St. Luke's College

Sioux City, Iowa

Medical Laboratory Science

Table of Contents

MISSION

St. Luke's College Medical Laboratory Science Program is committed to providing didactic and practical instruction, which will allow students to acquire the knowledge, skills and attitudes necessary to attain a high level of competency in the practice of clinical laboratory science.

ST. LUKE'S COLLEGE MEDICAL LABORATORY SCIENCE PROGRAM

The Medical Laboratory Science Program was established in 1972 and is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

The Medical Laboratory Science Program is located in the St. Luke's College on the UnityPoint Health's North Campus. The eleven-month program of professional study begins in July, and the average class size is 7-10 students.

The curriculum consists of didactic classroom lectures, and clinical instruction by certified medical laboratory scientists in all areas of the laboratory.

The program director assigns enrolled students to clinical assignments in the laboratories at affiliated clinical sites.

Clinical sites Include: UnityPoint Health St. Luke's North Campus, UnityPoint Health St. Luke's Downtown Campus formally MercyOne Siouxland Medical Center, Twelve Clans Health Center, and June E. Nylen Cancer Center and other laboratories as needed. These assignments provide students with the volume and variety of laboratory procedures and modern instrumentation to progress successfully through the program.

PROGRAM GOALS

1. To provide an educational program in accordance with standards established by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).
2. To maintain a curriculum and standard of academic education consistent with criteria acceptable for a college program culminating in a baccalaureate degree.
3. To provide the community and region with qualified medical laboratory scientists.

4. To adequately prepare and encourage those students who want a general clinical laboratory science background prior to the pursuit of advanced education in the profession, teaching careers in medical laboratory science, or employment in commercial and other related laboratory medicine fields.

GRADUATE COMPETENCY

St. Luke's College Medical Laboratory Science program provides students with an educational environment in which the following program student learning outcomes and competencies will be attained upon completion:

Cognitive Domain (Knowledge and Intellectual Skills):

1. Apply foundational scientific knowledge in biology, chemistry, immunology, microbiology, hematology, molecular diagnostics, and laboratory medicine to perform and evaluate clinical laboratory testing.
2. Develop, analyze, and troubleshoot test systems, and accurately interpret laboratory findings in relation to patient diagnosis and treatment.
3. Demonstrate clinical decision-making skills by analyzing data, evaluating test validity, and determining compliance with regulatory and accreditation standards.
4. Utilize information systems and laboratory informatics to ensure timely, accurate, and cost-effective reporting of laboratory data.
5. Apply principles of research design and evidence-based practice to evaluate scientific literature and support laboratory problem-solving and quality improvement initiatives.
6. Explain principles of laboratory management, including financial, operational, material, and human resource management, to support a cost-effective and high-quality laboratory environment.
7. Describe quality assessment and performance improvement processes used to monitor and enhance laboratory operations and patient care.
8. Recognize the importance of lifelong learning and continuing professional development to maintain competency and adapt to advances in laboratory medicine.

Psychomotor Domain (Technical & Practical Skills:

1. Perform the full range of routine and specialized clinical laboratory procedures accurately, safely, and efficiently in accordance with established protocols.

2. Operate, calibrate, maintain, and troubleshoot laboratory instrumentation and equipment used in diagnostic testing.
3. Collect, process, and analyze biological specimens while adhering to quality control and biosafety standards.
4. Apply quality control and quality assurance procedures to validate testing systems and ensure reliable results.
5. Use laboratory information systems (LIS) and related technologies to document, retrieve, and report laboratory information.
6. Demonstrate teaching and training skills when instructing laboratory personnel, students, and other healthcare professionals.

