

EXERCISE SCIENCE MAJOR

Exercise Science is the study of physiological and functional adaptations to movement. The Exercise Science Major is a science-oriented curriculum that prepares students for graduate study in exercise science/kinesiology, athletic training, physical therapy, and related health fields. In addition, graduates may pursue careers as strength and conditioning specialists, cardiac technicians, individual and group exercise prescription specialists, and home health-care workers. The program requires and recommends coursework in health sciences as well as anatomy, chemistry, physics, statistics, physiology, and psychology, culminating in a practical hands-on internship experience.

All Exercise Science majors complete a 46-hour of Exercise Science Core (required courses) in addition to choosing at least one area of emphasis: **Pre-Athletic Training, Pre-Physical Therapy, Kinesiology, and/or Pre-Occupational Therapy**. Eighteen hours of major requirements meet general education requirements.

Program Outcomes:

Students graduating with a Bachelor of Arts degree in *Exercise Science* will be able to:

- demonstrate knowledge of the discipline
- evidence professional and personal development
- demonstrate interdisciplinary understanding
- evidence Christian faithfulness

Code	Title	Hours
Health Sciences Courses		
HS 161	Medical Terminology	1
HS 162	Introduction to Interprofessional Health Sciences	1
HS 165	Responding to Emergencies and Sport Safety Training	3
HS 168	Prevention and Care of Athletic Injury	3
HS 201	Physiology of Exercise	3
HS 202	Nutrition ¹	3
HS 251	Kinesiology	3
HS 454	Measurement, Research, Statistics and Technology	3
HS 490	Seminar in Interprofessional Health Sciences	1
Biology		
BIO 111	General Biology ¹	4
BIO 340	Human Anatomy and Physiology I	4
BIO 341	Human Anatomy and Physiology II	4
Math		
MA 285X	Statistics ¹	4
Bioethics		
BE 474X	Introduction to Bioethics or BE 476X Undergraduate Bioethics Institute	3
Psychology		
PSY 140	Introduction to Psychology ¹	3
HPW 228X	Sport and Wellness Psychology	3
Total Hours		46

Pre-Athletic Training Emphasis

The Pre-Athletic Training Emphasis is designed to combine a solid theoretical science foundation with practical training needed to give students a competitive edge for continuing on to the graduate program in Athletic Training at TIU.

Code	Title	Hours
Pre-Athletic Training Emphasis		
		24
CH 103	Introduction to Chemistry ¹	4
CH 203	Essentials of Organic Biochemistry	4
PHY 111	General Physics I	4
PHY 112	General Physics II	4
MA 121	Calculus and Analytic Geometry I	4
HS 351	Biomechanics	3
HS 480	Professional Rotation in Health Sciences ¹ or HS 5111 Athletic Training Clinical I	1
Highly Recommended Athletic Training courses		
BIO 310	Microbiology	4
HS 365	Motor Learning and Lifespan Development	3
HS 370	Introduction to Therapeutic Modalities and Rehabilitation	3
HS 380	Advanced Functional Anatomy	3
Choose one:		3
PSY 335	Child Development	
PSY 337	Psychology of Adolescence	
PSY 339	Adult Development	

Pre-Occupational Therapy Emphasis

The Pre-Occupational Therapy Emphasis is designed to combine a solid theoretical science foundation with the practical training needed to give students a competitive edge for acceptance to professional Occupational Therapy graduate programs.

Code	Title	Hours
Pre-Occupational Therapy Emphasis		
		4
CH 103	Introduction to Chemistry	4
CH 203	Essentials of Organic Biochemistry	4
PHY 111	General Physics I	4
PHY 112	General Physics II	4
MA 121	Calculus and Analytic Geometry I	4
HS 480	Professional Rotation in Health Sciences	1-6
Choose one:		3
PSY 335	Child Development	
PSY 337	Psychology of Adolescence	
PSY 339	Adult Development	
Highly Recommended Pre-Occupational Therapy Courses		
BIO 310	Microbiology	
HS 365	Motor Learning and Lifespan Development	
HS 370	Introduction to Therapeutic Modalities and Rehabilitation	
Total Hours		24-29

Pre-Physical Therapy Emphasis

The Pre-Physical Therapy emphasis is designed to combine a solid theoretical science foundation with practical training needed to give students a competitive edge for acceptance to professional physical therapy programs.

Code	Title	Hours
Pre-Physical Therapy Emphasis		30
CH 111	General Chemistry I ¹	4
CH 112	General Chemistry II	4
CH 203	Essentials of Organic Biochemistry	4
PHY 111	General Physics I	4
PHY 112	General Physics II	4
MA 121	Calculus and Analytic Geometry I	4
HS 480	Professional Rotation in Health Sciences	1-6
BIO 410	Biology Seminar	1
Choose one:		4
BIO 310	Microbiology	
BIO 320 & BIO 321	Immunology and Immunology Case Studies Laboratory	
BIO 430	Developmental Biology	
Highly Recommended Pre-Physical Therapy Courses		
HS 370	Introduction to Therapeutic Modalities and Rehabilitation	3
HS 365	Motor Learning and Lifespan Development	3
HS 351	Biomechanics	3
PSY 335	Child Development	3
PSY 337	Psychology of Adolescence	3
PSY 339	Adult Development	3

Kinesiology Emphasis

The Kinesiology Emphasis is designed to prepare students with the tools necessary to become experts in the field of strength and conditioning, whether working with athletes, in a health club, or conducting research.

Code	Title	Hours
Kinesiology Emphasis		24
CH 103	Introduction to Chemistry ¹	4
HPWA 104	Beginning Weight Training	1
HPWA 204	Advanced Weight Training	1
HPW 220	Practicum in Sport and Wellness Management	3
HS 351	Biomechanics	3
HS 446	Field Internship	9
HS 455	Advanced Strength Training and Program Design	3
Highly Recommended Kinesiology Courses		
CH 203	Essentials of Organic Biochemistry	4
HS 370	Introduction to Therapeutic Modalities and Rehabilitation	3
HS 380	Advanced Functional Anatomy	3
HS 402	Sport Nutrition	3

¹ Fulfills a general education requirement