

# MEDICAL LABORATORY SCIENCE, B.S.

Saint Louis University's Bachelor of Science in Medical Laboratory Science (MLS) degree prepares graduates to take a national certification exam to become a certified laboratory professional for a career as a health care professional in laboratory medicine. The medical laboratory science professional saves lives by performing and assuring the reliability of tests that provide objective information used in the early detection, diagnosis, monitoring and effective treatment of disease.

Up to 80 percent of all clinical decisions are impacted by clinical laboratory testing. The knowledge and skills required of the professionals are diverse, involving both scientific detective work and managerial competence. Each day offers a challenge, and the opportunities to learn are endless.

Students in SLU's medical laboratory science program have numerous opportunities for personal and professional growth through faculty, professional and peer interactions. Also, students are welcome as a member of a variety of professional organizations such as the American Society for Clinical Laboratory Science (ASCLS) and the American Society of Clinical Pathology (ASCP).

- SLU's MLS program was one of the first in the country; it has over 85 years of continuous accreditation.
- SLU's MLS program has guaranteed placement in clinical practicum training sites.
- SLU's MLS program boasts both a low student-faculty ratio and state-of-the-art medical laboratory science labs — both of which help to substantially enhance the experience of students.
- SLU's MLS graduates' exam pass rates are consistently at or near 100 percent, as is graduate career placement rate.

## Curriculum Overview

Following two years of core courses in basic sciences and the liberal arts, and one year of pre-clinical laboratory-related coursework, students will enter the practicum phase of the curriculum in a clinical setting under supervision.

Seniors spend 19 weeks in practicum during either the summer and fall semesters at a variety of hospital laboratories in the St. Louis and surrounding areas.

## Fieldwork and Research Opportunities

Students will have the opportunity to conduct research and produce projects and papers for publication and presentation at professional conferences.

Clinical internship experiences in clinical practice settings (e.g. hospitals, clinics, reference labs, etc.) are a required component of the medical laboratory science curriculum. Regulations require all students to complete a criminal background check and a drug test at least once during the Program, either or both may be repeated as agency requirements demand. Positive results from the criminal background check or drug tests may result in ineligibility to graduate from the program. A felony conviction will affect a graduate's eligibility for professional certification and professional practice.

## Careers

In the area of career development, the program facilitates attendance of SLU's MLS students at state professional meetings. In addition, clinical affiliates in the St. Louis area frequently request that students seek part-time employment to garner clinical experience and are often retained as full-time employees upon graduation.

Benefits of SLU's MLS program also include several career opportunities. As a medical laboratory scientist, graduates will be qualified to work in five major areas of the laboratory: blood bank, chemistry, hematology, immunology and microbiology. Throughout the course of a typical workday, graduates might examine specimens under the microscope, operate complex computerized instrumentation, use immunologic methods to prepare units of blood for transfusion and/or identify disease-causing microorganisms.

While most medical laboratory science graduates work in a clinical laboratory in the areas of diagnostic testing and laboratory management, some choose positions in research, forensic science/crime laboratories, laboratory equipment companies or pharmaceutical/biotechnology industries. Many graduates choose to go directly to graduate, medical or professional schools.

Medical laboratory scientists are vital members of health care teams. As highly skilled bio-analysts, graduates contribute data critical to disease diagnosis and to patient treatment. In a typical laboratory setting, the medical laboratory scientist performs a full range of laboratory tests from blood smears for the detection of anemia to highly complex procedures used to diagnose and monitor the status of patients suffering from various forms of cancer.

## Admission Requirements

Admission consideration for the medical laboratory science program is initially based on a strong overall academic background.

### Admission criteria include:

- Minimum GPA of 3.00 in high school chemistry, biology, mathematics and English
- Four years of high school math (with algebra) and English, with some physics recommended
- Minimum ACT score of 20 in each subsection or an SAT of 500 or above in each area

Transfer applicants must have a 2.5 GPA in math and science coursework and possess a 2.5 cumulative GPA. Interested applicants who do not meet all the admission requirements should still apply for individual consideration.

