) Prerequisite: ExSc 181 or equivalent.

183. Tennis, Advanced. (0.5:0:2) Prerequisite: ExSc 182 or equivalent.

186. Volleyball, Beginning. (0.5:0:2)

187. Volleyball, Intermediate. (0.5:0:2) Prerequisite: ExSc 186 or equivalent.

188. Volleyball, Advanced. (0.5:0:2) Prerequisite: ExSc 187 or equivalent.

191. Weight Training, Beginning. (0.5:0:2)

192. Weight Training, Intermediate. (0.5:0:2) Prerequisite: ExSc 191 or equivalent.

Theory and technique of maximal strength development, emphasizing "power" and "Olympic" lifts.

201R. Extramural Sports. (0.5:0:2 ea.)

202. Introduction to Allied Health Professions. (1:1:0)

Allied fields of athletic training, exercise physiology, health promotion, and physical therapy. Survey and history of the allied fields and their relation to other health care professions.

- 203. Performance Psychology.** (1:1:1)
Relaxation and imagery for athletes and performing artists.
- 206. Officiating Team Sports.** (1:1:0)
Techniques, rules, and problems related to officiating, with particular attention to relationship between coach and official.
- 229. Physical Education Pedagogy.** (2:2:0)
Sport pedagogy for students *minoring* in physical education/coaching.
- 230. Sports and Activities 1.** (2:0:6) Prerequisite: acceptance into PETE program.
Developing motor skills and acquiring teaching materials for drills, lead-up activities, and teaching techniques in activities that include soccer, flag football, track and field, volleyball, and fitness.
- 231. Sport and Activities 2.** (2:0:6) Prerequisite: acceptance into PETE program.
Developing motor skills and acquiring teaching materials for drills, lead-up activities, and teaching techniques in activities that include basketball, tennis, golf, and softball.
- 233. Lifetime and Leisure Activities.** (1:0:3) Prerequisite: acceptance into PETE program.
Exposure to and development of skills in contemporary, noncompetitive, lifelong leisure activities.
- 234. Team Sport Fundamentals.** (1:0:4) For *minors* in physical education/coaching only. Prerequisite: ExSc 229.
Skill and pedagogy development in soccer and volleyball.
- 235. Sport Fitness Techniques.** (1:0:4) For *minors* in physical education/coaching only. Prerequisite: ExSc 229.
Skill and pedagogy in flexibility and weight training.
- 239. Weight Training: Skills and Teaching Techniques.** (0.5:0:2)
- 277. Techniques of Lifeguarding.** (2:1:3) Prerequisite: swim competency test (given first day of class).
First-aid and lifeguard skills training, including instruction in CPR, and American Red Cross certification for lifeguard training.
- 278. Water Safety Instructor Training.** (2:1:3) Prerequisite: ARC Swimmer-level competency.
Leads to American Red Cross WSI certification. Swimming teaching methods that include teaching swimming to special needs students.
- 285. Group Exercise Prescription and Technique.** (2:2:0)
Designing and implementing individual and group fitness and wellness programs based upon the latest scientific concepts, utilizing safe and effective techniques, to develop flexibility, strength, and cardiovascular endurance.
- 300. Historical and Sociological Foundations of Physical Education.** (2:2:0)
Historical and sociological foundations of physical education and sport.
- 302. Philosophical and Ethical Issues in Exercise Sciences.** (1:1:0) F, W, Sp, Su
Philosophical and ethical issues common to exercise science majors. Concept of mind, body, spirit.
- 320. Basic Athletic Training.** (3:3:0) Prerequisite: PDBio 220; concurrent enrollment in ExSc 321.
Recognition, evaluation, and care of athletic injuries. Techniques in taping, preventing, and rehabilitating injuries.
