

# MEDICAL LABORATORY SCIENCES (MS)

## Contacts

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Program Website (<https://www.jefferson.edu/academics/colleges-schools-institutes/health-professions/departments-programs/medical-laboratory-biotechnology/degrees-programs/ms-programs/medical-laboratory.html>)

## Curriculum: 2 years, 59 credits

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
LS 531	Immunology	3
MLS 500	Intro to Medical Lab Science	1
MLS 512	Clinical Microbiology I	4
MLS 523	Clinical Chemistry I	3.5
MLS 541	Clinical Hematology I	3
MLS 551	Immunohematology I	3
<b>Credits</b>		<b>17.5</b>
<b>Spring</b>		
MLS 513	Clinical Microbiology II	3.5
MLS 524	Clinical Chemistry II	3
MLS 543	Clinical Hematology II	3
MLS 552	Immunohematology II	3
MLS 576	Urinalysis and Body Fluids	3
<b>Credits</b>		<b>15.5</b>
<b>Second Year</b>		
<b>Fall</b>		
LS 501	Molecular Biology	3
LS 603	Research Design	2
MLS 812	Med Lab Sci Practicum I	3
MLS 813	Med Lab Sci Practicum II	3
<b>Credits</b>		<b>11</b>
<b>Spring</b>		
LS 510	Intro to Molecular Diagnostics	2
LS 610	Reg & Fis Issues in Lab. Mgmt	3
Select one of the following:		2
LS 803	Contemporary Topics Research	
LS 805	Experimental Research II (approval) <sup>1</sup>	
MLS 575	Medical Laboratory Science Sem	2
MLS 814	Med Lab Sci Practicum III	3
MLS 815	Med Lab Sci Practicum IV	3
MLS 816	Comprehensive Exam	0
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>59</b>

## Curriculum: 1 year, 57 credits

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
LS 501	Molecular Biology	3
LS 531	Immunology	3
LS 603	Research Design	2

Course	Title	Credits
MLS 500	Intro to Medical Lab Science	1
MLS 512	Clinical Microbiology I	4
MLS 523	Clinical Chemistry I	3.5
MLS 541	Clinical Hematology I	3
MLS 551	Immunohematology I	3
<b>Credits</b>		<b>22.5</b>
<b>Spring</b>		
LS 510	Intro to Molecular Diagnostics	2
MLS 513	Clinical Microbiology II	3.5
MLS 524	Clinical Chemistry II	3
MLS 543	Clinical Hematology II	3
MLS 552	Immunohematology II	3
MLS 576	Urinalysis and Body Fluids	3
<b>Credits</b>		<b>17.5</b>
<b>Summer</b>		
LS 610	Reg & Fis Issues in Lab. Mgmt	3
LS 803	Contemporary Topics Research	2
MLS 812	Med Lab Sci Practicum I	3
MLS 813	Med Lab Sci Practicum II	3
MLS 814	Med Lab Sci Practicum III	3
MLS 815	Med Lab Sci Practicum IV	3
MLS 816	Comprehensive Exam	0
<b>Credits</b>		<b>17</b>
<b>Total Credits</b>		<b>57</b>

## Curriculum: Advanced MS , 2 year, 30-36 credits

- Advanced MS, Part-time

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
LS 603	Research Design	2
LS 640	Methods in Bioscience Edu	3
Program Approved Elective		3
<b>Credits</b>		<b>8</b>
<b>Spring</b>		
Program Approved Elective		4-8
<b>Credits</b>		<b>4-8</b>
<b>Summer</b>		
LS 610	Reg & Fis Issues in Lab. Mgmt	3
Program Approved Elective		3
<b>Credits</b>		<b>6</b>
<b>Second Year</b>		
<b>Fall</b>		
LS 504	Biochemistry	3
Program Approved Elective		3
LS 804	Experimental Research I (Requires Approval, Optional Course)	
<b>Credits</b>		<b>6</b>
<b>Spring</b>		
LS 613	Pathology	2
Program Approved Elective		3-4
LS 803	Contemporary Topics Research (OR LS 803 Experimental Research II)	1-2
<b>Credits</b>		<b>6-8</b>
<b>Total Credits</b>		<b>30-36</b>

- To meet entry-level competency requirements for immunology credits, students entering as certified cytotechnology graduates who

have not completed three credits in immunology are required to enroll in LS 531 Immunology. Certified cytotechnology graduates who have completed three credits of immunology may enroll in a program-approved elective.

- To meet the research requirement, students may take a classroom literature review-based course (LS 803) or, under special circumstances, engage in a two-semester wet bench research project with a selected PI (LS 804 and LS 805). Students must meet with their faculty advisor and/or program director to determine which option best meets their educational goals. LS 804 and LS 805 are not a substitute for nor may run concurrently with practica courses.

## Curriculum: 1 Year, Advanced MS

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
LS 504	Biochemistry (MLS program only)	3
LS 603	Research Design	2
Program Approved Elective		8-9
LS 640	Methods in Bioscience Edu	3
LS 804	Experimental Research I (Requires Approval, Optional Course)	
<b>Credits</b>		<b>16-17</b>
<b>Spring</b>		
LS 610	Reg & Fis Issues in Lab. Mgmt	3
LS 613	Pathology	2
Program Approved Electives		8
Select One Below		
LS 803	Contemporary Topics Research (OR LS 805 Experimental Research II - requires approval, optional course)	1-2
<b>Credits</b>		<b>14-15</b>
<b>Total Credits</b>		<b>30-32</b>

- To meet entry-level competency requirements for immunology credits, students entering as certified cytotechnology graduates who have not completed three credits in immunology are required to enroll in LS 531 Immunology. Certified cytotechnology graduates who have completed three credits of immunology may enroll in a program-approved elective.
- To meet the research requirement, students may take a classroom literature review-based course (LS 803) or, under special circumstances, engage in a two-semester wet bench research project with a selected PI (LS 804 and LS 805). Students must meet with their faculty advisor and/or program director to determine which option best meets their educational goals. LS 804 and LS 805 are not a substitute for nor may run concurrently with practica courses.