

MEDICAL LABORATORY SCIENCES

Halenz Hall, Room

mls@andrews.edu

www.andrews.edu/mls/

Faculty

Marcia A. Kilsby, Chair, MLS Program Director

Aileen Hyde

Tim A. Newkirk

Karen A. Reiner, Graduate Program Coordinator

Richard D. Show

Academic Programs	Credits
BS in Medical Laboratory Science (BSMLS)	
BS: Allied Health Administration	
MS in Medical Laboratory Science (MSMLS)	
Emphasis Areas	
Education	
Laboratory Leadership and Administration	
Laboratory Mission & Development	
Laboratory Sciences	

Mission

The mission of the Department of Medical Laboratory Sciences, in harmony with Andrews University and the Seventh-day Adventist Church, is to prepare students for Christian service as medical laboratory scientists.

The MLS department encourages faculty in professional, educational and spiritual growth.

The MLS faculty educates students to develop excellence in the skills necessary for a life work of service in quality health care and dedication to improving the human condition.

MLS graduates will minister to the needs of others by practicing and promoting standards of excellence as medical laboratory science professionals.

Medical Laboratory Science

The degree program includes three years of undergraduate (pre-clinical) studies plus one year (semesters) of clinical (professional) education.

Pre-clinical Program. The first three years of undergraduate study include General Education, cognate science, and pre-clinical degree requirements. Program options feature directed elective course work selected in consultation with the faculty advisor according to the student's career goals and interests.

Clinical (Professional) Program. The year of clinical studies is comprised of lectures and student laboratories on the Berrien Springs campus and clinical practica at an affiliated hospital or clinical laboratory site.

with practicing professionals in patient health care during the final portion of the clinical year. Andrews University maintains a number of affiliations with clinical institutions across the country. Student preferences for clinical site assignments are solicited and granted when possible. Final site assignments are made at the discretion of the faculty. Each student is responsible for providing his/her own transportation for the clinical practica. We strongly advise that each student have his/her own car for that purpose.

Clinical Year Admission Requirements. An independent admissions process is required for university students who wish to enter clinical studies. The application form may be obtained from the Department of Medical Laboratory Sciences office. Students should complete the application and return it to the departmental office by January prior to their anticipated clinical-study year.

Admission requires an overall GPA of . . . In the admissions process, the GPAs for the cognate science courses and medical

required at the discretion of the Admissions Committee. are final arbiters in determining student continuance.

Professional Certification. Students who complete the degree program are eligible to write the national certification examination sponsored by the ASCP (American Society for Clinical Pathology) Board of Certification.

Program Accreditation. The Andrews University Program for Medical Laboratory Sciences holds accreditation from the National Accrediting Agency for Medical Laboratory Sciences (NAACLS), N River Rd, Suite , Rosemont, IL , () - fax () - , e-mail at info@naacils, or the Web at www.naacils.org.

