



INOVA FAIRFAX HOSPITAL

School of Medical Laboratory Science



Student Handbook

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I. General Information

Inova Fairfax Hospital

Inova is a leading not-for-profit healthcare system based in Northern Virginia that serves more than two million people each year from throughout the Washington, DC, metro area and beyond. Governed by a volunteer board of community members, Inova has grown from one hospital in 1956 to a nationally recognized, comprehensive network of hospitals, outpatient services and facilities, primary and specialty care physician practices, and health and wellness initiatives.

Inova's five hospitals include more than 1,900 licensed beds and 18,000 employees. Inova encompasses the full array of health services, including the area's only Level 1 Trauma Center and Level IV neonatal intensive care unit. Inova is also home to nationally and internationally recognized Inova Heart and Vascular Institute (IHVI), Inova Translational Medicine Institute (ITMI) focused on genomics research, Inova Neuroscience Institute, Inova Schar Cancer Institute and Inova Children's Hospital.

Inova's Mission:

To provide world-class healthcare – every time, every touch to each person in every community we have the privilege to serve.

Inova's Values and Cultural Beliefs:

- **Patient Always** – We work with compassion to ensure every action we take puts the patient and their family first.
- **Value People** – We create an environment of growth and respect, where contributions are recognized and rewarded.
- **One Team** – We are stronger together as a unified healthcare system, enriched by our diversity and driven by a shared purpose.
- **Integrity** – We consistently uphold the highest moral and ethical standards and honor our commitments.
- **Excellence** – We act with courage, hold ourselves accountable, and achieve results at the highest level of performance in our field.

Our vision:

To be among the leading health systems in the nation

We seek to optimize the health and well-being of each individual we serve. We will achieve this by building the future of health with a focus on the following:

- We will reinvent hospital-based care to increase value for our patients
- We will look outside our hospitals to build an integrated network of providers and programs to support our community
- We will gain national and international recognition and funding - as well as an expanded patient base - through world-renowned specialty care and leading-edge corporate and consumer health programs

Our Commitment:

As a not-for-profit health system, our commitment is to meet the healthcare needs and improve the health of the communities we serve. We work in innovative ways to meet the healthcare challenges of today, while striving to meet the needs of the future.

Recognizing that research and innovation are vital elements to providing world-class patient care, Inova participates in a large number of cutting-edge clinical trials and research projects. Our diverse clinical activities make us a first-class location for scientific research.

Our commitment to ensure high-quality care is strengthened by our range of rigorous professional education programs to improve medical practice skills and patient outcomes. Inova's work extends beyond the walls of our hospitals and outpatient centers. We bring disease-prevention programs, health and exercise classes, and improved access to care for vulnerable children and adults directly to the community through our many outreach programs and partnerships.

At Inova, more than 18,000 employees demonstrate their commitment every day to providing the community with expert, world-class, compassionate patient care.

Inova Fairfax Hospital:

- Is fully accredited by The Joint Commission (TJC).
- Is licensed by the Commonwealth of Virginia's Department of Health and the Department of Mental Hygiene and Hospitals.
- Is approved by the American Medical Association's Council on Medical Education for an internship training program.
- Has approved programs in medical laboratory science, life support technology and respiratory therapy, and is engaged in nursing education as the principal clinical facility for both the Fairfax County.
- School of Practical Nursing and the professional nursing programs at Northern Virginia Community College and George Mason University.
- Has physician residency programs in cooperation with the Georgetown University School of Medicine, the George Washington University School, the Medical College of Virginia and the University of Virginia Medical School.

Medical Laboratory Science Program

Introduction

The Inova Fairfax Hospital School of Medical Laboratory Science is a division of the department of pathology. The school, established in 1963, is a highly competitive and rigorous, 11 month clinical training program in Medical Laboratory Science, enrolling up to 6-8 students annually. At the end of the clinical year and upon successful completion of all program requirements, students are awarded a certificate from the Inova Fairfax Hospital School of Medical Laboratory Science and are eligible to sit for the National Board of Certification examination.

The program is intended to qualify its graduates to take the National Board of Certification examination given by the American Society for Clinical Pathology in pursuit of the MLS (ASCP) certification. The certification is necessary in order to work as a Medical Laboratory Scientist. We pride ourselves in graduating highly qualified medical laboratory scientists who are competent to enter the laboratory profession.

The program is proud to be fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd, Suite 720, Rosemont, Illinois 60018, (773) 714-8880, www.naacls.org. The program is required to comply with NAACLS standards for Medical Laboratory Science. NAACLS accreditation assures that the Inova Fairfax Hospital School of Medical Laboratory Science has met or exceeded specific national standards and speaks to the excellent quality of the education our students receive, the credentials of our faculty and the relationships we have with the professional community in this area. The school received the maximum accreditation award in 2019 which means that our program has demonstrated on-going commitment of our faculty in providing the highest caliber academics and excellence in MLS education.

The Inova Fairfax Hospital School of Medical Laboratory Science is certified to operate by the State Council of Higher Education for Virginia (www.schev.edu), James Monroe Building, and 101 North Fourteenth Street, Richmond, Virginia 23219.

The curriculum encompasses didactic and clinical experiences; the development of professional and leadership skills; and a commitment to life-long learning. The program promotes the values of respect for others, integrity, teamwork, and excellence in providing the high-quality care patients need and deserve.

The students are trained as generalists in the program through a combination of classroom, student lab and clinical practicum experience. During their clinical year of training, students rotate through the laboratory sections and participate in a corresponding lecture series. Laboratory rotations include Blood Bank, Chemistry, Urinalysis, Coagulation, Hematology, Immunology, and Microbiology. Settings for laboratory rotations include the Inova Fairfax Medical Campus Laboratory, Inova Fair oaks Hospital, Inova Loudoun Hospital, Inova Alexandria Hospital, Inova Mount Vernon Hospital, the Inova Blood Donor Services, Inova Laboratories and the facilities of Quest Diagnostics Nichols Institute, Inc. Here students receive systematic instruction and practical experience in technical methods and learn the relationship of laboratory test results to disease states.

The classroom is the setting for the lecture series. Through the lecture-conference method, emphasis is placed on understanding the theory behind the technical methods learned in the laboratory and their clinical applications.

Course materials are presented to students within the Course Management System called Canvas. Students are able to access and review lecture materials as many times as they wish or review at their own pace.

Additionally, the school offers supplemental resources using an online self-learning module through MediaLab. MediaLab provides online continuing education and compliance courses for medical laboratory scientists and students. Mandatory courses will be assigned by the clinical instructors in each section. Students are encouraged to complete as many courses as possible. The program purchases MediaLab exam simulator for our students for the duration of the program and in preparation for the Board of Certification examination.

The Student Handbook contains detail information regarding the program's policies, curriculum, students' rights, privileges and responsibilities. Students are encouraged to use this handbook as a reference during the program.

The Medical Laboratory Science Profession

Medical Laboratory Science is a branch of medicine dealing with laboratory analyses used in the diagnosis, prognosis, and treatment of disease as well as in the maintenance of health.

Medical laboratory scientists also known as Clinical Laboratory Scientists or Medical Technologists play a vital role in the care provided to our patients. Medical laboratory scientists are highly skilled medical professionals that develop, perform and troubleshoot the assays and methods for analysis of blood, tissue and body fluids in diagnostic laboratories. Working with blood samples and other body fluids and tissues, medical laboratory scientist perform a broad range of complex, and quantitative lab tests, from biological screening to molecular analysis. Medical laboratory scientists must have a sound background in the physical and biological sciences in order to understand the scientific theory behind the procedures they perform.

Approximately 75% of medical decisions, diagnosis, treatment and evaluations, are based on the interpretations of laboratory test results. Laboratory testing is used for diagnosis, prognosis or risk determination, and monitoring ongoing treatment. Specialty areas of laboratory medicine include

clinical chemistry, hematology, transfusion medicine, clinical immunology, clinical microbiology and the emerging field of molecular diagnostics.

Medical laboratory science is a fast-growing field, and there is a great demand for medical laboratory scientists. According to the U.S. Department of Labor, the field is growing much faster than the national average. Approximately two-thirds of all medical laboratory scientists are employed in hospital laboratories. Most others are employed in private laboratories, physician offices, clinics, the armed forces, local, state and federal health agencies, industrial medical laboratories, pharmaceutical companies, and in numerous public and private research programs dedicated to the study of specific diseases.

Our graduates are in high demand with 100% obtaining employment within 3 months of graduation. With the high demand for our graduates and the wide variety of career options, this degree is an excellent choice for students interested in a health science career.

Statement of Purpose:

The Inova Fairfax Hospital School of Medical Laboratory Science is dedicated to the advancement of knowledge, to instruction of students in laboratory theory and techniques and to the provision of laboratory healthcare. The primary and major concern of the Inova Fairfax Hospital and the laboratory are our patients. However, within the framework of a teaching hospital, the School of Medical Laboratory Science is able to afford the opportunity for medical laboratory education in a real-world setting. The Program, well aware of the rapidity of change, seeks to provide the most meaningful education for its students, by constant re-examination of its methods and goals.

Our Commitment:

The Inova Fairfax Hospital School of Medical Laboratory Science is committed to providing outstanding education through quality instruction, research and service, which will allow our students to acquire the knowledge, skills and attitudes necessary to attain a high level of competency in the practice of Medical Laboratory Science. We are driven by the belief that by graduating competent, quality minded, ethical professionals, we will enhance patient safety in the community we serve and perpetuate the highest standards in the field of medical laboratory science.