Affective Domain (Professional Behaviors and Attitudes)

1. Communicate effectively and professionally with laboratory colleagues, other healthcare professionals, patients, and external customers.
2. Apply ethical principles and professional standards to all aspects of laboratory practice, including confidentiality, integrity, and accountability.
3. Participate in interprofessional collaboration to support quality patient care.
4. Demonstrate responsibility, adaptability, and sound judgment in new and evolving laboratory situations.
5. Value continuous quality improvement and contribute to performance improvement initiatives.
6. Demonstrate commitment to professional growth, including continuing education, certification maintenance, and involvement in professional organizations such as American Society for Clinical Laboratory Science and American Society for Clinical Pathology.

ADMISSION REQUIREMENTS

Applicants must possess a baccalaureate degree or have satisfactorily completed a minimum of 90 semester hours (135 quarter hours) in an affiliated college/university and be eligible for a baccalaureate degree upon successful completion of the professional year of study at the hospital.

Minimum pre-clinical and credit requirements are:

- 16 semester hours chemistry, to include: general chemistry, organic and/or biochemistry
- 16 semester hours biological sciences, to include: anatomy/ physiology, genetics and/or molecular biology, microbiology, and immunology (2 credit content minimum). It is strongly recommended that immunology be a separate course.
- One course of college level mathematics to include statistics. Remedial mathematic courses will not satisfy the requirement.

The content of chemistry and biological science courses must be acceptable toward a major in those fields or in medical laboratory science. Survey courses do not qualify as fulfillment of the prerequisites.

Applicants must have a minimum cumulative grade point average (GPA) of 2.80 and a minimum science GPA of 2.80. Applicants with GPA's below 2.80 may submit an application, however they will be evaluated and considered only after candidates with GPA's of 2.80 or higher have been processed.

Individuals who have met the minimal pre-clinical requirements seven or more years before application must update their academic preparation in a manner acceptable to NAACLS and the program. Individuals who possess a foreign degree and meet program requirements must have their transcript evaluated by a qualified transcript evaluation agency. Contact the Program Director for information.

Students meeting the stated criteria and possessing certification in laboratory science (CLA, MLT) may be considered for advanced placement in the clinical laboratory rotation portion of the program by demonstrating competency. The didactic portion of the program does not lend itself to advanced placement.

Meeting minimum requirements for application does not guarantee admission into the Program.

ESSENTIAL REQUIREMENTS

The Essential Requirements provide criteria so that potential applicants can independently evaluate their own ability to meet, participate in education activities and successfully fulfill the expected competencies required of a medical laboratory scientist. These performance criteria are in compliance with the current regulations of the Rehabilitation's Act, the American Disabilities Act, Civil Rights Act and the Standards of NAACLS. The Medical Laboratory Science program requires that all applicants read and sign the form at the time of application.

APPLICATION PROCEDURE

Application forms may be obtained from the Medical Laboratory Science program website: www.stlukescollege.edu or from: Program Director, Medical Laboratory Science Program, St. Luke's College, 2800 Pierce Street, Sioux City, IA 51104, (712) 274-5726.

Applications are accepted starting **May 13th** for the class starting in July. Priority deadline for applications is **June 10th.** Personal interviews are scheduled with applicants who meet application criteria. Students applying by June 10th will be contacted for interviews in June and notified of status by June 25th. Applicants received after June 10th are reviewed on a space available basis.

Admission is conditional based on 1) successful completion of science courses in progress and planned at time of making application, and 2) acceptable results of a criminal background check conducted within 30 days of the starting date.

St. Luke's College adheres to the Fair Practices in Education. The program does not discriminate with respect to age, sex, marital status, race, color, creed, national origin or handicap, except those handicaps which may affect bonafide professional performance or ac-ad emic standards.

PROCESSING APPLICATIONS

Students are ranked numerically according to points generated through evaluation of the college cumulative and science GPA, course progress, references, interview and a statement of the applicant's expectations and goals. The St. Luke's College Medical Laboratory Science Program will give preference to qualified, local area applicants. St. Luke's College Medical Laboratory Science Program does not accept more students than it has available clinical positions.