Clinical Experience (Practica). Students work side-by-side

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<p>hemostasis procedures are performed. Weekly: Three lectures and one lab.</p>	<p>and morphologies; abnormal and disease state hematologies; principles and procedures of routine and special hematology assay methodologies; correlation of patient conditions with results of hematology assay results. Prerequisites: MLSC and permission of program director.</p>
<p>MLSC \$ () Fundamentals of Clinical Microbiology Orientation to clinical microbiology; specimen selection, collection, and transport; microscopic evaluation; stains and sterilization techniques; media and incubation selections; identification of routine and non-routine microorganisms; susceptibility testing; automation and quality assurance. Prerequisite: BIOL . Weekly: Two lectures and two labs.</p>	<p>MLSC () Hemostasis Hemostasis systems, their function, interaction, and monitoring; correlation of hemostasis assay results with various disorders; thrombosis and anticoagulant therapy; principles and procedures of routine and special hemostasis assays. Prerequisites: MLSC and permission of program director.</p>
<p>MLSC \$ () Fundamentals of Immunohematology Introduces blood group antigen systems, antibody screening, antibody identification, and compatibility testing. Selected routine procedures are performed. Weekly: Three lectures and one lab.</p>	<p>MLSC () Clinical Hematology & Hemostasis Practicum Professional health-care laboratory practicum; emphasis in patient-care application of hematology and hemostasis procedures. Prerequisites: MLSC , and permission of program director.</p>
<p>MLSC () Fundamentals of Immunology Innate and acquired immune systems of the human organism; immunoglobulin production, structure, function, and diversity; antigen characteristics, variety, and specific red cell groups; tolerance and memory; complement structure and function; cell mediated immunity function and regulation; autoimmune disorders; transplantation and tumor immunology; immunodeficiency disorders; principles and procedures of techniques used in modern immunology lab. Weekly: Three lectures. Prerequisite: BIOL .</p>	<p>MLSC () Clinical Immunology and Molecular Diagnostics Theory and application of immunologic/serologic and basic molecular techniques including detection, analyses and epidemiology. Emphasis on correlation of patient conditions with test results for viral and bacterial diseases and cancers. Prerequisites: MLSC and permission of program director.</p>
<p>MLSC \$ () Fundamentals of Clinical Chemistry Clinical lab procedures, safety, application of statistical procedures in quality control, and principles of clinical laboratory instrumentation. Topics include carbohydrates, lipids, electrolytes, and hepatic function with selected pathologies. Weekly: Three lectures and one lab. Prerequisites: completed or currently enrolled in CHEM or permission of instructor</p>	<p>MLSC () Clinical Immunology, Virology, and Molecular Diagnostics Practicum Professional health-care laboratory practicum: emphasizes patient-care applications of immunology, serology, virology and molecular techniques. Prerequisites: MLSC and permission of program director.</p>
<p>MLSC () Specimen Procurement and Processing Clinical specimen collection and processing; point-of-care testing, professional ethics; phlebotomy practicum. Prerequisite: permission of the instructor.</p>	<p>MLSC () Clinical Bacteriology Emphasis on specimen collection, culture, identification and clinical significance of bacterial pathogens. Simulated clinical practice for the separation of normal flora from pathogenic microorganisms encountered in various body sites including the study of antimicrobial susceptibility test</p>
<p>MLSC \$ () Clinical Year Seminar and Research Methodology Introduction to educational methodology, multicultural communication, professionalism, medical laboratory sciences literature review, research design and practice. Attendance to all sessions is required. A pass/fail grade is assigned. Prerequisite: permission of program director.</p>	
<p>MLSC \$ () Clinical Year Seminar and Research Project Introduction to team building, service outreach and professional development. Research in medical laboratory science under the direction of a departmental faculty member. Preparation and delivery of a written report and oral presentation on the research project. Attendance to all sessions is required. Prerequisite: permission of program director.</p>	
<p>MLSC () Hematology Cellular elements of the blood, their maturation, functions,</p>	

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problem solving; patient clinical state correlations. Prerequisites: MLSC , MLSC and permission of program director.

MLSC \$ ()
Practicum Project

Designed to be an integral component of the clinical year practica experience. Introduces students to the principles, practices, and performance of clinical laboratory projects expected of practicing professional clinical laboratory scientists.

MLSC ()
Transfusion Medicine
In-depth study of immunohematology testing results, clinical patient manifestations, blood component therapy and blood product requirements. Prerequisites: MLSC and permission of program director.

MLSC (-)
Independent Project

Topics may be from areas relevant to clinical laboratory practice and must be approved by the Program director. Repeatable in a different subject area. Independent readings earn S/U grades. Prerequisite: permission of program director.

MLSC ()
Clinical Immunohematology Practicum
Professional health-care laboratory practicum; emphasis in patient-care applications of immunohematology. Prerequisites: MLSC , and permission of program director.