Our Mission:

The mission of the Inova Fairfax Hospital School of Medical Laboratory Science is to graduate highly skilled, knowledgeable and ethical medical laboratory scientists who are committed to excellence, innovation and evidence-based practice in a rapidly changing health-care environment. The program strives to create an environment that nurtures Medical Laboratory Science as a unique and highly specialized profession.

The program aims to prepare its students to achieve a passing score on the American Society of Clinical Pathology (ASCP) MLS Board of Certification Examination and to meet the regional, national and global workforce needs.

Program Goals:

- Assure that entry-level medical laboratory scientists are adequately trained and equipped with the knowledge, skills and background experience essential for becoming a professional medical laboratory scientist.
- To provide the most meaningful and high quality clinical education experience for our students both academically and clinically in all areas of the clinical laboratory so that students are well prepared for the workforce.

- To offer an exceptional and sustainable curriculum that meets and exceeds the standards of training set forth by the National Accrediting Agency for Clinical Laboratory Science.
- To provide students with adequate knowledge and background experience to qualify for and pass the national certification examination.
- To Instill the highest standards of performance, professional ethics and integrity in all graduates
- Develop graduates with the capacity to participate in leadership roles in education and management
- To recruit and employ program graduates in the state of Virginia and the nation.
- To perform continuous systematic evaluation and necessary modifications, of all program processes, to ensure the effectiveness of the program.
- To foster an environment which develops crucial thinking, clinical reasoning, and creative problem solving

The Laboratory

The Inova Fairfax Hospital Department of Pathology and the Laboratory is dedicated to providing the highest quality clinical laboratory services necessary to support the management of the general health and well-being of the community. The department ensures that these services are of the highest quality through its continuing education, quality control, quality assurance programs and through interactive communication with other members of the health care team.

Recognizing the importance of education in health care, the department provides professional level training for pathology residents and medical laboratory science students.

The laboratory at Inova Fairfax Hospital is accredited by the College of American Pathologists, CLIA, FDA and the American Association of Blood Banks. Diagnostic tests are performed in a wide variety of disciplines including hematology, urinalysis, body fluid analysis, clinical chemistry, immunohematology (blood banking), immunology, flow cytometry, microbiology, and parasitology using a wide variety of manual and automated methods.

The laboratory is a fully computerized, progressive laboratory which performs over 6.5 million tests annually. Using state of the art automation and equipment, the laboratory seeks every opportunity to meet the unique needs of each person we are privileged to serve – every time, every touch.

All laboratory staff including pathologists and certified medical laboratory scientists, maintain continuous laboratory service 24 hours a day. Our staff includes dedicated and experienced clinical instructors, laboratory scientists, physicians, and administrators, all of whom participate in the education of our students. Staff members and clinical instructors participate actively in professional societies which provide continuing educational opportunities for advancement. All clinical instructors must demonstrate adequate knowledge and proficiency in their content areas and demonstrate the ability to teach effectively at the MLS level. They maintain continuing education as required by NAACLS standards. An active in-service educational program is conducted for all laboratory personnel.

Contact Information

Information about the Inova Fairfax Hospital Medical Laboratory Science Program may be obtained by contacting the following individuals.

Program Director: Deborah L Hixon, MBA, MT(ASCP)SM
Inova Fairfax Hospital
School of Medical Laboratory Science
3300 Gallows Road, Falls Church, VA 22042-3300
Debbie.hixon@inova.org
(703)776-2892

Program Supervisor: Shabrina Shah MLS (ASCP)BB^{CM}
Shabrina.shah@inova.org
(703)776-2695
(703)776-3401

Website Address: <https://www.inova.org/education/student-educational-opportunities/medical-laboratory-science-program>

Hours of Operation

The School is located within the clinical laboratory at Inova Fairfax Hospital. The laboratory is operational 24- hours-a-day, 7-days-a-week. Students have access to the laboratory at any time by use of employee badge. School officials (Program Director, Program Supervisor) are generally onsite Monday through Friday from 7:00 am – 4:30 pm. For hours of required attendance for students, please see the Attendance Policy section of this handbook.

Program Faculty and Administration

Medical Director.....Hassan Nayer, MD, Chairman Department of Pathology

Program Medical Director/Advisor.....Lucy Nam, MD, Pathologist

Program Director Deborah L Hixon, MBA, MT(ASCP)SM
Director, Laboratory Services

Program Supervisor..... Shabrina Shah MLS(ASCP)BB^{CM}

Clinical Instructors/Faculty:

Blood Bank..... Melissa Ayala, MLS(ASCP)^{CM}

Chemistry Jennifer Garlick, MLS(ASCP)^{CM}
Debbie Winfree, MLS(ASCP)^{CM}

Coagulation Mi Kim, MLS(ASCP)^{CM}

Hematology	Stephanie Schell, MLS(ASCP) ^{CM}
Microbiology	Heather Purdy, MLS(ASCP) ^{CM}
Urinalysis.....	Jennifer Thura, MLS(ASCP)SH,MB ^{CM}
Immunology.....	Cara Palermo, MLS(ASCP) ^{CM}
Inova Blood Donor Center.....	Nicolas Lilly, Director
Quest Diagnostics	Harvey Vandenburg MT(ASCP)DLM

Admissions Policy and Procedure

Academic Requirements

Applicants to the Medical Laboratory Science Program must have completed a baccalaureate degree in chemistry, biological sciences or medical technology or must be enrolled in a degree program at one of the academic institutions with which the Inova Fairfax Hospital School of Medical Laboratory Science has a formal affiliation. Before admission to a hospital-based medical laboratory science program, applicants must have completed all pre-clinical medical laboratory science requirements of the college and must be eligible for a baccalaureate degree at the completion of the clinical program.

Prerequisites for admission to the Inova Fairfax Hospital School of Medical Laboratory Science include the following courses. Applicants must have completed these courses by the end of the Spring semester preceding entry to the program.

- **Chemistry – 16 semester hours. Organic and/or biological chemistry must be included.**
- **Biological science – 16 semester hours. Microbiology (including bacteriology) and immunology must be included.**
- **Mathematics – a minimum of one course in college-level mathematics.**

The content of chemistry and biological science courses must be acceptable towards a major in those fields or in medical laboratory science or must be certified by the college/university as equivalent. Survey courses do not qualify as fulfillment of chemistry and biological science prerequisites. Remedial mathematics courses do not satisfy the mathematics requirements.

Science coursework must be completed within 7 years prior to enrollment. Individuals who meet the minimum requirements 7 years or more prior to application are requested to update their coursework in immunology. Other areas suggested for updating include microbiology, organic and or biochemistry.

GPA Requirement

The applicant must possess at least a 2.5 GPA cumulative from all colleges/universities attended and at least a 2.5 GPA in the sciences which is calculated from the required courses listed above.

Non-Academic Requirements for Admission

Personal Qualifications

Personal qualifications for a career in Medical Laboratory Science include an interest in science and medicine, analytical thinking, problem-solving skills and a genuine desire to help others. Other requirements include good communication skills, good judgment, a sense of personal responsibility and the ability to work cooperatively with others. In addition, good general health, endurance, and a willingness to work long hours, both in school and on the job, are essential.

Selection Process

After reviewing the applications, the program's Admissions Committee will select applicants to be interviewed. Only those applicants whose application files are complete will be considered for an interview. Interviews are conducted in the month of January. Applicants are selected based on a point system which takes into consideration the following: overall GPA which is calculated by looking at the GPA across all institutions where an applicant has earned credit, science GPA which is calculated by looking at only those courses required for admission, college major, affiliate status which is determined by whether or not an applicant is a student or graduate of one of our academic affiliates, relevant coursework, incidence of course repeats and withdrawals, strength of recommendation letters, interview performance, motivation/interest, work experience, and communication skills/etiquette and overall knowledge and understanding of the profession.

The information obtained during the interview process will be examined and applicants are then chosen for enrollment in the program for the following year. Applicants are evaluated without regard for gender, age, race, color, creed, religion, pregnancy, or related medical conditions, marital status, national origin, mental or physical disability or any other characteristic protected by applicable federal, state, or local law. Applicants selected are notified of their admission status via phone, an email and a follow-up letter during the month of January. Notification of acceptance letters requires a response within 2 weeks of the date of the letter. If the student decides to accept the position within the program they must sign enrollment agreement and submit an acceptance letter along with a \$100 fee to reserve their position. The entire fee is applied toward tuition.

Upon receipt of the acceptance letter and the reservation fee, the student will be provided with the student handbook, a truth-in-lending statement and an enrollment agreement. The student will be given 2 weeks to thoroughly and carefully review each document and the student handbook. Should the student choose to accept all terms outlined in each document and the student handbook, the student will be required to sign and return the documents back to the school within the due date stated in the offer letter.

Admission is contingent upon satisfactorily passing all parts of Inova's employment process. This includes a health assessment and drug screening by Inova Fairfax Hospital's Team Member Health & Safety clearance by Inova Human Resources Department to include a criminal background check. Evaluation and clearance by Inova Fairfax Hospital's Team Member Health & Safety and Inova Human Resources Department must take place no later than 1 month prior to the start date of the program. Failure to satisfactorily complete these evaluations by this deadline will result in revocation of the conditional admission. In such a case, the applicant must reapply in the next admission cycle to be considered for future acceptance.