## 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 University scholarships, the Doisy College of Health Sciences offers a scholarship to sophomores, juniors and seniors.
- **Financial Aid:** provided in the form of grants and loans, some of which require repayment.

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

For more information, visit the student financial services office online at <http://finaid.slu.edu>.

## Accreditation

### National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)

5600 N. River Rd., Suite 720  
Rosemont, IL 60018-5119  
(773) 714-8880  
<http://naaccls.org>

Additional Accreditation Information (<https://www.slu.edu/doisy/degrees/program-pdfs/mls-accreditation-1017.pdf>)

## Learning Outcomes

1. Graduates will be able to demonstrate respect for human life with regard to all aspects of laboratory testing.
2. Graduates will be able to communicate accurate laboratory information to members of the healthcare team.
3. Graduates will be able to apply critical reasoning to solve laboratory-based case studies.
4. Graduates will be able to demonstrate the application of laboratory principles.
5. Graduates will be able to adhere to the principles found in the American Society for Clinical Laboratory Science (ASCLS) Professional Code of Ethics.

## Requirements

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

### Standard Track

Code	Title	Credits
<b>Foundation</b>		
BIOL 1240 & BIOL 1245	Principles of Biology I and Principles of Biology I Laboratory	4
BIOL 1260 & BIOL 1265	Principles of Biology II 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
ENGL 1900	Advanced Strategies Of Rhetoric and Research	3
ENGL 2xxx or above	Literature	3
HCE 2010	Foundations in Clinical Health Care Ethics	3
MATH 1300	Elementary Statistics with Computers	3
MATH 1400	Pre-Calculus	3
PHIL 1050	Introduction to Philosophy: Self and Reality	3
PPY 2540	Human Physiology	4
THEO 1000	Theological Foundations	3

Fine Art (Cultural Studies, Art, Dance, Music, Theater)	3
Social Science (Anthropology, Political Science, Criminal Justice, Sociology, Select Psychology, Urban Politics)	3
PHIL 2xxx or THEO 2xxx	Philosophy to Theology Elective 3

### Biomedical Laboratory Science

BLS 1100 & BLS 1150	Foundations of Medical Laboratory Science and Foundations of Medical Laboratory Science Lab	3
BLS 3110	Urinalysis & Body Fluids	2
BLS 4110	Medical Biochemistry I	3
BLS 4120	Medical Biochemistry II	2
BLS 4130	Principles & Techniques in Molecular Biology	1
BLS 4210	Hematology	4
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
BLS 4411	Fundamentals of Immunology	2
BLS 4420	Medical Immunology	2
BLS 4510	Medical Microbiology	4
BLS 4610	Research Design, Critique & Presentation	3

### Medical Laboratory Science

MLS 3150	Urinalysis and Immunology Laboratory	1
MLS 3210	Clinical Education & Laboratory Management	2
MLS 3400	Laboratory Operations	1
MLS 4150	Analytical Chemistry	2
MLS 4161	Molecular Biology Laboratory	1
MLS 4250	Hematology Laboratory	1
MLS 4350	Immunohematology Lab	1
MLS 4520	Medical Bacteriology	2
MLS 4541	Medical Mycology and Parasitology	2
MLS 4550	Medical Bacteriology Laboratory	2
MLS 4571	Medical Mycology and Parasitology Laboratory	1
MLS 4611	Advanced Topics and Case Correlations	3
MLS 4701	Clinical Chemistry Practicum	3
MLS 4710	Clinical Chemistry Routine Testing	1
MLS 4740	Clinical Hematology Practicum	2
MLS 4750	Clinical Hematology	1
MLS 4760	Clinical Hemostasis Practicum	1
MLS 4780	Clinical Immunohematology Practicum	2
MLS 4790	Clinical Immunohematology	1
MLS 4800	Clinical Microbiology Practicum	3
MLS 4811	Clinical Microbiology	1
MLS 4821	Clinical Urinalysis and Phlebotomy	1

