

MEDICAL LABORATORY SCIENCE PROGRAM STUDENT HANDBOOK

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**RADFORD UNIVERSITY CARILION
MEDICAL LABORATORY SCIENCE PROGRAM
STUDENT HANDBOOK**

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MEDICAL LABORATORY SCIENCE DESCRIPTION

The medical laboratory scientist is qualified by academic and applied science education to provide service and research in clinical laboratory science and related areas in rapidly changing and dynamic healthcare delivery systems.

Medical laboratory scientists perform, develop, evaluate, correlate, and assure accuracy and validity of laboratory information; direct and supervise clinical laboratory resources and operations; and collaborate in the diagnosis and treatment of patients. The medical laboratory scientist has diverse and multi-level functions in the principles, methodologies and performance of assays; problem-solving; troubleshooting techniques; interpretation and evaluation of clinical procedures and results; statistical approaches to data evaluation; principles and practices of quality assurance/quality improvement; and continuous assessment of laboratory services for all major areas practiced in the contemporary clinical laboratory.

Medical laboratory scientists possess the skills necessary for financial, operations, marketing, and human resource management of the clinical laboratory.

Medical laboratory scientists practice independently and collaboratively, being responsible for their own actions, as defined by the profession. They have the requisite knowledge and skills to educate laboratory professionals, other health care professionals, and others in laboratory practice as well as the public.

The ability to relate to people, a capacity for calm and reasoned judgment and a demonstration of commitment to the patient are essential qualities.

Communications skills extend to consultative interactions with members of the healthcare team, external relations, customer service and patient education.

Medical laboratory scientists demonstrate ethical and moral attitudes and principles that are necessary for gaining and maintaining the confidence of patients, professional associates, and the community.

NAACLS Standards for Accredited Programs

Adopted 2012, Revised 9/2013, 1/2014, 4/2014, 10/2014, 11/2014, 10/2015, 4/2016, 6/2016, 11/2016, 11/2017, 5/2018, 11/2018, 5/2019, 10/2019, 5/2020, 11/2020, 5/2021, 10/2021, 6/2022

RADFORD UNIVERSITY CARILION MEDICAL LABORATORY SCIENCE MISSION STATEMENT

The Medical Laboratory Science program at Radford University Carilion prepares students for a variety of career opportunities in medical, research, veterinary, and reference laboratories by supporting the mission of Radford University in empowering students from diverse backgrounds by providing transformative educational experiences. The program is dedicated to equipping students with the knowledge, skills, and ethics required to deliver quality patient care as part of the healthcare team.

MEDICAL LABORATORY SCIENCE PROGRAM PHILOSOPHY

As a student, each individual undergoes a great deal of personal change to become the professional provided above. We expect each of you will grow academically, professionally, and personally.

This is a year-long program of study accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) 5600 N. River Rd., Suite 720, Rosemont, IL 60018-5119.

Classes include courses in all branches of clinical laboratory science. School faculty, clinical laboratory scientists, and guest lecturers will deliver lectures. Staff clinical laboratory scientists provide one-on-one clinical training during your clinical rotations to teach you the procedures used in each laboratory section. To give you the widest possible experience, you will receive instruction in Clinical Microbiology, Clinical Chemistry, Urinalysis, Body Fluids, Hematology, Hemostasis, Immunohematology, Parasitology, Mycology, Immunology, Phlebotomy, and Laboratory Management.

Following graduation, you are expected to take the national certification examination offered through the American Society of Clinical Pathologists (ASCP).

The Radford University Carilion Medical Laboratory Science program believes:

- Continued advancement of knowledge in modern medicine has resulted in an ever-increasing demand for vital diagnostic tests. The complexities of laboratory science today require a trained staff to carry out all types of analyses which are often critical to the patient welfare.
- The patient has the right to the best medical care available and is entitled to have laboratory services which are performed with concern, accuracy, confidentiality, and speed.
- The medical laboratory scientist has a vital role on the laboratory team in areas such as supervision and management, problem solving, organization, and education.