Admission may be conditional on completion of pre-requisite coursework. Satisfactory completion of this coursework must be documented by official transcript and must be submitted at least 1 month

prior to the start of the program. Failure to satisfactorily complete or provide evidence of completion by this deadline will result in revocation of the conditional admission. In such a case, the applicant must reapply in the next admission cycle to be considered for future acceptance.

Technical Standards

Technical standards represent the essential non-academic requirements of the program that students must master to successfully participate in the program and become employable. Prior to admission each student must agree that they can, and are prepared to meet these requirements with or without reasonable accommodation.

Inova Fairfax Hospital School of Medical Laboratory Science is an equal opportunity employer. Inova Fairfax Hospital and its Program does not discriminate on the basis of gender, age, race, color, creed, religion, pregnancy, or related medical conditions, marital status, national origin, mental or physical disability or any other characteristic protected by applicable federal, state, or local law. The Program will provide reasonable accommodations to otherwise qualified students with disabilities. The following is a list of the technical abilities and skills:

1. Manual Dexterity

Students must:

- Be able to manipulate objects precisely and perform assays that require fine or gross motor skills using good eye-hand physical coordination (such as pipetting, measure and aliquot liquids).
- Be able to handle needles and syringes and perform phlebotomy safely and accurately.
- Be able to handle flammable and hazardous chemicals, electrical and infectious biological materials.
- Be able to reach instruments, bench tops, and equipment to perform duties adequately.
- Be able to carry objects weighing up to 20 pounds and have the stamina to perform academic program functions over an 8 hour day including standing or sitting.
- Be able to maneuver freely in the clinical laboratory setting and in a patient-care setting.

2. Vision

Students must:

- Be able to distinguish colors, hue, shading or intensity and clarity.
- Be able to use a microscope to read biological material and identify fine structural differences and color.
- Be able to read and interpret charts, graphs, and labels in print and video monitor.

3. Communication Skills

Students must:

- Be able to communicate in English, both verbally and in writing to all staff, employees, students, patients and other healthcare workers.

4. Intellectual and Critical Thinking Skills

Students must:

- Be able to judge, comprehend, make calculations, analyze and perform complex interpretative testing.
- Be able to solve problems and apply critical thinking under normal and stressful situations.

5. Ethical Standards

Students must:

- Exercise ethical judgement, integrity, honesty, dependability, patient confidentiality and adhere to the academic and professional code of ethics.

6. Safety

Students must:

- Be able to recognize and respond to safety issues, including recognizing emergency situations and taking appropriate actions.
- Be able to adhere to the regulations of accrediting agencies, comply with safety regulations of the laboratory and maintain a safe environment for themselves and others.

II. Curriculum and Requirements of the Medical Laboratory Science Program

Curriculum

The medical laboratory science student will study the clinical and diagnostic aspects along with case studies, pre-analytical, analytical and post-analytical components of laboratory services, problem solving, and instrumentation, point of care, safety, quality control and quality assurance for the courses listed below. The program consists of courses containing didactic lecture series and supervised clinical rotation in the clinical laboratories of Chemistry, Hematology, Immunohematology, Immunology, Microbiology, Coagulation, Urinalysis, Lab Operations and Phlebotomy. The instructional time is equivalent to more than 1,700 clock hours or 38 semester credit hours.

In order to graduate from Inova Fairfax Hospital School of Medical Laboratory Science and to qualify to take the ASCP Board of Certification examination, the requirements are as follows:

Course Descriptions

- **MLS 401 Orientation to the Problems and Practices of the Clinical Laboratory (2 credit hours)**

Orientation to the clinical laboratory includes lectures and demonstration on principles of venipuncture. Lectures emphasize theory regarding blood collection procedures, and laboratory sessions introduce basic techniques for the collection of blood samples including venipuncture and capillary puncture. Clinical internship consists of supervised practice in the collection of blood samples. Emphasis is placed on professional conduct, adherence to safety regulations and policies.

Laboratory operations includes: discussions of quality control, budgeting, personnel, laboratory space, supplies and equipment, concepts and principals of laboratory operations, general principles of federal and state regulations, laboratory safety, laboratory and hospital information system, ethics and medical/legal matters. Basic laboratory techniques such as pipetting, microscopy, and laboratory mathematics are also included.

- **MLS 402 Clinical Hematology and Coagulation (7 credit hours)**

Course involves the study of maturation, morphology and function of blood cells and their role in disease processes. Emphasis is placed on both manual and automated laboratory procedures, blood cell identification, and the relationship of cells with specific diseases such as anemia, leukemia, lymphomas and reactive processes. As part of Hematology, the basic principles and applications of flow cytometry is included.

This course also covers the mechanisms involved in the coagulation system, including platelet function, coagulation factors, and fibrinolytic system. Bleeding and clotting disorders as well as treatment modalities are discussed. Laboratory evaluation of the hemostatic process and the correlation of laboratory findings with disease states will be emphasized.

- **MLS 403 Clinical Urinalysis and Fluids (3 credit hours)**

This course of study covers the physical, chemical and microscopic analysis of urine. Renal function, disease states, and the physiology and clinical analysis of CSF and other body fluids are also covered. Emphasis is placed on laboratory procedures, morphological findings and the

correlation of test results to disease states.

- **MLS 404 Immunohematology (7 credit hours)**

Topics of study include genetics and biology of red cell antigen systems, ABO/Rh blood typing, antibody screening and identification, compatibility testing and solving compatibility problems, transfusion reactions, donor requirements, preparation of blood components for transfusion, quality and inventory control, instrumentation, and current practices in component preparation. Additionally, hemolytic disease of the fetus and newborn, HLA blood group system, and hematopoietic stem cell transplantation are also addressed.

- **MLS 405 Clinical Microbiology (8 credit hours)**

This course looks at pathogenic bacteria, mycobacteria, parasites, viruses and fungi of humans in relation to pathogenesis, epidemiology, clinical manifestations, infectious diseases and antimicrobial agents. Practical laboratory instruction include specimen collection; handling and transport; media composition and utilization; culture, isolation and identification methods; and automation, quality control methods and laboratory safety.

- **MLS 406 Clinical Chemistry (8 credit hours)**

Study of the biochemical constituents of body fluids, their physiological functions and alterations in disease states. Emphasis is placed on the analytical methods of the laboratory. This includes the study of the principles, operation and maintenance of laboratory instrumentation, the use of computer technology, quality control and quality assurance tools.

- **MLS 407 Immunology/Serology (3 credit hours)**

Topics of study include antigen/antibody structure, function and interaction as they relate to serologic diagnosis. The course explores the human immune system in relation to immunophysiology, hypersensitivity, immunochemistry, immunities to infectious agents, disorders of the immune system, and clinical applications. The course also provides principles of current clinical techniques, methodologies and instrumentation, result interpretation and clinical applications.

Enrichment-Observation Experience:

This enrichment-observation experience is a 3 week rotation at the facilities of Quest Diagnostics Nichols Institute. Students will observe specialized testing in the reference laboratory of Quest Diagnostics. This is a unique and challenging experience which includes rotations in Immunology, Molecular Genetics, Molecular Infectious, Immunoassay/RIA, Immunology and Serology, Mycology, Parasitology, Special Chemistry, Cytogenetics, and Toxicology laboratories.

The experience also includes a 1 week rotation at the Inova Blood Donor Center. This unique rotation introduces students to the essentials of blood donor collection and processing. Students will learn the basic procedures of the blood draw and discuss the various types of collections. From there, the students will discuss and observe FDA biologics regulations, the importance of confidentiality, blood collection laboratory analytical factors, safety and handling of blood products during manufacturing, and distribution of the final product.

Student Project

The student project allows students to apply the knowledge gained throughout the program through the completion of an independent study, mentored project. On the job, a medical laboratory scientist is expected to be able to improve old methods and to evaluate and implement new methods. These

on-the-job assignments might range from reorganization of the workload in a department in a management role to setting up new test procedures.

The purpose for the student project is to provide the student with:

- Experience in evaluating the need for change by means of the research involved in getting the project approved through a project proposal.
- Experience in the actual process of reorganization or setting up new procedures. New procedures provide students with working experience in Quality Control, cost analysis, statistics, establishment of normal values and other areas that the medical laboratory scientist are asked to evaluate in the laboratory.
- Whether or not the laboratory adopts the project results, neither adds nor detracts from the validity of the project. The purpose of the project is to provide a learning experience for the student, not a service to the laboratory.
- Completion of this program and permission to sit for the Registry examination is contingent upon completion and presentation of the student project.

Entry Level Competencies of Medical Laboratory Scientist

According to the Standards for Accredited Programs for Medical Laboratory Scientist established by the National Accrediting Agency for Clinical Laboratory Science (NAACLS)*:

Upon graduation and when entering the profession, the medical laboratory scientist should be able to demonstrate entry level competencies necessary to perform the full range of clinical laboratory tests in the 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.

*National Accrediting Agency for Clinical Laboratory Sciences (May 2020). NAACLS Standards for Accredited and Approved Programs (MLS Unique Standards), p. 10.

Skills and Abilities of the Medical Laboratory Scientist

Communication and Professionalism

The medical laboratory scientist communication skills extend to consultative interactions with members of the healthcare team, external relations, customer service and patient education. This may include problems or matters of a scientific, technical and/or administrative nature. Medical laboratory scientists practice professional responsibilities, ethical and moral attitudes and principles that are necessary for gaining and maintaining the confidence of patients, professional associates, and the community.

