

Advisor: Dr. Andrea Castillo

This curriculum is recommended for students planning a career in Medical Laboratory Science. Make sure to meet with the Advisor, Dr. Castillo.

Note: There are two options for the Medical Laboratory Science (MLS) preparation, 4+1 and 3+1. The 4+1 option indicates the student will graduate from EWU with a B.S. in Biology in 4 (or more) years and then attend a MLS program for an additional year. With the 4+1 option, students are no longer eligible for financial aid support during their year in the MLS program. 4+1 students pay MLS tuition. The 3+1 option indicates the student will spend 3 (or more) years fulfilling the appropriate prerequisite courses at EWU and then spend a year as a MLS student (and take the “senior year required clinical courses”). After completing the MLS program, the student will graduate from EWU with a B.S. in Biology and also graduate from the MLS program. The advantage of the 3+1 program is that students may (if they are eligible) receive financial aid while they are in the MLS program. 3+1 students pays EWU tuition instead of the MLS tuition. For either option, students must apply for the MLS program the fall prior to the year (July) they hope to attend the program. Note that the MLS program starts in July during summer session and financial aid is not available for this session. This only effects those trying to do the 3+1 program.

Required Biology Courses: (23 credits)

BIOL 171 Biology I	(5)
BIOL 172 Biology II	(5)
BIOL 173 Biology III	(5)
BIOL 270 Biological Investigation	(3)
BIOL 301 Microbiology	(5)
BIOL 310 Fundamentals of Genetics	(5)

Select one of the following courses: 5 credits (5)

BIOL 423 Evolution (5)
BIOL 440 Ecology (5)

Select one of the following courses: 5 credits (5)

BIOL 436 Cell Biology (5)
BIOL438 Molecular Biology (5) (preference)

Select one of the following courses (4–5 credits) (4-5)

BIOL 334 Human Anatomy and Physiology III for Biology Majors	(5)
BIOL 351 Principles of Animal Physiology	(4)
BIOL 352 Principles of Plant Physiology	(4)
BIOL 353 Principles of Microbial Physiology (preference)	(4)

*note that BIOL334 has prerequisites BIOL332, BIOL332

Required Supporting Courses:

BIOL 421 Medical Bacteriology	(5)
BIOL 332 Human Anatomy and Physiology I	(5)
BIOL 430 Immunology	(5)
CHEM 171 General Chemistry	(4)
CHEM 171L General Chemistry Lab	(1)
CHEM 172 General Chemistry	(4)
CHEM 172L General Chemistry Lab	(1)
CHEM 173 General Chemistry	(4)
CHEM 173L General Chemistry Lab	(1)
CHEM 351 Organic Chemistry, or	(4)
CHEM 480 Biochemistry	(5)

NOTE: The MLS Program at Sacred Heart requires 24 quarter credits of chemistry. This is not achieved by taking only organic chemistry (CHEM 351 (4)) or biochemistry (CHEM 480 (5)). CHEM 480 requires CHEM 352 (organic II, 3 credits) as a prerequisite.

RECOMMEND taking: CHEM 351 (4), CHEM 352 and CHEM 480.

MATH 161 Calculus I, or	
MATH 380 Elementary Probability and Statistics, or	(5)
BIOL 380 Data analysis for biologists	(5)

Recommended supporting courses

BIOL 460 Hematology	(5)
BIOL 304 Vertebrate Zoology	(5)
BIOL 333 Human Anatomy and Physiology II Biology Majors	(5)
BIOL 334 Human Anatomy and Physiology III Biology Majors	(5)
CHEM 304 Quantitative Analysis	(6)
CHEM 352 Organic Chemistry	(4)
CHEM 454 Clinical Chemistry	(4)

Senior Year Required Clinical Courses (at SHMC): 47 credits

BIOL 479 Clinical Theory and Practicum I	(6)
BIOL 480 Clinical Theory and Practicum II	(12)
BIOL 482 Clinical Theory and Practicum III	(12)
BIOL 483 Clinical Theory and Practicum IV	(12)
BIOL 491 Senior Seminar (replaces major's capstone)	(5)

***NOTE: Certification Examination at the completion of clinical courses is required. These courses require admission to the clinical laboratory program at SHMC School of Medical Laboratory Science.**

Biology ETS Field Exam required for graduation.

See University catalog for additional requirements.