



School of Medical Laboratory Science

Application and Admission Requirements

CRITERIA FOR SELECTION OF STUDENTS FOR THE MEDICAL LABORATORY SCIENCE PROGRAM

A. ELIGIBILITY REQUIREMENTS

1. The program start date is the third (3rd) week of July and end date is the second 2nd week of July.
2. Completed application form and official copies of all college transcripts to the Program Office. Send an official transcript with all pending courses shown along with the application packet. A final official transcript will be needed before starting the rotation.
3. All pre-internship university courses specified by the National Accrediting Agency for Clinical Laboratory Science (NAACLS) must be completed before the beginning of the student's internship.
4. The applicant must either:
 - a) possess a baccalaureate degree in a related science (e.g. Biology) before the start of the internship (4 + 1 student)OR
 - b) be eligible for a baccalaureate degree upon completion of the internship (3 + 1 student)
5. The overall GPA of the university courses must be 2.5 or greater. This may be revised depending on the applicant pool. Please contact the Program Director for verification of current requirements.
6. The calculated GPA attained from Chemistry, Biology, Math and related science courses must be 2.5 or greater.
7. The student must have a minimum of 3 references:
 - a. Major advisor
 - b. Biology instructor
 - c. Science instructor other than Biology
 - d. Personal reference from an individual who has known them for one or more years.

B. SOME FACTORS USED AS SELECTION CRITERIA

1. GPA in Chemistry, Biology and Math (Science GPA).
2. Previous employment, with a satisfactory work record, especially in a laboratory setting where quantitative or qualitative analysis is performed.
3. Courses completed with a satisfactory GPA in addition to those required by NAACLS in the following areas:
 - Parasitology, Biochemistry, Pathophysiology, Educational Methods, Management/Supervision, and advanced mathematics
4. Personal suitability based on ability to communicate; understanding of the profession and degree of maturity as evaluated by those involved in the personal interview of the applicant.
5. Rating of the applicant's ability by the major advisor and instructors.
6. Personal (character) reference.
7. Activities in high school and college, any special talents, abilities, awards, scholarships, etc. not directly related to the clinical laboratory field.

Student selection will be based on evaluation of information contained in application materials as well as personal evaluation of the applicant's suitability. The Program Director will explain the selection process to the applicant. This is usually done at the time of the personal interview.

If selected as a student in our MLS Program, the applicant must accept the appointment in writing and furnish the MLS Program any information deemed necessary by the Program Director before the start of the first week of attendance.

Termination Clause; If the hospital decides to terminate the MLS program at any time, the students in rotation at that time will be allowed to complete their rotation. If the termination occurs after you are accepted into the program, you will be given ample notice to try to obtain space in another program.

ACADEMIC PREREQUISITES FOR MEDICAL LABORATORY SCIENCE

The Medical Laboratory Science Program at URHCS is approved by The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). NAACLS approved programs in Medical Laboratory Science are required to accept only those students who have completed the following academic prerequisites:

BIOLOGY:

A minimum of 16 semester hours (24 quarter hours) to include: A full course in Microbiology. The Microbiology should include a laboratory. Immunology is strongly recommended. These courses must be applicable towards a major in Biology. Survey courses are acceptable.

CHEMISTRY:

A minimum of 16 semester hours (24 quarter hours) to include: organic or biochemistry. The organic or biochemistry should include a laboratory. These courses must be applicable towards a major in Biology. Survey courses are acceptable

MATHEMATICS:

A minimum of 6 hours in college mathematics to include: college algebra or calculus, and a biological statistics course. Remedial mathematics is not acceptable.

FOREIGN DEGREE HOLDERS:

In general, students who have obtained a degree in another country in areas other than biological sciences or chemistry will need to complete 24 semester hours (32 quarter hours) in both biology and chemistry rather than the 16 semester hours (24 quarter hours).