Total Credits 123

### Pre-Medicine Track

Code	Title	Credits
<b>Foundation</b>		
BIOL 1240 & BIOL 1245	Principles of Biology I and Principles of Biology I Laboratory	4
BIOL 1260 & BIOL 1265	Principles of Biology II and Principles of Biology II Laboratory	4
BIOL 3020	Biochemistry and Molecular Biology	3

BIOL 3040	Cell Structure & Function	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
CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
ENGL 1900	Advanced Strategies Of Rhetoric and Research	3
ENGL 2xxx or above	Literature	3
HCE 2010	Foundations in Clinical Health Care Ethics	3
MATH 1300	Elementary Statistics with Computers	3
MATH 1400	Pre-Calculus	3
MATH 1510	Calculus I	4
PHIL 1050	Introduction to Philosophy: Self and Reality	3
PHYS 1310	Physics I	3
PHYS 1320	Physics I Laboratory	1
PHYS 1330	Physics II	3
PHYS 1340	Physics II Laboratory	1
PPY 2540	Human Physiology	4
PSY 1010	General Psychology	3
SOC 1100	Introduction to Sociology	3
THEO 1000	Theological Foundations	3
Fine Art (Cultural Studies, Art, Dance, Music, Theater)		3
PHIL or THEO 2xxx	Philosophy or Theology Elective	3
<b>Biomedical Laboratory Science</b>		
BLS 1100 & BLS 1150	Foundations of Medical Laboratory Science and Foundations of Medical Laboratory Science Lab	3
BLS 3110	Urinalysis & Body Fluids	2
BLS 4110	Medical Biochemistry I	3
BLS 4120	Medical Biochemistry II	2
BLS 4130	Principles & Techniques in Molecular Biology	1
BLS 4210	Hematology	4
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
BLS 4411	Fundamentals of Immunology	2
BLS 4420	Medical Immunology	2
BLS 4510	Medical Microbiology	4
BLS 4610	Research Design, Critique & Presentation	3
<b>Medical Laboratory Science</b>		
MLS 3150	Urinalysis and Immunology Laboratory	1
MLS 3210	Clinical Education & Laboratory Management	2
MLS 3400	Laboratory Operations	1
MLS 4150	Analytical Chemistry	2
MLS 4161	Molecular Biology Laboratory	1
MLS 4250	Hematology Laboratory	1
MLS 4350	Immunohematology Lab	1
MLS 4520	Medical Bacteriology	2
MLS 4541	Medical Mycology and Parasitology	2

MLS 4550	Medical Bacteriology Laboratory	2
MLS 4571	Medical Mycology and Parasitology Laboratory	1
MLS 4611	Advanced Topics and Case Correlations	3
MLS 4701	Clinical Chemistry Practicum	3
MLS 4710	Clinical Chemistry Routine Testing	1
MLS 4740	Clinical Hematology Practicum	2
MLS 4750	Clinical Hematology	1
MLS 4760	Clinical Hemostasis Practicum	1
MLS 4780	Clinical Immunohematology Practicum	2
MLS 4790	Clinical Immunohematology	1
MLS 4800	Clinical Microbiology Practicum	3
MLS 4811	Clinical Microbiology	1
MLS 4821	Clinical Urinalysis and Phlebotomy	1
Total Credits		145

