

# Bachelor of Science in Exercise Science

The **Exercise Science** program at the University of Kansas prepares students for a variety of career paths after graduation, including admission to most physical therapy schools. Graduates may also work in agencies that dispense health- and fitness-related programs, such as commercial or private health and fitness centers, hospital exercise and cardiac rehabilitation programs, and corporate fitness centers or apply for graduate study in exercise physiology. It also serves as a foundation for graduate-level work in health sciences, such as nursing, chiropractic, medicine (physician assistant, medical doctor, etc.), physical/occupational therapy or dietetics. The program combines rigorous coursework in the sciences with exercise science classes such as biomechanics, exercise biochemistry and neuromuscular exercise physiology.

**Incoming Freshman Students:** Students can be admitted into the Exercise Science program as freshmen if they meet KU's assured admission standards and declare Exercise Science as their major.

**Incoming Transfer Students:** Students can be admitted into Exercise Science as transfer students if they are admitted to KU, declare Exercise Science as their major, and meet the following criteria:

- A KU + Transfer Cumulative GPA of at least 2.75

**Current KU Students:** Students can be admitted into Sport Management or Exercise Science as current KU students if they meet the following criteria:

- A KU + Transfer Cumulative GPA of at least 2.75

Students that do not meet the requirements above can petition through the online [SOEHS Admission Petition form](#).

For information about initial admission to KU, visit the Office of Admissions (<https://admissions.ku.edu/>). Visit the Office of International Support Services (<http://www.iss.ku.edu/>) for information about international admissions.

Primary responsibility for meeting graduation requirements rests with the student.

- Complete an approved program with a minimum of 120 credit hours of course work. At least 30 hours must be taken in residence.
- A 2.75 minimum KU + Transfer Cumulative grade-point average for all academic coursework, including transfer hours.
- Other general regulations of the School and University, including KU Core Goal requirements.
- Successful completion of internship or required electives.

Requirements to begin internship, if student elects to complete an internship:

- A minimum KU + Transfer Cumulative grade-point average of 2.75.
- All program requirements must be completed before internship.

## B.S. in Exercise Science

Code	Title	Hours
<b>Core 34 General Education</b>		<b>34</b>

The KU Core 34 is comprised of 34-35 credit hours typically completed during the first two years of study. The Core 34 consists of the following requirements: English (6), Communications (3), Math & Statistics (3), Natural & Physical Sciences with lab (4-5), Social & Behavioral Sciences (6 in two different disciplines), Arts & Humanities (6 in two different disciplines), US Culture (3), and Global Culture (3)

MATH 101 College Algebra is the designated "math pathway" course. This course will fulfill your Core 34 Math and Statistics requirement.

BIOL 100/150 and BIOL 102 are required courses of the major. Students are strongly advised to satisfy 4 credits of their Core 34 Natural and Physical Sciences by taking these courses.

### Major Requirements

BIOL 100 or BIOL 150	Principles of Biology Principles of Molecular and Cellular Biology	3
BIOL 102	Principles of Biology Laboratory	1
HSES 269	Introduction to Exercise Science	3
HSES 305	Methods of Strength Training and Conditioning	3
HSES 310	Research and Data Analysis in Health, Sport, and Exercise Sciences	3
HSES 330	Principles of Nutrition and Health	3
HSES 350	Care and Prevention of Athletic Injuries	3
HSES 369	Kinesiology	3
HSES 372	Exercise Physiology	3
HSES 375	Neuromuscular Exercise Physiology and Motor Control	3
HSES 470	Biomechanics	3
HSES 474	Exercise Biochemistry	3
HSES 373	Clinical Exercise Physiology	3
BIOL 240	Fundamentals of Human Anatomy	3
BIOL 241	Human Anatomy Observation Laboratory	2
BIOL 246	Principles of Human Physiology	3
BIOL 247	Principles of Human Physiology Laboratory	2
BIOL 200	Basic Microbiology	3
BIOL 203	Introductory Microbiology Laboratory	2
CHEM 130	General Chemistry I	5
CHEM 135	General Chemistry II	5
MATH 103 or MATH 104 or MATH 115 or MATH 125	Trigonometry Precalculus Mathematics Calculus I Calculus I	2-5
PHSX 114	College Physics I	4
PHSX 115	College Physics II	4
<b>Select 11 credit hours from the following list of electives, minors, 11 or certificate programs</b>		
HSES 300	Study Abroad Topics in: _____ (1-3)	
HSES 306	Principles of Personal Training (3) <sup>4</sup>	
HSES 307	Tactical Strength and Conditioning (3) <sup>4</sup>	
HSES 309	Foundations of Sport Science <sup>3</sup>	
HSES 331	Sport and Exercise Nutrition (3) <sup>4</sup>	
HSES 335	Clinical Field Experience (1-6)	