The following grid gives the assigned percent values used for evaluating applicants:

Application; Statement of Career Goals	5%
GPA, Science Courses	20%
GPA, Cumulative	20%
Academic Progress	10%
References	15%
Interview	30%

AFFILIATED COLLEGES AND UNIVERSITIES

For a complete and current list of affiliated colleges and universities, please contact Morningside University directly. The university can provide detailed information regarding institutional affiliations, partnership agreements, and transfer opportunities.

PROGRESS REQUIREMENTS

During the clinical year of study, the student must maintain a minimum grade of C (70%) or better in each course. The didactic (lecture) subject area constitutes 50% of the grade while the clinical performance constitutes the other 50%.

Grading in the didactic portion of the program is based upon written examinations. Progress in the clinical portion of the program is evaluated after each assigned rotation through the department. The grading system is explained during program orientation.

Grading System: A = 90-100%
B = 80-89%
C = 70-79%

When the student has satisfactorily completed all requirements of the program, they are eligible to take national certifying examinations. The student will be awarded a certificate and pin from the pro-gram and a baccalaureate degree from the affiliated college/ university. Issuing of the baccalaureate degree or program certificate is **not** contingent upon students passing any type of external certification or licensure examination.

RULES AND REGULATIONS

Program Policies are reviewed with students during Orientation. These policies state the criteria regarding academic requirements, academic probation, academic and nonacademic grievance and ap-peal procedure, and disciplinary action.

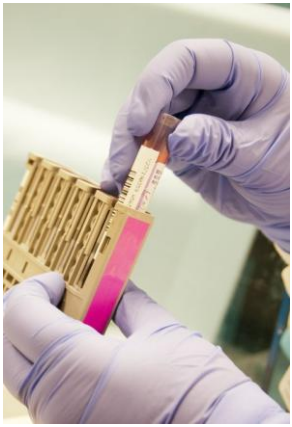
Causes for Probation or Dismissal

On the Basis of Grades: Any student failing to achieve a C average in didactic (lecture) or clinical areas will be counseled and will be informed of academic status including verbal warning, written probation notice, and lastly dismissal from the program. Dismissal for scholastic failure or technical incompetence would be per the decision of the Academic Dean and the Program Director, with consultation from clinical and didactic instructors. Progress records are

maintained throughout the year and are available to the student at any time.

On the Basis of Conduct: Students are required to conform to existing medical center and laboratory policies concerning conduct. Reasons for disciplinary actions up to and including dismissal are as follows:

- Theft, immoral conduct, fighting, willful destruction of property on hospital grounds
- Being under the influence of alcohol, drugs or chemicals
- Inconsiderate treatment of patients or discussion of confidential information with unauthorized persons
- Cheating on examinations or dishonesty in the performance or reporting of test procedures
- Excessive unexcused absenteeism and/or tardiness
- Any other act classified as criminal



Students dismissed for reasons of either grades or conduct will not be allowed reentry into the program. A complete Code of Conduct is available in the St. Luke's College student handbook.

APPEALS PROCEDURE

An appeals procedure is available for use by any student having an academic or nonacademic grievance based upon seemingly unfair treatment. This procedure ensures neutral evaluation, due process and fair disposition. Students enrolled in the Medical Laboratory Science Program, who have need to exercise a grievance appeal, will follow the current process in place for students of St. Luke's College. The Appeal Process can be found in the St. Luke's College student handbook.

EXPENSES

Tuition: 2026-27 tuition is $19,000. Tuition is subject to change and reviewed on an annual basis. An enrollment fee of $300 must accompany the letter of acceptance and is applied toward the tuition. This $300 fee is **not refundable.**

Textbooks:	approximately $800 Clinical
Management software fee:	approximately $100
Housing/Meals:	Students are responsible for their own housing and meals.
Transportation:	Students are responsible for providing their own transportation to/from their personal residence, any enrichment site, and the hospitals.

REFUNDS

All institutional charges (tuition and fees) will be refunded according to the following schedule. A week is defined as 8:00 a.m. Monday through 4:30 p.m. Friday. For students who withdraw following January 1 when the 2nd payment is made, a similar refund policy will apply.