- Faculty members are responsible for transfer of the aggregate of acquired knowledge, skill, judgment and integrity necessary to develop well-trained medical laboratory scientists.
- Educational, professional and personal growth is achieved by the student using initiative and self-motivation under the leadership of qualified practitioners having adequate facilities and resources.
- Those medical laboratory scientists who receive carefully planned instruction in a progressive hospital will be prepared for their role in the clinical laboratory and will contribute to the promotion and conservation of the health of the community.
- That the philosophy should be reviewed and revised periodically as changes occur in Medical Laboratory Science education, or as the needs of society change and the practice of medical care evolves.

MEDICAL LABORATORY SCIENCE PROGRAM PROGRAM GOALS

- To prepare ethically and technically competent medical laboratory scientists to perform as entry-level staff in clinical laboratories and related job markets
- To prepare students for certification as Medical Laboratory Scientists
- Students will achieve entry-level clinical competency in each area of the clinical laboratory
- To provide technical training with modern instrumentation and manual methodologies to allow graduates the flexibility to work in a variety of environments after program completion

MEDICAL LABORATORY SCIENCE PROGRAM ESSENTIAL FUNCTIONS

Essential functions are a set of requirements that students must meet for admission, retention and graduation from the program. Prior to admission, each student must agree that they are able to meet these requirements with or without reasonable accommodation. It is the responsibility of the student with disabilities to request accommodations that he/she feels are reasonable and are necessary to execute the essential function requirements described below. The Medical Laboratory Science student must possess the following skills:

- **Observation:** Distinguish objects macroscopically and microscopically; read and comprehend text, numbers, and graphs displayed in print and on video display monitors.
- **Movement:** Maneuver safely and efficiently in the workspace in order to perform assigned tasks.
- **Communication:** Read and comprehend educational and technical materials; communicate clearly, accurately, and professionally, both verbally and in a written format; and follow verbal and written instructions provided in English.
- **Intellect:** Receive, process, and utilize information in order to achieve satisfactory performance in all tasks; demonstrate judgment and critical-thinking skills.
- **Behavior:** Work independently or in a team; manage time efficiently; demonstrate respect to all regardless of individual values and opinions; adapt to working with unpleasant biologicals; and maintain sound psychological health and emotional stability.
- **Safety:** Recognize potentially hazardous materials, equipment, and situations; proceed safely to minimize risk of injury to self and nearby personnel.

MEDICAL LABORATORY SCIENCE PROGRAM ENTRY LEVEL COMPETENCIES

At entry level, the medical laboratory scientist will possess the entry level competencies necessary to perform the full range of clinical laboratory tests in areas such as Clinical Chemistry, Hematology/Hemostasis, Immunology, Immunohematology/Transfusion Medicine, Microbiology, Urine and Body Fluid Analysis and Laboratory Operations, and other emerging diagnostics, and will play a role in the development and evaluation of test systems and interpretive algorithms.

The medical laboratory scientist will have diverse responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/performance improvement wherever laboratory testing is researched, developed or performed.

At entry level, the medical laboratory scientist will have the following basic knowledge and skills in:

- A. Application of safety and governmental regulations and standards as applied to clinical laboratory science;
- B. Principles and practices of professional conduct and the significance of continuing professional development;
- C. Communications sufficient to serve the needs of patients, the public and members of the health care team;
- D. Principles and practices of administration and supervision as applied to clinical laboratory science;
- E. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services;
- F. Principles and practices of clinical study design, implementation and dissemination of results.

NAACLS Standards for Accredited Programs

Adopted 2012, Revised 9/2013, 1/2014, 4/2014, 10/2014, 11/2014, 10/2015, 4/2016, 6/2016, 11/2016, 11/2017, 5/2018, 11/2018, 5/2019, 10/2019, 5/2020, 11/2020, 5/2021, 10/2021, 6/2022

MEDICAL LABORATORY SCIENCE PROGRAM OPERATING GUIDELINES

Students are subject to all policies and procedures of Radford University Carilion (RUC), as well as the policies and procedures set forth in this handbook.

Clinical Rotation

The Program Director is responsible for the education of students during their clinical rotations. Students will work with various members of the laboratory staff who will mentor and instruct the students in technical skills. Requested changes to the clinical rotation schedule must be made in advance and students must receive approval in advance from the Program Director. Students are responsible for reporting any changes in schedule (including illness, injury, or unexpected events) to the Program Director.