Judgment and Decision-Making

The medical laboratory scientist has the ability to exercise initiative and independent judgment in dealing with the broad scope of procedural and technical problems. The Medical Laboratory Scientist is able to participate in, and may be delegated the responsibility for decisions involving quality control programs, instrument selection, preventative maintenance, safety test procedures and reagent purchases.

Knowledge

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. They have an understanding that continuous acquisition of clinical knowledge is essential for professional development and competence.

Technical Skills

The medical laboratory scientist is capable of performing technically demanding and complex laboratory tests. They have an extensive technical and theoretical understanding of quality assurance sufficient to monitor and to implement quality control programs. The medical laboratory scientist is able to participate in the introduction and implementation of new procedures and in the evaluation of new instruments and methodologies. This includes knowledge of accuracy, precision, normal ranges and correlation with existing methods.

III. Resources

Library and Learning Resources

A collection of current texts, periodicals and other learning tools for use by the students and laboratory staff are kept in each department and also the Laboratory conference room. These items may be checked out on the honor system. Items may be kept as long as needed provided that no one else has requested use of the item and that all items are returned in good condition by the last day of class for the school year in which the items were borrowed. Failure to return items that have been checked out will result in a lock placed on the student's account whereby the student's certificate of completion will not be issued until either the item is returned in good condition or payment for replacement of the item has been received.

In addition, the Inova Fairfax Hospital has a Health Sciences Medical Library. The library is housed in the Inova Fairfax Hospital and is located in the atrium at the top of the escalators in the connector corridor between the Tower Lobby and the Professional Services Building.

The Health Sciences Medical Library provides resources and services to Inova physicians, employees, affiliated residents and students for their work as it relates to patient care, education,

research and management. The library, through the Consumer Health Resource Center, also provides resources and services to assist patients, their families and the local community.

The library's information resources provide access to clinical and managerial literature, online databases, patient education, quality improvement, continuing education and research. The scope of the collection reflects Inova's primary needs with resource concentrations in medicine, nursing, allied health, health care administration and patient education.

The library provides access to MEDLINE, CINAHL, MDConsult, Evidence-Based Medicine Reviews, Health Business Fulltext, Health & Wellness Resource Center, among others and over 1000 full-text electronic journals, books, journals, audiovisual and multimedia materials.

Extensive reference service is provided by experienced medical librarians who access information from the library collection and online databases as needed.

Clinical Resources

A variety of resources, including clinical, reference and demonstration materials, i.e., practice specimens, stock cultures and case studies, are used in each laboratory section for student instruction. Educational materials are available via computer in certain sections of the Laboratory.

Blood Bank is semi-automated. Students will learn how to perform both automated and manual techniques using available patient samples, frozen sera, enhanced samples and survey samples. Various computer programs and websites are also used for training.

Coagulation instruction also involves practice on unknown samples for analysis and a set of case histories and study question related to the coagulation learning of objectives.

Chemistry is highly automated and students use available patient samples, controls, calibration standards, and survey samples for learning experiences.

Urinalysis provides a set of color kodachromes of urinary sediment for one-on-one instruction. After review of the kodachromes, a double-headed microscope is used to instruct students in the interpretation of urinary sediment in patient samples.

Hematology has numerous stained peripheral smears of normal and abnormal WBC's and RBC's. Each set of slides has a group of unknowns for the student to identify after the WBC and RBC unit of instruction is taught. Teaching slides for special stains and body fluids are also used. A double-headed microscope is used for these lessons. Study guides and Blood Cell Morphology Slides from ASCP are available and used for independent study of WBC's, RBC's, and body fluids.

The students are provided with laboratory equipment and fresh patient samples to use in setting up manual tests such as reticulocyte counts, manual platelet and white blood cell counts, sedimentation rates, body fluid cell counts, kleihauer stains, malaria smears and microhematocrits. In addition to the teaching microscopes, students are introduced to state-of-the-art automated microscopy through the use of Cellavision, a learning tool to help the students evaluate normal and abnormal RBCs and WBCs. Hematology self-study practice disks are used to introduce students to normal WBC morphology.

During the last week of their rotation students are provided with a variety of slides and kodachromes to evaluate as part of their practical exam. Near the end of the Hematology rotation, case histories are assigned to the student. A narrative accompanied by peripheral smears and/or color kodachromes is reviewed for diagnosis by the student.

Microbiology has numerous bacterial and fungal stock cultures which are given to the students as unknowns for identification. A specified number of unknowns are to be identified throughout the rotation. All biochemical testing materials, media, and incubators used in this section are available for

the students to use during their rotation. The Parasitology unit of instruction is a self-study section. Students are provided with microscopic material. A variety of preserved specimens are used for instruction and as unknowns for identification.

A complete list of stock cultures, test kits, and miscellaneous material is available on-site. The hospital patient population provides a broad spectrum of body fluid specimens to the laboratory. The trauma center, oncology, critical care units, open-heart program, transplant program, intensive neonatal care, organ-donor program, stem-cell program, and dialysis unit supply a multitude of learning experiences for the students. Students learn about interesting cases as they rotate through laboratory sections.

Computer Access

The Inova Fairfax Hospital Laboratory Information System (LIS) which interfaces with the Hospital Information System (HIS) is used for laboratory orders, results and patient demographics. Many laboratory instruments are interfaced with the LIS allowing results to be verified and captured directly on-line from the instrument. Results print on the units for all stat and critical results. Chart updates are printed on a daily basis.

Students are trained to use designated functions in the LIS in all clinical areas. Initial training on the system is conducted during the orientation week by the designated LIS and HIS trainer. All students are required to successfully complete a competency on the system before access is given. Students sign a system access form indicating that they have received instruction regarding appropriate access to the system and patient confidentiality prior to receiving access to the system. Students receive instruction in the use of computers in the Laboratory.

Students will be given a user name and password with which to access the Inova Health System computer system. All hospital policies and procedures related to computer usage must be followed. Through this access students will have the use of an Inova Health System email address, internet, and presentation/spreadsheet/word-processing software. There are computers for student use in the laboratory conference room and also in each department, accessible twenty-four hours a day. In addition, printers are connected to these computers for student use.

IV. Student Disclosure Information

Transfer Credit Policy

The academic institutions listed in the 'Affiliations' section of our website have agreed, by signed affiliation agreement, to award transfer credit for the clinical year towards a baccalaureate degree for students enrolled as a 3+1 student at the time of program completion. Students already possessing baccalaureate degrees may be enrolled if they meet admission requirements. For students already possessing baccalaureate degrees, credits earned at this school are transferable to another institution at the sole discretion of the accepting institution.

The Inova School of Medical Laboratory Science will not accept transfer credits from another institution. All credit applicable toward the certificate of completion must be completed in this program.

Students enrolled in the Inova Fairfax Hospital School of Medical Laboratory Science who have experience working in a clinical laboratory will not be granted exemption from any aspect of the program.

Transcripts are prepared at the end of the year, or at intervals as requested by the degree-granting institutions. Individual students must advise the Program Supervisor at least one (1) week in advance when transcripts are needed. Transcripts are kept on file and forwarded to affiliated universities of

three-plus-one program students upon completion of the Program. The university affiliates award the Baccalaureate degrees upon satisfactory completion of the clinical year.

Transfer credit awarded by the affiliated universities for the clinical year towards a baccalaureate degree for students enrolled as a 3+1 student per the affiliation agreement, upon completion of the program is as indicated in the following table:

Course Title	George Mason University	Longwood University
Orientation to the Problems and Practices of the Clinical Laboratory	1	1
Clinical Hematology and Coagulation	7	7
Clinical Urinalysis and Fluids	1	1
Immunohematology and Immunology	7	7
Clinical Microbiology	6	6
Clinical Chemistry	8	8

Grading Policy

The program maintains a standard for academic, technical and professional performance. The program is considered a medical and profession curriculum therefore; standards must be met in all areas for the successful completion of the program. Each course is compromise of didactic and supervised clinical rotation requirements. Each clinical course will include an evaluation of the theoretical aspects, the technical component, and professional/affective behavior evaluation. Practical and written examinations, assignments, unknowns, and performance checklist based on stated objectives are given weekly to measure the theoretical aspects and technical components in each course.

Professional/Affective evaluation assesses the student's performance, and behavior in the classroom, student lab and during the clinical rotation. The purpose of this evaluation is to provide the student with an overall assessment of their behavioral performance and their progress towards acquiring readiness to function as an entry-level laboratory professional. Student evaluation grade is calculated as a certain percentage of the final grade for each clinical rotation. Grading criteria will be specified in each course syllabus. Professional/Affective evaluation form can be found in this student handbook.

At the end of the instruction period in each clinical rotation and lecture series, a final grade will be calculated and recorded on the student grade report form. The student grade report and evaluation will be shared with the student at the end of each clinical rotation and lecture series.

During the final weeks of the Program, students are given a comprehensive examination, which includes questions over all phases of medical laboratory science.

To successfully complete each clinical course, a student must maintain a grade of 70% or greater in the theoretical component of the course(didactic), and in the technical component (clinical rotation) including achieving no less than the minimum performance level for each skill listed on the Affective Evaluation, and no deficiencies on the professional behaviors evaluation. In addition, successful passing grade must be achieved on the comprehensive exams administered in the final weeks of the program.

The following grading scale is as follows:

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%

F = Below 60%

The final course grade at the end of the year will constitute 60% of the lecture grade, 40% of the laboratory rotation grade. 90% of the combined lecture and laboratory grade will then be added to 10% of the comprehensive examination grade. Letter grades will be assigned based upon the above grading scale.