WITHDRAWAL DURING THE FOLLOWING TIME PERIOD	PERCENT OF CHARGES REFUNDED
First day of Class	100%
Week 1	75%
Week 2	50%
Week 3	25%
Week 4	25%
Following Weeks	0%

CRIMINAL BACKGROUND CHECK

A passed criminal background check will be required prior to clinical participation. The student is responsible for all costs associated with the criminal background check.

PROGRAM WITHDRAWAL

If a student chooses to withdraw from the program, he/she must submit a written statement of withdrawal to the Program Director, with refund policy as stated. The Program Director will notify the college/ university of the student's withdrawal or dismissal from the program, with transcript sent of any final grades attained (must include both didactic and clinical requirements).

CHANGE IN SCHEDULE/PROGRAM CLOSURE

St. Luke's College reserves the right to change or augment didactic, lab or clinical course lengths, assignments, or delivery modes due to disruptions caused by natural disasters, global health threats, or other causes. Any changes will be communicated and will satisfy regulatory and accreditation requirements at that time.

The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) requires the MLS program to have a "teach out" plan in the case the program unexpectedly closes due to natural or un-natural disasters or permanent closure. Intentional closure of the St. Luke's College MLS program will be communicated by email to all current and enrolled students and affiliates immediately. In the case of disaster, the college will inform the students and affiliates of a plan as soon as that information is available.

Prospective students:

- In the case of intentional closure, student applicants will be notified and informed that no additional MLS students will be enrolled due to program closure. Students will be assisted in ap-plying to other MLS programs.
- In the case of disaster, program officials will work with other medical laboratory science programs to continue education and training until training can resume at the college.
- Program closure information will be posted on the MLS program website.

Current students:

- Students will be informed of program closure. The Program Director will be designated to clear students applying for the certification exam.
- In the case of a permanent closure of the MLS program, currently enrolled students will be allowed to complete the program.
- In the case of a disaster at the college campus or clinical site (s), the program will work with other medical laboratory science programs or recruit additional clinical sites to continue education until training can resume at the college or hospital clinical site(s).
- In the event that a student cannot attend a scheduled clinical site due to infectious agents/illness of instructors or disaster, the program will work with remaining clinical sites in order for the student to complete an alternate clinical experience.

HEALTH AND LIABILITY INSURANCE

Students are required to have a physical examination to include a chest x-ray or TB skin testing, proof of age-appropriate immunity for measles, mumps, rubella, and chicken pox, and Hepatitis B immunization or a written waiver signed by the student declining the Hepatitis B vaccine prior to start of the clinical year. COVID-19 vaccination, as well as additional health screen and immunizations per clinical site, may be required. Hospital Emergency Department physicians are available for emergency care. Payment for medical care and treatment, including hospitalization costs, will be the responsibility of the student.

St. Luke's maintains a comprehensive liability insurance program, which covers students during the clinical year they are enrolled in the Medical Laboratory Science Program.

FINANCIAL AID

Students seeking financial assistance are encouraged to contact the financial aid office for information.

Limited scholarships are available through St. Luke's College and professional organizations. The Program Director can provide this information.

COURSE DESCRIPTIONS: (Detailed course objectives are available upon request from the Program Director)

Major Subjects **Range of Semester Hour Credits**

CLINICAL MICROSCOPY/URINALYSIS 2-3 sem. hrs
Lecture, supervised laboratory instruction, quality control, instrumentation, computer applications and experience in body fluids and urine in regard to chemical and cellular composition. Anatomy and physiology, theory of renal function in health and disease.

CLINICAL HEMATOLOGY/COAGULATION 5-8 sem. hrs.
Lecture, supervised laboratory instruction, quality control, instrumentation, computer applications and experience in the analysis of cellular elements of the blood and bone marrow, both normal and abnormal, and on the hemostatic mechanisms of the blood.