- 321. Basic Athletic Training Lab.** (0.5:0:0.5) Prerequisite: concurrent enrollment in ExSc 320. Fee.
- 330R. Coaching Selected Sports.** (2:1:2 ea.) Prerequisite: appropriate skills and teaching techniques class or equivalent.
Theory, fundamentals, strategies, and techniques of coaching golf, tennis, or wrestling.
- 335. Coaching Competitive Swimming.** (2:1:2) Prerequisite: appropriate skills and teaching techniques class or equivalent.
Theory, fundamentals, strategies, and techniques of coaching swimming.
- 341. Coaching Basketball.** (2:1:2) Prerequisite: appropriate skills and teaching techniques class or equivalent.
Theory, fundamentals, strategies, and techniques of coaching basketball.
- 342. Coaching Track and Field.** (2:1:2) Prerequisite: appropriate skills and teaching techniques class or equivalent.
Theory, fundamentals, strategies, and techniques of coaching track and field.
- 344. Coaching Football.** (2:1:2) Prerequisite: appropriate skills and teaching techniques class or equivalent.
Theory, fundamentals, strategies, and techniques of coaching football.
- 345. Coaching Volleyball.** (2:1:2) Prerequisite: appropriate skills and teaching techniques class or equivalent.
Theory, fundamentals, strategies, and techniques of coaching volleyball.
- 346. Coaching Baseball and Softball.** (2:1:2) Prerequisite: appropriate skills and teaching techniques class or equivalent.
Theory, fundamentals, strategies, and techniques of coaching baseball and softball.
- 347. Coaching Soccer.** (2:1:2) Prerequisite: appropriate skills and teaching techniques class or equivalent.
Theory, fundamentals, strategies, and techniques of coaching soccer.
- 349. Body, Mind, Spirit.** (3:3:0) Honors also.
Sacredness of the body and its meaningfulness to the whole being. Comparative approach utilizing ideas from the restored gospel and Western and Eastern philosophy (nature of being).
- 351. Administration of Physical Education and Athletics.** (2:2:0) For teaching and coaching minors. Independent Study also.
Management styles and techniques for physical education and athletic programs; policies concerning eligibility, contest management, safety, facilities, and legal concerns.
- 352. Legal and Administrative Aspects of Physical Education and Sport.** (3:3:0) Prerequisite: acceptance into PETE program.
Principles of physical education and intramural management including facilities, equipment, fiscal matters, personnel, public relations, and program administration. Legal considerations of physical education and sport programs, including constitutional rights, gender, liability, and risk management.
- 360. Curriculum and Assessment of Learning in Physical Education.** (3:3:0) Prerequisite: acceptance into PETE Program.
Curriculum development to meet national physical education standards. Assessment of psychomotor, cognitive, and affective learning, including elementary statistical testing.
- 361. Introduction to Motor Learning.** (3:2:2)
Motor and cognitive factors influencing acquisition of motor skills.
- 362. Kinesiology and Biomechanics.** (3:3:0) Prerequisite: PDBio 220, Math 110 or higher. Recommended: Phcs 105 or 121.
- 364. Scientific Bases of Sport 1: Motor Learning.** (2:2:0)
Motor learning principles for physical education/coaching minor.
- 365. Scientific Bases of Sport 2: Kinesiology.** (2:2:0)
Kinesiology and biomechanics for physical education/coaching minor.
- 366. Scientific Bases of Sport 3: Exercise Physiology.** (2:2:0)
Physiology of activity for physical education/coaching minor.
- 369. Exercise Physiology for Physical Educators.** (3:Arr.:Arr.) F Prerequisite: PDBio 305.

