

MEDICAL SCIENCES, B.S.

Saint Louis University's medical sciences program meets the needs of students considering a variety of career paths in the health sciences. It is designed mainly as a pre-professional program for SLU students looking to advance in health care education. It is ideal preparation for medical, physician assistant, anesthesiologist assistant, dental, pharmacy, optometry or other health-related graduate programs.

Program Highlights

SLU's medical sciences program:

- Focuses on human health and diagnostic studies
- Has a low student-faculty ratio, which allows for more individualized attention
- Provides students opportunities to conduct research with faculty members, present their research findings at professional conferences and have their work published in various journals

Curriculum Overview

SLU's medical sciences curriculum provides graduates with the knowledge and skills to enhance their competitive edge in seeking employment or furthering their education in professional programs, especially medical and physician assistant schools.

This curriculum offers:

- Basic science courses that are required for the Medical College Admission Test (MCAT) and for admission into medical school
- A strong foundation in both basic sciences and medical courses in various areas of diagnostic medicine, such as urinalysis and body fluids, medical biochemistry, hematology and hemostasis, fundamental immunology, immunohematology and medical microbiology
- An excellent option for medical and physician assistant scholars
- A uniquely flexible curriculum that can accommodate a minor, certificate, or combination to meet the student's professional goals. Pre-medicine, Medical Scholar, pre-physician assistant (PA) and PA Scholars curricula are the main options for degree candidates.
- An active student association sponsoring service projects, social events, fundraisers and trips to professional conferences
- Opportunities for research

Clinical and Research Opportunities

Students will be able to conduct research and produce projects and papers for publication and presentation at professional conferences.

Careers

The advantages of SLU's medical sciences program include a wide range of career paths available to graduates. They include:

Professional School and Programs

- Medical, dental, optometry, physician or anesthesiologist assistant
- Veterinary science, public health
- Federal, state or municipal crime laboratory programs

Graduate School

- Pathology, microbiology, pharmacology
- Physiology, forensic science

Medical Research

- National Institutes of Health
- Centers for Disease Control
- Pharmaceutical research
- Universities

Other Career Options

- Biotechnology technician
- Pharmaceutical technical or sales representative

Admission Requirements

Freshmen Applicants

Solid academic performance in college preparatory coursework is the primary consideration when reviewing freshmen applications.

Admission criteria include:

- Minimum cumulative GPA of 3.00 on a 4.00 scale.
- Four years of high school math (with algebra), biology, chemistry, and English, with some physics recommended
- Saint Louis University has moved to a test-optional admission process for all undergraduate programs. Applicants may submit standardized test scores, but those who choose not to will not be disadvantaged in any way in the admission process.

Transfer Applicants

Transfer applicants must have at least a "C-" in all math and science coursework and a 2.70 cumulative GPA from an accredited (https://catalog.slu.edu/academic-policies/academic-policies-procedures/regional_accreditation/) college-level institution. Interested applicants who do not meet all the admission requirements should still apply for individual consideration.

International Applicants

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

- You must demonstrate English language proficiency (<https://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency/>).
- Proof of financial support must include:
 - A letter of financial support from the person(s) or sponsoring agency funding your time at Saint Louis University.
 - A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of your study at the University.
- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include the courses taken and/or lectures attended, practical laboratory work, the maximum and minimum grades attainable, the grades earned or the results of all end-of-term examinations, and any honors or degrees received. WES and ECE transcripts are accepted.

Tuition

Tuition	Cost Per Year
Undergraduate Tuition	\$54,760

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/>).

Learning Outcomes

1. Graduates will be able to demonstrate the Jesuit value of "women and men for and with others" to promote service in the medical sciences.
2. Graduates will be able to articulate a clear description of a medical science project.
3. Graduates will be able to apply clinical knowledge to analyze medical science data to develop a differential diagnosis.
4. Graduates will be able to exemplify the professional and ethical behaviors necessary for effective teamwork.

Requirements

Students must maintain a minimum 2.70 GPA and earn a C- or better in math, science, and program specific courses (BLS or MLS prefix) including HSCI 3700 Research Methods (3 cr).

Students in Saint Louis University's medical sciences major take the following courses.

