

# Exercise Science and Rehabilitation

## MAJOR OPTIONS

The Bachelor of Science (BS) in Exercise Science and Rehabilitation has seven program options.

- ▼ **Option A: Professional Certification Route**  
 120 credits
- ▼ **Option B: Professional Route Pre-Athletic Training**  
 21-22 additional credits
- ▼ **Option C: Professional Route Pre-Physical Therapy**  
 32 additional credits
- ▼ **Option D: Pre-Occupational Therapy**  
 14-15 additional credits
- ▼ **Option E: Pre-Physician Assistant**  
 27 additional credits
- ▼ **Option F: Pre-Chiropractic**  
 35 additional credits
- ▼ **Option G: Pre-Med**  
 36 additional credits

## 4 YEAR PLAN

### OPTION A: PROFESSIONAL CERTIFICATION ROUTE (120 cr)

1st Year			
Fall		Spring	
BIOL 220 Anatomy and Physiology I	4 cr	BIOL 221 Anatomy and Physiology II	4 cr
UNIV 110 University Studies + PSYC 111 Intro. to Psychology	3 cr	ATR 207 Prevention and Care of Injuries	2 cr
KIN 120 Weight Training	1 cr	KIN 126 Group Fitness/ Yoga	1 cr
Humanities elective	3 cr	HMS 208 Medical Terminology	2 cr
ENGL 110 College Composition I	3 cr	Humanities elective	3 cr
KIN 100 Concepts of Fitness and Wellness	2 cr	MATH 103 College Algebra	4 cr
<b>TOTAL</b>	<b>up to 18 cr</b>	<b>TOTAL</b>	<b>up to 18 cr</b>

2nd Year			
Fall		Spring	
BIOL 220 Anatomy and Physiology I	4 cr	KIN 433 Exercise Physiology	3 cr
KIN 431 Kinesiology	3 cr	EXSR 316 GXT	2 cr
KIN 323 Basic EKG for Exercise Science	2 cr	EXSR 317 GXT lab	1 cr
EXSR 226 Meth of T Group Fitness	2 cr	KIN 225 Fitness Leadership	2 cr
KIN 301 Psychomotor Development	2 cr	KIN 441 Eval. of Psychomotor Performance	3 cr
ATR 206 Med Cond, Spec Pop, and Phys Activity	3 cr	ENGL 120 College Composition II	3 cr
HMS 215 Pharmacology	3 cr		
<b>TOTAL</b>	<b>up to 18 cr</b>	<b>TOTAL</b>	<b>up to 18 cr</b>

3rd Year			
Fall		Spring	
KIN 325 Personal Training Methods	2 cr	ATR 308 Biomechanics	3 cr
KIN 303 Therapeutic Exercise Part 1	3 cr	KIN 310 Org and Adm of PE Ath	2 cr
KIN 306 Health Risk Appraisal	2 cr	ATR 304 Ther Exercise Part 2	3 cr
History elective	3 cr	EXSR 227 Strength and Cond. Program Design	2 cr
COMM 110 Fundamentals of Public Speaking	3 cr	PSY 241 Intro to Statistics <i>or</i> MATH 240	3 cr
<b>TOTAL</b>	<b>up to 18 cr</b>	<b>TOTAL</b>	<b>up to 18 cr</b>

4th Year			
Fall		Spring	
KIN 334 Nutrition for Physical Performance	2 cr	KIN 407 Psychology of PE and Athletics	2 cr
KIN 414 Pathomechanics	3 cr	ATR 425 Capstone	1 cr
KIN 305 Therapeutic Exercise Part 3	3 cr	KIN 498	5 cr
KIN 342 Programming in an Aging Pop.	2 cr		
Social science elective	3 cr		
KIN 497 Internship	5 cr		
<b>TOTAL</b>	<b>up to 18 cr</b>	<b>TOTAL</b>	<b>up to 18 cr</b>

## Option A: Professional Certification Route (120 cr)

### General Education

(not covered by program requirements)

#### Core

COMM 110 Fundamentals of Public Speaking (3)  
ENGL 110 College Composition I (3)  
ENGL 120 College Composition II (3)  
UNIV 110 First Year Seminar (2-3)

### Foundational Content

History (3)  
Humanities (6)  
Social science (3)

### Required Support Courses

May be used to satisfy Gen. Ed. Requirements

BIOL 220 Anatomy and Physiology I (4)  
BIOL 221 Anatomy and Physiology II (4)  
KIN 120 Strength Training (1)  
KIN 126 Group Exercise (1)  
MATH 103 College Algebra (4)  
MATH 210 Elementary Statistics (4)  
PSY 111 Introduction to Psychology (3)

