EXERCISE SCIENCE, B.S.

Curriculum Overview

The Bachelor of Science in Exercise Science at Saint Louis University consists of three pathways. The exercise and wellness concentration is for students who seek careers as an exercise physiologist, medical scientist, personal trainer, health and wellness coordinator, wellness coach or recreation specialist. This exercise and wellness concentration of the Exercise Science, B.S. is available at Saint Louis University and Saint Louis University-Madrid.

SLU also offers the Exercise Science, B.S., with concentrations in athletic training or physical therapy. These concentrations are for students who wish to pursue direct entry toward a Master of Athletic Training (M.A.T.) or a Doctor of Physical Therapy (D.P.T.) degree respectively. For additional information on all the Exercise Science, B.S. concentrations, see the Requirements and Roadmap tabs.

For additional information on the M.A.T. and the D.P.T., see the catalog entries below:

Athletic Training, Master of (https://catalog.slu.edu/colleges-schools/health-sciences/physical-therapy-athletic-training/athletic-training-program/)

Physical Therapy, Doctor of (https://catalog.slu.edu/colleges-schools/health-sciences/physical-therapy-athletic-training/physical-therapy-program/)

Admission Requirements

Begin Your Application (https://www.slu.edu/apply.php)

Saint Louis University also accepts the Common Application.

Freshman

All applications are thoroughly reviewed with the highest degree of individual care and consideration to all credentials that are submitted. Solid academic performance in college preparatory coursework is a primary concern in reviewing a freshman applicant's file.

To be considered for admission to any Saint Louis University undergraduate program, applicants must be graduating from an accredited high school, have an acceptable HiSET exam score or take the General Education Development (GED) test.

Transfer

Applicants must be a graduate of an accredited high school or have an acceptable score on the GED or HiSET.

Students who have attempted fewer than 24 semester credits (or 30 quarter credits) of college credit must follow the above freshmen admission requirements. Students who have completed 24 or more semester credits (or 30 quarter credits) of college credit must submit transcripts from all previously attended college(s).

In reviewing a transfer applicant's file, the Office of Admission holistically examines the student's academic performance in college-level coursework as an indicator of the student's ability to meet the academic rigors of Saint Louis University. Where applicable, transfer students will be evaluated on any courses outlined in the continuation standards of their preferred major.

International Applicants

All admission policies and requirements for domestic students apply to international students along with the following:

- Demonstrate English Language Proficiency (https://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency/)
- All academic records must include an English translation. An official course-by-course transcript evaluation may be required and accepted.

Tuition

Tuition/Fee	Cost Per Year
Undergraduate Tuition	$56,960

Additional charges may apply. Other resources are listed below:

Net Price Calculator (https://www.slu.edu/financial-aid/tuition-and-costs/calculator.php)

Information on Tuition and Fees (https://catalog.slu.edu/academic-policies/student-financial-services/tuition/)

Miscellaneous Fees (https://catalog.slu.edu/academic-policies/student-financial-services/fees/)

Information on Summer Tuition (https://catalog.slu.edu/academic-policies/student-financial-services/tuition-summer/)

Scholarships and Financial Aid

There are two principal ways to help finance a Saint Louis University education:

- **Scholarships:** Awarded based on academic achievement, service, leadership and financial need. In addition to SLU scholarships, the Doisy College of Health Sciences offers scholarships (https://www.slu.edu/doisy/about/scholarships-for-current-students.php) to sophomores, juniors, seniors and graduate students.
- **Financial Aid:** Provided in the form of grants and loans, some of which require repayment.

For priority consideration of merit-based scholarships, applicants should apply for admission by Dec. 1 and complete a Free Application for Federal Student Aid (FAFSA) by Feb. 1.

For more information, visit the Office of Student Financial Services (https://www.slu.edu/financial-aid/).

Requirements

Code	Title	Credits
University Undergraduate Core (https://catalog.slu.edu/academic-policies/academic-policies-procedures/university-core/)		**32-35**
Major Requirements		
ANAT 1000	Basic Human Anatomy	3
BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory	4
CHEM 1080 & CHEM 1085	Principles of Chemistry 1 Lecture and Principles of Chemistry 1 Lab	4

