

BS in Medical Laboratory Science (285220) MAP Sheet

Life Sciences, Microbiology and Molecular Biology

For students entering the degree program during the 2020-2021 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:				FRESHMAN YEAR			
Requirements	#Classes	Hours	Classes	1st Semester			JUNIOR YEAR
Religion Cornerstones				First-year Writing or American Heritage	3.0		5th Semester
Teachings and Doctrine of The Book of Mormon	1	2.0	REL A 275	CHEM 105	4.0		Arts or Letters elective
Jesus Christ and the Everlasting Gospel	1	2.0	REL A 250	MMBIO 121	3.0		PWS 340
Foundations of the Restoration	1	2.0	REL C 225	MMBIO 102	1.0		MMBIO 261
The Eternal Family	1	2.0	REL C 200	Languages of Learning (recommended STAT 121)	3.0		Social Sciences elective
The Individual and Society				Religion Cornerstone course	2.0		Religion elective
American Heritage	1-2	3-6.0	from approved list	Total Hours	16.0		Religion elective
Global and Cultural Awareness	1	3.0	from approved list	2nd Semester			Total Hours
Skills				First-year Writing or American Heritage	3.0		6th Semester
First Year Writing	1	3.0	from approved list	PDBIO 220	3.0		MMBIO 405*
Advanced Written and Oral Communications	1	3.0	WRTG 316 recommended	CHEM 106	3.0		MMBIO 411
Quantitative Reasoning	1	3.0	STAT 121 recommended	CHEM 107	1.0		MMBIO 409
Languages of Learning (Math or Language)	1	3.0	STAT 121 recommended	Civilization 1 elective	3.0		MMBIO 410
Arts, Letters, and Sciences				Religion Cornerstone course	2.0		MMBIO 412
Civilization 1	1	3.0	from approved list	Total Hours	15.0		Total Hours
Civilization 2	1	3.0	from approved list	SOPHOMORE YEAR			Spring/Summer
Arts	1	3.0	from approved list	3rd Semester			Adv. Written & Oral Communication (Recommended WRTG 316)
Letters	1	3.0	from approved list	MMBIO 240	3.0		General Elective
Biological Science	1	3.0	MMBIO 121	MMBIO 241	1.0		Total Hours
Physical Science	1-2	3.0-7.0	CHEM 105*, PHSCS 105 recomm.	CHEM 285	4.0		6.0
Social Science	1	3.0	from approved list	Civilization 2 elective	3.0		* MMBIO 405 should be taken the 1st semester you are accepted into the program. If you start in the Fall, take MMBIO 405 in the Fall rather than the winter.
Core Enrichment: Electives				Religion Cornerstone course	2.0		SENIOR YEAR
Religion Electives	3-4	6.0	from approved list	General Electives	3.0		7th Semester
Open Electives	Variable	Variable	personal choice	Total Hours	16.0		MMBIO 406
FOR UNIVERSITY CORE QUESTIONS CONTACT THE ADVISEMENT CENTER – FOR PROGRAM QUESTIONS SEE YOUR FACULTY ADVISOR				4th Semester			MMBIO 407
*THESE CLASSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (7 hours overlap)				Global & Cultural Awareness elective	3.0		MMBIO 418
Graduation Requirements:				Arts or Letters Elective	3.0		MMBIO 419
Minimum residence hours required		30.0		MMBIO 221	3.0		MMBIO 491**
Minimum hours needed to graduate		120.0		Physical Science elective (Recommend PHSCS 105)	3.0		Religion elective
				Religion cornerstone course	2.0		Total Hours
				Total Hours	15.0		14.0
				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.			
				Note: Quantitative Reasoning can be fulfilled by ACT Math subscore of 22 or higher.			
				** MMBIO 491 should be taken the 2nd semester you are accepted into the program. If you start in the Fall, take MMBIO 491 in the Winter, if you start in the winter take MMBIO 491 in the Fall.			
				8th Semester			
				MMBIO 496R***			
				Total Hours			
				12.0V			
				12.0V			
				Spring/Summer			
				MMBIO 496R***			
				Total Hours			
				6.0V			
				6.0V			
				*** MMBio 496R must be taken during one semester and one term (minimum of 1 credit/semester and term). If you need to have more credits to keep a scholarship, up to 12 credits of MMBIO 496R can be taken during the semester and up to 6 credits for the term.			