374. Fundamental Skills and Teaching Methods for Elementary Physical Education. (3:2:2) Prerequisite: acceptance into PETE program.

Identifying and demonstrating fundamental skills; identifying immature and mature movement patterns; selecting developmentally appropriate activities; appropriate management techniques.

375. Physical Education for Elementary School Teachers. (2:1:3) Prerequisite: ExSc 169.

376. Practical Experience in Teaching Elementary School Physical Education. (2:0:4) Prerequisite: ExSc 375.

377. Secondary Practicum. (3:1:3) Prerequisite: Sc Ed 276R; fingerprinting and FBI clearance; acceptance into PETE program.

Written and practical teaching assignments designed to help prospective teachers plan, conduct, and evaluate lessons and unit plans appropriate to adolescent students.

380. Use of Technology in Physical Education Teaching. (2:2:0) Prerequisite: acceptance into PETE Program.

Applying computer technology: Web page design and software focusing on skill, fitness grading, digital video editing, and presentation. Meets secondary education technology requirements.

387. Lifestyle and Chronic Disease Prevention. (3:3:0)

Current scientific evidence demonstrating how lifestyle affects disease processes. Healthy lifestyle concepts specifically needed by wellness professionals, health educators, and health promotion practitioners; influence of unhealthy lifestyle as basis for chronic diseases, i.e. cardiovascular disease, cancer, and diabetes.

394. Athletic Training Clinical Education 1. (2:1:5) Prerequisite: admission to athletic training program.

Classroom and field experience. Orientation to athletic training program and clinical expectations. Modules include emergency care, taping skills, and basic modalities.

395. Athletic Training Clinical Education 2. (2:1:5) Prerequisite: ExSc 394.

Classroom and field experience. Modules include taping skills, assessment, and modalities.

399R. Academic Internship. (1–9:0:Arr. ea.) Prerequisite: advisor's consent; ExSc 202 for health promotion majors.

On-the-job experience for physical education majors and coaching and physical education minors.

400. Functional Anatomy and Kinesiology. (4:3:2) Prerequisite: ExSc 362 or equivalent.

Advanced examination of structure and function of skeletal, articular, muscular, and peripheral nervous systems with clinical applications; cadaver lab included.

410. Stress and Emotional Health. (2:2:0)

Practical experience in learning to understand and manage stress.

414. Advanced Athletic-Training Lab. (1:0:2) Prerequisite: admission to athletic training program.

Advanced athletic-training skills, including taping, bracing and splinting, custom-fitted equipment, massage and stretching techniques, and emergency splinting and transport.

415. Therapeutic Modalities. (3:2:2) F, W Prerequisite: admission to athletic training program.

Hydrotherapy, massage, traction, radiant energy, heat, cold, and electrotherapy.

416. Injury Evaluation: Lower Extremities. (3:3:0) Prerequisite: admission to athletic training program.

Basic principles of injury evaluation; evaluation techniques specific to lower-extremity injuries.

417. Injury Evaluation: Upper Extremities and Trunk. (3:3:0) Prerequisite: ExSc 416.

Injury evaluation techniques specific to the upper extremities and trunk.

418. Rehabilitation of Orthopedic Injuries. (3:3:0) F, W Prerequisite: ExSc 415.

Basic principles, techniques, and progression of orthopedic/musculoskeletal rehabilitation.

419. Medical Issues in Athletic Training. (1:1:0) Prerequisite: ExSc 417 or concurrent enrollment.

Discussion of current medical issues in athletic training, with guest lectures by medical specialists.

423. Administration of Athletic Training Programs. (2:2:0) Prerequisite: ExSc 415.

Management and administration of athletic training facilities and staff members.

430. Theory of Coaching. (2:2:2)

450. Psychology of Sport. (2:2:0)

455. Worksite Health Promotion. (3:3:0) F, W Prerequisite: ExSc 363, 387.

Designing, implementing, managing, administering, marketing, and assessing health promotion programs in a worksite setting.

460. Orthopaedic Impairments and Therapeutic Exercise. (3:3:0) Prerequisite: ExSc 362; PDBio 220 or equivalent.

Fundamentals of body mechanics and therapeutic exercise, coupled with kinesiological principles for detection and correction of basic neuromusculoskeletal anomalies.

461. Adapted Physical Education for Teaching Majors. (3:2:1) Prerequisite: acceptance into PETE program.

Program, legal mandates, management techniques, and assessing and identifying special needs students.

463. Exercise Physiology. (3:3:0) F, W, Sp, Su Prerequisite: PDBio 305; concurrent enrollment in ExSc 464.

464. Exercise Physiology Lab. (0.5:0:1) F, W, Sp, Su Prerequisite: ExSc 463 or concurrent enrollment.

468. Problems in Exercise Prescription. (2:2:0) Prerequisite: ExSc 363.

Applying scientific principles to problems in conditioning.

470. Functional Neuroanatomy. (3:3:0) Prerequisite: PDBio 220, ExSc 400.

Function, assessment, and rehabilitation of sensory and motor systems.

476. Elementary Student Teaching in Physical Education. (3:1:5) Prerequisite: completion of courses in public school teaching major and instructor's consent.

