

BS in CLINICAL LABORATORY SCIENCE (285220) Map Sheet

Department of Microbiology and Molecular Biology

For students entering the degree program during the 2004–2005 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				MAJOR REQUIREMENTS (65.0 total hours)			
UNIVERSITY CORE REQUIREMENTS (48.5 hours minimum)				Complete the following biology core requirements:			
<u>Requirements</u>	<u>#Classes</u>	<u>Hours</u>	<u>Classes</u>	Biol 120	Science of Biology	2.0	Complete the following:
Doctrinal Foundation				Biol 220	Biodiversity	2.0	Chem 105* General College Chemistry
Book of Mormon	2	4.0	RelA 121 and 122	Biol 240	Molecular Biology	2.0	Chem 106 General College Chemistry
New Testament	1	2.0	RelA 211 or 212	Biol 241	Molecular & Cellular Biology Lab	1.0	Chem 107 General College Chem Lab
Doctrine and Covenants	1	2.0	RelC 324 or 325	Biol 340	Genetics	2.0	Chem 152 Intro to Organic Chemistry
				Biol 360	Cell Biology	3.0	Chem 281 Intro to Biochemistry
							3.0
The Individual and Society				Complete the following microbiology core requirements:			
Wellness	1or3	1.5–2.0	from approved list	MMBio 165	Introductory Lab Methods	1.0	Recommended Courses
Citizenship				MMBio 265	Intermediate Lab Methods	1.0	Engl 316.
American Heritage	1–2	3–6.0	from approved list	MMBio 352	Immunology 1	2.0	Stat 221.
Global & Cultural Awareness	1	3.0	from approved list	MMBio 353	Medical Microbiology 1	2.0	
				MMBio 354	Virology 1	2.0	
Skills				Complete the following:			
Effective Communication				MMBio 102	Intro Clinical Lab Techniques	1.0	
First-Year Writing	1	3.0	from approved list	MMBio 392	Hematology	2.5	
Adv Written & Oral Communication	1	3.0	Engl 316 recommended	MMBio 393	Immunohematology & Coagulation Theory	2.5	
Quantitative Reasoning	0–1	0–3.0	from approved list	MMBio 394	Practical Hematology	2.0	
Languages of Learning (Math or Language)	1–4	3–20.0	Stat 221 recommended	MMBio 395	Practical Immunohematology & Coagulation Theory	2.0	
				MMBio 407	Clinical Microbiology	4.0	
Arts, Letters, and Sciences				MMBio 417	Medical Parasitology	3.0	
Civilization 1 and 2	2	6.0	from approved list	MMBio 420	Clinical Chemistry	5.0	
Arts	1	3.0	from approved list	MMBio 421	Clinical Chem & Diagnostic Molecular Biology Lab Tech	4.0	
Letters	1	3.0	from approved list	MMBio 453	Medical Microbiology 2	3.0	
Scientific Principles & Reasoning				MMBio 491	Applications in Lab Medicine	1.0	
Biological Science	2	4.0	Biol 240* and 340*	During one semester and one term, complete at least 2 hours from the following:			
Physical Science	2	7.0	Chem 105*, Phscs 105 recomm	MMBio 399R	Academic Internship	9.0V	
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				
GRADUATION REQUIREMENTS:							
Minimum residence hours required		30.0					
Minimum hours needed to graduate		120.0					

FOR UNIVERSITY CORE QUESTIONS CONTACT THE ADVISEMENT CENTER — FOR MAJOR QUESTIONS SEE YOUR FACULTY ADVISOR

*THESE CLASSES FILL BOTH UNIVERSITY CORE AND MAJOR REQUIREMENTS (8.0 hours overlap)

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2004–2005

Suggested Sequence of Courses:

FRESHMAN YEAR

1st Semester

Biol 120	2.0
Biol 220	2.0
Chem 105	4.0
1 st Year Writing	3.0
or AHtg 100	(3.0)
MMBio 102	1.0
RelA 121 (FWSpSu)	2.0
Precollege Math (if needed)	0–3.0
Total Hours	14–17.0

2nd Semester

AHtg 100 (FWSpSu)	3.0
or 1 st Year Writing	(3.0)
Biol 240	2.0
Biol 241	1.0
Chem 106, 107	4.0
HEPE 129	2.0
RelA 122 (FWSpSu)	2.0
Global & Cultural elective	3.0
Total Hours	17.0

SOPHOMORE YEAR

3rd Semester

Biol 340	2.0
Chem 152	2.0
Civilization 1	3.0
MMBio 165	1.0
MMBio 353	2.0
Phscs 105 (recommended)	3.0
RelA 211 or 212	2.0
Total Hours	15.0

4th Semester

Chem 281	3.0
Civilization 2	3.0
MMBio 352	2.0
MMBio 453	3.0
Social Science elective	3.0
Religion elective (FWSpSu)	2.0
Total Hours	16.0

JUNIOR YEAR

5th Semester

Biol 360	3.0
Engl 316 recommended	3.0
MMBio 354	2.0
RelC 324 or 325	2.0
Stat 221 recommended	3.0
Arts elective	3.0
Total Hours	16.0

6th Semester

MMBio 392, 394	4.5
MMBio 393, 395	4.5
MMBio 407	4.0
Letters elective	3.0
Religion elective	2.0
Total Hours	18.0

SENIOR YEAR

7th Semester

MMBio 417	3.0
MMBio 420, 421	9.0
MMBio 491	1.0
Religion elective (FWSpSu)	2.0
Total Hours	15.0

8th Semester

*MMBio 399R (FWSpSu)	1.0
Open electives	5.0
Total Hours	6.0

Spring/Summer Term

*MMBio 399R (FWSpSu)	1.0
Open electives	4.0
Total Hours	5.0

*MMBio 399R must be taken during one semester and one term.

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:

The objectives of the clinical laboratory science program are to qualify the students to provide service and research in clinical laboratory science and related areas in rapidly changing and dynamic healthcare delivery systems.

At the completion of the program, the student will be able to:

1. Proficiently perform clinical laboratory test in areas such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular, and other emerging diagnostics.
2. Play a role in the development and evaluation of test systems and interpretive algorithms.
3. Accept 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.
4. 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,

- 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.

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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