



St. Luke's College
UnityPoint Health

Sioux City, Iowa



MEDICAL LABORATORY SCIENCE PROGRAM

2018-2019

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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).

UnityPoint Health — St. Luke's is a full-service, community hospital. St. Luke's serves as a medical referral center for Sioux City and surrounding communities, and is recognized for critical care, major surgery, high-risk obstetrics and pediatrics, orthopedic and sports medicine, cardiopulmonary services, and gastrointestinal medicine. The Auxiliary Neonatal Intensive Care Unit is the area's only Level II Regional Neonatal Intensive Care Unit.

The Program is located in St. Luke's College on the campus of St. Luke's. Clinical instruction is provided in the Department of Pathology and Clinical Laboratory Services on the first floor of the Medical Center. The unique design of the clinical laboratory provides an efficient and pleasant environment, and modern instrumentation that allows laboratory personnel to perform a wide variety of tests accurately, precisely, and on a timely basis. There are five pathologists on staff.

The year of professional study begins in August and the average class size is six students. The curriculum consists of didactic classroom lectures, and clinical instruction by certified medical laboratory scientists in all areas of the laboratory. The lecture portion of the program is given in conjunction with the Mercy Medical Center Medical Laboratory Science Program. The hospitals are approximately 1.5 miles apart and students travel to the hospital presenting the lecture.

In the laboratory, students learn to work with accuracy and precision while performing tests that aid in the diagnosis of disease and help monitor treatment. In the performance of these tests students develop a high degree of organization, skill, and learn the theory and clinical significance of the tests. They also develop a high level of professionalism and responsibility by realizing their role as part of the health care team.

Program hours are from 7:00 a.m. to 3:30 p.m. Monday through Friday. A brief 3:00 to 11:00 p.m. rotation may be included during the year. Six regular holidays and four personal days are allowed during the year. In addition, a two week vacation is given during the Christmas holiday and a one week spring break. Missed clinical time must be made up once the allowed time has been exceeded. Clinical time can be made up at the end of the clinical year or on weekends or evenings when an instructor is available.

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.

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 a COMLE 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 Department Chairperson 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 clinical 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 Committee on Medical Laboratory Education (COMLE) requires that all applicants read and sign the form at the time of application.

APPLICATION PROCEDURE

Application for entrance into the program is processed through the Committee on Medical Laboratory Education (COMLE). Application forms may be obtained from the college/university medical laboratory science advisor, the program website: www.stlukescollege.edu or from: Department Chairperson, Medical Laboratory Science Program, St. Luke's College, 2800 Pierce Street, Sioux City, IA 51104, (712) 279-3967.

Applications are accepted from **August 1 to October 1** for the class starting the following August. Personal interviews are scheduled in October or November. Students are notified of acceptance or alternate status in December/January. 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 August starting date. Late applicants will be considered if openings exist.

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 academic standards.

PROCESSING APPLICATIONS

St. Luke's College Medical Laboratory Science Program, along with other members of the Committee on Medical Laboratory Education, participates in a matching system for selection of students. Students are

ranked numerically according to points generated through evaluation of the college GPA, course progress, references, interview and a statement of the applicant's expectations and goals. The objective is to match qualified students with a program based on available program positions and student program preference. 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(s)	30%

AFFILIATED COLLEGES AND UNIVERSITIES

Augustana University, Sioux Falls, SD
Briar Cliff University, Sioux City, IA
Dordt College, Sioux Center, IA
Minnesota State University — Mankato, Mankato, MN
Morningside College, Sioux City, IA
Mount Marty College, Yankton, SD
North Dakota State University, Fargo, ND
Northern State University, Aberdeen, SD
Northwestern College, Orange City, IA
Southwest Minnesota State University, Marshall, MN
University of South Dakota, Vermillion, SD
Wartburg College, Waverly, IA
Wayne State College, Wayne, NE

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 program 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 appeal 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 Dean of Health Sciences 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.

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 handbook.

EXPENSES

Tuition:

Tuition is \$7,500. (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**. The tuition will be paid in two installments, August and January.

Textbooks:	approximately \$800
Housing/Meals:	Students are responsible for their own housing and meals.
Transportation:	Students are responsible for providing their own transportation to and 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.

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%

For students who withdraw following January 1 when the 2nd payment is made, a similar refund policy will apply.

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).

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. 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 their college/university 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.

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 para-professionals.

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

TOTAL SEMESTER HOURS CREDIT = 40

PROGRAM OFFICIALS

James Quesenberry, MD, Medical Director
Pam Briese, MS, MLS(ASCP)^{CM}SC^{CM}, Program Director
Lauren Kelly, MS, MLS(ASCP)^{CM}, Assistant Professor

Faculty members include program officials, pathologists, and selected medical laboratory scientists. A current list of program faculty members and college/university advisors is available from the program director.

For more information contact the program director: 712-279-3967

STATEMENT OF POLICY

St. Luke's College's 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:

Chancellor
St. Luke's College
2800 Pierce Street Blvd.
Sioux City, IA 51104
712-279-3149
www.stlukescollege.edu

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Clinical Laboratory Sciences
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