Appropriate Attire

Students are expected to always present themselves in a professional manner, to include dress, deportment, communication, and manner. While in the clinical simulation rooms or in the laboratory for clinical rotations, students must wear lab-appropriate footwear. Lab appropriate footwear must completely enclose the foot, be non-porous, slip resistant, and durable. Students are allowed to choose footwear that suits their needs and personal taste, within the limits above. The Program Director reserves the right to reject these choices if the chosen footwear does not meet standards for safety.

Students are expected to wear scrubs while at the clinical site(s) for rotations. The style and color of scrubs will be communicated to accepted students during the orientation period. It is the students' responsibility to understand and comply with these regulations. All personal protective equipment (PPE) will be provided to the student.

Students are expected to wear only tasteful jewelry and attire, including nail, hair and/or other decorative jewelry or attire. Use of strong cologne or perfumes should be avoided, as many of our patients are sensitive to odors. There will be instances during the year when the students are asked to dress for professional presentations or other special events. This information will be communicated in advance with directives as to what is expected. Program officials reserve the right to ask that students refrain from wearing certain apparel, jewelry (including body jewelry), and/or scents, and may require that the student return home to change.

Daily Schedules

Every effort will be made to announce schedule changes before their occurrence, keeping in mind that daily schedules are subject to change.

- Lecture Schedules will be prepared and distributed in advance. These schedules will include classroom lectures and clinical simulation exercises, exam/test/quiz dates, holidays and special events.
- Clinical Rotation Schedules will be prepared for each semester and distributed in advance. During the program year, students will rotate through each department in the laboratory. The location, order, and time of rotations may vary among students. Each student is responsible for knowing in advance when and where to report for clinical rotations. The start and end times of clinical rotations will be communicated in advance, and will vary depending on the department in which the rotation is to occur. Break and lunch times during clinical rotations will be determined by the clinical staff training each student and may be affected by clinical workload.

Daily schedules may be altered by a number of factors including but not limited to departmental workload, lecture schedule, meetings, college events, and weather.

Examinations

Examinations are given on numerous occasions throughout the program year. Once an exam is graded and recorded, the student will be given ample opportunity to review and discuss the results. Should a student copy, share, discuss, or provide answers to any exam for students present or future, this will be considered a violation of the honor code policy and subject the student to dismissal.

Professional Certification Examination

Upon completing all academic requirements, the newly graduated medical laboratory scientist will be eligible for professional certification examinations:

Board of Certification (BOC)

Candidates for this national examination for certification as a Medical Laboratory Scientist must possess a baccalaureate degree and must have completed an approved program in medical laboratory science/clinical laboratory science/medical technology as recognized by National Accrediting Agency for Clinical Laboratory Science. This examination is administered by the American Society of Clinical Pathologists (ASCP), with all questions, scoring, fee collection, and registration the responsibility of ASCP. The examination is conducted using computer-adaptive testing and offered at numerous sites. The program faculty will aid students as they prepare for this exam by assisting with online registration, facilitating student membership in ASCP, and directing students to appropriate review materials. Time will be scheduled during the spring semester for review of materials to help students prepare for the certification exam. Program faculty are also willing to work with students one-on-one in preparation for the certification examination, but this must be scheduled in advance with program faculty.

MEDICAL LABORATORY SCIENCE PROGRAM ATTENDANCE POLICY

All students are expected to attend each scheduled day of the school year, including all lectures, unless approval is given in advance. Acceptable reasons for absence may include appointments, job interviews, or other events as approved by program faculty. The student must notify program faculty at least 24 hours prior to the scheduled absence to obtain approval.

The student must bring an excuse from the physician who treated him/her for each illness that extends beyond two days. Absences from the program due to extended illness may necessitate rotation schedule changes or an extension of the graduation date to complete program requirements.

A student who becomes ill or injured during a clinical rotation must notify the Program Director. (It is acceptable to leave a message for the Program Director; you do not have to wait for a call back. You may have another student, family member, or laboratory staff member call for you in the event that you are sick or injured.)