DEGREE REQUIREMENTS:

Applicants to the hospital-based medical laboratory science program must possess a baccalaureate degree in biology/chemistry or related science, or they must be degree eligible after the completion of the one year of the program. They must have completed all of their college or university's requirements for graduation before entering the program. They must have a GPA of 2.5 or better for both total and science GPA.

UPDATING COURSEWORK:

Applicants who have not taken an organic or biochemistry course or microbiology applicable towards the prerequisite within the last seven years must update their knowledge in these fields before attending a medical technology program. Updating coursework can be done by any of the following:

1. Taking the appropriate refresher course in either or both chemistry and biology. The courses must be applicable towards a major in chemistry or biology or medical technology. If not, they must be certified by the college or university as the equivalent. A grade of "C" or better must be achieved in each course.
2. College credit may be obtained for the above mentioned courses by challenge examination. If grade is given, it must be at least a "C". This arrangement must be made between an individual and the college or university. Successful completion of the examination must result in credit granted for an acceptable course.
3. If you have recently been working in the chemical or microbiological fields or related areas, your experience may exempt you from one or both of the update requirements

IMMUNIZATION POLICY

To comply with Title 25 Health Services, §97.61 – 97.72 of the Texas Administrative Code, all students enrolled in health related courses that will involve direct patient contact must meet compliance with state-mandated immunizations. Additional program requirements are included.

State-mandated and Program Immunization Requirements

In order to meet our obligations to our students and patients, all students must have had the following immunizations prior to their start of the clinical program.

a. Tetanus/Diphtheria (Td):

1. Official documentation of one dose of adult type tetanus/diphtheria toxoid (Td) within the last ten years.

b. Rubeola (Measles): Vaccination with live attenuated rubeola virus

1. Official documentation of immunization with two (2) doses of live Measles virus on or after the first birthday and at least 28 days apart. Persons vaccinated prior to 1968 must be revaccinated.
2. Laboratory (serologic) evidence of Measles immunity.

c. Mumps: Vaccination with live attenuated mumps, only available after 1967, or past history of mumps.

1. Official documentation of immunization with live Mumps virus on or after the first birthday.
2. Laboratory (serologic) evidence of Mumps immunity

d. Rubella (German Measles): Vaccination with the live rubella virus or a positive rubella antibody titer (copy of laboratory report).

1. Official documentation of immunization with live Rubella virus vaccine on or after the first birthday
2. Laboratory (serologic) evidence of Rubella immunity

NOTE: The diagnosis of rubella cannot be confirmed clinically. Other viral infections can cause similar symptoms and physical findings. Therefore, if you have not been vaccinated with live rubella vaccine, which was not available until 1969, and you believe you have had a natural infection with rubella virus, you must obtain a rubella antibody titer to verify the occurrence of the natural disease.

e. Hepatitis B: Students can be considered compliant for Hepatitis B only if they have documentation of at least one of the following;

1. Official documentation of immunization with three (3) doses of hepatitis B vaccine in accordance with the CDC Advisory Committee on Immunization Practices, prior to the start of direct patient care.

2. Laboratory (serologic) evidence of Hepatitis B immunity

f. Varicella (Chicken Pox): Allied health students in certain specific departments must provide proof of varicella vaccination, a positive titer confirming immunity or evidence of prior infection, or validated history of disease.

1. Official documentation of two doses of varicella vaccine, administered on or after the first birthday, if given after 13 years of age.

2. Laboratory (serologic) evidence of Varicella immunity.

3. A written, dated statement documenting the month/day/year of Varicella illness validated by the student, the student's parent or the student's physician.

g. Tuberculin Skin Test (TST, PPD): Students can be considered compliant for tuberculin testing only if they have documentation of at least one of the following (required annually);

1. Official documentation of negative Mantoux test.

2. Persons with positive TST result must provide official documentation of a negative chest x-ray report and a complete health care evaluation verifying a negative status for tuberculosis.