Code	Title	Credits
	University Undergraduate Core (https://catalog.slu.edu/academic-policies/academic-policies-procedures/university-core/)	32-35
	Foundation	

BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory	4
BIOL 1260 & BIOL 1265	General Biology: Transformations of Energy and Matter and Principles of Biology II Laboratory	4
BIOL 3020	Biochemistry and Molecular Biology	3
CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
CHEM 1120 & CHEM 1125	General Chemistry 2 and General Chemistry 2 Laboratory	4
CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
CMM 1200	Public Speaking	3
ENGL 1900	Advanced Strategies of Rhetoric and Research	3
HCE 1600	Embodiment, Life, and Death in Context	3
HSCI 2200	Medical Terminology	3
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4
HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
MATH 1400	Pre-Calculus *	3
PSY 1010	General Psychology	3
STAT 1300	Elementary Statistics with Computers	3
HSCI 3700	Research Methods	3
Biomedical Laboratory Science		
BLS 1100	Foundations of Medical Sciences	2
BLS 3110	Urinalysis & Body Fluids	2
BLS 4110	Medical Biochemistry I	3
BLS 4120	Medical Biochemistry II	2
BLS 4210	Hematology	4
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
BLS 4411	Fundamentals of Immunology	2
BLS 4510	Medical Microbiology	4
BLS 4800	Medical Sciences Capstone - Integrative Global Health, Ethics, and Community Impact	3

Optional Track 15-24

Students in any of the 3 following tracks should complete the additional coursework listed below.

Pre-Physician Assistant and PA Scholars Track (p. 3)

Pre-Medicine Track (p. 3)

Med Scholars Track (p. 3)

General Electives 3-30

Total Credits 120-124

* Students in the Pre-Medicine and Med Scholars tracks should take MATH 1510 Calculus I (4 cr) instead of MATH 1400 Pre-Calculus (3 cr).

Pre-Physician Assistant and PA Scholar Track

Code	Title	Credits
Foundation		
BIOL 3030	Principles of Genetics	3
BIOL 3040	Cell Structure & Function	3
CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
MLS 4515	Medical Microbiology Laboratory	1
PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
Total Credits		15

Pre-Medicine Track

Code	Title	Credits
BIOL 3030	Principles of Genetics	3
BIOL 3040	Cell Structure & Function	3
CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
MATH 1510	Calculus I (Students should take this in place of MATH 1400) *	4
PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
PHYS 1330 & PHYS 1340	Physics II and Physics II Laboratory	4
SOC 1100	Introduction to Sociology	3
Total Credits		21

* Students in the Pre-Medicine and Med Scholars tracks should take MATH 1510 Calculus I (4 cr) instead of MATH 1400 Pre-Calculus (3 cr).

Medical Scholars Track

Code	Title	Credits
BIOL 3030	Principles of Genetics	3
BIOL 3040	Cell Structure & Function	3
CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
MATH 1510	Calculus I (Students should take this in place of MATH 1400) *	4
PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
PHYS 1330 & PHYS 1340	Physics II and Physics II Laboratory	4
PPHS 1050	Medical Scholar Seminar	0
SOC 1100	Introduction to Sociology	3
3XXX-4XXX	Upper Division Science/Math Elective **	3
Total Credits		24

* Students in the Pre-Medicine and Med Scholars tracks should take MATH 1510 Calculus I (4 cr) instead of MATH 1400 Pre-Calculus (3 cr).

**Upper Science requirement must be Biology, Chemistry, or Physics.

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.

Standard Track

Course	Title	Credits
Year One		
Fall		
! BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory (! satisfies CORE 3800)	4
BLS 1100	Foundations of Medical Sciences	2
! CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
CORE 1000	Ignite First Year Seminar	2
XXXX	Elective	3
Credits		15
Spring		
! BIOL 1260 & BIOL 1265	General Biology: Transformations of Energy and Matter and Principles of Biology II Laboratory	4
! CHEM 1120 & CHEM 1125	General Chemistry 2 and General Chemistry 2 Laboratory	4
CORE 1500	Cura Personalis 1: Self in Community	1
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
MATH 1400	Pre-Calculus	3
Credits		15
Year Two		
Fall		
BIOL 3020	Biochemistry and Molecular Biology	3
! CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
HCE 1600	Embodiment, Life, and Death in Context (satisfies CORE 1600)	3
HSCI 2200	Medical Terminology	3
STAT 1300	Elementary Statistics with Computers (satisfies CORE 3200)	3
Credits		16
Spring		
CMM 1200	Public Speaking (satisfies CORE 1200)	3
CORE 1700	Ultimate Questions: Philosophy	3
CORE 2500	Cura Personalis 2: Self in Contemplation	0
PSY 1010	General Psychology (satisfies CORE 3600)	3
XXXX	Elective	3