IF ANY ILLNESS, INJURY, OR EMERGENCY OCCURS OVERNIGHT WHICH WILL KEEP THE STUDENT FROM ATTENDING CLASS, THE STUDENT MUST NOTIFY PROGRAM FACULTY. IF SCHEDULED FOR CLINICAL ROTATIONS, THE STUDENT MUST ALSO NOTIFY THE APPROPRIATE CLINICAL DEPARTMENT. DURING YOUR CLINICAL ROTATIONS, YOU ARE RESPONSIBLE FOR KNOWING TO WHOM YOU REPORT.

Students who suffer illness or injury, or have an emergency, should communicate this information to program faculty as soon as possible. Accommodations, if granted, will be determined on an individual basis by program faculty.

Students who miss lecture time are responsible for all material covered during the absence. All exams/tests/quizzes are to be taken on the scheduled date. If a lecture exam is missed, it must be made up within 5 class/working days of the originally scheduled date. The make-up exam must be scheduled in advance with the instructor of that subject. Failure to do so will result in a grade of zero for that exam/test/quiz. Assignments due during approved student absences must be turned in within 24 hours of the student's return. A student who misses clinical time and is unable to complete the clinical competency due to this absence, will be required to make up this clinical rotation time. The Program Director will schedule any make up clinical rotation time with the student and the clinical staff. If you are going to be tardy, please inform program faculty and/or the appropriate clinical department of your anticipated arrival time, and reason for tardiness.

Program faculty realize that a student may need to be absent due to the loss of a family member. Three days as it relates to the student's schedule may be provided if there is a death in the immediate family. These three days are to include the day of the funeral. Students must request leave from program faculty as soon as they are aware of the need.

MEDICAL LABORATORY SCIENCE PROGRAM SERVICE WORK POLICY

Students enrolled in the following courses will be required to complete clinical rotations in the clinical laboratory of one of our clinical partners:

- MLAB 421C
- MLAB 431C

During these required clinical rotations, students will never be used as a replacement for paid staff.

During these required clinical rotations, students will never be expected to perform any diagnostic testing nor release results independently.

Students may seek or be offered employment in the clinical laboratory of our clinical partners.

- This employment must be on a voluntary/non-compulsory basis.
- The student must be paid for this employment, according to the policies of the clinical laboratory.
- This employment must be restricted to non-instructional hours.
- This employment will not be considered as part of the course requirements.
- Students must meet applicable clinical competencies, according to the policies of the clinical laboratory.
- Students will be supervised by clinical laboratory staff, according to the policies of the clinical laboratory.

Neither the Medical Laboratory Science Program Director nor Faculty will be involved in any hiring decisions, disciplinary actions, or evaluations related to the student's employment.

MEDICAL LABORATORY SCIENCE PROGRAM EXPECTATIONS FOR CLINICAL ROTATIONS

- Students are required to record attendance at clinical rotations. Failure to do accurately may result in disciplinary action. If a mistake occurs when entering time, or a correction needs to be made, the student should notify the Program Director in writing as soon as possible so the records will be correct.
- Students are expected to arrive at the assigned clinical area at the appointed time, ready to work. Arrival on time does not mean flying out of the elevator, being at your locker, or wheeling into the parking lot, but **IN THE DEPARTMENT**, ready to work.
- While on clinical rotations, students are under the supervision and guidance of the clinical instructors. Breaks (if the workload permits) and lunch time are assigned by these people. You will return to the bench at the appointed time, ready to work.
- You are expected to remain in your assigned department on the scheduled date and time. Evidence that you left the department before completing the shift, without appropriate documentation from clinical staff or contacting the Program Director, can result in disciplinary action.
- The use of cell phones, pagers, tablets, computers, and other personal electronic devices is prohibited during clinical rotations.
- Should you become ill during your clinical rotation, your clinical instructor may send you home. You should not leave the clinical area without first contacting the Program Director. You should leave a message that you are going home because of illness if you are unable to speak with the Program Director. Someone (laboratory preceptor, for example) may call on your behalf if you are too sick to do this on your own.
- There may be times when the workload has a quiet spell, or there may be tasks that you are not asked to complete during your clinical rotation. During this time, you may be assigned study time by your clinical instructor. Should this occur, you are not to leave the clinical area, and should remain alert and ready to assist in the completion of any tasks.
- When instrumentation is undergoing maintenance or repair, you should take this opportunity to learn. Ask the clinical instructor if you can be of assistance. If instructed otherwise, stay out of the way, and remain ready to assist.
- Take the initiative to review skills or concepts when you have a break in the workload. For example: do differentials and ask the tech to check your counts, repeat a crossmatch and compare your results to the tech, or read gram stains and review the plates in microbiology to see if you can determine the organism.
- Students will be evaluated by their clinical instructors and these evaluations will be forwarded to program faculty. Evidence that the student has failed to meet expectations may result in a counseling session with program faculty, disciplinary action, and/or a reduction in grades.

