



BS in EXERCISE SCIENCE (663435) Map Sheet

Department of Exercise Sciences

For students entering the degree program during the 2011–2012 curricular year.

UNIVERSITY CORE AND GRADUATION REQUIREMENTS				PROGRAM REQUIREMENTS (59.5 total hours)			
UNIVERSITY CORE REQUIREMENTS				Complete senior exit interview.			
<u>Requirements</u>	<u>#Classes</u>	<u>Hours</u>	<u>Classes</u>	Complete the following:	(continued from previous column)		
Doctrinal Foundation				Chem 105* General College Chemistry	4.0	MMBio 221 General Microbiology	3.0
Book of Mormon	2	4.0	Rel A 121/H and 122/H	Chem 106 General College Chemistry	3.0	MMBio 222 General Microbiology Laboratory	1.0
New Testament	1	2.0	Rel A 211/H or 212/H	Chem 107 General College Chemistry Lab	1.0	MMBio 241 Molecular & Cellular Biology Lab	1.0
Doctrine and Covenants	1	2.0	Rel C 324/H or 325/H	MMBio 240* Molecular Biology	3.0	NDFS 200 Nutrient Metabolism	3.0
The Individual and Society				NDFS 100 Essentials of Human Nutrition	3.0	NDFS 201 Nutrition & Prevention of Chronic Disease	2.0
Citizenship				PDBio 120* Science of Biology	2.0	NDFS 305 Nutritional Implications Of Disease	4.0
American Heritage	1–2	3–6.0	from approved list	PDBio 220 Human Anatomy (with lab)	3.0	NDFS 310 Sports Nutrition	2.0
Global & Cultural Awareness	1	3.0	from approved list	Phscs 105* Introductory Applied Physics	3.0	PDBio 320 Dissection Techniques in Human Anatomy	1.0
Skills				Phscs 106 Introductory Applied Physics	3.0	PDBio 325 Tissue Biology (with lab)	3.0
Effective Communication				Phscs 107 Introductory Applied Physics Lab	1.0	PDBio 360 Cell Biology	3.0
First-Year Writing	1	3.0	from approved list	Phscs 108 Introductory Applied Physics Lab	1.0	PDBio 365 Pathophysiology	4.0
Adv Written & Oral Communication	1	3.0	Engl 316 recommended	Complete one of the following options:		PDBio 484 Human Embryology	3.0
Quantitative Reasoning	0–1	0–4.0	Math 112*, 119* or Stat 121*	Either		PDBio 561 Physiology of Drug Mechanisms	3.0
Languages of Learning (Math or Language)	1	3–4.0	Math 112*, 119* or Stat 121*	PDBio 305 Human Physiology (with lab)	4.0	PDBio 565 Endocrinology	3.0
Arts, Letters, and Sciences				Or		Psych 111* General Psychology	3.0
Civilization 1 and 2	2	6.0	from approved list	PDBio 362 Advanced Physiology	3.0	Psych 220 Human Development: Life Span	3.0
Arts	1	3.0	from approved list	PDBio 363 Advanced Physiology Lab	1.0	Psych 342 Abnormal Psychology	3.0
Letters	1	3.0	from approved list	Complete the following major courses:		PWS 340 Genetics	2.0
Scientific Principles & Reasoning				ExSc 302 Philosophical & Ethical Issues	1.0	Soc 111* Introductory Sociology	3.0
Biological Science	2	5.0	MMBio 240*, PDBio 120*	ExSc 362 Kinesiology & Biomechanics	3.0	Soc 112* Current Social Problems	3.0
Physical Science	2	7.0	Chem 105* and Phscs 105*	ExSc 400 Functional Anatomy & Kinesiology	4.0	Stat 121* Principles of Statistics	3.0
Social Science	1	3.0	Psych 111*, Soc 111* or 112*	ExSc 460 Orthopaedic Impairments & Therapeutic Ex	3.0	StDev 170 Introduction to Health Professions	1.0
Core Enrichment: Electives				ExSc 463 Exercise Physiology	3.0	StDev 399R Health Professions Internship	3.0V
Religion Electives	3–4	6.0	from approved list	ExSc 464 Exercise Physiology Lab	0.5	Note: Watch for prerequisites for the elective courses.	
Open Electives	Variable	Variable	personal choice	Complete 14 hours from the following:		Note to Premed Students: Professional schools and graduate programs may require additional courses not required for this major. Contact the programs to which you may apply to determine specific courses that meet their entrance requirements.	
GRADUATION REQUIREMENTS:				Chem 285 Introductory Bio-organic Chemistry	4.0	Students considering professional or graduate degrees should take at least two semesters of mathematical courses. The following required or elective courses are strongly recommended for students considering professional or graduate degrees in the exercise sciences: MMBio 241; PDBio 360, 362, 363; Chem 351, 352, 353, 481; Math 119; Stat 121.	
Minimum residence hours required		30.0		Chem 351 Organic Chemistry	3.0	For more information contact the Preprofessional Advisement Center, 3328 WSC, (801) 422-3044.	
Minimum hours needed to graduate		120.0		Chem 352 Organic Chemistry	3.0	Contact potential schools of choice for a complete list of entrance requirements.	
				Chem 353 Organic Chemistry Laboratory–Nonmajors	2.0V		
				Chem 481 Biochemistry 1	3.0		
				ExSc 320 Basic Athletic Training	3.0		
				ExSc 321 Basic Athletic Training Lab	0.5		
				ExSc 455 Worksite Health Promotion	3.0		
				ExSc 468 Problems in Exercise Prescription	2.0		
				ExSc 470 Functional Neuroanatomy	3.0		
				ExSc 497R Undergraduate Research and Study	4.0V		
				Hlth 310 Chronic Diseases: Prevention & Control	3.0		
				Hlth 320 Advanced First Aid and Safety	3.0		
				Hlth 335 Health Behavior Change	3.0		
				Math 112* Calculus 1	4.0		
				Math 119* Introduction to Calculus	4.0		
				(Continued in next column)			