CHEM 1480 & CHEM 1485	Principles of Chemistry 2 Lecture and Principles of Chemistry 2 Lab	4
ENGL 1900	Advanced Strategies of Rhetoric and Research	3
IPE 2100	Interprofessional Collaboration and Healthcare in Global Context	3
IPE 4200	Applied Decision-Making in Interprofessional Practice	3
IPE 4900	Interprofessional Community Practicum	3
MATH 1400	Pre-Calculus	3
PHIL 2050 or HCE 2010	Ethics Foundations in Clinical Health Care Ethics	3
PHYS 1310	College Physics I	3
PHYS 1320	College Physics I Laboratory	1
PPY 2540	Human Physiology	4
PSY 1010	General Psychology	3
STAT 1100	Introduction to Statistics	3
Choose a Concentration:		**47-59**
Exercise and Wellness Concentration (p. 2)		
Athletic Training Concentration (p. 2)		
Physical Therapy Concentration (p. 2)		
General Electives		**7**
Total Credits		**120-126**

Exercise and Wellness Concentration

Code	Title	Credits
DIET 2080	Foundations in Nutrition	3
HSCI 2500	Human Development across the Lifespan	3
EXSC 3230	Exercise Physiology	3
EXSC 4121	Clinical Biomechanics	3
EXSC 4150	Nutrition, Health, and Physical Performance	3
EXSC 4170	Exercise Testing and Prescription	3
EDI 4361	Art and Science of Human Flourishing	3
EXSC 4260	Enhancing Human Performance	3
EXSC 4241	Clinical Research and Design	2
Concentration Electives		
Foundational Electives--Select 2 courses or course sequences below, to be completed Freshman or Sophomore years:		*6-8*
BIOL 1260 & BIOL 1265	General Biology: Transformations of Energy and Matter and Principles of Biology II Laboratory	
BIOL 1460	Exercise and Health	
PHYS 1240 & PHYS 1255	General Physics II and General Physics II Lab	
DIET 2100	Nutrition Across the Lifespan	
DIET 2510	Principles of Food Preparation	
ASTD 2800	Sports in American Culture	
SOC 2110	Sociology of Sport	
Upper-level Electives--Select 8 courses below, 2 of which must be upper level psychology courses, to be completed Junior or Senior years:		*24*
ASTD 3600	American Food and Cultures	
DIET 3030	Sustainable Food Systems	
PSY 3460	Abnormal Psychology	
PSY 4150	Science of Sleep	
PSY 4350	Health Psychology	
MGT 3000	Management Theory and Practice	
MGT 3201	Social Entrepreneurship	
EXSC 4910	Internship / Fieldwork in Exercise Science	
PUBH 3100	Public Health & Social Justice	
HCE 3030	Disability Studies: Medicine, Ethics, and Policy	
HCE 3040	Mindfulness & the Ethics of Healthcare	
Total Credits		**56-58**

Athletic Training Concentration

Code	Title	Credits
PHYS 1330	Physics II	3
PHYS 1340	Physics II Laboratory	1
PSY 3000/4000	Psychology Elective	3
ANAT 4000	Human Gross Anatomy	5
EXSC 3230	Exercise Physiology	3
EXSC 5121	Clinical Biomechanics	3
EXSC 5241	Clinical Research and Design	2
MAT 1000	Intro to Athletic Training	1
MAT 2000	Athletic Training Student Development I	1
MAT 3000	Athletic Training Student Development II	2
MAT 5010	Principles of Athletic Training	2
MAT 5125	Therapeutic Modalities	3
MAT 5160X	Aspects of Nutrition	2
MAT 5240	Musculoskeletal Assessment and Management I	4
MAT 5250	Musculoskeletal Assessment and Management II	4
MAT 5500	Rehabilitation in Athletic Training I	4
MAT 5800	Medical Conditions and Physical Activity	4
Total Credits		**47**

Physical Therapy Concentration

Students must earn a C or better in all required courses with a DPT, EXSC, and IPE prefix. Students must earn a C or better in all required ANAT courses at the 4000 level and above. For clinical education courses in the professional phase, an S (satisfactory) grade is required.

Code	Title	Credits
PHYS 1330	Physics II	3
PHYS 1340	Physics II Laboratory	1
ANAT 4000	Human Gross Anatomy	5
ANAT 4300	AHP Neurosciences	4
BIOL 1260 & BIOL 1265	General Biology: Transformations of Energy and Matter and Principles of Biology II Laboratory	4
PSY 3460	Abnormal Psychology	3
DPT 1111	Self and Community in PT	1
DPT 1212	Fueling the Fire, Discovering Your Passion	2
DPT 2213	Professionalism and Physical Therapy Thought	1