### Pre-Physician Assistant and PA Scholar Track

Code	Title	Credits
<b>Foundation</b>		
ANAT 1000	Basic Human Anatomy	3
BIOL 1240 & BIOL 1245	Principles of Biology I and Principles of Biology I Laboratory	4
BIOL 1260 & BIOL 1265	Principles of Biology II and Principles of Biology II Laboratory	4
BIOL 3020	Biochemistry and Molecular Biology	3
BIOL 3030	Principles of Genetics	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
CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
ENGL 1900	Advanced Strategies Of Rhetoric and Research	3
ENGL 2xxx or above	Literature	3
HCE 2010	Foundations in Clinical Health Care Ethics	3
HSI 2200	Medical Terminology	3
MATH 1300	Elementary Statistics with Computers	3
MATH 1400	Pre-Calculus	3
PHIL 1050	Introduction to Philosophy: Self and Reality	3
PPY 2540	Human Physiology	4
THEO 1000	Theological Foundations	3
Fine Art (Cultural Studies, Art, Dance, Music, Theater)		3
Social Science (Anthropology, Political Science, Criminal Justice, Sociology, Select Psychology, Urban Politics)		3
PHIL or THEO 2xxx	Philosophy or Theology Elective	3
<b>Biomedical Laboratory Science</b>		
BLS 1100 & BLS 1150	Foundations of Medical Laboratory Science and Foundations of Medical Laboratory Science Lab	3
BLS 3110	Urinalysis & Body Fluids	2
BLS 4110	Medical Biochemistry I	3

BLS 4120	Medical Biochemistry II	2
BLS 4130	Principles & Techniques in Molecular Biology	1
BLS 4210	Hematology	4
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
BLS 4411	Fundamentals of Immunology	2
BLS 4420	Medical Immunology	2
BLS 4510	Medical Microbiology	4
BLS 4610	Research Design, Critique & Presentation	3
<b>Medical Laboratory Science</b>		
MLS 3150	Urinalysis and Immunology Laboratory	1
MLS 3210	Clinical Education & Laboratory Management	2
MLS 3400	Laboratory Operations	1
MLS 4150	Analytical Chemistry	2
MLS 4161	Molecular Biology Laboratory	1
MLS 4250	Hematology Laboratory	1
MLS 4350	Immunohematology Lab	1
MLS 4520	Medical Bacteriology	2
MLS 4541	Medical Mycology and Parasitology	2
MLS 4550	Medical Bacteriology Laboratory	2
MLS 4571	Medical Mycology and Parasitology Laboratory	1
MLS 4611	Advanced Topics and Case Correlations	3
MLS 4701	Clinical Chemistry Practicum	3
MLS 4710	Clinical Chemistry Routine Testing	1
MLS 4740	Clinical Hematology Practicum	2
MLS 4750	Clinical Hematology	1
MLS 4760	Clinical Hemostasis Practicum	1
MLS 4780	Clinical Immunohematology Practicum	2
MLS 4790	Clinical Immunohematology	1
MLS 4800	Clinical Microbiology Practicum	3
MLS 4811	Clinical Microbiology	1
MLS 4821	Clinical Urinalysis and Phlebotomy	1
Total Credits		136

## Continuation Standards

Students must maintain a minimum 2.50 grade point average (GPA).

## 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
<b>Year One</b>		
<b>Fall</b>		
! BIOL 1240 & BIOL 1245	Principles of Biology I and Principles of Biology I Laboratory	4
! BLS 1100 & BLS 1150	Foundations of Medical Laboratory Science and Foundations of Medical Laboratory Science Lab	3
! CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
MATH 1400	Pre-Calculus	3
Credits		14
<b>Spring</b>		
! BIOL 1260 & BIOL 1265	Principles of Biology II 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	3
HCE 2010	Foundations in Clinical Health Care Ethics	3
THEO 1000	Theological Foundations	3
Credits		17
<b>Year Two</b>		
<b>Fall</b>		
BIOL 3020	Biochemistry and Molecular Biology	3
! CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
PPY 2540	Human Physiology	4
XXXX	Fine Arts Elective	3
Credits		14
<b>Spring</b>		
BLS 3110	Urinalysis & Body Fluids	2
BLS 4130	Principles & Techniques in Molecular Biology	1
MLS 3150	Urinalysis and Immunology Laboratory	1
MATH 1300	Elementary Statistics with Computers	3
PHIL 1050	Introduction to Philosophy: Self and Reality	3
ENGL 2XXX/3XXX	Literature Elective	3
XXXX	Social Science Elective	3
Credits		16
<b>Year Three</b>		
<b>Fall</b>		
BLS 4110	Medical Biochemistry I	3
MLS 4150	Analytical Chemistry	2
BLS 4210	Hematology	4
MLS 4250	Hematology Laboratory	1
BLS 4411	Fundamentals of Immunology	2
BLS 4510	Medical Microbiology	4
Credits		16
<b>Spring</b>		
BLS 4120	Medical Biochemistry II	2