MEDICAL LABORATORY SCIENCE PROGRAM PROFESSIONAL BEHAVIOR

The behaviors listed below, which are considered reflective of professionalism, should be demonstrated consistently. Behaviors which divert from accepted professional behavior will not be tolerated and will be addressed by program faculty. Counseling sessions, with documentation, may be held to guide the students toward improvement.

If an infraction is considered very severe, (HIPAA violation, danger to self or classmates, threatening behavior, unlawful conduct, etc.) immediate suspension or dismissal from the program could occur.

Professional Behaviors Expected of Medical Laboratory Students

- Follows all policies and procedures, including but not limited to, HIPAA, clinical rotation site operating procedures/regulations, and the Radford University Carilion Honor Code
- Communicates in a positive way to and about the faculty, staff, fellow students, other hospital employees, patients, visitors, and guests
- Behavior and verbal communications are non-aggressive and non-argumentative
- Brings concerns and problems to program faculty in a calm and mature manner, discussing sensitive matters in private
- Practices privacy and confidentiality on all matters concerning patients and peers
- Maintains composure when dealing with difficult people and/or difficult situations
- Behavior and conversation do not distract others from their duties
- Practices established safety procedures at all times
- Does not falsify laboratory data or other information
- Is precise, accurate, and correct while working; does not continually make errors
- Responds favorably to instructions and assignments made by program faculty
- Accepts decisions made by program faculty without animosity
- Takes initiative and responsibility for meeting the objectives of the educational process
- Is conscientious concerning performance of laboratory procedures and the reporting of patient results

MEDICAL LABORATORY SCIENCE PROGRAM ACADEMIC GRADING POLICIES

Students enrolled in the Medical Laboratory Science Program must achieve a passing average of at least 80%. Students must also be able to perform at the acceptable level in laboratory practice, as evidenced by completion of clinical competency in each clinical rotation. The grading scale for all courses will be published in the course syllabi. Students who miss lecture time are responsible for all material covered during the absence. All exams/tests/quizzes are to be taken on the scheduled date. If a lecture exam is missed, it must be made up within 5 class/working days of the originally scheduled date. The make-up exam must be scheduled in advance with the instructor of that subject. Failure to do so will result in a grade of zero for that exam/test/quiz. Assignments due during approved student absences must be turned in within 24 hours of the student's return.

Successful completion of the Medical Laboratory Program is not contingent upon any external examination or certification.

MEDICAL LABORATORY SCIENCE PROGRAM TEACH OUT PLAN

In the event of any disruption to the normal education process (including but not limited to natural disasters, institutional closure, academic program closure, clinical site contract expiration), the Radford University Carilion Medical Laboratory Science Program Director, Faculty, and Administration will work with regional partners and resources to determine a plan to resume student didactic and clinical experiences. A student in good standing who has begun clinical rotations shall be permitted to complete the requirements for successful completion of the curriculum. Students who have not begun the senior/clinical year will be evaluated on an individual basis to determine a path for completion of the Medical Laboratory Science degree, facilitate transfer to another institution, or effect a change of major at the current institution. Notification to the National Accrediting Agency for Clinical Laboratory Science (NAACLS) will occur within 30 days of any such disruption necessitating the creation of a teach out plan.