School of Medical Laboratory Science

Essential Functional Tasks --- School of Medical Laboratory Applicants

The ability to perform certain essential tasks is necessary for all students entering the United Regional Health Care System School of Medical Laboratory Science. The function of these tasks is essential for successfully completing the clinical education component of the Medical Technology Program. These essential functions are based upon the specialized nature of the work in the profession of medical laboratory science, and are aligned with the job performance standards for an employed medical laboratory scientist. Reasonable effort will be made to accommodate any disabilities to allow for performance of these essential functional tasks.

To meet the essential function requirements, the student shall:

1. Complete a pre-entry health history given by the Program Director and reviewed by the Medical Director.
2. Obtain or update all required immunizations as required by the school.
3. Complete visual testing and laboratory screening studies. These tests will be performed free of charge.

In addition to completing the above, the student shall possess:

4. The ability to read and write.
5. Visual acuity in order to discriminate color in urine chemistry reactions, chemical reactions, and microscopic identification of cell morphology, special stains, etc.
6. Adequate motor skills in order to perform phlebotomy procedures; instrument calibration and maintenance; delicate sampling procedures; a variety of manual, semi-automated, and automated analytical procedures; and computer keyboarding.
7. Physical ability to tolerate long periods of standing.
8. Physical strength for light lifting of weights of 25 pounds or less from the floor to waist level.
9. Communication skills, to include appropriate telephone skills, necessary to interact effectively with instructors, patients, and other members of the health care team.
10. Demonstrated ability to function effectively under stress.

A student who fails to meet the above essential functions may be denied admission to the program or be removed anytime during the rotation

CURRICULUM FOR MEDICAL LABORATORY SCIENCE STUDENTS

Students are required to attend classes/rotation eight hours a day, five days a week for a period of 50 of 52 weeks which constitutes a year of clinical training. The normal class times are as follows:

Orientation/Lectures;

First Eight (8) weeks of the program; 7:30 a.m. to 4:00 p.m

Lecture/Exams/Reviews/Case Studies;

Every Friday for the rest of the year; 7:30 a.m. to 4:00 p.m

TACLS meeting; One week (TBA)

Student meeting arranged by the Texas Academy of Clinical Laboratory Science
Students are accompanied by the Program Director and one Faculty member to attend this meeting and participate in a competition event against students from other MLS schools

Clinical Rotations; Monday thru Thursday as follows

Blood Bank;	6:30 a.m. to 3:00 p.m.(hematology
Chemistry;	6:30 a.m. to 3:00 p.m.
Urinalysis /Coagulation;	6:00 a.m. to 2:30 p.m.
Hematology;	5:30 a.m. to 2:00 p.m.
Microbiology;	6:00 a.m. to 2:30 p.m. OR 6:30 am to 3:00 pm

Occasionally students will be asked to come on a weekend day or days in order to observe and participate in equipment maintenance. When a student is asked to attend on a weekend, they will be given a day off during the week for every day they attended on the weekend.

Six official holidays are granted:

- New Year's
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day; includes Wednesday before and Friday after the holiday
- Christmas Day; Christmas Eve will be given if Christmas is on Saturday

Two weeks of vacation will be given which will consist of the **week between Christmas and New Year's** and a **week of spring break in March** that should closely coincide with most affiliated universities' spring breaks. Five personal days will be allowed to be used at student's discretion. **The students will be expected to make up the work missed due to personal days.**

Students should attend lectures and clinical rotation for 49 weeks or 1960 hours.
Total approximate hours = 2080 hrs (required) – 120 hrs (vacation days)=**1960 hours**

DETAILED DESCRIPTION OF THE SECTIONAL ROTATIONS

LECTURE SESSIONS:

The first eight weeks of the program are spent in the classroom where the students are lectured from 7:30 am to 4:00 pm. This is a total of **256** lecture hours. Lectures are given over the entire basic laboratory subject areas listed below. Additional lectures are given every Friday (41 weeks x 8 hrs= **320** hrs) during the clinical year to supplement the basic techniques as the student becomes familiar with laboratory procedures. This brings the didactic hours total to **576 didactic hours**.