HSES 370	Health and Pathophysiology (3) <sup>4</sup>
HSES 371	Medical Terminology for Health Professionals (3) <sup>4</sup>
HSES 418	Health Aspects of Aging (3) <sup>3</sup>
HSES 440	Applied Sport and Performance Psychology (3) <sup>3</sup>
HSES 475	Undergraduate Research in Health, Sport, and Exercise Sciences (1-6)
HSES 489	Health and Human Sexuality (3) <sup>3</sup>
HSES 497	Independent Study (1-3)
HSES 580	Internship in: _____ (Exercise Science) (15) <sup>2</sup>
HSES 598	Special Course: _____ (1-5)
AAAS 203	Culture and Health
AAAS 204	Culture and Health, Honors
ABSC 160	Introduction to Child Behavior and Development (3)
GEOG 201	Culture and Health
GEOG 202	Culture and Health, Honors
GIST 210	Culture and Health
GIST 211	Culture and Health, Honors
BIOL 150	Principles of Molecular and Cellular Biology
BIOL 350	Principles of Genetics (4)
BIOL 503	Immunology (3)
BIOL 400	Fundamentals of Microbiology
BIOL 504	Immunology Laboratory (2)
BIOL 600	Introductory Biochemistry, Lectures (3)
BIOL 601	Principles of Biochemistry Laboratory (2)
BIOL 636	Biochemistry I (4)
CHEM 330	Organic Chemistry I (3)
CHEM 331	Organic Chemistry I Laboratory (2)
CHEM 335	Organic Chemistry II (3)
CHEM 336	Organic Chemistry II Laboratory (2)
CLSX 332	Medical Terminology: Greek and Latin Roots
HEIM 230	Medical Terminology
MATH 365	Elementary Statistics (3) <sup>7</sup>
PHIL 676	Medical Ethics: Life and Death Issues
PSYC 333	Child Development (3)
PSYC 350	Psychological Disorders (3)
SOC 104	Elements of Sociology (3) <sup>3</sup>
SOC 304	Principles of Sociology (3) <sup>4</sup>
SOC 424	Sociology of Health and Medicine (3)
SPAN 326	Spanish for Health Care Workers (3)
A maximum of 6 credit hours of foreign language courses can be counted as required electives credit	
HEIM 415	Healthcare Delivery Systems (3)
HEIM 420	Legal Aspects of Healthcare (3)
HEIM 540	Health Information Systems (3)
HEIM 567	Quality and Performance Improvement in Healthcare (3)
HEIM 570	Introduction to Healthcare Management (3)
HEIM 585	Healthcare Reimbursement (3) <sup>5</sup>
<b>Capstone</b>	
HSES 473	Clinical Fitness Evaluation Techniques 3
<b>Total Hours</b>	<b>120-123</b>

Sport Management Minor (<https://catalog.ku.edu/education/health-sport-exercise-sciences/minor-sport-management/>)<sup>5</sup>, Business Minor (<https://catalog.ku.edu/business/minor/#requirementstext>)<sup>5</sup>, Entrepreneurship Certificate (<https://catalog.ku.edu/business/ucrt-entrepreneurship/>), Psychology Minor (<https://catalog.ku.edu/liberal-arts-sciences/psychology/minor-psychology/#requirementstext>)<sup>5</sup>, Sport & Exercise Psychology Minor ([https://catalog.ku.edu/education/psychology-research/sports\\_exercise\\_psychology\\_minor/](https://catalog.ku.edu/education/psychology-research/sports_exercise_psychology_minor/)), Public and Population Health Minor (<https://catalog.ku.edu/professional-studies/public-population-health-minor/#minorrequirementstext>)<sup>4,5</sup>, Nutrition Minor (<https://catalog.ku.edu/professional-studies/nutrition-minor/#minorrequirementstext>)<sup>4,5</sup>.