XXXX	Elective	3
Credits		15
Year Three		
Fall		
BLS 4110	Medical Biochemistry I	3
BLS 4411	Fundamentals of Immunology	2
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4
XXXX	Elective	3
XXXX	Elective	3
Credits		15
Spring		
CORE 3500	Cura Personalis 3: Self in the World	1
HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
HSCI 3700	Research Methods	3
BLS 4120	Medical Biochemistry II	2
XXXX	Elective	3
XXXX	Elective	3
Credits		16
Year Four		
Fall		
BLS 4210	Hematology	4
BLS 4510	Medical Microbiology	4
MLS 4515	Medical Microbiology Laboratory (Optional)	
CORE 3400	Ways of Thinking: Aesthetics, History, and Culture	3
XXXX	Elective	3
Credits		14
Spring		
BLS 3110	Urinalysis & Body Fluids	2
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
BLS 4800	Medical Sciences Capstone - Integrative Global Health, Ethics, and Community Impact	3
XXXX	Elective	3
Credits		15-16
Total Credits		121-122

Program Notes

The standard curriculum contains a series of electives which allows students to select courses that meet their career goals such as entrance to graduate or professional (dental, veterinary, optometry, pharmacy, anesthesiologist assistant, etc.) school.

Pre-Physician Assistant and PA Scholars Track

Course	Title	Credits
Year One		
Fall		
! BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory (! satisfies CORE 3800)	4
BLS 1100	Foundations of Medical Sciences	2
! CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
CORE 1000	Ignite First Year Seminar	2
XXXX	Elective	3
Credits		15
Spring		
! BIOL 1260 & BIOL 1265	General Biology: Transformations of Energy and Matter and Principles of Biology II Laboratory	4
! CHEM 1120 & CHEM 1125	General Chemistry 2 and General Chemistry 2 Laboratory	4
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
MATH 1400	Pre-Calculus	3
CORE 1500	Cura Personalis 1: Self in Community	1
Credits		15
Year Two		
Fall		
BIOL 3020	Biochemistry and Molecular Biology	3
! CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
STAT 1300	Elementary Statistics with Computers (satisfies CORE 3200)	3
HCE 1600	Embodiment, Life, and Death in Context (satisfies CORE 1600)	3
HSCI 2200	Medical Terminology	3
Credits		16
Spring		
BIOL 3040	Cell Structure & Function	3
! CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
CMM 1200	Public Speaking (satisfies CORE 1200)	3
CORE 1700	Ultimate Questions: Philosophy	3
CORE 2500	Cura Personalis 2: Self in Contemplation	0
PSY 1010	General Psychology (satisfies CORE 3600)	3
Credits		16
Year Three		
Fall		
BLS 4110	Medical Biochemistry I	3
BLS 4411	Fundamentals of Immunology	2
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4

PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
XXXX	Elective	3
Credits		16
Spring		
BIOL 3030	Principles of Genetics	3
HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
CORE 3500	Cura Personalis 3: Self in the World	1
HSCI 3700	Research Methods	3
BLS 4120	Medical Biochemistry II	2
XXXX	Elective	3
Credits		16
Year Four		
Fall		
BLS 4210	Hematology	4
BLS 4510	Medical Microbiology	4
CORE 3400	Ways of Thinking: Aesthetics, History, and Culture	3
MLS 4515	Medical Microbiology Laboratory	1
XXXX	Elective	3
Credits		15
Spring		
BLS 3110	Urinalysis & Body Fluids	2
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
BLS 4800	Medical Sciences Capstone - Integrative Global Health, Ethics, and Community Impact	3
Credits		12-13
Total Credits		121-122

Program Notes

The pre-PA curriculum is based on the SLU PA program requirements and is not guaranteed to meet all the prerequisites of all PA programs. Prospective PA students need to identify the programs to which they intend to apply and ascertain what courses are needed to fulfill the application requirements for those schools.

Medical Scholars Track

Course	Title	Credits
Year One		
Fall		
! BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory (! satisfies CORE 3800)	4
BLS 1100	Foundations of Medical Sciences	2
! CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
CORE 1000	Ignite First Year Seminar	2
CORE 1500	Cura Personalis 1: Self in Community	1

XXXX	Elective	3
Credits		16
Spring		
! BIOL 1260 & BIOL 1265	General Biology: Transformations of Energy and Matter and Principles of Biology II Laboratory	4
! CHEM 1120 & CHEM 1125	General Chemistry 2 and General Chemistry 2 Laboratory	4
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
MATH 1510	Calculus I	4
Credits		15
Year Two		
Fall		
BIOL 3020	Biochemistry and Molecular Biology	3
! CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
HCE 1600	Embodiment, Life, and Death in Context (satisfies CORE 1600)	3
HSCI 2200	Medical Terminology	3
PPHS 1050	Medical Scholar Seminar	0
STAT 1300	Elementary Statistics with Computers (satisfies CORE 3200)	3
Credits		16
Spring		
BIOL 3040	Cell Structure & Function	3
! CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
CMM 1200	Public Speaking (satisfies CORE 1200)	3
CORE 1700	Ultimate Questions: Philosophy	3
CORE 2500	Cura Personalis 2: Self in Contemplation	0
SOC 1100	Introduction to Sociology	3
Credits		16
Year Three		
Fall		
BLS 4110	Medical Biochemistry I	3
BLS 4411	Fundamentals of Immunology	2
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4
! PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
PSY 1010	General Psychology (satisfies CORE 3600)	3
Credits		16
Spring		
! PHYS 1330 & PHYS 1340	College Physics II and College Physics II Laboratory	4
HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
CORE 3500	Cura Personalis 3: Self in the World	1
HSCI 3700	Research Methods	3
BLS 4120	Medical Biochemistry II	2
Credits		14