MLS 3400	Laboratory Operations	1
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
MLS 4350	Immunohematology Lab	1
BLS 4610	Research Design, Critique & Presentation	3
MLS 4520	Medical Bacteriology	2
MLS 4550	Medical Bacteriology Laboratory	2
Credits		16

**Summer**

MLS 4161	Molecular Biology Laboratory	1
! 4 credits from list of Fall courses in Semester Seven (Arranged with Department)		4
Credits		5

**Year Four**

**Fall**

Register for remaining 12 credits not taken Summer 1		
Select 12 credits from the following:		12
MLS 4701	Clinical Chemistry Practicum	
MLS 4710	Clinical Chemistry Routine Testing	
MLS 4740	Clinical Hematology Practicum	
MLS 4750	Clinical Hematology	
MLS 4760	Clinical Hemostasis Practicum	
MLS 4780	Clinical Immunohematology Practicum	
MLS 4790	Clinical Immunohematology	
MLS 4800	Clinical Microbiology Practicum	
MLS 4811	Clinical Microbiology	
MLS 4821	Clinical Urinalysis and Phlebotomy	
Credits		12

**Spring**

MLS 3210	Clinical Education & Laboratory Management	2
BLS 4420	Medical Immunology	2
MLS 4541	Medical Mycology and Parasitology	2
MLS 4571	Medical Mycology and Parasitology Laboratory	1
MLS 4611	Advanced Topics and Case Correlations	3
2XXX/3XXX	Philosophy or Theology Elective	3
Credits		13
Total Credits		123

**Program Notes**

**Suggested Elective Options:**

- **Literature:** Any 2XXX or 3XXX course which is designated as "Literature" requirement for English.
- **Fine Arts:** any course in: ART, ARTH, DANC, FPA, MUS, THR
- **Social Science:** PSY 1010 General Psychology (3 cr) (recommended for all majors; required for students taking the MCAT), SOC 1100 Introduction to Sociology (3 cr) (required for students taking the MCAT), any course in: ANTH, PSYCH, SOC
- **Philosophy/Theology:** Any 2XXX level or above Philosophy (PHIL) or Theology (THEO) course.

**Pre-Medicine Track**

Course	Title	Credits
<b>Year One</b>		
<b>Fall</b>		
! BIOL 1240 & BIOL 1245	Principles of Biology I and Principles of Biology I Laboratory	4
! BLS 1100 & BLS 1150	Foundations of Medical Laboratory Science and Foundations of Medical Laboratory Science Lab	3
! CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
ENGL 1900	Advanced Strategies Of Rhetoric and Research	3
MATH 1400	Pre-Calculus	3
Credits		17

**Spring**

! BIOL 1260 & BIOL 1265	Principles of Biology II and Principles of Biology II Laboratory	4
! CHEM 1120 & CHEM 1125	General Chemistry 2 and General Chemistry 2 Laboratory	4
HCE 2010	Foundations in Clinical Health Care Ethics	3
MATH 1510	Calculus I	4
Credits		15

**Summer**

! ENGL 2XXX/3XXX	Literature Elective	3
SOC 1100	Introduction to Sociology	3
! XXXX	Fine Arts Elective	3
Credits		9

**Year Two**

**Fall**

BIOL 3020	Biochemistry and Molecular Biology	3
! CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
PPY 2540	Human Physiology	4
PHIL 1050	Introduction to Philosophy: Self and Reality	3
PSY 1010	General Psychology	3
Credits		17

**Spring**

BIOL 3040	Cell Structure & Function	3
BLS 3110	Urinalysis & Body Fluids	2
BLS 4130	Principles & Techniques in Molecular Biology	1
MLS 3150	Urinalysis and Immunology Laboratory	1
! CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
MATH 1300	Elementary Statistics with Computers	3
THEO 1000	Theological Foundations	3
Credits		17