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2020-2021 Program Requirements (62 Credit Hours)

<p>REQUIREMENT 1 Complete 13 courses</p> <p>PROGRAM PREREQUISITES:</p> <p>CELL 220 - (Not currently offered) 4.0</p> <p>*CHEM 105 - General College Chemistry 1 with Lab (Integrated) 4.0</p> <p>CHEM 106 - General College Chemistry 2 3.0</p> <p>CHEM 107 - General College Chemistry Laboratory 1.0</p> <p>CHEM 285 - Introductory Bio-organic Chemistry 4.0</p> <p>MMBIO 102 - Introduction to Clinical Laboratory Techniques 1.0</p> <p>*MMBIO 121 - General Biology: Health and Disease 3.0</p> <p>MMBIO 221 - General Microbiology 3.0</p> <p>MMBIO 222 - General Microbiology Laboratory 1.0</p> <p>MMBIO 240 - Molecular Biology 3.0</p> <p>MMBIO 241 - Molecular and Cellular Biology Laboratory 1.0</p> <p>MMBIO 261 - Infection and Immunity 3.0</p> <p>PWS 340 - Genetics 3.0</p> <p>REQUIREMENT 2 Complete 10 courses</p> <p>PROGRAM COURSES:</p> <p>MMBIO 405 - Basic Laboratory Operations in Medical Laboratory Science 1.0</p> <p>MMBIO 406 - Clinical Chemistry 4.0</p> <p>MMBIO 407 - Clinical Microbiology 5.0</p> <p>MMBIO 409 - Hematology 3.0</p> <p>MMBIO 410 - Hematology Laboratory 2.0</p> <p>MMBIO 411 - Molecular Diagnostics 3.0</p> <p>MMBIO 412 - Immunohematology 4.0</p> <p>MMBIO 418 - Medical Parasitology 2.0</p> <p>MMBIO 419 - Clinical Parasitology Laboratory 1.0</p> <p>MMBIO 491 - Concept Applications in Laboratory Medicine 1.0</p> <p>REQUIREMENT 3 Complete 2.0 hours from the following course(s)</p> <p>COMPLETE AN INTERNSHIP EXPERIENCE. DURING ONE SEMESTER AND ONE TERM, COMPLETE AT LEAST 2 HOURS FROM THE FOLLOWING:</p> <p>MMBIO 496R - Clinical Experience 12.0v</p> <p>REQUIREMENT 4</p> <p>Complete an exit interview.</p> <p>REQUIREMENT 5</p> <p>Pass the BYU comprehensive exam offered during the clinical experience.</p> <p>RECOMMENDED Complete 2 courses</p> <p>ALTHOUGH NOT REQUIRED, THESE COURSES ARE RECOMMENDED.</p> <p>STAT 121 - Principles of Statistics 3.0</p>	<p style="text-align: center;">WRTG 316 - Technical Communication 3.0</p> <p>THE DISCIPLINE:</p> <p>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).</p> <p>OBJECTIVE:</p> <p>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:</p> <p>a. Communication to enable consultative interactions with members of the healthcare team, external relations, customer service, and patient education;</p> <p>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)</p> <p>c. Information management to enable effective, timely, accurate, and cost-effective reporting of laboratory-generated information, and;</p> <p>d. Research design/practice sufficient to evaluate published studies as an informed consumer.</p>	<p>CAREERS:</p> <p>Medical Laboratory Scientist in a Hospital laboratory, Outpatient lab or a Reference Lab; Quality Control/Assurance officer in clinical laboratory; MLS in a Clinical Diagnostic Molecular Laboratory; Clinical Laboratory Information System analyst; Physician Office Laboratory; Management in a Clinical Laboratory; MLS Specialty in Clinical Hematology, Chemistry, Immunohematology or Microbiology; Graduate Studies; Veterinary Medicine Laboratory Scientist; Medical Laboratory Industry – instrumentation sales and service; MLS Educator; Research Scientist; Pathology Assistant Studies</p> <p>See faculty advisor for additional career choices.</p> <p>HONORARY SOCIETIES AND CLUBS:</p> <p>The student chapter of the Utah Society for Clinical Laboratory Science provides opportunity for fellowship and professional association.</p> <p>FINANCING:</p> <p>An endowed scholarship is available to students in clinical laboratory science. Recipient is selected by CLS faculty after program admission. No application is necessary.</p> <p>MAP DISCLAIMER</p> <p>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.</p> <p>DEPARTMENT INFORMATION</p> <p>Microbiology and Molecular Biology Brigham Young University 4007 Life Sciences Building Provo, UT 84602 Telephone: (801) 422-2889</p>
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2020-2021

ADVISEMENT CENTER INFORMATION

Life Sciences Advisement
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Provo, UT 84602
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