*THESE COURSES FILL UNIVERSITY CORE AND PROGRAM REQUIREMENTS (18–19.0 hours overlap)

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2011–2012**

Life Sciences Student Services
380 WIDB
(801) 422-3042
email: lifesciences@byu.edu

Preprofessional Advisement Center
3328 WSC
(801) 422-3044

This suggested plan of study averages 14-16 credit hours per semester without taking Spring or Summer terms. If classes are taken during Spring or Summer terms, lighter loads can be taken in the Fall or Winter semesters—especially during the Freshman year or when other classes are demanding. Most of the GE requirements should be completed in the first two years of study. Some of the GE requirements are taken later to allow completion of 100-200-level science courses (chemistry, physics, biology) by the fifth semester. The sequence of GE requirements is only a suggestion and can be modified to accommodate course availability and scheduling conflicts. Some classes count as two GE requirements. See the college advisement center for advisement.

Suggested Sequence of Courses:

FRESHMAN YEAR

1st Semester

First-Year Writing or A Htg 100	3.0
Rel A 121	2.0
PDBio 120 (Biological Science)	2.0
Civilization 1 elective	3.0
Chem 105	4.0
Quantitative Reasoning (if required)	0–3.0
Total Hours	14–17.0

2nd Semester

First-Year Writing or A Htg 100	3.0
Arts or Letters elective	3.0
MMBio 240 (Biological Science)	3.0
Chem 106 & 107	4.0
Rel A 122	2.0
Total Hours	15.0

SOPHOMORE YEAR

3rd Semester

Civilization 2 elective	3.0
Phscs 105 & 107	4.0
NDFS 100	3.0
Social Science elective	3.0
Rel A 211 or 212	2.0
Total Hours	15.0

4th Semester

Phscs 106 & 108	4.0
Arts or Letters elective	3.0
Global & Cultural Awareness elective	3.0
PDBio 220	3.0
Rel C 324 or 325	2.0
Total Hours	15.0

JUNIOR YEAR

5th Semester

PDBio 305 or 362 and 363	4.0
ExSc 302	1.0
General elective	3.0
Languages of Learning elective	3.0
Major elective	3.0
Religion elective	2.0
Total Hours	16.0

6th Semester

ExSc 463	3.0
ExSc 464	0.5
Major elective	4.0
Religion elective	2.0
General electives	5.0
Total Hours	14.5

SENIOR YEAR

7th Semester

Adv. Written & Oral Communication	3.0
ExSc 362	3.0
ExSc 400	4.0
Major elective	3.0
Religion elective	2.0
Total Hours	15.0

8th Semester

ExSc 460	3.0
Major elective	3.0
General electives	9.0
Total Hours	15.0

THE DISCIPLINE:

The exercise science program is designed to prepare students for entry into graduate school in one of the disciplines related to exercise science or one of the healthcare professional schools.

Students majoring in exercise science explore how the body functions during physical activity and exercise. Principles and concepts taught in human anatomy and physiology, exercise

physiology, biomechanics, motor learning, chemistry, physics, and nutrition are mastered to help understand how the body responds to acute bouts of exercise and how it adapts to chronic physical activity and exercise. The impact that physical activity and exercise have on one's capacity to do work, physical performance, as well as its impact on health and disease makes study of this discipline rewarding.

Students considering medicine as a profession may want to select this major.

While providing the requisite courses for medical school acceptance, it also conveys a healthy-lifestyle, preventive-medicine health care perspective.

CAREER OPPORTUNITIES:

The exercise science degree 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 or fitness centers, and health promotion programs.

The major is designed to prepare students to enter graduate programs in several health-related professions; specifically exercise science master's and doctoral programs. Those who complete graduate work in exercise science are most likely to be employed as a professor/researcher in a university setting. In addition to graduate studies in exercise science, students are also prepared to attend medical school, dental school, osteopathy school, physician assistant and nursing programs, and chiropractic school.

Salary varies with the terminal degree sought, the choice of career speciality, and geographic location of employment or practice. Earnings for those with certain medical and dental specialties are potentially lucrative.

Please check with departments for current availability of all courses.

Note: Students are encouraged to complete an average of 15–16 credit hours each semester or 30–32 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

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