**Summer**

! PHYS 1310 & PHYS 1320	Physics I and Physics I Laboratory	4
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! PHYS 1330 & PHYS 1340	Physics II and Physics II Laboratory	4
Credits		8

**Year Three****Fall**

BLS 4110	Medical Biochemistry I	3
MLS 4150	Analytical Chemistry	2
BLS 4210	Hematology	4
MLS 4250	Hematology Laboratory	1
BLS 4411	Fundamentals of Immunology	2
BLS 4510	Medical Microbiology	4
Credits		16

**Spring**

BLS 4120	Medical Biochemistry II	2
MLS 3400	Laboratory Operations	1
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
MLS 4350	Immunohematology Lab	1
BLS 4610	Research Design, Critique & Presentation	3
MLS 4520	Medical Bacteriology	2
MLS 4550	Medical Bacteriology Laboratory	2
Credits		16

**Summer**

MLS 4161	Molecular Biology Laboratory	1
! 4 credits from list of Fall courses in Semester Seven (Arranged with Department)		4
Credits		5

**Year Four****Fall**

Register for remaining 12 credits not taken Summer 1		
Select 12 credits from the following:		12
MLS 4701	Clinical Chemistry Practicum	
MLS 4710	Clinical Chemistry Routine Testing	
MLS 4740	Clinical Hematology Practicum	
MLS 4750	Clinical Hematology	
MLS 4760	Clinical Hemostasis Practicum	
MLS 4780	Clinical Immunohematology Practicum	
MLS 4790	Clinical Immunohematology	
MLS 4800	Clinical Microbiology Practicum	
MLS 4811	Clinical Microbiology	
MLS 4821	Clinical Urinalysis and Phlebotomy	
Credits		12

**Spring**

MLS 3210	Clinical Education & Laboratory Management	2
BLS 4420	Medical Immunology	2
MLS 4541	Medical Mycology and Parasitology	2
MLS 4571	Medical Mycology and Parasitology Laboratory	1
MLS 4611	Advanced Topics and Case Correlations	3

2XXX/3XXX	Philosophy or Theology Elective	3
Credits		13
Total Credits		145

**Program Notes**

Curriculum is designed to address SLU's Medical School requirements and is subject to change. If applying to a Medical School at another institution, please consult their website for specific requirements.

**Suggested Elective Options:**

- **Literature:** Any 2XXX or 3XXX course which is designated as "Literature" requirement for English.
- **Fine Arts:** any course in: ART, ARTH, DANC, FPA, MUS, THR
- **Social Science:** PSY 1010 General Psychology (3 cr) (recommended for all majors; required for students taking the MCAT), SOC 1100 Introduction to Sociology (3 cr) (required for students taking the MCAT), any course in: ANTH, PSYCH, SOC
- **Philosophy/Theology:** Any 2XXX level or above Philosophy (PHIL) or Theology (THEO) course.

**Pre-Physician Assistant Track**

Course	Title	Credits
<b>Year One</b>		
<b>Fall</b>		
! BIOL 1240 & BIOL 1245	Principles of Biology I and Principles of Biology I Laboratory	4
! BLS 1100 & BLS 1150	Foundations of Medical Laboratory Science and Foundations of Medical Laboratory Science Lab	3
! CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
ENGL 1900	Advanced Strategies Of Rhetoric and Research	3
MATH 1400	Pre-Calculus	3
Credits		17
<b>Spring</b>		
! BIOL 1260 & BIOL 1265	Principles of Biology II and Principles of Biology II Laboratory	4
! CHEM 1120 & CHEM 1125	General Chemistry 2 and General Chemistry 2 Laboratory	4
MATH 1300	Elementary Statistics with Computers	3
THEO 1000	Theological Foundations	3
Credits		14
<b>Summer</b>		
HSI 2200	Medical Terminology	3
XXXX	Social Science Elective	3
XXXX	Fine Arts Elective	3
Credits		9
<b>Year Two</b>		
<b>Fall</b>		
BIOL 3020	Biochemistry and Molecular Biology	3
! CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
PPY 2540	Human Physiology	4
PHIL 1050	Introduction to Philosophy: Self and Reality	3