- <sup>1</sup> Must have a minimum grade of "C-" or better.
- <sup>2</sup> Students may apply for an internship at an approved site once all coursework is completed. A 2.75 KU + Transfer Cumulative GPA is required before one can apply for an internship. Internship students are required to be present at the internship site a minimum of 40 hours per week for 16 weeks - NO EXCEPTIONS.
- <sup>3</sup> Currently, only offered on the Lawrence Campus
- <sup>4</sup> Currently, only offered on the Edwards Campus
- <sup>5</sup> A list minor may be declared and completed in its entirety OR taken as individual courses toward the required 11 elective hours.
- <sup>6</sup> Trigonometry must be completed as a sequence to MATH 101 (College Algebra) to meet degree requirements, unless a higher-level math is completed in its place (MATH 104-Precalculus Mathematics, MATH 115-Calculus I, or MATH 125-Calculus I).
- <sup>7</sup> MATH 365 cannot be completed for credit if a student has already earned credit for MATH 107

This is a sample plan of study. Students should consult with their academic advisor to create an individualized plan for degree completion.

**Year 1**

Fall	Hours Spring	Hours
ENGL 101 (Core 34: English (SGE)) <sup>010*</sup>	3 ENGL 102 (Core 34: English (SGE)) <sup>010*</sup>	3
MATH 101 (Core 34: Math and Statistics (SGE)) <sup>030</sup>	3 MATH 103	2
BIOL 100 or 150	3 BIOL 240	3
BIOL 102	1 COMS 130 (Core 34: Communications (SGE)) <sup>020*</sup>	3
PSYC 104 (Core 34: Social and Behavior Science (SGE)) <sup>050*</sup>	3 Core 34: Natural and Physical Sciences Lecture (SGE) <sup>040</sup>	3
HSES 269	3 Core 34: Natural and Physical Sciences Lab (SGE) <sup>040</sup>	1
	<b>16</b>	<b>15</b>

**Year 2**

Fall	Hours Spring	Hours
BIOL 246	3 BIOL 247	2
BIOL 241	2 CHEM 135	5
CHEM 130	5 HSES 350	3
PHIL 160 (Core 34: Arts and Humanities (SGE)) <sup>060*</sup>	3 Core 34: Social and Behavior Science (SGE) <sup>050</sup>	3
HSES 330	3 Core 34: US Culture (SGE) <sup>070</sup>	3
	<b>16</b>	<b>16</b>

<b>Year 3</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSES 310	3 HSES 375	3
HSES 369	3 HSES 470	3
HSES 372	3 BIOL 200	3
Core 34: Arts and Humanities (SGE) <sup>060</sup>	3 BIOL 203	2
Required Elective <sup>1</sup>	3 PHSX 114	4
	<b>15</b>	<b>15</b>

<b>Year 4</b>		
<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
HSES 305	3 HSES 473	3
HSES 373	3 HSES 474	3
PHSX 115	4 Required Elective <sup>1</sup>	3
Core 34: Global Culture (SGE) <sup>070</sup>	3 Required Elective <sup>1</sup>	3
Required Elective <sup>1</sup>	2	
	<b>15</b>	<b>12</b>

**Total Hours 120**

<sup>1</sup> Courses that fulfill the Required Elective (p. 1) requirement.

**Notes:**

\* - This course is a Recommended Core 34: Systemwide General Education course. This specific course is not required but is recommended by the program's faculty.

At the completion of this program, students will be able to:

- Identify the core scientific principles that underpin exercise science and physical activity.
- Locate accurate, reliable, peer reviewed scientific information and critically evaluate research and data in exercise science.
- Evaluate and design exercise technique and exercise programs.
- Demonstrate knowledge of risk assessment and injury prevention.
- Provide evidence of participation in activities that enhance collaboration and lead to professional growth and development.