MLSC ()
Extended Clinical Practicum

A twelve-week professional health-care laboratory practicum. Emphasis in patient-care applications. Subject/T1_1 1 Tf 30.706OJ /ned tcticum

MLSC ()
Clinical Chemistry I
Carbohydrate, lipid, enzyme, electrolyte, acid-base balance, trace element, protein systems, and gastric functions. Correlations with normal physiology and selected pathological conditions. Analysis of relevant blood and body fluids constituents. Prerequisites: MLSC and permission of program director.

MLSC ()
Clinical Chemistry II
Liver function, renal function, endocrinology, toxicology, and therapeutic drug monitoring. Correlations with normal physiology and selected pathological conditions. Prerequisites: MLSC and permission of program director.

MLSC ()
Clinical Chemistry Practicum
Professional health-care laboratory practicum. Emphasis on patient-care applications in clinical chemistry. Prerequisites: MLSC , and per mission of program director.

MLSC ()
Body Fluids
Analysis of various body fluids such as serous fluids, synovial fluids, amniotic fluid, and urine. Correlations with normal physiology and selected pathological conditions. Prerequisites: MLSC and permission of the program director.

MLSC ()
Body Fluids Practicum
Professional health-care laboratory practicum. Emphasis in patient-care applications of body fluids. Prerequisites: MLSC and permission of program director.

MLSC ()
Medical Laboratory Management Concepts
Discussion in selected areas that include health-care delivery systems; problem solving in the clinical laboratory; human resource management; supply and equipment acquisition; financial management' performance standards and assessment; ethics; laboratory information systems; and regulatory processes. Prerequisite: permission of the program director.

MLSC (-)
Topics in _____
An in-depth study of selected topics in the clinical laboratory sciences. Repeatable in different specialized areas. Prerequisite: permission of program director.

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program coordinator. Clinical placement depends on clinical site availability.

MLSC (-)
 Independent Study/Readings/Research Project
 Topics may be from immunology, immunohematology, clinical chemistry, hematology, microbiology and other areas of patient-care science, clinical laboratory science education, management, or applications specially relevant to clinical laboratories.
 Repeatable in a different subject area for a total of four () credits. Independent readings earn S/U grades. Prerequisite: permission of graduate program coordinator.

MLSC \$ ()
 Project Continuation
 Student may register for this title while clearing deferred grade (DG) and/or incomplete (I) courses with advisor approval only. Registration for this title indicates full-time status.

MLSC \$ ()
 Program Continuation
 Students may register for this non-credit continuation course to maintain active status. For additional information on active status, please refer to p. in the bulletin. Registration does not indicate full-time status.

NURSING

Marsh Hall (Second Floor)
 - - or () -
nursing@andrews.edu
www.andrews.edu/nrsg/

Faculty
 Karen A. Allen, Chair, and Director of Graduate Programs
 Ruth D. Abbott
 Nancy A. Carter, Director of Undergraduate Admissions and Progressions
 Henrietta H. Hanna, Director of Undergraduate Curriculum
 Gisele D. Kuhn
 Mary N. Ngugi
 Cynthia J. Papendick, Director of Clinical Practicum
 Arlene M. Saliba
 Gisela E. Schmidt

Academic Programs	Credits
BS: Nursing (NCLEX-preparatory)	
BS: Nursing (completion)	
MS: Nursing Nurse Education	
Post-MS: Nursing Education Certificate	

Mission

Based on a framework of Seventh-day Adventist precepts and restoration to the image of God, the Andrews University Department of Nursing prepares nurses at the baccalaureate and master's degree levels. This preparation is for life-long Christian work in nursing service, technology, practice, education, leadership and research to the local, national, and international communities.

The faculty create a learning environment within a culturally diverse context, which develops and enhances critical thinking, communication, therapeutic nursing interventions, professional development, and Christian service.

Vision

To prepare professional nurses to reflect Christian spirituality, caring attitudes, clinical excellence, and cultural competence for service in an ever-changing environment.

Program Accreditation

The Andrews University Nursing program is approved by the Michigan Board of Nursing and holds accreditation from the

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 Atlanta GA
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