CLINICAL MICROBIOLOGY 8-12 sem. hrs.
Lecture, supervised laboratory instruction, quality control, instrumentation,

computer applications and experience in the isolation and identification of pathogenic organisms and their susceptibility to anti-microbial agents. Includes Bacteriology, Mycology, Parasitology, and Virology.

CLINICAL SEROLOGY/IMMUNOLOGY 2-3 sem. hrs.
Lecture on antigen/antibody structure-function-interaction, supervised laboratory instruction, quality control, instrumentation, computer applications, and experience in applying the principles of immunology to serologic diagnosis.

CLINICAL CHEMISTRY 8-12 sem. hrs.
Lecture, supervised laboratory instruction, quality control, computer applications, instrumentation, and experience in medically oriented biochemistry as applied to normal and abnormal physiology and analyses of body constituents. Includes analyses of special body fluids such as amniotic, synovial, cerebrospinal, and pleural fluids. Includes special procedures utilized for toxicology, endocrinology, and immunoassay.

CLINICAL IMMUNOHEMATOLOGY 4-6 sem. hrs.
Lecture, supervised laboratory instruction, quality control, instrumentation, computer applications and experience in theory and practice of immunohematology as applied to blood transfusion, component therapy, autoimmune diseases, immunologic diagnostic procedures and blood component preparation and administration.

SPECIALIZED UNITS (SPECIALIZED TOPICS)

ORIENTATION TO MEDICAL LABORATORY SCIENCE 0-1 sem. hrs.
Introduction: Introduction to basic techniques, principles of safety, infection control, professional ethics, personal and professional responsibilities in the clinical laboratory. Review of program's rules and regulations. Introduction to clinical significance of laboratory procedures in diagnosis and treatment.

SPECIALIZED UNITS (SPECIALIZED TOPICS)

Phlebotomy: Anatomy and physiology of the arm, blood collection techniques from vein, capillary, artery and difficult draw sites. Specimen variables and handling techniques. Interactive communication skills with patients and paraprofessionals.

Computer Applications in the Clinical Lab: An introduction to techniques, principles, and concepts common in laboratory data processing systems. Utilization of computers in the laboratory and within instruments.

Laboratory Mathematics/Quality Assurance: Laboratory oriented mathematics with emphasis on performing calculations related to units of measure, pH, Beer's law and calibration curves, Henderson-Hasselbach equation, enzyme activity, renal clearance, hematology calculations. Principles and practice of quality assurance. Includes statistical techniques, method evaluation, and pipette calibration.

MANAGEMENT AND SUPERVISION 0-4 sem. hrs.
Lectures and/or seminars on theory and techniques of laboratory-oriented management practices utilized in planning, organizing, directing, controlling and supervising a clinical laboratory facility.

EDUCATION METHODOLOGIES 0-4 sem. hrs.
Lectures and/or seminars on the principles of education. Includes methods of instruction, writing objectives and evaluation devices for didactic and clinical practice.

INTRODUCTION TO RESEARCH 0-1 sem. hrs.
Faculty guided study, research, scientific writing, case study presentations and/or projects in specialty area(s) of medical laboratory science.

PROGRAM OFFICIALS

A current list of program faculty members and college/university advisors is available from the program director.

For more information, contact the MLS program director at:

712-274-5726

STATEMENT OF POLICY

St. Luke's College educational programs are equal opportunity programs. Any question of discrimination on the basis of age, sex, race, color, creed, disability or national origin shall be directed to:

Dean
St. Luke's College
2800 Pierce Street
Sioux City, IA 51104
712-274-5297

National Accrediting Agency for
Clinical Laboratory Sciences
5600 N. River Rd. Suite 720
Rosemont, IL 60018 –5119
773-714-8880

St. Luke's College

2800 Pierce Street
Sioux City, IA 51104
Phone: (712) 274-5700
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Email: chytkaa@morningside.edu