ENGL 2XXX/3XXX	Literature Elective	3
Credits		17

**Spring**

ANAT 1000	Basic Human Anatomy	3
BIOL 3030	Principles of Genetics	3
BLS 3110	Urinalysis & Body Fluids	2
MLS 3150	Urinalysis and Immunology Laboratory	1
! CHEM 2420 & CHEM 2425 2XXX/3XXX	Organic Chemistry 2 and Organic Chemistry 2 Laboratory Philosophy or Theology Elective	4 3
Credits		16

**Year Three**

**Fall**

BLS 4110	Medical Biochemistry I	3
MLS 4150	Analytical Chemistry	2
BLS 4210	Hematology	4
MLS 4250	Hematology Laboratory	1
BLS 4411	Fundamentals of Immunology	2
BLS 4510	Medical Microbiology	4
Credits		16

**Spring**

BLS 4120	Medical Biochemistry II	2
MLS 3400	Laboratory Operations	1
BLS 4130	Principles & Techniques in Molecular Biology	1
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
MLS 4350	Immunohematology Lab	1
BLS 4610	Research Design, Critique & Presentation	3
MLS 4520	Medical Bacteriology	2
MLS 4550	Medical Bacteriology Laboratory	2
Credits		17

**Summer**

MLS 4161	Molecular Biology Laboratory	1
! 4 credits from list of Fall courses in Semester Seven (Arranged with Department)		4
Credits		5

**Year Four**

**Fall**

Register for remaining 12 credits not taken Summer 1

Select 12 credits from the following: 12

MLS 4701	Clinical Chemistry Practicum	
MLS 4710	Clinical Chemistry Routine Testing	
MLS 4740	Clinical Hematology Practicum	
MLS 4750	Clinical Hematology	
MLS 4760	Clinical Hemostasis Practicum	
MLS 4780	Clinical Immunohematology Practicum	
MLS 4790	Clinical Immunohematology	
MLS 4800	Clinical Microbiology Practicum	
MLS 4811	Clinical Microbiology	

MLS 4821	Clinical Urinalysis and Phlebotomy	
Credits		12

**Spring**

MLS 3210	Clinical Education & Laboratory Management	2
BLS 4420	Medical Immunology	2
MLS 4541	Medical Mycology and Parasitology	2
MLS 4571	Medical Mycology and Parasitology Laboratory	1
MLS 4611	Advanced Topics and Case Correlations	3
HCE 2010	Foundations in Clinical Health Care Ethics	3
Credits		13
Total Credits		136

**Program Notes**

Curriculum is designed to address SLU's PA Program requirements and is subject to change. If applying to a PA Program at another institution, please consult their website for specific requirements.

**Suggested Elective Options:**

- **Literature:** Any 2XXX or 3XXX course which is designated as "Literature" requirement for English.
- **Fine Arts:** any course in: ART, ARTH, DANC, FPA, MUS, THR
- **Social Science:** PSY 1010 General Psychology (3 cr) (recommended for all majors; required for students taking the MCAT), SOC 1100 Introduction to Sociology (3 cr) (required for students taking the MCAT), any course in: ANTH, PSYCH, SOC
- **Philosophy/Theology:** Any 2XXX level or above Philosophy (PHIL) or Theology (THEO) course.