Didactic Requirements

Graduates of the program are expected to understand theory in all areas of laboratory work; therefore, passing all graded written assignments with a grade of 70% or greater is required in each lecture series. If a student fails to maintain a passing average in a lecture series, the student will be placed on academic probation.

Written examinations are scheduled throughout the lecture series. The number and frequency of tests is based on the length of the lecture series and subject material to be covered. Lecture schedule and learning objectives are defined in the course syllabus and are given to the students prior to the start of each lecture series. The course management system, *Canvas*, will be used to access course materials and course schedules. Canvas is an online program which can be accessed from any web browser at no cost to the student. Upon completion of each lecture series, a final grade is calculated based on assignments and written examination scores. The lecture grade counts as 60% of the final grade for the course.

Laboratory Clinical Rotation Requirements

Graduates of the program must be proficient in all areas of the laboratory; therefore, students are required to complete a clinical rotation in each section. **Satisfactory requirements include but are not limited to passing all written assignments and exams with a grade of 70% or greater.** A satisfactory Affective Behavior evaluation for each laboratory section is required and will be completed by the clinical instructor. If at the end of a laboratory rotation the evaluation is unsatisfactory, the student will be required to return to that laboratory section until a satisfactory evaluation has been achieved. If grades are not maintained, the student will be placed on academic probation. This additional time will be scheduled at the end of each day and/or at the end of the student year at the discretion of the clinical instructor.

During the laboratory rotations, periodic quizzes and examinations are administered. The frequency and number of tests vary with the length of the rotation. Examinations may be written, practical, or a combination of the two. Each laboratory section provides information about the testing schedule, the course syllabus, and the student workbook for that section at the beginning of the rotation. Every effort is made to grade the tests and report back to the students as soon as possible. The final grade is calculated based on all assignments, exams and affective behavior evaluation and added to the student grade report form. The laboratory clinical rotation grade comprises 40% of the final grade for that course.

Comprehensive Examination

The purpose of this examination is to prepare students to take the Board of Certification (BOC) examination. During the final weeks of the Program, students are given comprehensive examinations, which include questions over all phases and sections of Medical Laboratory Science. Students prepare by reviewing information from lecture and laboratory. The final grade for each course will constitute 10% of the comprehensive examination. A student must receive an overall passing grade of 70% on each section of the comprehensive examination. Students who do not receive a passing grade on each section of the exam will be allowed to take that section one additional time. The repeat exam will be given the very next day from the initial exam. If a passing grade of >70% is not obtained on the repeat examination, the student will be required to repeat the course. If the student does obtain >70% on a retake exam, the maximum grade recorded will be 70.

Student Evaluation of the Program

Students are required to complete and turn in an evaluation to the program supervisor at the end of each laboratory rotation, stating whether or not the objectives were achieved. Students are asked to give an evaluation of the instruction provided in that section and they are also encouraged to give constructive feedback about the rotation; such as suggestions for changes and comments on the positive and negative aspects of the rotation. The evaluations will be kept anonymous. Feedback from the evaluations will be used by instructors to improve and maintain the quality of their rotation.

At the end of each lecture series, students are required to complete an evaluation to be turned in to the program supervisor. Students are asked to evaluate the lecture series regarding the instruction that was given throughout the entire duration of each lecture series, whether or not the objectives were achieved, fairness of examination, visual aids, etc. The evaluations will be kept anonymous. We appreciate having constructive feedback regarding our Program.

Students are allowed to view their grades and their own affective evaluation after the program supervisor receives an evaluation from the student for each laboratory rotation and lecture series. The student is required to sign the grade report form and their affective evaluation form to acknowledge receipt.

Grievance Policy

If a student has a grievance related to any aspect of the Program, the first step of attempted resolution is with the person directly involved. It is hoped that most problems can be resolved at this level.

If the grievance is not resolved at this level, the student may request an informal review by the Program Supervisor and the Program Director. If the response from the Program Supervisor and the Program Director is unacceptable to the student, the student may initiate the formal grievance procedure outlined below.

Any student may submit an appeal in writing to the Program Supervisor, regarding grievances or concerns to be brought before the Education Committee. The Education Committee consists of the following individuals: Program Director, Program Supervisor, Medical Director of the school, a representative from the Human Resources department in a consultative capacity, and clinical instructors as appropriate. Actions taken to resolve formal complaints will be communicated to the individual(s) involved as appropriate. A record of complaints and steps taken to resolve any problem will be maintained by the Program Supervisor.

In addition, the Inova Health System Dispute Resolution Policy defines the team member problem solving procedure. The Human Resource policies of this institution apply to medical laboratory students, as they are also classified as team members of Inova. A student may choose to follow the Human Resource policy instead of the Program's appeal procedure for non-academic, work-related circumstances. Students are made aware of this process during the hospital orientation. Additionally, the Human Resources policy manual is available online at all times for student review.

The Inova Fairfax Hospital School of Medical Laboratory Science adheres to the following Inova Health System policies found on Inova Fairfax Hospital's internal website.

- Inova Health System Policy Internal Dispute Resolution
- Inova Health System Policy Progressive Discipline
- Inova Health System Policy Personnel Record Confidentiality

The State Council of Higher Education for Virginia (SCHEV) may be contacted as the agency of last resort for grievances that the student feels were not properly addressed by Education Committee as

described above. In any case, the student will not be subject to any unfair action and/or treatment by any school official as a result of the initiation of a complaint. SCHEV, 101 N 14th Street, 9th Floor, Richmond, VA 23219, phone number (804-225-2600) and website www.schev.edu.

Primary Appeals (Grades)

Students who wish to appeal a grade must make every effort to contact the instructor and discuss concerns before beginning the official grade appeal process. Students can reach their instructor by e-mail or telephone number as provided in the student manual. The student must request grade review within a week of receiving the evaluation. If the student finds the resolution is unsatisfactory, the grade appeal will then be evaluated by the Program Supervisor and the Program Director. A response will be given within one week. The student will not be subject to any unfair action and/or treatment by any school officials as a result of the initiation of the appeal. Should the student not be satisfied with the outcome of this primary response, they may proceed with the advanced appeal process.

Advanced Appeals

In the event that a student is not satisfied with the decision including that of dismissal from the program and he or she wishes to appeal that decision, the following procedure should be enacted within 5 business days from the date of the decision:

A formal letter of appeal should be submitted to the Education Committee explaining the grounds for appeal. The Education Committee consists of the following individuals: Program Director, Program Supervisor, Medical Director of the School, a representative from the Human Resources department in a consultative capacity and the clinical instructor as appropriate.

Review of the appeal and final decision will be made by the Education Committee and final action will be stated to the student in a formal letter.

The Program Director and Program Supervisor are available for student support and assistance regarding Program policies and practices and academic concerns. Any such guidance sessions remain confidential. At Inova Fairfax Hospital we ensure the right to privacy and confidentiality by creating and maintaining a secure and trusting environment. We will treat all student information as confidential. Discussion of these matters will be restricted to situations where the information is necessary to meet the student's needs. We protect students' confidentiality by preventing the disclosure of their personal information to any unauthorized parties. The Medical Laboratory Science Program adheres to the Inova Health System Policy Personnel Record Confidentiality.

V. Probation, Dismissal, Withdrawal and Readmission

Good Scholastic Standing

Academic performance expectations in the MLS Program include two components: meeting academic performance standards, and maintaining professional behaviors. Students are expected to meet these academic and professional behavior standards throughout the program in order to remain in good scholastic standing.

Good academic standing must be achieved in order to complete the program and be permitted to sit for national certification examinations. Acceptable performance requires that the student meet criteria throughout the entire school year. **Students must maintain a passing grade of 70% throughout the program.** The course evaluation consists of quizzes, content examinations, comprehensive examinations, technical evaluations, affective behavior evaluation, clinical practical examinations, worksheets, writing assignments, and oral presentations.

A student may be placed on probation or dismissed for failing to perform academically in accordance

with the standards established by Inova Fairfax Hospital School of Medical Laboratory Science.

Students are expected to adhere to all Inova Health System policies listed under the Dismissal Policy Section including but not limited to student conduct, behavior standards, ethical conduct and academic integrity. Violations of any of the professional behavior policies may result in disciplinary actions with penalties such as probation or dismissal from the program. Disciplinary dismissal without probation can occur when the hospital, laboratory, or program rules and policies governing behavioral conduct have been violated.

Reasons for a recommendation for probation or dismissal of a student are fully documented and discussed with the student. Signatures of all persons involved appear on the documentation statement and probation contracts.

Disciplinary Procedure

Academic performance and/or professional behavior that falls below the MLS Program's stated standards will result in initiation of a disciplinary procedure if any one of the following criteria is met:

- Failure of any graded activities (including quizzes, written, practical, final or comprehensive exams), assignments or student evaluations.
- Failure of any repeat final comprehensive exam
- Failure to obtain >70% in the overall grade in a lecture series or laboratory clinical rotation
- Excessive unexcused absences and tardiness as outlined in the Attendance Policy Section
- Failure to assume appropriate professional responsibilities and behavior as outlined in the Student Conduct and Professional Behavior Guidelines Section. Depending upon severity, infraction of this policy could lead to immediate dismissal without probation.