DPT 3214	Reflections on the Core and the Future	1
EXSC 3230	Exercise Physiology	3
EXSC 5121	Clinical Biomechanics	3
DPT 5011	Foundations in Physical Therapy	1
DPT 5125	Therapeutic Modalities	3
DPT 5127	Basic Examination	3
DPT 5130	System-Based Pathology	4
DPT 5147	Human Growth and Development	3
DPT 5222	Kinesiology	3
DPT 5226	Therapeutic Exercise	2
DPT 5228	Basic Procedures	2
DPT 5240	Neuromusculoskeletal Conditions	4
EXSC 5241	Clinical Research and Design	2
DPT 5290	Formation of Identity as a Physical Therapist	1
Total Credits		**59**

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

Exercise and Wellness Concentration (B.S. in Exercise Science)

Course	Title	Credits
Year One		
Fall		
BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory	4
CHEM 1080 & CHEM 1085	Principles of Chemistry 1 Lecture and Principles of Chemistry 1 Lab	4
CORE 1500	Cura Personalis 1: Self in Community	1
ENGL 1900	Advanced Strategies of Rhetoric and Research	3
CORE 1700	Ultimate Questions: Philosophy	3
	Credits	**15**
Spring		
CHEM 1480 & CHEM 1485	Principles of Chemistry 2 Lecture and Principles of Chemistry 2 Lab	4
CORE 1000	Ignite First Year Seminar	2-3
CORE 1200	Eloquentia Perfecta 2: Oral and Visual Communication	3
MATH 1400	Pre-Calculus	3
Foundational Major Elective		3
	Credits	**15-16**
Year Two		
Fall		
IPE 2100	Interprofessional Collaboration and Healthcare in Global Context	3
PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
PPY 2540	Human Physiology	4
PSY 1010	General Psychology	3
DIET 2080	Foundations in Nutrition	3
	Credits	**17**
Spring		
ANAT 1000	Basic Human Anatomy	3
IPE 4200	Applied Decision-Making in Interprofessional Practice	3
HSCI 2500	Human Development across the Lifespan	3
Foundational Major Elective		3
Elective		3
	Credits	**15**
Year Three		
Fall		
PHIL 2050 or HCE 2010	Ethics or Foundations in Clinical Health Care Ethics	3
CORE 3400	Ways of Thinking: Aesthetics, History, and Culture	3
CORE 1600	Ultimate Questions: Theology	3
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
Upper-level Major Psychology Elective		3
	Credits	**14-15**
Spring		
EXSC 3230	Exercise Physiology	3
IPE 4900	Interprofessional Community Practicum	3
STAT 1100	Introduction to Statistics	3
Upper-level Major Elective		3
EDI 4361	Art and Science of Human Flourishing	3
	Credits	**15**
Year Four		
Fall		
EXSC 4121	Clinical Biomechanics	3
EXSC 4150	Nutrition, Health, and Physical Performance	3
EXSC 4260	Enhancing Human Performance	3
Upper-level Major Elective		3
CORE 3500	Cura Personalis 3: Self in the World	1
	Credits	**13**
Spring		
EXSC 4170	Exercise Testing and Prescription	3
EXSC 4241	Clinical Research and Design	2
Upper-level Major Psychology Elective		3
Upper-level Major Electives		9
	Credits	**17**
	Total Credits	**121-123**

Athletic Training Concentration (B.S. in Exercise Science) continuing to the Master of Athletic Training