485. Fitness Instructor Workshop. (3:3:0) Prerequisite: senior status.

Review of personal fitness trainer curriculum; preparation for American College of Sports Medicine certification.

494. Athletic Training Clinical Education 3. (2:1:5) Prerequisite: ExSc 395.

Classroom and field experience. Modules include injury assessment and management, rehabilitation skills, and knowledge of general medical conditions.

495. Athletic Training Clinical Education 4. (2:1:5) Prerequisite: ExSc 494.

Classroom and field experience. Modules include injury assessment and management, rehabilitation skills, nutrition, and dermatology.

496R. Academic Internship: Practicum. (1–8:0:Arr. ea.) Prerequisite: ExSc 320, 420, and instructor's consent.

Academic and practical application of skills for athletic trainers.

497R. Undergraduate Research and Study. (1–4:0:Arr. ea.)

Individual research and study in any area of physical education.

498. Capstone Experience in Athletic Training. (2:2:0) F, W
Prerequisite: senior standing in athletic training education program. Course should be taken last semester prior to graduation.

Synthesizing and integrating student classroom and clinical experiences in preparation for BOC examination resulting in certification of allied health professionals.

500-Level Graduate Courses (available to advanced undergraduates)

501. Sports Medicine Pharmacology. (2:2:0) Prerequisite: ExSc 320, 321; or equivalents.

Pharmacological information for students in a variety of sports medicine/allied health professions. Meets educational JRC-AT competencies.

560. Orthopaedic Pathomechanics. (2:2:1) Prerequisite: ExSc 460 or equivalent.

Advanced analysis of neuromusculoskeletal deformities and/or injury. Therapeutic exercise and the use of orthoses.

582. Physical Education for Special Populations. (2:2:0)

Prerequisite: baccalaureate degree in physical education.

Theoretical and practical aspects of teaching individuals with disabilities.

586R. Workshop in Fitness and Sport. (1-4:Arr.:Arr. ea.)

Prerequisite: undergraduate major in physical education or equivalent.

599R. Academic Internship: Practicum. (1-9:0:Arr. ea.)

Field experience for exercise science students; 50 hours of service in approved organization required per credit hour.

Graduate Courses

For 600- and 700-level courses, see the BYU 2007–2008 Graduate Catalog.

Exercise Sciences Faculty

Professors

- Aldana, Steve (1994) BS, MS, Brigham Young U., 1986, 1988; PhD, Arizona State U., 1991.
Allsen, Philip Edmond (1966) BS, Ricks Coll., 1955; MS, Brigham Young U., 1960; EdD, U. of Utah, 1965.
Draper, David (1992) BS, Utah State U., 1982; MA, Brigham Young U., 1984; EdD, Northern Illinois U., 1988.
Knight, Kenneth L. (1996) BS, BS, Weber State U., 1969, 1973; PhD, U. of Missouri, 1977.
Lockhart, Barbara D. (1991) BS, MA, Michigan State U., 1964, 1967; EdD, Brigham Young U., 1971.
Mack, Gary (2004) BS, MA, U. of California, Davis, 1977, 1981; PhD, U. of Hawaii, 1984.
Myrer, William (1990) BS, U. of Calgary, Canada, 1974; MA, U. of Windsor, Canada, 1977; PhD, Brigham Young U., 1983.
Tucker, Larry (1988) BS, MS, Brigham Young U., 1978, 1979; PhD, Southern Illinois U., 1981.

Teaching Professionals

- Chamberlain, Diane (1969) BA, California State U., Los Angeles, 1966; MS, Brigham Young U., 1969; EdD, U. of Utah, 1984.
Hall, Larry Thomas (1978) BS, MS, Brigham Young U., 1970, 1971; PhD, U. of Utah, 1976.
Olson, Mel J. (1970) BS, MA, EdD, Brigham Young U., 1970, 1973, 1980.

Athletic Professionals

- Judkins, Jeff (1999) BA, U. of Utah, 1984.
Mendenhall, Bronco (2003) BS, MA, Oregon State U., 1989, 1990.
Poole, R. Craig (1980) BS, MS, Utah State U., 1964, 1967; EdD, U. of Utah, 1970.
Powers, Timothy J. (1975) BS, U. of Montana, 1968; MA, San Jose State U., 1973.