**Physician Assistant Scholar Track**

Course	Title	Credits
<b>Year One</b>		
<b>Fall</b>		
! BIOL 1240 & BIOL 1245	Principles of Biology I and Principles of Biology I Laboratory	4
! BLS 1100 & BLS 1150	Foundations of Medical Laboratory Science and Foundations of Medical Laboratory Science Lab	3
! CHEM 1110 & CHEM 1115	General Chemistry 1 and General Chemistry 1 Laboratory	4
ENGL 1900	Advanced Strategies Of Rhetoric and Research	3
MATH 1400	Pre-Calculus	3
Credits		17
<b>Spring</b>		
! BIOL 1260 & BIOL 1265	Principles of Biology II and Principles of Biology II Laboratory	4
! CHEM 1120 & CHEM 1125	General Chemistry 2 and General Chemistry 2 Laboratory	4
MATH 1300	Elementary Statistics with Computers	3
THEO 1000	Theological Foundations	3
Credits		14
<b>Summer</b>		
HSI 2200	Medical Terminology	3

XXXX	Social Science Elective	3
XXXX	Fine Arts Elective	3
	Credits	9

**Year Two****Fall**

BIOL 3020	Biochemistry and Molecular Biology	3
! CHEM 2410 & CHEM 2415	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
PPY 2540	Human Physiology	4
PHIL 1050	Introduction to Philosophy: Self and Reality	3
ENGL 2XXX/3XXX	Literature Elective	3
	Credits	17

**Spring**

ANAT 1000	Basic Human Anatomy	3
BIOL 3030	Principles of Genetics	3
BLS 3110	Urinalysis & Body Fluids	2
MLS 3150	Urinalysis and Immunology Laboratory	1
! CHEM 2420 & CHEM 2425	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
2XXX/3XXX	Philosophy or Theology Elective	3
	Credits	16

**Year Three****Fall**

BLS 4110	Medical Biochemistry I	3
MLS 4150	Analytical Chemistry	2
BLS 4210	Hematology	4
MLS 4250	Hematology Laboratory	1
BLS 4411	Fundamentals of Immunology	2
BLS 4510	Medical Microbiology	4
	Credits	16

**Spring**

BLS 4120	Medical Biochemistry II	2
MLS 3400	Laboratory Operations	1
BLS 4220	Hemostasis and Thrombosis	2
BLS 4310	Immunohematology	3
MLS 4350	Immunohematology Lab	1
BLS 4610	Research Design, Critique & Presentation	3
MLS 4520	Medical Bacteriology	2
MLS 4550	Medical Bacteriology Laboratory	2
	Credits	16

**Summer**

MLS 4161	Molecular Biology Laboratory	1
! 4 credits from list of Fall courses in Semester Seven (Arranged with Department)		4
	Credits	5

**Year Four****Fall**

Register for remaining 12 credits not taken Summer 1		
Select 12 credits from the following:		12
MLS 4701	Clinical Chemistry Practicum	
MLS 4710	Clinical Chemistry Routine Testing	

MLS 4740	Clinical Hematology Practicum	
MLS 4750	Clinical Hematology	
MLS 4760	Clinical Hemostasis Practicum	
MLS 4780	Clinical Immunohematology Practicum	
MLS 4790	Clinical Immunohematology	
MLS 4800	Clinical Microbiology Practicum	
MLS 4811	Clinical Microbiology	
MLS 4821	Clinical Urinalysis and Phlebotomy	
	Credits	12

**Spring**

BLS 4420	Medical Immunology	2
MLS 3210	Clinical Education & Laboratory Management	2
MLS 4541	Medical Mycology and Parasitology	2
MLS 4571	Medical Mycology and Parasitology Laboratory	1
MLS 4611	Advanced Topics and Case Correlations	3
HCE 2010	Foundations in Clinical Health Care Ethics	3
	Credits	13
	Total Credits	135

**Program Notes**

Curriculum is designed to address SLU's PA Program requirements and is subject to change. If applying to a PA Program at another institution, please consult their website for specific requirements.

**Suggested Elective Options:**

- **Literature:** Any 2XXX or 3XXX course which is designated as "Literature" requirement for English.
- **Fine Arts:** any course in: ART, ARTH, DANC, FPA, MUS, THR
- **Social Science:** PSY 1010 General Psychology (3 cr) (recommended for all majors; required for students taking the MCAT), SOC 1100 Introduction to Sociology (3 cr) (required for students taking the MCAT), any course in: ANTH, PSYCH, SOC
- **Philosophy/Theology:** Any 2XXX level or above Philosophy (PHIL) or Theology (THEO) course.