

MEDICAL LABORATORY SCIENCE CONCENTRATION

General Science, Bachelor of Science - Medical Laboratory Sciences Concentration Requirements

The B.S. in General Science is offered with a concentration in medical laboratory science for students planning to apply to UNMC's Medical Laboratory Science Program (MLS). This program was designed in collaboration with UNMC to allow a student to complete two Bachelor's degrees in as little as 122 credits. Students will apply to UNMC's College of Arts and Sciences for the BS degree with General Science major. It is imperative for students intending to follow this pathway to work closely with each of the lead advisors in the Health Careers Resource Center and Arts and Sciences Advising Center before declaring a concentration in Medical Laboratory Science.

Following the guide below allows the student to complete UNMC's general education requirements and UNMC's MLS pre-requisite coursework in no more than three years. Near the beginning of the student's third year of UNMC studies, they will need to apply to UNMC's MLS program. Provided that the student has collaborated with the A&S and HCRC's lead advisor and maintained a cumulative or math/science GPA of 3.0, he/she will be guaranteed an interview with UNMC's MLS program.

Upon acceptance into UNMC's MLS program, students will complete 11 months of studies in specific MLS courses. Students will take at least 43 credits of professional MLS coursework to transfer back toward the completion of this additional UNMC degree—a B.S. in general science—medical laboratory science concentration. The Writing in the Discipline requirement for the UNMC degree will be included within the 43 credits of transfer MLS coursework from UNMC. During the last semester in the MLS program at UNMC, students must apply for graduation at both institutions and request a final transcript from UNMC be sent to UNMC within 15 business days following UNMC's commencement. Students must have a minimum of 30 credits in residence at UNMC and of those, 15 credits must come from the natural and physical sciences.

If the student is not accepted to UNMC, the MLS concentration will be removed and the student may opt to satisfy the General Science non-concentration version of the major in A&S. If so, the following will need to be added to complete the GSCI major: GEOL 1170 (<https://catalog.unomaha.edu/search/?P=GEOL%201170>), PHYS 1110 (<https://catalog.unomaha.edu/search/?P=PHYS%201110>)/PHYS 1154 (<https://catalog.unomaha.edu/search/?P=PHYS%201154>), an additional 3 credits of social sciences if not taken within the cognate, an Advanced Writing course, a minor or additional College of Arts & Sciences Gen Eds, and electives to reach 120 credits total. Students must have a minimum of 27 credits at the 3000/4000 level throughout the entire degree.

Coursework to be taken prior to making application to UNMC's B.S. MLS program:

Code	Title	Credits
Fundamental Academic Skills - Required Pathway Courses		
ENGL 1160	ENGLISH COMPOSITION II (** ^)	9
CMST 1110	PUBLIC SPEAKING FUNDS (**)	
or CMST 2120	ARGUMENTATION AND DEBATE	

MATH 1300	COLLEGE ALGEBRA WITH SUPPORT (** ^)	
or MATH 1320	PRE-CALCULUS ALGEBRA	
Distribution Requirements - Required Pathway Courses		15
One 3-credit hour Social Science** - discipline 1		
One 3-credit hour Social Science with Global or U.S. Diversity** - discipline 2		
One 3-credit hour Humanities and Fine Arts** - discipline 1		
One 3-credit hour Humanities and Fine Arts ** - discipline 2		
One 3-credit hour Humanities and Fine Arts with U.S. or Global Diversity **		
MAJOR REQUIREMENTS		
Required Biology Pathway Courses		21
BIOL 1450	BIOLOGY I (** ^)	
BIOL 1750	BIOLOGY II (^)	
BIOL 2140	GENETICS (^)	
BIOL 2440	THE BIOLOGY OF MICROORGANISMS	
BIOL 3240	INTRODUCTION TO IMMUNOLOGY (^)	
Required Chemistry Pathway Courses		14
CHEM 1140 & CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY and FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY (** ^) ¹	
CHEM 2210 & CHEM 2214	FUNDAMENTALS OF ORGANIC CHEMISTRY and FUNDAMENTALS OF ORGANIC CHEMISTRY LABORATORY (^) ²	
CHEM 3650 & CHEM 3654	FUNDAMENTALS OF BIOCHEMISTRY and FUNDAMENTALS OF BIOCHEMISTRY LABORATORY (^)	
Required Statistics Pathway Course		3
PA/SOWK/CRCJ 3000	APPLIED STATISTICS AND DATA PROCESSING IN PUBLIC SECTOR (^)	
or PSYC 3130	STATISTICS FOR THE BEHAVIORAL SCIENCES	
or STAT 3000	STATISTICAL METHODS I	
BS Cognate Coursework - Required Pathway Courses		15
Chosen in consultation with UNMC advisor. Cannot be transferred from UNMC. Some suggested courses are:		
BIOL 1060	INTRODUCTION TO MEDICAL CAREERS & ETHICS	
BIOL 1160	TERMINOLOGY OF HUMAN HEALTH & DISEASE	
BIOL 2740	HUMAN ANATOMY AND PHYSIOLOGY I	
BIOL 2840	HUMAN ANATOMY AND PHYSIOLOGY II	
One 3-credit hour Social Science **		

STUDENTS MUST WORK WITH THE HEALTH CAREERS RESOURCE CENTER AND UNMC FOR APPLICATION TO THE PROFESSIONAL MLS PROGRAM AT UNMC.