Rose, David J. (1997) AS, Dixie Coll., 1980; BS, U. of Houston, 1983.

Shane, Patrick (1985) BS, MS, Brigham Young U., 1968, 1970.

Associate Professors

- Feland, Brent (1999) BS, Brigham Young U., 1993; MS, Texas Women's U., 1995; PhD, Brigham Young U., 1999.
George, Jim (1995) BS, MA, Brigham Young U., 1984, 1986; PhD, Arizona State U., 1995.
Parcell, Allen C. (1998) BS, Brigham Young U., 1993; MS, Iowa State U., 1995; PhD, Ball State U., 1998.
Pennington, Todd R. (1998) BS, Brigham Young U. 1991; MS, U. of Utah, 1995; PhD, Virginia Polytechnic Inst. and State U., 1998.
Vehrs, Pat Roy (2000) BS, MS, Northern Illinois U., 1984, 1986; PhD, Brigham Young U., 1991.
Wilkinson, Carol (1995) BEd, Durham U., England, 1976; MS, EdD, Brigham Young U., 1981, 1983.
Zanandrea, Maria (1995) BA, MS, EdD, Brigham Young U., 1983, 1985, 1992.

Associate Teaching Professional

Noel, Robert Edward (1979) BS, Brigham Young U., 1964.

Associate Athletic Professionals

- Brockbank, Bruce (1992) BS, MS, Brigham Young U., 1990, 1992.
Crump, Wayne Stan (1991) BS, MA, Brigham Young U., 1978, 1988.
Holmoe, Thomas A. (2002) BS, MS, Brigham Young U., 1983, 1994.
Lamb, Barry (1994) BS, U. of Oregon, 1978; MA, Arizona State U., 1988.
Nyhus, Susan B. (1999) BS, MS, Brigham Young U., 1986, 1987; PhD, U. of Utah, 1992.
Robison, Mark T. (1996) BS, MS, Brigham Young U., 1982, 1986.
Russell, Keith (1992) BS, Brigham Young U., 1973.

Associate Clinical Professionals

- Merrill, R. Gaye (1981) BS, Brigham Young U., 1978; MS, Indiana U., Bloomington, 1979.
Morris, Kevin (2000) BS, MS, Brigham Young U., 1992, 2002.

Assistant Professors

- Graser, Susan D. (2001) BS, MS, Brigham Young U., 1992, 1997; PhD, Arizona State U., 2001.
Hager, Ron (1999) BS, MS, Brigham Young U., 1991, 1994; PhD, Arizona State U., 1997.
Hopkins, Jon Tyler (2003) BS, Brigham Young U., 1996; MS, PhD, Indiana State U., 1997, 2000.
Hunter, Iain (2001) BS, MEd, Brigham Young U., 1996, 1997; PhD, Oregon State U., 2001.
Prusak, Kevin (2002) BS, Brigham Young U., 1986; MEd, Utah State U., 1990; PhD, Arizona State U., 2000.
Seeley, Matthew Kirk (2006) PhD, U. of Kentucky, 2006.

Instructor

Johnson, A. Wayne (2006) BS, Brigham Young U., 1995; MS, U. of Alabama, Birmingham, 1997.

Assistant Athletic Professionals

- Aldridge, Brent (2005) BS, U. of South Dakota, 1992.
Alvey, Vaughn (2002) BS, U. of Utah, 1970.
Anae, Robert (2004) BA, PhD, Brigham Young U., 1986, 1999.
Applegate, Robert D. (2005) BS, U. of Southern Colorado, 1996.
Battistone, Dann (2006) BS, Brigham Young U., 2006.
Billings, Carolyn (1997) BS, MS, Brigham Young U., 1993, 1995.
Bills, Allison H. (2001) BS, U. of Utah, 1998.
Chatterton, Jonas B. (2001) BS, U. of Utah, 2001.
DeSantis, David B. (2004) BS, Brigham Young U., 1981.
Doman, Brandon G. (2005) BS, Brigham Young U., 2002.
Eakin, Gordon (1999) BS, U. of Utah, 1978.
Eystone, Ed D. (2000) BS, MS, Brigham Young U., 1985, 1990.
Grimes, Jeff D. (2004) BS, U. of Texas, El Paso, 1991; MS, Texas A&M, 1997.
Hamblin, James O. (2002) BA, MEd, Brigham Young U., 1991, 2001.
Hanson, Mindy (2002) BA, Brigham Young U., 2002.
Hasler, Holly (2002) BS, Brigham Young U., 2004.