Course	Title	Credits
Year One		
Fall		
BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory	4
CHEM 1080 & CHEM 1085	Principles of Chemistry 1 Lecture and Principles of Chemistry 1 Lab (satisfies CORE 3800)	4
CORE 1500	Cura Personalis 1: Self in Community	1
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
XXXX	Elective	3
	Credits	**15**
Spring		
CHEM 1480 & CHEM 1485	Principles of Chemistry 2 Lecture and Principles of Chemistry 2 Lab	4
CORE 1000	Ignite First Year Seminar	2
CORE 1200	Eloquentia Perfecta 2: Oral and Visual Communication	3
MAT 1000	Intro to Athletic Training	1
MATH 1400	Pre-Calculus [1]	3
XXXX	Elective	3
	Credits	**16**
Year Two		
Fall		
CORE 1700	Ultimate Questions: Philosophy	3
IPE 2100	Interprofessional Collaboration and Healthcare in Global Context	3
MAT 2000	Athletic Training Student Development I	1
PHYS 1310	College Physics I	3
PHYS 1320	College Physics I Laboratory	1
PPY 2540	Human Physiology	4
PSY 1010	General Psychology (satisfies CORE 3600)	3
	Credits	**18**
Spring		
ANAT 1000	Basic Human Anatomy	3
CORE 1600	Ultimate Questions: Theology	3
CORE 2500	Cura Personalis 2: Self in Contemplation	0
IPE 4200	Applied Decision-Making in Interprofessional Practice	3
PHYS 1330	College Physics II	3
PHYS 1340	College Physics II Laboratory	1
XXXX	Upper Division Psychology Elective	3
	Credits	**16**
Year Three		
Fall		
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
CORE 3400	Ways of Thinking: Aesthetics, History, and Culture	3
PHIL 2050	Ethics	3
STAT 1100	Introduction to Statistics (satisfies CORE 3200)	3
XXXX	Elective	3
	Credits	**14-15**
Spring		
IPE 4900	Interprofessional Community Practicum	3
MAT 3000	Athletic Training Student Development II (❗ satisfies CORE 3500)	2
EXSC 3230	Exercise Physiology	3
XXXX	Elective	3
XXXX	Elective	1-3
	Credits	**12-14**
Summer		
ANAT 4000	Human Gross Anatomy	5
MAT 5010	Principles of Athletic Training	2
	Credits	**7**
Year Four		
Fall		
MAT 5125	Therapeutic Modalities	3
EXSC 5121	Clinical Biomechanics	3
MAT 5240	Musculoskeletal Assessment and Management I	4
MAT 5160X	Aspects of Nutrition	2
MAT 5700	AT Clinical Practicum I	3
	Credits	**15**
Spring		
Bachelor of Science in Exercise Science - AT awarded upon completion of this semester of courses (minimum 130 credits)		
MAT 5250	Musculoskeletal Assessment and Management II	4
MAT 5500	Rehabilitation in Athletic Training I	4
MAT 5750	AT Clinical Practicum II	3
EXSC 5241	Clinical Research and Design	2
MAT 5800	Medical Conditions and Physical Activity	4
	Credits	**17**
Summer		
MAT 5900	AT Field Experience	2
	Credits	**2**
Year Five		
Fall		
MAT 5550	Rehabilitation in Athletic Training II	4
MAT 5600	Athletic Training Administration	3
MAT 6010	Contemporary Clinical Practice	2
MAT 6700	AT Clinical Practicum III	3
MAT 6160	Enhancing Human Performance	3
	Credits	**15**
Spring		
MAT 6750	AT Clinical Practicum IV	3
MAT 6800	Seminar in Athletic Training	3

MAT 6960	AT Capstone Project	2
MAT 5620X	Sports Psychology	3
	Credits	**11**
	Total Credits	**158-161**

Physical Therapy Concentration (B.S. in Exercise Science) continuing to the Doctor of Physical Therapy

Course	Title	Credits
Year One		
Fall		
Pre-Professional Phase		
BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory	4
CHEM 1080 & CHEM 1085	Principles of Chemistry 1 Lecture and Principles of Chemistry 1 Lab	4
CORE 1700	Ultimate Questions: Philosophy (satisfies CORE 1700)	3
DPT 1111	Self and Community in PT (satisfies CORE 1500)	1
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
	Credits	**15**
Spring		
BIOL 1260 & BIOL 1265	General Biology: Transformations of Energy and Matter and Principles of Biology II Laboratory	4
CHEM 1480 & CHEM 1485	Principles of Chemistry 2 Lecture and Principles of Chemistry 2 Lab	4
DPT 1212	Fueling the Fire, Discovering Your Passion (satisfies CORE 1000)	2
MATH 1400	Pre-Calculus	3
CORE 1200	Eloquentia Perfecta 2: Oral and Visual Communication (satisfies CORE 1200)	3
	Credits	**16**
Year Two		
Fall		
IPE 2100	Interprofessional Collaboration and Healthcare in Global Context	3
PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
PPY 2540	Human Physiology	4
PSY 1010	General Psychology	3
XXXX	Elective (for minor)	3
	Credits	**17**
Spring		
ANAT 1000	Basic Human Anatomy	3
DPT 2213	Professionalism and Physical Therapy Thought (satisfies CORE 2500)	1
IPE 4200	Applied Decision-Making in Interprofessional Practice	3
PHYS 1240 & PHYS 1255	General Physics II and General Physics II Lab	4
XXXX	Elective (for minor)	3
XXXX	Elective (for minor)	3
	Credits	**17**
Year Three		
Fall		
Participation in Study Abroad Optional		
CORE 1600	Ultimate Questions: Theology	3
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
CORE 3400	Ways of Thinking: Aesthetics, History, and Culture	3
PHIL 2050 or HCE 2010	Ethics or Foundations in Clinical Health Care Ethics	3
PSY 3460	Abnormal Psychology	3
XXXX	Elective (for minor)	3
	Credits	**17-18**
Spring		
EXSC 3230	Exercise Physiology	3
IPE 4900	Interprofessional Community Practicum	3
STAT 1100	Introduction to Statistics	3
DPT 3214	Reflections on the Core and the Future	1
XXXX	Elective (for minor)	3
XXXX	Elective (for minor)	3
	Credits	**16**
Year Four		
Summer		
Professional Phase		
ANAT 4000	Human Gross Anatomy	5
	Credits	**5**
Fall		
EXSC 5121	Clinical Biomechanics	3
DPT 5125	Therapeutic Modalities	3
DPT 5127	Basic Examination	3
DPT 5130	System-Based Pathology	4
DPT 5147	Human Growth and Development	3
	Credits	**16**
Spring		
Bachelor of Science in Exercise Science - PT awarded upon completion of Semester Eight		
ANAT 4300	AHP Neurosciences	4
DPT 5222	Kinesiology	3
DPT 5226	Therapeutic Exercise	2
DPT 5228	Basic Procedures	2
EXSC 5241	Clinical Research and Design	2
DPT 5240	Neuromusculoskeletal Conditions	4
DPT 5290	Formation of Identity as a Physical Therapist	1
	Credits	**18**
Year Five		
Fall		
DPT 5123	Clinical Gait	2
DPT 5134	Multi System Management	3
DPT 5135	Cardiopulmonary Conditions	3