The disciplinary procedure for academic probation is as follows:

1st Step:	Verbal warning
2nd Step:	1st written probation contract
3rd Step:	2nd written probation contract (not guaranteed and will be determined by the Education Committee)
4th Step:	Dismissal from the program

Verbal Warning: In an effort to identify at-risk students and prevent probation, any student who receives a score below 70% on any graded activities, or assignments and any student who has displayed unacceptable professional behaviors, will have a documented discussion with the program supervisor. This discussion is to address potential problems and bring them to the student's attention prior to placing student on a formal probation.

2nd Step: Student will be placed on a formal academic probation if academic performance and/or professional behavior are not remediated.

The Education Committee will convene to deliberate the duration and terms of the probation contract. The probation contract will include a performance action plan for the student to abide by in order to improve performance.

Students may be placed on academic probation for the duration of the specific rotation and/or lecture series or for the duration of the program if satisfactory grades are not maintained.

During the probation period, the student may be required to spend additional time in the area of rotation and/or lecture in which they are delinquent. Additional time will be decided by the clinical instructor at their discretion and may be added to the end of each day and/or end of the year.

The student must meet established terms and conditions outlined in the probation contract in the timeframe specified by the Education Committee. If the student meets the established terms and conditions in the specified timeframe, the Education Committee may recommend lifting the probation status.

For the 3+1 students under Academic Probation, their academic advisor will be notified in writing.

3rd Step: If the student fails to meet the terms and conditions of the probation contract within the specified timeframe, the Education Committee will convene to determine the next steps which may include dismissal.

A second probation contract may only be established if marked improvements with grades above 80% have been noted. Full review of the student's progress will be discussed. If the Education Committee grants a second probation contract, the student will be required to adhere to the terms and conditions established by the Education Committee.

If the Education Committee determines that, in its academic and professional judgment, the student is not meeting the standards of the program and the profession, and that the academic difficulty is unlikely to be resolved quickly and satisfactorily with a performance action plan, the student will be dismissed from the Program.

4th Step: Failure to meet terms and conditions of the second probation contract will result in dismissal. Dismissal decision will be final.

Probationary status can only be assigned for a maximum of two periods throughout the entire program. No further probationary periods will be allowed and dismissal will be recommended.

Dismissal Policy

Depending upon severity, and infraction committed, immediate dismissal will be warranted superseding the disciplinary procedure above.

Misconduct which may result in dismissal consists of the following but is not limited to these offenses:

- Failure to maintain satisfactory grade.
- Failure to meet terms and conditions of probation.
- Violation of established rules/policies set forth by the school and/or Inova Health System.
- Inability to fulfill program requirements according to established standards.
- Negligence especially with regard to patient care.
- Violation of professional conduct and or ethical standards.
- Violation of academic integrity policy or honor code to include practices such as insubordination, lying, cheating, and plagiarism, stealing or falsifying results. All students are expected to comply with the Inova Health System Code of Conduct Policy.
- Disrespect of the rights or welfare of patients, fellow students, clinical staff, or other individuals.
- Unauthorized removal, destruction, or theft of any property of the program, hospital, employees, or patients. This includes physical property, including, but not limited to, instruments, reagents, and exams. This also includes all course and assessment materials, e.g. presentations, study questions, quizzes, and exams, found in the course learning management system Canvas, unless given specific approval by the clinical instructor.

- Violation of HIPAA requirements as related to the confidentiality of protected health information (PHI)
- Possession, use or distribution of weapons, illegal drugs, narcotics or alcohol on hospital grounds.
- Violation of safety requirements.
- Threat or harm to others will result.
- Excessive unexcused absences.
- Student will be dismissed from the program if the student has not contacted the school 24 hours after the students last date of attendance. Exceptions may be made in emergency situations and valid proof will be required.

In addition to the program dismissal policy, the Inova Fairfax Hospital School of Medical Laboratory Science adheres to the following Inova Health System policies found on Inova Fairfax Hospital's internal website.

- Inova Health System Policy Code of Conduct
- Inova Health System Policy Compliance and Ethics
- Inova Health System Policy Workplace Violence
- Inova Health System Policy Possession of Weapons

Dismissal Decision

A student who is dismissed may appeal in writing to the Education Committee consisting of the following individuals: Program Director, Program Supervisor, Medical Director of the School, a representative from the Human Resources in a consultative capacity and the clinical instructor as appropriate, stating the reason for and goals of the appeal as outlined in the Grievance Policy Appeals Section. The student's appeal will be evaluated with consideration being given to their past performance, the nature of probation, the length of time they have been in the program and the student's defense statement.

The decision of the Education committee will be a final decision. If the student is allowed to remain in the program on a provisional status, required conditions must be met for continued progression. Failure to meet required conditions will result in dismissal. Dismissal decision at this point will be final.

Dismissal due to threat or harm to others will be immediate and the student will be prohibited from readmission in the future.

The student will receive a formal written notification of the decision made by the Education Committee. A record of appeal and steps taken to resolve any problem will be maintained by the Program Supervisor.

If a student in the 3+1 program is dismissed, their academic advisor will be notified in writing. They will be awarded credit for any successfully completed courses.

Note: Depending upon severity, infraction of this policy could lead to immediate dismissal without probation. The Inova Fairfax Hospital School of Medical Laboratory Science reserves the right to discipline any student who fails to fulfill the duties and responsibilities of a student and/or violates the policies/rules of the school and Inova health System. Final action shall not be unreasonable or arbitrary, shall follow due process, but will remain the prerogative of the school.

Withdrawal

If a student decides to withdraw due to personal reasons, they are required to submit a written letter stating their intentions to the Program Director. Student will be awarded credit for any successfully completed courses.

Readmission

Following reasons will prohibit readmission to the program:

- Dismissal due to dishonesty, such as lying, cheating, plagiarism, stealing or falsifying results and/or violation of the academic integrity and the honor policy.
- Dismissal due to noncompliance with the Inova Health System Standards of Behavior.
- Dismissal due to threat of harm to others.

Withdrawal due to personal reasons, the student will be allowed to reapply to the program. Readmission will not be guaranteed.

If a student is dismissed due to academic reasons, the student may reapply for readmission. Proof of improvement may be requested by the Education Committee to demonstrate that the student has resolved any problems causing unsatisfactory progress and/or conduct. Students readmitted to the program that have been previously dismissed will be readmitted on a probationary status and will be expected to complete the terms outlined in the probation contract included with the offer of admission. Failure to complete probationary conditions in the probationary semester will result in immediate dismissal.

VI. Student Conduct and Professional Behavior Guidelines

Professional Behavior

All students are expected to behave in a professional manner and adhere to policies set forth by the Inova Fairfax Hospital School of Medical Laboratory Science and the Inova Health System Code of Conduct Policy. Professional behaviors fall under the scope of academic performance standards. Professional behavior is expected in all situations and at all times during clinical rotations, online interactions, enrichment-observation experience and lecture sessions. Professional/Affective evaluation along with clinical instructor and peer observations is used to assess professional behavior. Clinical course final grade requires successful completion of all components of the Professional/Affective evaluation in order to achieve a passing grade. Professional/Affective evaluation form can be found in this student handbook.

Violation of professional conduct policies of the school and/or the hospital will not be tolerated. If an instructor believes that a student's behavior is inappropriate and/or unprofessional, the student will be asked to leave the clinical or lecture area. In addition, disciplinary action may be instituted as outlined in the Probation, Dismissal and Readmission section of the student handbook.

Students are expected to demonstrate the following responsibilities and professional behaviors. The list includes but is not limited to the following:

- Adherence to policies, rules, standards and procedures of the school, laboratory and the hospital
- Take an active role in learning, academic success and attaining professional competence.
- Adherence to safety regulations
- Adherence to the principles of quality control and quality assurance
- Responsibility for completing all assignments with quality and excellence
- Attend ALL scheduled lecture and laboratory sessions, arriving on time and demonstrating respect for the instructor and an interest in the material being presented
- Be patient and flexible, remembering patients first. An instructor may be immersed in patient work and unavailable to work with students at the exact time noted on the class schedule. Students are encouraged to assist with the task at hand, if possible.
- Establish and maintain the highest concept of honor, ethics and academic integrity
- Seek help and assistance when needed

- Follow established laboratory dress code and exhibits neat, clean, and appropriate professional appearance
- Respect and protect patient confidentiality and privacy, adhering to the HIPPA laws at all times.
- Display respect and maintain interpersonal skills in communication and collaboration with the patients, fellow classmates, faculty members, all laboratory personal and hospital personnel
- Respect for diversity and others' opinions
- Strive to meet or exceed affective objectives outlined in the Profession/Affective student evaluation form
- Strive for excellence in their professional practice, and in their professional and personal conduct to uphold the integrity of the profession and the public trust.
- Exercise independent judgment, assume responsibility and accept accountability
- Accept instructions and constructive criticism from instructors
- Exhibit characteristics of a quality healthcare professional to include dependability, cooperativeness, commitment, compassionate, integrity, personal growth, and competence.

Supervision

The Inova Fairfax Hospital School of Medical Laboratory Science has an ethical responsibility for the safety of patients with whom students and graduates will come in contact. Although students learn and work under the supervision of the clinical instructors, students interact with patients and their specimens throughout the program. Patient safety and well-being are therefore major factors in establishing requirements involving the physical, cognitive, and emotional abilities of the student for progression and graduation.