Exercise Sciences

- Higgins, Patrick (2005) BS, William Penn U., 1986; MS, St. Cloud State U., 1989.
- Hill, Jaime (2006) BS, San Francisco State U., 1988
- Huebner, Brooke (2004) BS, San Jose State U., 1998; MS, Brigham Young U., 2004.
- Hurst, Jeffery (2006) BS, MS, Brigham Young U., 2000, 2004.
- Kaufusi, Steve P. (2002) BS, Brigham Young U., 1994.
- Law, Vance A. (1999) BS, Brigham Young U., 1978.
- Legas, Richard (1996) BS, Brigham Young U., 1971; MS, Embrey Riddle U., 1987.
- Manning, Craig (1997) BS, MS, Brigham Young U., 1995, 2001.
- McClure, Justin (2003) BA, MA, U. of Northern Colorado, 1998.
- Mertz, Shauna (1996) BS, Brigham Young U., 1993.
- Millar, Ryan (2006) BS, Brigham Young U., 2003.
- Mitchell, Brian K. (1996) BS, Brigham Young U., 1995.
- Morzelewski, Joshua (2006) BS, U. of Utah, 2001.
- Myles-Mills, Leonard (2002) BS, Brigham Young U., 1999.
- Omer, Jay (2001) BS, Southern Utah State U., 1972; MEd, Auburn U., 1985.
- Patchell, Shawn E. (2002) BA, Brigham Young U., 1993; MA, U. of California, Irvine, 1999.
- Pearce, Brad (2000) BS, Brigham Young U., 1999.
- Penfield, Janette C. (2003) BA, MBA, Brigham Young U., 1998, 2003.
- Ramos, Robert J. (2002) BS, MS, Brigham Young U., 1995, 1999.
- Reynolds, Lance (1983) BS, Brigham Young U., 1980.
- Rice, David (2005) BA, MBA, U. of Nevada, Las Vegas, 1991, 1993.
- Roberts, Ryan A. (2002) BS, Brigham Young U., 1998; MEd, Utah State U., 2002.
- Rockwood, Jennifer (1996) BA, Brigham Young U., 1989.
- Roese, Walter (2005) BA, MBA, Brigham Young U., 1994, 2003.
- Santiago, Brian S. (1997) BS, MBA, Brigham Young U., 1999, 2001.
- Skabelund, Shari (1996) BS, Brigham Young U., 1981.
- Tidwell, Paul (2001) BA, Southern Utah State U., 1979.
- Wardenburg, John Nathan (2001) BS, Brigham Young U., 1986; MS, Utah State U., 1992.
- Watkins, Chris (1998) BS, Brigham Young U., 1994.
- Watson, Jason (2002) BS, Brigham Young U., 1995.
- Harrison, Joyce M. (1969) BA, MA, California State U., Long Beach, 1964, 1966; EdD, Brigham Young U., 1973.
- Hawkes, Nena Rey (1960) BS, Utah State U., 1954; MS, Brigham Young U., 1965; PhD, Union Inst., 1993.
- Hirschi, Willard M. (1964) BS, Brigham Young U., 1956; MS, Arizona State U., 1960.
- Hirst, Cynthia C. (1948) BA, U. of Utah, 1947; MS, U. of Washington, 1952; PhD, U. of Utah, 1974.
- Jarman, Boyd O. (1969) BS, Brigham Young U., 1954; MS, EdD, U. of Oregon, 1959, 1965.
- Jensen, Clayne R. (1964) BS, MS, U. of Utah, 1952, 1956; EdD, Indiana U., Bloomington, 1963.
- Jones, J. Richard (1961) BS, MS, Brigham Young U., 1951, 1955; EdD, U. of Northern Colorado, 1967.
- Leishman, Courtney M. (1962) BS, Utah State U., 1958; MS, EdD, Brigham Young U., 1962, 1976.
- Lewis, Kathryn (1972) BS, Brigham Young U., 1955; MA, Long Beach State Coll., 1962; EdD, Brigham Young U., 1978.
- McGown, Carl M. (1972) BS, MS, Brigham Young U., 1963, 1964; PhD, U. of Oregon, 1971.
- Michaelis, Elaine (1960) BS, MS, Brigham Young U., 1960, 1962.
- Osborne, James H. (1991) BS, U. of Utah, 1969.
- Pella, Chris (1986) BS, Utah State U., 1966.
- Pullins, Gary D. (1976) BA, MA, Brigham Young U., 1969, 1975.
- Ramage, Thomas J. (1973) BS, MS, Utah State U., 1957, 1962.
- Roundy, Elmo S. (1963) BS, MEd, Brigham Young U., 1953, 1956; EdD, U. of California, Los Angeles, 1965.
- Schmidt, Kenneth (1983) BS, MS, U. of Utah, 1964, 1969.
- Silvester, L. Jay (1969) BS, MS, Utah State U., 1959, 1970; EdD, Brigham Young U., 1976.
- Tucker, Karl L. (1961) BS, MS, Brigham Young U., 1952, 1964.
- Valentine, Ann (1966) BS, Slippery Rock State Coll., 1955; MS, Pennsylvania State U., 1961.
- Vickers, Betty J. (1971) BS, Kent State U., 1955; MA, California State U., Los Angeles, 1960; EdD, Brigham Young U., 1976.
- Wallace, Lu (1956) BS, Utah State U., 1954; MS, Washington State U., 1960.
- Witbeck, Alan R. (1955) BS, MS, Brigham Young U., 1952, 1954.