Required Medical Laboratory Science Pathway Courses from UNMC

General Science Major Requirements- MLS Concentration		20
MLS 407 - CLINICAL LABORATORY OPERATIONS ^		
MLS 408 - INTRODUCTION TO CLINICAL HEMATOLOGY ^		
MLS 409 - INTRODUCTION TO MEDICAL MICROBIOLOGY ^		
MLS 410 - INTRODUCTION TO CLINICAL CHEMISTRY AND URINALYSIS ^		
MLS 411 - INTRODUCTION TO CLINICAL IMMUNOHEMATOLOGY ^		

MLS 412 - CLINICAL LABORATORY SCIENCE THEORY, APPLICATION AND CORRELATION ^

MLS 420 - CLINICAL IMMUNOLOGY, SEROLOGY AND MOLECULAR DIAGNOSTICS ^

MLS 430 - CLINICAL LABORATORY MANAGEMENT I ^ (**Writing in the Discipline)

MLS 431 - CLINICAL LABORATORY MANAGEMENT II ^ (**Writing in the Discipline)

College Breadth 0

College of Arts and Sciences' breadth requirement satisfied with the dual degrees from UNO and UNMC.

ELECTIVES

23 CREDITS OF MLS COURSEWORK FROM UNMC 23

Elective hours as required to reach a total of 120 hours

¹ CHEM 1180-1184 and CHEM 1190-1194 may be substituted for CHEM 1140-1144.

² CHEM 2250 and CHEM 2260-2274 may be substituted for CHEM 2210-2214.

General Science, Bachelor of Science - Medical laboratory Sciences Concentration Four-Year Plan

Freshman

Course	Description	Credits
BIOL 1450	BIOLOGY I (*)	5
ENGL 1160	ENGLISH COMPOSITION II (**)	3
MATH 1300	COLLEGE ALGEBRA WITH SUPPORT	4
BIOL 1060	INTRODUCTION TO MEDICAL CAREERS & ETHICS (for suggested cognate course^)	2

*BIOL 1450: Requires high school biology and chemistry. College level chemistry recommended.

**ENGL 1160: Requires appropriate placement via EPPE, ACT, AP scores or transfer credit.

^B.S. Cognate courses must be 15 credits of coursework outside of the major that complements the students interests. Suggested cognate courses are BIOL 1060, BIOL 2740, BIOL 2840, BIOL 1160, and a Social Science.

Course	Description	Credits
Spring		14
BIOL 1750	BIOLOGY II (*)	5
Humanities and Fine Arts		3
Social Science		3
Humanities and Fine Arts with U.S. Diversity		3

*BIOL 1750: Requires BIOL 1450

Course	Description	Credits
Sophomore		14
Fall		
BIOL 2440	THE BIOLOGY OF MICROORGANISMS (*)	4
CHEM 1140 & CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY and FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY (**)	5
CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS or ARGUMENTATION AND DEBATE	3
Social Science/Global Diversity		3

*BIOL 2440: Requires high school biology and chemistry.

**CHEM 1140 and 1144: See the catalog for the most up-to-date prerequisites.

Course	Description	Credits
Spring		15
BIOL 2140	GENETICS (*)	4
CHEM 2210 & CHEM 2214	FUNDAMENTALS OF ORGANIC CHEMISTRY and FUNDAMENTALS OF ORGANIC CHEMISTRY LABORATORY (**)	5
Humanities and Fine Arts***		3
Elective/Minor Course/ Course toward parallel plan major^		3

*BIOL 2140: Requires BIOL 1450 and 1750, in addition to CHEM 1140 or 1180.

**CHEM 2210: Requires CHEM 1140-1144 or CHEM 1190-1194 with a grade of C- or better in each. CHEM 2214 must be taken concurrently.

***HFA #3 must come from a second discipline.

^It is suggested that students have a parallel plan involving another major or at least a minor. Taking a course toward that major or minor here or an upper-level elective is suggested.