### Required Exercise Science Courses

ATR 206 Medical Conditions (3)  
ATR 207 Prevention & Care of Injuries (2)  
ATR 304 Therapeutic Exercise (3)  
ATR 308 Biomechanics (2)  
HMS 215 Principles of Pharmacology (3)  
HMS 208 Medical Terminology (2)  
KIN 225 Fitness Leadership (2)  
KIN 226 Methods of Teaching Group Exercise and strength Training (2)  
KIN 301 Psychomotor Development (2)  
KIN 303 Therapeutic Exercise I (3)  
KIN 305 Therapeutic Exercise III (3)  
KIN 227 Strength and Conditioning Programming Principles and Methods (2)  
KIN 306 Health Risk Appraisal (2)  
KIN 323 Basic EKG for Exercise Science (2)  
KIN 325 Personal Training Methods (2)  
KIN 334 Nutrition for Physical Performance (2)  
KIN 316 Graded Exercise Testing and Prescription (2)  
KIN 342 Exercise Programming for Older Adults (2)  
KIN 317 Graded Exercise Testing Lab (1)  
KIN 407 Psych. of Physical Education & Athletes (2)  
KIN 414 Pathomechanics (2)  
KIN 425 Exercise Science and Rehab. Capstone (1)  
KIN 431 Kinesiology (3)  
KIN 433 Physiology of Exercise (3)  
KIN 441 Eval. of Psychomotor Performance (3)  
KIN 497 Practicum in Corporate Fitness (8)  
KIN 498 Internship (8)

### Electives as required to meet 120 credits

Students seeking professional certification must follow internship requirements for that certification.

## Option B: Professional Route Pre-Athletic Training (+21-22 cr)

Option B: Pre-Athletic Training requires the following courses in addition to the Option A course requirements.

BIOL 150 Introduction to Cellular Biology (4)  
*Internship is recommended*  
CHEM 121 General Chemistry I (5)  
CHEM 122 General Chemistry II (5)  
PHYS 211 College Physics I (4)  
or PHYS 251 University Physics I (5)  
PSY 255 Child & Adolescent Psychology (3)

## Option C: Professional Route Pre-Physical Therapy\* (+32 cr)

Option C: Pre-Physical Therapy requires the following courses in addition to the Option A course requirements.

BIOL 150 Introduction to Cellular Biology (4)  
BIOL 151 Introduction to Zoology (4)  
BIOL 220 Anatomy and Physiology I (4)  
BIOL 221 Anatomy and Physiology II (4)  
CHEM 121 General Chemistry I (5)  
CHEM 122 General Chemistry II (5)  
MATH 103 College Algebra (4)  
MATH 210 Elementary Statistics (4)  
PHYS 211 College Physics I (4)  
PHYS 212 College Physics II (4)  
PSY 255 Child & Adolescent Psychology (3)  
PSY 270 Abnormal Psychology (3)  
SOC 110 Introduction to Sociology (3)

## Option D: Pre-Occupational Therapy\* (+27 cr)

Option E: Pre-Physician Assistant requires the following courses in addition to the Option A course requirements.

BIOL 215 Genetics (4)  
BIOL 220 Anatomy and Physiology I (4)  
BIOL 221 Anatomy and Physiology II (4)  
BIOL 302 General Microbiology (4)  
CHEM 121 General Chemistry I (5)  
CHEM 121 General Chemistry II (5)  
MATH 103 College Algebra (4)  
MATH 210 Elementary Statistics (4)  
PSY 255 Child & Adolescent Psychology (3)  
or PSY 270 Abnormal Psychology (3)

Elect 6 credits from:

BIOL 150 Introduction to Cellular Biology (4)  
BIOL 151 Introduction to Zoology (4)  
BIOL 480 Molecular Biology (4)  
CHEM 341 Organic Chemistry I (5)  
CHEM 342 Organic Chemistry II (5)  
CHEM 480L Biochemistry Laboratory (2)  
CHEM 481 Biochemistry I (3)  
CHEM 482 Biochemistry II (3)

## Option F: Pre-Chiropractic\* (+35 cr)

Option F: Pre-Chiropractic requires the following courses in addition to the Option A course requirements.

BIOL 150 Introduction to Cellular Biology (4)  
BIOL 220 Anatomy and Physiology I (4)  
BIOL 221 Anatomy and Physiology II (4)  
CHEM 121 General Chemistry I (5)  
CHEM 121 General Chemistry II (5)  
CHEM 341 Organic Chemistry I (5)  
CHEM 342 Organic Chemistry II (5)  
HUM 251 Humanities (3)  
HUM 252 Humanities (3)  
HUM 253 Humanities (3)  
MATH 103 College Algebra (4)  
MATH 210 Elementary Statistics (4)  
PHYS 211 College Physics I (4)  
PHYS 212 College Physics II (4)

## Option G: Pre-Medicine\* (+36 cr)

Option G: Pre-Medicine requires the following courses in addition to the Option A course requirements.

BIOL 150 Introduction to Cellular Biology (4)  
BIOL 151 Introduction to Zoology (4)  
BIOL 220 Anatomy and Physiology I (4)  
BIOL 221 Anatomy and Physiology II (4)  
CHEM 121 General Chemistry I (5)  
CHEM 121 General Chemistry II (5)  
CHEM 341 Organic Chemistry I (5)  
CHEM 342 Organic Chemistry II (5)  
MATH 103 College Algebra (4)  
MATH 210 Elementary Statistics (4)  
PHYS 211 College Physics I (4)  
PHYS 212 College Physics II (4)  
PSY 111 Introduction to Psychology (3)  
SOC 110 Introduction to Sociology (3)

**Electives:** recommended coursework in biochemistry, genetics, and cell biology

### PROGRAM CONTACT:

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▶ [MinotStateU.edu/tehp](http://MinotStateU.edu/tehp)

\*KIN 317 GXT Lab, KIN 425 Capstone, and KIN 498 Internship are not required for options C - G.

View course descriptions: [MinotStateU.edu/tehp](http://MinotStateU.edu/tehp).  
All courses subject to change.