Assistant Clinical Professionals

- Empey, William Blain (1998) BS, Brigham Young U., 1991; MS, Columbia U., 1993.
- Linde, Christine (1996) BS, MS, Brigham Young U., 1980, 1982.
- Williams, Dustin J. (2006) BS, MS, Utah State U., 2003, 2005.

Emeriti

- Barker, Ruel M. (1971) BS, Utah State U., 1961; MS, EdD, Brigham Young U., 1964, 1971.
- Bestor, Rollie R. (1969) BS, MS, U. of Wisconsin, Madison, 1954, 1958; EdD, Brigham Young U., 1969.
- Blakemore, Connie L. (1978) BS, U. of Utah, 1960; MS, Brigham Young U., 1967; EdD, Temple U., 1984.
- Bunker, Robert E. (1949) BS, Utah State U., 1937.
- Call, C. Boyd (1960) BS, U. of Utah, 1950; MS, Brigham Young U., 1963; PhD, U. of Oregon, 1967.
- Clarke, Mark S. (1982) BS, U. of Arizona, 1963; MS, EdD, Brigham Young U., 1964, 1971.
- Conlee, Robert K. (1977) BS, MS, Brigham Young U., 1969, 1970; PhD, U. of Iowa, 1975.
- Cryer, Walter (1964) BS, MS, U. of Illinois Medical, 1952, 1959; EdD, Brigham Young U., 1975.
- Curtis, George (1985) BS, Southern Utah State Coll., 1971.
- Durrant, Earlene (1973) BS, MS, EdD, Brigham Young U., 1962, 1963, 1975.
- Edwards, R. LaVell (1962) BS, Utah State U., 1952; MS, U. of Utah, 1960; EdD, Brigham Young U., 1978.
- Felt, Richard G. (1967) BS, MA, Brigham Young U., 1958, 1980.
- Fisher, A. Garth (1969) BS, Brigham Young U., 1955; MA, Sacramento State Coll., 1966; PhD, U. of New Mexico, 1969.
- Francis, Rulon S. (1963) BS, MS, Brigham Young U., 1952, 1967; PhD, U. of Utah, 1971.
- French, Roger W. (1980) BS, U. of Minnesota, Minneapolis, 1956; MA, Memphis State U., 1958.