

BS in Medical Laboratory Science (285220) MAP Sheet

Life Sciences, Microbiology and Molecular Biology

For students entering the degree program during the 2017-2018 curricular year.

This is a limited enrollment program requiring departmental admissions approval. Please see the department office for information regarding requirements for admission to this major.



University Core and Graduation Requirements				Suggested Sequence of Courses		
University Core Requirements:						
Requirements	#Classes	Hours	Classes			
Religion Cornerstones						
Teachings and Doctrine of The Book of Mormon	1	2.0	REL A 275			
Jesus Christ and the Everlasting Gospel	1	2.0	REL A 250			
Foundations of the Restoration	1	2.0	REL C 225			
The Eternal Family	1	2.0	REL C 200			
The Individual and Society						
American Heritage	1-2	3-6.0	from approved list			
Global and Cultural Awareness	1	3.0	from approved list			
Skills						
First Year Writing	1	3.0	from approved list			
Advanced Written and Oral Communications	1	3.0	ENGL 316 recommended			
Quantitative Reasoning	1	3.0	STAT 121 recommended			
Languages of Learning (Math or Language)	1	3.0	STAT 121 recommended			
Arts, Letters, and Sciences						
Civilization 1	1	3.0	from approved list			
Civilization 2	1	3.0	from approved list			
Arts	1	3.0	from approved list			
Letters	1	3.0	from approved list			
Biological Science	1	3-4.0	from approved list			
Physical Science	1	3.0-7.0	CHEM 105*, PHSCS 105 recomm.			
Social Science	1	3.0	from approved list			
Core Enrichment: Electives						
Religion Electives	3-4	6.0	from approved list			
Open Electives	Variable	Variable	personal choice			
FOR UNIVERSITY CORE QUESTIONS CONTACT THE ADVISEMENT CENTER — FOR PROGRAM QUESTIONS SEE YOUR FACULTY ADVISOR						
*THESE CLASSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (7 hours overlap)						
Graduation Requirements:						
Minimum residence hours required		30.0				
Minimum hours needed to graduate		120.0				
				FRESHMAN YEAR		
				<u>1st Semester</u>		
				First-year Writing or American Heritage	3.0	
				CHEM 105	4.0	
				MMBIO 121	3.0	
				MMBIO 102	1.0	
				Quantitative Reasoning (if needed)	0-3.0	
				Religion Cornerstone course	2.0	
				Total Hours	13-16.0	
				<u>2nd Semester</u>		
				First-year Writing or American Heritage	3.0	
				PDBIO 220	3.0	
				CHEM 106	3.0	
				CHEM 107	1.0	
				Civilization 1 elective	3.0	
				Languages of Learning (recommended STAT 121)	3.0	
				Religion Cornerstone course	2.0	
				Total Hours	18.0	
				SOPHOMORE YEAR		
				<u>3rd Semester</u>		
				MMBIO 240	3.0	
				MMBIO 241	1.0	
				CHEM 285	4.0	
				Civilization 2 elective	3.0	
				Religion Cornerstone course	2.0	
				General Electives	2.0	
				Total Hours	15.0	
				<u>4th Semester</u>		
				Global & Cultural Awareness elective	3.0	
				Arts or Letters Elective	3.0	
				MMBIO 221	3.0	
				MMBIO 222	1.0	
				Physical Science elective (Recommend PHSCS 105)	3.0	
				Religion cornerstone course	2.0	
				Total Hours	15.0	
				JUNIOR YEAR		
				<u>5th Semester</u>		
				Arts or Letters elective		3.0
				PWS 340		3.0
				MMBIO 261		3.0
				Social Sciences elective		3.0
				Religion Cornerstone course		2.0
				Total Hours		14.0
				<u>6th Semester</u>		
				MMBIO 392 & 394		4.5
				MMBIO 393 & 395		4.5
				MMBIO 407		4.0
				Religion elective		2.0
				Total Hours		15.0
				<u>Spring/Summer</u>		
				Adv. Written & Oral Communication (Recommended ENGL 316)		3.0
				Total Hours		6.0
				SENIOR YEAR		
				<u>7th Semester</u>		
				MMBIO 418		2.0
				MMBIO 419		1.0
				MMBIO 422, 423, 424, 425		9.0
				MMBIO 491		1.0
				Religion elective		2.0
				Total Hours		15.0
				<u>8th Semester</u>		
				MMBIO 496R*		1.0
				General Education courses, university requirements, and/or general electives		5.0
				Total Hours		6.0
				<u>Spring/Summer</u>		
				MMBIO 496R*		1.0
				General electives		5.0
				Total Hours		6.0
				*MMBio 496R must be taken during one semester and one term.		
				Note: This degree program requires a minimum of 120.0 hours for graduation. Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.		