ORIENTATION/GENERAL INFORMATION:

Hospital wide orientation is mandatory and is a two day process. It is usually scheduled for a Monday and Tuesday the week before the start date of the program. Approximately 20 lecture hours are spent on introduction to the hospital and laboratory policies, safety, equipment, quality assurance, quality control, education and management.

PHLEBOTOMY

One week of rotation through the phlebotomy department is required. This is included in lecture weeks. The student observes the phlebotomists and learns to draw blood on a simulated arm. Once proficient, the student is required to perform a certain number of different types of blood draws under the supervision of a phlebotomist.

HEMATOLOGY/COAGULATION/URINALYSIS:

Nine weeks of clinical rotation (**288 clinical hours**) are required. Theories of blood formation and blood forming tissues as well as testing and instrument use are taught. Practical works include cell morphology, cell maturation, blood counts, and determinations on manual, semi-automated and automated systems, special hematology stains, and bone marrow aspirations. The UA/Coag rotation includes learning about theories of coagulation and tests for the blood clotting process in coagulation and theories of anatomy and physiology of the kidney and the process of macro and micro urinalysis in testing urines.

MICROBIOLOGY:

Student spends the longest time in the Microbiology department requiring ten weeks of clinical rotation (**320 clinical hours**). This will include Virology, Parasitology, Mycology, Mycobacterium, and other pathogenic and non-pathogenic bacteria. Morphology, physiology, pathogenic significance and practical applications of morphology, as well as identification using differential media and antimicrobial sensitivities on these organisms will be covered in detail during this rotation.

IMMUNOLOGY/SEROLOGY/MOLECULAR DIAGNOSTICS/RESEARCH:

This rotation is four weeks long (**140 clinical hrs**) and is conducted at the hospital laboratory and the Midwestern State University campus. The students perform ANAs, DNA isolation, PCR, DNA and Protein gel electrophoresis, Gel Densitometry, pH and other molecular techniques as available. They also observe techniques such as GC/MS, HPLC, etc. During their other rotations, the students also perform serology and molecular diagnostic tests such as RPR, PCR, Elisa for Syphilis, MRSA, Cdiff, CTNG, BhCG, Drug TOX screens etc. The students present their topic of interest as a research paper and presentation.

CHEMISTRY:

The chemistry requires an extensive learning of the instrumentation as it is most automated department. Nine weeks (**288 clinical hours**) are spent learning theories and significance of clinical chemistry results in areas such as electrolyte balance, blood gases, liver function, and kidney function, enzymology, hormones, vitamins, special chemistry tests, therapeutic drug monitoring and toxicology.

IMMUNOHEMATOLOGY/BLOOD BANK:

During the eight weeks of clinical rotation (**256 clinical hours**) in blood bank the students learn about the history and theory of blood transfusion therapy, as well as practical applications such as ABO and Rh typing. Basic cross matching and antibody detection, in addition to techniques for mass processing blood and blood components and AABB Standards are also taught in detail in this rotation.

*** If performance in a department is not as expected, the time spent in that department will be increased depending upon the input of the department technologists.**

NAACLS is the accrediting body of the School. Any concerns can be sent to:

NAACLS
5600 North River Road, Suite 720
Rosemont, IL 60018-5119
(773)714-8880

If you have any questions, please do not hesitate to contact me.

Sincerely,

Asma Javed

Asma Javed, MS, MT (ASCP) Program Director
Ph; 940-764-3187
Email; ajaved@unitedregional.org

Please mail completed application packet and required documents to

United Regional HealthCare System
Att; Asma Javed, Program Director
School of Medical Technology
1600 11th St, Bethania Building
Wichita Falls, TX 76301