DPT 5137	Aspects of Nutrition	2
DPT 5142	Evidence Based Practice	2
DPT 5149	Motor Control and Motor Learning	2
DPT 5162	Musculoskeletal Conditions II	4
	Credits	**18**
Spring		
DPT 5215	Cura Personalis as a Physical Therapist	2
DPT 5218	Effective Communication and Teaching	3
DPT 5251	Neurological Conditions I	4
DPT 5263	Musculoskeletal Conditions III	4
DPT 5271	Patient Management I	3
DPT 5291	Clinical Experience IA	2
	Credits	**18**
Year Six		
Summer		
DPT 6072	Patient Management II	1
DPT 6077	Department Administration	2
DPT 6091	Clinical Experience IB	1-2
DPT 6092	Clinical Experience IIA	2
	Credits	**6-7**
Fall		
DPT 6116	Leadership and Advocacy as a Physical Therapist	2
DPT 6124	Biomechanical Interventions	3
DPT 6138	Concepts of Wellness	1
DPT 6152	Pediatric Conditions	2
DPT 6164	Musculoskeletal Conditions IV	3
DPT 6173	Patient Management III	4
DPT 6178	Applied Administration and Management	2
DPT 618X	Physical Therapy Elective (optional)	0-1
DPT 6192	Clinical Experience IIB	2
	Credits	**19-20**
Spring		
Doctor of Physical Therapy awarded upon completion of Semester 12		
DPT 6293	Clinical Experience III	3
DPT 6294	Clinical Experience IV	3
	Credits	**6**
	Total Credits	**204-207**

1 CHEM 1110 General Chemistry 1 (0,3 cr) and CHEM 1115 General Chemistry 1 Laboratory (1 cr) can be taken in place of CHEM 1080 Principles of Chemistry 1 Lecture (3 cr) and CHEM 1085 Principles of Chemistry 1 Lab (1 cr).

2 CHEM 1120 General Chemistry 2 (0,3 cr) and CHEM 1125 General Chemistry 2 Laboratory (1 cr) may be taken in place of CHEM 1480 Principles of Chemistry 2 Lecture (3 cr) and CHEM 1485 Principles of Chemistry 2 Lab (1 cr).

3 PHYS 1310 College Physics I (3 cr) and PHYS 1320 College Physics I Laboratory (1 cr) may be taken in place of PHYS 1220 General Physics I (3 cr) and PHYS 1235 General Physics I Lab (1 cr).

Madrid

The exercise and wellness concentration of the Exercise Science, B.S. is available at SLU-Madrid.

2+SLU

2+SLU programs provide a guided pathway for students transferring from a partner institution.

Exercise Science, B.S. (STLCC 2+SLU) (https://catalog.slu.edu/academic-policies/office-admission/undergraduate/2plusslu/stlcc/exercise-science/)

Contact Us

Apply for Admission (https://www.slu.edu/admission/)

Contact Doisy College of Health Sciences
Recruitment specialist
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dchs@health.slu.edu