

MASTER OF SCIENCE IN MEDICAL LABORATORY SCIENCES

The Professional Master of Science in Medical Laboratory Sciences is an option for students who hold a bachelor's degree from an accredited college or university and wish to pursue a rewarding career as a medical laboratory scientist. The program is comprised of 74 semester credit hours and is designed to provide entry-level competencies in the four core disciplines of clinical chemistry, hematology, immunohematology, and microbiology, in addition to medical toxicology, evidence-based medicine concepts, management and leadership skills, and quality assurance. Medical laboratory scientists use state-of-the-art instrumentation to analyze blood and other body fluids providing critical, objective data for disease diagnosis, treatment planning, and preventative healthcare. The professional clinical phase includes 520 hours of in-hospital or clinical practice in surrounding hospital systems.

Upon completion of the program, graduates are eligible to sit for the national board examination for Medical Laboratory Scientist given by the Board of Certification of the American Society for Clinical Pathology (ASCP). Our graduates are recognized for their clinical skills, analytics acumen, and aptitude by some of the best health care systems.

Objectives/Program Outcomes

Students graduating from the Professional Master of Science in Medical Laboratory Sciences will be able to:

- Communicate effectively with patients, colleagues, members of patient care team and the public on issues related to clinical laboratory practice.
- Perform laboratory tests using sophisticated instrumentation on body fluids, cells, and other specimens accurately and efficiently.
- Assess quality control data and apply quality control procedures to determine validity and reliability of laboratory test results. If results aren't reliable, suggest possible causes (e.g., systematic or random) and methods to resolve the inaccurate results.
- Evaluate laboratory test results, determine if results are reportable to patient's medical record, detect problem if one or more of the test results is not reportable and predict an action for resolution.
- Analyze laboratory test results to predict disease state (e.g., iron deficiency anemia) and select appropriate reflex laboratory test(s) necessary to confirm the diagnosis or identify the appropriate therapeutic intervention.
- Exhibit ethical and professional behavior appropriate for the delivery of patient care.
- Gather and apply evidence-based research in clinical decision-making to include evaluation and implementation of new laboratory test methods and instrumentation and outcome analyses.
- Apply fundamental principles of administration and supervision to clinical laboratory practice.
- Use educational principles and methodologies to teach and/or inform students, colleagues, patients, members of patient care team, and public on clinical laboratory topics or general healthcare topics.
- Comply with all safety regulations impacting practice in the clinical laboratory and monitor for changes in regulations.

- Contribute to the profession through presentations and active involvement in American Society for Clinical Laboratory Science (ASCLS).

Program Policies

Advancement to the Second Year

A student must have no grade lower than a "C" in required science and medical laboratory science courses to begin the second year and clinical practicums. In addition, a MLS student must file an [Advancement to Clinical Practicum form](#), available from the program director at the end of the semester before practicums begin. A student must also demonstrate high professional conduct and behaviors at the time they are eligible for enrollment in clinical practicums. Failure to demonstrate high professional conduct may result in dismissal from the program. Students who are ready for clinical practicums are placed based on availability of positions at the affiliate sites throughout South Texas. All students are expected to complete at least one clinical practicum at an affiliate located outside of San Antonio. In the unlikely event that there are not enough sites available for the number of students ready to enter clinical practicums, assignments will be made according to program policies. Students who must remediate a practicum will be assigned to an affiliate on a space-available basis.

Advisement and Schedule Planning

Applicants are encouraged to seek advisement from their college counselors or the School of Health Professions Office of Admissions and Special Programs at (866) 802-6288 (toll-free) or (210) 567-6220. Prior to applying to the Health Science Center, students who are completing or have completed required prerequisite courses at another college or university are urged to seek advisement about fulfilling the program's prerequisite requirements. Students must be advised each semester before permission is given to enroll in professional courses. For students in the Professional MS in MLS program, sequencing and completion of specific courses are very important.

Certification

Students who successfully complete the Professional MS in MLS program are eligible to take the national certification examination for Medical Laboratory Scientist, MLS(ASCP) given by the Board of Certification (<https://www.ascp.org/content/board-of-certification/>) (BOC) of the American Society for Clinical Pathology (ASCP). Awarding of the degree is not contingent on passing an external certification or licensing examination.

Practicum Assignments

Clinical practicum assignments provide the student with the breadth of experiences that encompass all major content areas and exposure to laboratory technology. Assignment to clinical affiliates for practicum courses is a random process that is based on availability of positions at the affiliate sites. Practicum courses typically begin in the fall semester of the second year and are completed during the following summer semester.

All students are expected to complete at least one practicum at an affiliate located outside of San Antonio. If a student declines to go to an assigned affiliate, this will result in a loss of the student's practicum position and possible delay of graduation. Students who have special needs and request special considerations for practicum assignments must put the request in writing to the program director at least one

semester before the practicum begins. The program director will take the request to the faculty who will approve or disapprove the request.

Program Costs

In addition to required tuition and fees, there are costs for textbooks, scrubs, and equipment. Detailed information about program costs can be found on the Professional Master of Science in Medical Laboratory Sciences program website.

Transfer of Credits

Agreements for transferable coursework exist with some area colleges and universities. Students should contact the program director of the Health Science Center's Medical Laboratory Sciences Program or the biology advisor at their institution to determine if such an agreement exists with their school.

For additional information, see the policies and procedures in the School of Health Professions section of this *Catalog*.