In each department of the laboratory, the student is under the immediate supervision of a clinical instructor. At all times the student is under the direct supervision of the program supervisor. Students are not permitted to verify results during instructional hours. Students are trained to use designated functions in the Laboratory Information System during orientation week. All students are required to successfully complete a competency on the system before access is given. Students sign a system access form indicating that they have received instruction regarding appropriate access to the system and patient confidentiality prior to receiving access to the system. Students receive instruction in the use of computers in the Laboratory.

Students will be given a user name and password with which to access the Inova Health computer system. All hospital policies and procedures related to computer usage must be followed. Students will gain practice in resulting after a successful competency assessment and always under direct supervision of their clinical instructor. The clinical instructor will assume all responsibility for the patient results.

In addition, The Inova Fairfax Hospital School of Medical Laboratory Science adheres to the Inova Health Systems Policy HIPAA Privacy and Security Compliance.

Dress Code

Students must maintain a professional appearance according to the Inova Fairfax Hospital Professional Appearance policy, Employee Identification System policy, and the following Medical Laboratory Science Program Dress Code.

Lab personal are required to wear Lab coats, gloves and other personal protective equipment while in the laboratory. These will be provided by the laboratory and must be worn according to policy.

- Wear clothing appropriate for the laboratory work area. A new uniform code established by the IFH Professional Services makes it easier to identify the roles of the IFH healthcare teams. **Royal blue scrub tops and pants** are to be worn by the Laboratory personnel. This is intended to help improve patient satisfaction and patient safety.

- Name tags are to be worn at all times. They should be above the waist with name showing. Name tags in disrepair should be replaced.
- Sandals, open style shoes, Crocs and soft-sided slipper type shoes do not afford proper foot protection and are not acceptable.
- Long hair should be contained in some way so it does not hang freely and interfere with equipment or reagents.
- Fingernails should be clean and of a length short enough not to be uncomfortable to patients. They cannot be artificial.
- Any Jewelry that may have potential to be a safety hazard should not be worn.
- Refrain from wearing strong perfumes, colognes, etc.
- If clothing is not appropriate, instructors, at their discretion, will ask the student to not wear the clothing again, or will send the student home to change
- Students must adhere to all CDC and other regulatory guidelines related to personal hygiene.

The Inova Fairfax Hospital School of Medical Laboratory Science adheres to the following Inova Health Systems Policies found on Inova Fairfax Hospital's internal website.

- Inova Health System Policy Professional Appearance
- Inova Health System Policy Employee Identification System
- Inova Health System Policy Workplace Safety

Personal Communication

Telephone Usage:

Telephones in the Inova facilities are for business use only, except in emergencies. There are public telephones available for personal phone calls during your break time. Please restrict phone calls from friends and family to emergencies only.

Cell Phone and Electronic Device Usage:

Students may not use personal cell phone, headsets, or other similar electronic devices to receive or place calls, text messages, surf the Internet, use of social media, check phone messages or receive or respond to e-mail while in any way performing activities related to the Medical Laboratory Science Program unless allowed by the clinical instructor. An instructor may allow students to use laptops during lecture or other student course work in the classroom. All electronic devices are strictly prohibited in the teaching laboratories due to biosafety restrictions. If you must use your cell phone, find a private, quiet place to call or text during a break or while at lunch.

E-Mail/Internet Usage:

The Inova e-mail system is for business use only. E-mail is not to be used in any way that may be disruptive, offensive to others or harmful to general morale. Remember that all messages you send or receive are Inova records, which Inova reserves the right to access and disclose. The use of the Inova e-mail system is a privilege, not a right, and may be revoked at any time for inappropriate or abusive conduct. Students should check email daily for hospital, program or instructor communications.

Student Employment and Service Work Policy

Once the student has completed the rotation in a clinical area and has been determined proficient in the area he/she may be given the opportunity to work part-time for monetary compensation, if they choose to do so. This is encouraged but not required since it enhances student's job opportunities after graduation. The following conditions must apply in order to be employed while in the program:

- Students accepted into the Medical Laboratory Program become employees of Inova Fairfax Hospital; therefore applicants must be eligible to work in the United States.
- To become an employee, the Federal Government requires a form of identification proving eligibility to work in the United States. Examples of acceptable documents include Social Security Account Number and Permanent Resident card or Alien Registration Receipt card.
- Employment is contingent upon having satisfactorily passed all parts of the employment process which includes a health assessment, background check and a drug screen.
- Students must demonstrate proficiency and competence before employment.
- Competency assessment on the student must be signed by the instructor before employment in that specific section of the laboratory.
- Student employment must be outside the regular instructional/program hours.
- Due to the rigorous demands of the clinical program, it is strongly recommended that a student work less than 20 hours per week while in the Program.
- Work hours or responsibilities must not interfere with academic hours or activities.
- The student must maintain acceptable performance in all areas (academic, technical, professional) as defined in acceptable performance policies.
- Service work by students in clinical settings outside of academic hours must be non-compulsory and paid.
- Students may not be substituted for regular staff during instructional hours.
- Students are not permitted to verify patient results during instructional hours until they have been deemed competent in that department by the instructor and under direct supervision.
- Students will be supervised by the department supervisor at all times.

The Inova Fairfax Hospital School of Medical Laboratory Science adheres to the following Inova Health Systems policies found on Inova Fairfax Hospital's internal website.

- Inova Health System Policy Preplacement Health Screen
- Inova Health System Policy Employment
- Inova Health System Policy Immunization Program
- Inova Health Systems Policy HIPAA Privacy and Security Compliance
- Inova Health Systems Policy Equal Employment Opportunity and Affirmative Action Statement

HIPAA Policy

Inova Health System and the School of Medical Laboratory Science are committed to protecting the privacy of protected health information (PHI) in compliance with the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA) and relevant Virginia Laws. Students with access to PHI must respect the patient's rights to privacy and understand and adhere to the hospital's privacy policies. The students are required to maintain the confidentiality of any and all PHI they have been appropriately granted authorization to use and view. The use and disclosure of PHI by students shall occur only in accordance with HIPAA Privacy Policies. All students shall strictly adhere to the HIPAA policies set forth by the school and the Inova Health System.

PHI may only be accessed by the student for the purpose to inquire or process information required for education purposes for which the student is specifically responsible. Violation of this policy include, but are not limited to accessing, collecting or removing from Inova Health System or revealing confidential information to an unauthorized person including disclosing on social media. Any breaches or disclosure of PHI may be considered a major infraction of this policy, leading to dismissal from the program and/or may also be subject to criminal penalties.

Students will be required to participate in training and comply with hospital policy relating to Health Insurance Portability and Accountability Act of 1996. Mandatory training courses will be provided via Inova's internal team member learning management system, Healthstream and the program's learning

management system, Medialab.

All students are also required to complete mandatory annual eLearning assignments assigned in Healthstream. Annual eLearning assignments are critical to be in compliance with governing agencies to ensure patient and student safety.

General Safety Information

Safety is an important part of any laboratory and students receive extensive instruction in Laboratory Safety. The Hospital abides by the Occupational Safety and Health Administration (OSHA) regulations (e.g. blood borne pathogens, hazardous communication) and the Centers for Disease Control and Prevention Guidelines (CDC). Students should be aware of the biohazard substances that may be potentially hazardous will be used routinely in our laboratories and therefore must adhere to safety protocols and guidelines at all times.

The health and safety of students, laboratory staff and faculty is safeguarded by requiring updated immunizations, by providing safety training, and by providing personal protective equipment in all areas of the laboratory. In accordance with OSHA standards, protective equipment (such as safety eyewear, face masks, face shields, disposable gloves, gowns, etc.) and instructions for prescribed usage will be provided in each area. There are fire extinguishers, spill kits, safety showers and eye washes in several places throughout the laboratory. Students are expected to follow safety procedures, protocols and maintain safe work environment for themselves, other members of the laboratory staff, and our patients at all time. Failure to follow safety policies will lead to probation or dismissal dependent on the severity.

- Gloves must be worn at all times when handling blood or body fluid and be changed when visibly soiled or torn, per OSHA guidelines.
- A laboratory provided/laundered laboratory coat will be worn as PPE to protect against hazardous materials at all times in the laboratory. It must be changed when visibly soiled, contaminated, or torn.
- When performing a task that could result in a splash or aerosol, a face shield or appropriate PPE must be worn if the work is not performed behind a protective barrier.
- Gloves and disposable lab coats must be removed prior to leaving the laboratory and may not be worn in clean areas such as the lounge, rest rooms, offices, or administrative area

Student education on safety procedures and protocols occurs during initial orientation week, laboratory orientation and throughout the year as needed. Students will be required to attend an in-person safety lecture and tour of the laboratories safety features with the clinical instructor. Mandatory safety training courses will also be provided via Inova's internal team member learning management system, Healthstream and the program's learning management system, Medialab.

Students must immediately report any accident, injury or exposures incurred to one or more of the following individuals: the area clinical instructor, assigned instructor, Program Supervisor, laboratory management, safety officer, or the program director. An injury report or variance report may need to be completed.

The Inova Fairfax Hospital School of Medical Laboratory Science adheres to the following Inova Health Systems Policies found on Inova Fairfax Hospital's internal website.

- Inova Health System Safety Policies and Procedures
- Inova Health System Policy Immunization Program
- Inova Health System Policy Pre Placement Health Screen Policy
- Inova Health System Policy Occupation Exposure to BloodBorne Pathogens

Drug/Alcohol/Tobacco and Weapons Policy

Admission is contingent on applicant evaluation and drug screening by Inova Fairfax Hospital's Team Member Health Department and clearance by Inova Fairfax Hospital's Human Resources Department to include a criminal background check. Evaluation and clearance by Inova Fairfax Hospital's Team Member Health and Human Resources departments must take place no later than one month prior to the start date of the program. Failure to satisfactorily complete these evaluations by this deadline will result in revocation of the conditional admission. In such a case, the applicant must reapply in the next admission cycle to be considered for future acceptance.