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2017-2018 Program Requirements (61 Credit Hours)

REQUIREMENT 1 Complete 13 courses	
PROGRAM PREREQUISITES:	
*CHEM 105 - General College Chemistry 1 with Lab (Integrated)	4.0
CHEM 106 - General College Chemistry 2	3.0
CHEM 107 - General College Chemistry Laboratory	1.0
CHEM 285 - Introductory Bio-organic Chemistry	4.0
MMBIO 102 - Introduction to Clinical Laboratory Techniques	1.0
MMBIO 121 - General Biology: Health and Disease	3.0
MMBIO 221 - General Microbiology	3.0
MMBIO 222 - General Microbiology Laboratory	1.0
MMBIO 240 - Molecular Biology	3.0
MMBIO 241 - Molecular and Cellular Biology Laboratory	1.0
MMBIO 261 - Infection and Immunity	3.0
PDBIO 220 - Human Anatomy (with lab)	3.0
PWS 340 - Genetics	3.0
REQUIREMENT 2 Complete 12 courses	
PROGRAM COURSES:	
MMBIO 392 - Hematology	2.5
MMBIO 393 - Immunohematology and Coagulation Theory	2.5
MMBIO 394 - Practical Hematology	2.0
MMBIO 395 - Practical Immunohematology and Coagulation Theory	2.0
MMBIO 407 - Clinical Microbiology	4.0
MMBIO 418 - Medical Parasitology	2.0
MMBIO 419 - Clinical Parasitology Laboratory	1.0
MMBIO 422 - Pathophysiology and Laboratory Diagnosis in Clinical Chem	2.5
MMBIO 423 - Pathophysiology and Lab Diagnosis in Clinical Chemistry ar	2.5
MMBIO 424 - Diagnostic Techniques in Clinical Chemistry	2.0
MMBIO 425 - Diagnostic Techniques in Clinical Chemistry and Molecular I	2.0
MMBIO 491 - Concept Applications in Laboratory Medicine	1.0
REQUIREMENT 3 Complete 2.0 hours from the following course(s)	
COMPLETE AN INTERNSHIP EXPERIENCE. DURING ONE SEMESTER AND ONE TERM, COMPLETE AT LEAST 2 HOURS FROM THE FOLLOWING:	
MMBIO 496R - Clinical Experience	9.0v
<i>You may take up to 2 credit hours.</i>	
REQUIREMENT 4	
Complete an exit interview.	
REQUIREMENT 5	
Pass the BYU comprehensive exam offered during the clinical experience.	
RECOMMENDED Complete 2 courses	
ALTHOUGH NOT REQUIRED, THESE COURSES ARE RECOMMENDED.	

ENGL 316 - Technical Communication	3.0
STAT 121 - Principles of Statistics	3.0

THE DISCIPLINE:

This degree program is for students who desire to practice clinical laboratory science/medical technology in diagnostic laboratories or related options. The program in clinical laboratory science is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631, [773] 714-8880). Program graduates are eligible for National Certification examinations (i.e., ASCP, NCA).

OBJECTIVE:

At career entry, the clinical laboratory scientist/medical technologist will be proficient in performing the full range of clinical laboratory tests in areas such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular, and other emerging diagnostics, and will play a role in the development and evaluation of test systems and interpretive algorithms. The clinical laboratory scientist / medical technologist will have diverse responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/performance improvement wherever laboratory testing is researched, developed, or performed. The clinical laboratory scientist/medical technologist will also possess basic knowledge, skills, and relevant experiences in:

- a. Communication to enable consultative interactions with members of the healthcare team, external relations, customer service, and patient education;
- b. Financial, operations, marketing, and human resource management of the clinical laboratory to enable cost-effective, high-quality, value-added laboratory services; (continued in next column)
- c. Information management to enable effective, timely, accurate, and cost-effective reporting of laboratory-generated information, and;

d. Research design/practice sufficient to evaluate published studies as an informed consumer.

CAREERS:

Health Care Agency/Government Hospital/Medical Center
Health Care Administration Staff Medical Technologist/Clinical Laboratory Scientists Information Systems Management Health Maintenance Organization Consultant to Physician Physician Office Laboratories Reference/Commercial Laboratories Veterinary Medicine Laboratory Scientist Working Abroad Humanitarian Work Education Industry Research Diagnostic Molecular Laboratories Forensic Laboratories
(See faculty advisor for additional career choices.)

HONORARY SOCIETIES AND CLUBS:

The student chapter of the Utah Society for Clinical Laboratory Science provides opportunity for fellowship and professional association.

FINANCING:

An endowed scholarship is available to students in clinical laboratory science. Recipient is selected by CLS faculty after program admission. No application is necessary.

MAP DISCLAIMER

While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

DEPARTMENT INFORMATION

Microbiology and Molecular Biology
Brigham Young University
4007 Life Sciences Building
Provo, UT 84602
Telephone: (801) 422-2889

ADVISEMENT CENTER INFORMATION

Life Science Student Services

BS in Medical Laboratory Science (285220)

2017-2018

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Provo, UT 84602
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