Year Four**Fall**

BIOL 3030	Principles of Genetics	3
BLS 4210	Hematology	4
BLS 4510	Medical Microbiology	4
CORE 3400	Ways of Thinking: Aesthetics, History, and Culture	3
Credits		14

Spring

BLS 3110	Urinalysis & Body Fluids	2
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
BLS 4800	Medical Sciences Capstone - Integrative Global Health, Ethics, and Community Impact	3
3XXX	Upper Level Science/Math Elective	3
Credits		15-16

Total Credits **122-123**

Program Notes

The Med Scholars curriculum is designed to address SLU's School of Medicine requirements and is subject to change. If applying to a medical school at another institution, please consult their website for specific requirements.

Pre-Medicine Track

Course	Title	Credits
Year One		
Fall		
! BIOL 1240 & BIOL 1245	General Biology: Information Flow and Evolution and Principles of Biology I Laboratory (! satisfies CORE 3800)	4
BLS 1100	Foundations of Medical Sciences	2
! CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
CORE 1000	Ignite First Year Seminar	2
CORE 1500	Cura Personalis 1: Self in Community	1
XXXX	Elective	3
Credits		16
Spring		
! BIOL 1260 & BIOL 1265	General Biology: Transformations of Energy and Matter and Principles of Biology II Laboratory	4
! CHEM 1120 & CHEM 1125	General Chemistry 2 and General Chemistry 2 Laboratory	4
ENGL 1900	Advanced Strategies of Rhetoric and Research (satisfies CORE 1900)	3
MATH 1510	Calculus I	4
Credits		15

Year Two**Fall**

BIOL 3020	Biochemistry and Molecular Biology	3
-----------	------------------------------------	---

! CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
HCE 1600	Embodiment, Life, and Death in Context (satisfies CORE 1600)	3
HSCI 2200	Medical Terminology	3
STAT 1300	Elementary Statistics with Computers (satisfies CORE 3200)	3
Credits		16

Spring

BIOL 3040	Cell Structure & Function	3
! CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
CMM 1200	Public Speaking (satisfies CORE 1200)	3
CORE 1700	Ultimate Questions: Philosophy	3
CORE 2500	Cura Personalis 2: Self in Contemplation	0
SOC 1100	Introduction to Sociology	3
Credits		16

Year Three**Fall**

BLS 4110	Medical Biochemistry I	3
BLS 4411	Fundamentals of Immunology	2
HSCI 3300 & HSCI 3310	Anatomy & Physiology I and Anatomy & Physiology I Lab	4
! PHYS 1310 & PHYS 1320	College Physics I and College Physics I Laboratory	4
PSY 1010	General Psychology (satisfies CORE 3600)	3
Credits		16

Spring

! PHYS 1330 & PHYS 1340	College Physics II and College Physics II Laboratory	4
HSCI 3400 & HSCI 3410	Anatomy and Physiology Lecture II and Anatomy & Physiology II Lab	4
CORE 3500	Cura Personalis 3: Self in the World	1
HSCI 3700	Research Methods	3
BLS 4120	Medical Biochemistry II	2
Credits		14

Year Four**Fall**

BIOL 3030	Principles of Genetics	3
BLS 4210	Hematology	4
BLS 4510	Medical Microbiology	4
CORE 3400	Ways of Thinking: Aesthetics, History, and Culture	3
Credits		14

Spring

BLS 3110	Urinalysis & Body Fluids	2
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
CORE 2800	Eloquentia Perfecta 3: Creative Expression	2-3
BLS 4800	Medical Sciences Capstone - Integrative Global Health, Ethics, and Community Impact	3

XXXX	Elective	3
Credits		15-16
Total Credits		122-123

Program Notes

The pre-medicine curriculum is designed to address SLU's School of Medicine requirements and is subject to change. If applying to a medical school at another institution, please consult its website for specific requirements.

Contact Us

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

Contact Doisy College of Health Sciences

Recruitment specialist

314-977-2570

dchs@health.slu.edu