Course	Description	Credits
Junior		15
Fall		
BIOL 1160	TERMINOLOGY OF HUMAN HEALTH & DISEASE (*)	2
BIOL 2740	HUMAN ANATOMY AND PHYSIOLOGY I	4
CHEM 3650 & CHEM 3654	FUNDAMENTALS OF BIOCHEMISTRY and FUNDAMENTALS OF BIOCHEMISTRY LABORATORY (**)	4
PSYC 3130 or STAT 3000 or PA 3000 or SOWK 3000 or CRCJ 3000	STATISTICS FOR THE BEHAVIORAL SCIENCES or STATISTICAL METHODS I or APPLIED STATISTICS AND DATA PROCESSING IN PUBLIC SECTOR or APPLIED STATISTICS AND DATA PROCESSING IN PUBLIC SECTOR or APPLIED STATISTICS AND DATA PROCESSING IN PUBLIC SECTOR	3

*B.S. Cognate courses must be 15 credits of coursework outside of the major that complements the students interests. Suggested cognate courses are BIOL 1060, BIOL 2740, BIOL 2840, BIOL 1160, and a Social Science.

**CHEM 3650: Requires concurrent enrollment in CHEM 3654. Requires CHEM 2210-2214 or CHEM 2260-2274, either of which needs to be a C- or better.

Note: UNMC'S Medical Laboratory Science Program Application needs to be started this semester. Typically applications are due early October, and the program begins late May in the following year. BEGIN APPLICATION NOW. Students must have taken the required courses, even if in a different plan of study, and must have a cumulative or math/science GPA of 3.0 minimum for a guaranteed interview with UNMC.

Course	Description	Credits
Spring		13
BIOL 2840	HUMAN ANATOMY AND PHYSIOLOGY II (*)	4
BIOL 3240	INTRODUCTION TO IMMUNOLOGY (**)	3
BS Cognate Course: Social Science of choice from 2nd discipline***		3

Elective/Minor course/ Course toward parallel plan major. [^]	3
*BIOL 2840: Requires BIOL 2740	
**BIOL 3240: Requires BIOL 1450, 1750, 2140, and junior standing. Recommended: BIOL 2440 or CHEM 3650 or Organic Chemistry.	
***B.S. Cognate courses must be 15 credits of coursework outside of the major that complements the students interests. Suggested cognate courses are BIOL 1060, BIOL 2740, BIOL 2840, BIOL 1160, and a Social Science.	
[^] It is suggested that students have a parallel plan involving another major or at least a minor. Taking a course toward that major or minor here or an upper-level elective is suggested.	

complete UNO’s general education requirements and UNMC’s MLS prerequisite coursework in no more than three years. Near the beginning of the student’s third year of UNO studies, they will need to apply to UNMC’s MLS program. Provided that the student has followed the curriculum, for example, as laid out above, maintained a cumulative or math/science GPA of 3.0, he/she will be guaranteed an interview with UNMC’s MLS program. Upon acceptance into UNMC’s MLS program, students will complete 11 months of studies in specific MLS courses. After completion of the MLS program at UNMC, students may transfer their UNMC coursework back to UNO to earn a dual degree of BS MLS from UNMC/ BS GSCI-MLS concentration from UNO. Students must have a minimum of 30 credits in residence at UNO and of those, 15 credits must come from the natural and physical sciences.

Credits **13**

Summer

AT UNMC

After taking the above 3 years worth of courses, upon acceptance to the Bachelor of Science in Medical Laboratory Science program at UNMC, students will take at least 43 credits of professional MLS coursework to transfer back toward the completion of this additional UNO degree—a B.S. in general science–medical laboratory science concentration.	43
If the student is not accepted to UNMC, the following will need to be added to complete the GSCI major: GEOL 1170, PHYS 1110-1154, an additional 3 credits of social sciences if not taken within the cognate, an Advanced Writing course, a minor or additional College of Arts & Sciences Gen Eds, and electives to reach 120 credits total. Students must have a minimum of 27 credits at the 3000/4000 level throughout the entire degree.	

Credits **43**

Total Credits **127**

This roadmap is a suggested plan of study and does not replace meeting with an advisor. Please note that students may need to adjust the actual sequence of courses based on course availability. Please consult an advisor in your major program for further guidance.

This plan is not a contract and curriculum is subject to change

Additional Information About this Plan:

University Degree Requirements: The minimum number of hours for a UNO undergraduate degree is 120 credit hours. Please review the requirements for your specific program to determine all requirements for the program. In order to graduate on-time (four years for an undergraduate degree), you need to take 30 hours each year.

Placement Exams: For Math, English, Foreign Language, a placement exam may be required. More information on these exams can be found at <https://www.unomaha.edu/enrollment-management/testing-center/placement-exams/information.php>

**Transfer credit or placement exam scores may change suggested plan of study

Graduation Requirements: The B.S. in general science is offered with a concentration in medical laboratory science for students planning to apply to UNMC’s Medical Laboratory Science Program (MLS). This program was designed in collaboration with UNMC to allow a student to complete two bachelor’s degrees in as little as 122 credits. Students will apply to UNO’s General Science program and add on the medical laboratory science concentration. Following the guide below allows the student to