Inova Health System has a zero tolerance level for infraction of these policies therefore any violation of the Inova Health Systems Policy regarding possession of weapons, use of illicit drugs, distribution and alcohol will result in dismissal from the program.

Inova Fairfax Hospital is a tobacco-free campus. Tobacco products of any kind are not permitted on Inova Fairfax Hospital property.

Weapons of any kind are prohibited at all times on Inova Health System properties.

The Inova Fairfax Hospital School of Medical Laboratory Science adheres to the following Inova Health Systems Policies found on Inova Fairfax Hospital's internal website.

- Inova Health System Policy Drug Free Workplace Policy
- Inova Health System Policy Tobacco Free Workplace Place
- Inova Health System Policy Possession of Weapons

Inova recognizes that alcohol and drug abuse and addiction are treatable illnesses. We also realize that early intervention and support improve the success of rehabilitation. To support our team members, Inova Health System offers all employees assistance with alcohol and drug problems through the Inova Employees Assistance Program (EAP). They may request help by calling 1 (800) 346 0110.

Academic Integrity and Honor Policy

All students are expected to comply with the policies and rules set forth by the School of Medical Laboratory Science and Inova Health System Code of Conduct. Unethical conduct will not be tolerated and may result in immediate dismissal from the program. Unethical conducts includes but are not limited to the following dishonest practices: falsification of information and results, violation of HIPAA requirements as related to the confidentiality of protected health information, violation of the drug/alcohol/tobacco and weapons policy, insubordination, repeated unprofessional or unsafe behavior during academic hours on school and hospital property, stealing and lying.

Students are expected to adhere to the standards of academic integrity. Academic dishonesty will not be tolerated. Academic dishonesty standards include, but are not limited to the following: fabrication of falsification of results/data/information, facilitating academic dishonesty, plagiarism and cheating.

Cheating: is defined as using or attempting to use unauthorized assistance, information or study aids in any academic exercise.

Plagiarism: is defined as representing the words, research findings or ideas of another person as your own in any academic exercise. Unique ideas or materials taken from another source for either written or oral use must be fully acknowledged and cited in any and all academic work.

Collusion and/or Complicity: Collaborating with another student without instructor approval on any

examination, any quiz, any patient care documentation or assignment, any computer or laboratory work, or any other assignment. Collusion includes the exchange of materials or ideas verbally or nonverbally. Complicity includes helping or attempting to help another student to commit an act of academic dishonesty.

In addition, Students may not distribute, via the Internet or other means, instructor-provided lecture notes or other instructor-provided materials, except to other members of the same class or with the express written consent of the instructor.

Students are not permitted to record (whether audio or visual or both) any part of a class/lab/other session unless explicitly granted permission to do so by the instructor.

Violations of the academic integrity and honor policy may result in dismissal from the program depending on the severity of the violation. Course level sanctions such as a grade of F will be assigned to any student confirmed of academic dishonesty along with placement on academic probation.

If the decision is made to dismiss the student, the student may file for an appeal as outlined in the Probation Dismissal and Readmission Section. Readmission is prohibited if a student is dismissed due to misconducts outlined in the Probation, Dismissal and Readmission Section.

Ethics Policy

The Inova Fairfax Hospital School of Medical Laboratory Science has adopted the Code of Ethics of the American Society for Clinical Laboratory Science (ASCLS) listed below and also can be found on ASCLS website at <http://www.ascls.org/about-us/code-of-ethics>.

Preamble

The Code of Ethics of the American Society for Clinical Laboratory Science sets forth the principles and standards by which clinical laboratory professionals practice their profession.

I. Duty to the Patient

Clinical laboratory professionals are accountable for the quality and integrity of the laboratory services they provide. This obligation includes maintaining individual competence in judgement and performance and striving to safeguard the patient from incompetent or illegal practice by others. Clinical laboratory professionals maintain high standards of practice. They exercise sound judgment in establishing, performing and evaluating laboratory testing.

Clinical laboratory professionals maintain strict confidentiality of patient information and test results. They safeguard the dignity and privacy of patients and provide accurate information to other health care professionals about the services they provide.

II. Duty to Colleagues and the Profession

Clinical laboratory professionals uphold and maintain the dignity and respect of our profession and strive to maintain a reputation of honesty, integrity and reliability. They contribute to the advancement of the profession by improving the body of knowledge, adopting scientific advances that benefit the patient, maintaining high standards of practice and education, and seeking fair socioeconomic working conditions for members of the profession.

Clinical laboratory professionals actively strive to establish cooperative and respectful working relationships with other health care professionals with the primary objective of ensuring a high standard of care for the patients they serve.

III. Duty to Society

As practitioners of an autonomous profession, clinical laboratory professionals have the responsibility to contribute from their sphere of professional competence to the general well being of the community. Clinical laboratory professionals comply with relevant laws and regulations pertaining to the practice of clinical laboratory science and actively seek, within the dictates of their consciences, to change those which do not meet the high standards of care and practice to which the profession is committed.

Pledge to the Profession

As a clinical laboratory professional, I strive to:

- Maintain and promote standards of excellence in performing and advancing the art and science of my profession.
- Preserve the dignity and privacy of others.
- Uphold and maintain the dignity and respect of our profession.
- Seek to establish cooperative and respectful working relationships with other health professionals.
- Contribute to the general well being of the community.
- I will actively demonstrate my commitment to these responsibilities throughout my professional life.

VII. Attendance/Leave of Absence Information

Hours

Each student is expected to arrive on time and attend all classes, lectures, case study sessions, and clinical experiences. The Medical Laboratory Science Program is a full time course of study. Students spend approximately 8 1/2 hours, anytime between 7a-4p, in the laboratory Monday through Friday. Additionally, students may be required to complete their rotation on evening shift and times may vary. All assigned work must be completed or the student must be excused by the clinical instructor before leaving the department. Staying beyond the scheduled time may be required in order to complete an assignment or for learning experience.

Documentation of Attendance

Students will document attendance upon their arrival and departure from the laboratory by sending a message to the clinical instructor via Inova email system using the designated hospital computers in each department. Sending email using personal cell phone is not acceptable.

After sending a message, students should immediately report to their assigned section and notify the clinical instructor or designee of their arrival. Students are expected to arrive in their department early enough to begin training at their scheduled time. Scheduled time is 7:00am. Times may vary during certain rotations. Students should allow ample time for traffic and parking considerations. Also, allow enough time for 'getting situated' – hanging up your coat, preparing your workstation, etc.

Each day lectures are scheduled from 1400 to 1600 unless otherwise noted and students are expected to attend. When a lecture ends prior to 1600, students may need to return to their assigned laboratory rotation and report to the clinical instructor or designee. If the lecture extends beyond 1600, students are to remain until the conclusion of the lecture. Students rotating at other Inova hospitals will be given enough time to return back to Inova Fairfax Hospital for lectures.

Students are strongly encouraged to be on time and have perfect attendance throughout the course of the program. It is anticipated that a student will want to seek employment at Inova Hospitals after graduation; therefore the impression made by the students on the staff will be taken into consideration when hiring decisions are made. Please remember that clinical instructors are potential employers and references when the job search begins.

Absenteeism/ Tardiness

Any student, who may be ill or unable to report to the laboratory at the scheduled time, must notify the clinical instructor in the section to which he/she is assigned and the Program Supervisor if possible at least one hour prior to the expected arrival time. The student should obtain the name of the person to whom he/she is speaking.

Arriving to the laboratory after the scheduled time for a rotation is considered to be an act of tardiness. Tardiness will not be tolerated except for unusual circumstances and will require specific documentation or proof of the occurrence, i.e., traffic accident in which a student is involved.

If a student is absent for more than 4 hours in a day, this will count as a full day absence. In order to count a half day absence, the student must be present for at least 4 hours.

Bereavement leave of 3 days will be provided for absences related to members of the student's immediate family, to include children, spouse, parents, brother, sister, grandparents, grandchildren, mother-in-law, father-in-law, brother-in-law, sister-in-law or any relative living in the household.

Student will be withdrawn from the program if the student has not contacted the school 24 hours after the student's last date of attendance, unless valid proof is provided. The clinical instructor and the Program Supervisor must be notified.

Excessive Tardiness

Three unexcused incidents of tardiness per department rotation will result in a decrease of **5 points** from that rotation's final grade. Each additional incident of tardiness will result in a decrease of an additional **10 points** from that grade.

Excessive tardiness may result in probation or dismissal from the program.

Personal Days Off and Exam Policy

In addition to the six observed holidays, students may miss five days which includes sick days during the year without penalty. **The five days should not be taken consecutively or on a day when an exam has been scheduled in lecture or in a laboratory rotation.**

Personal days may not be taken together with other students. To schedule a personal day in advance, students must complete a Personal Day Request form found in this handbook. Student must submit the original request at least 2 working days in advance to the clinical instructor and give a copy to the Program Supervisor.

All exams must be taken on the scheduled day and time. If an absence occurs on a scheduled exam day, completion of the missed exam will be the first day the student returns to class. Individual considerations may be made for a student based on extenuating circumstances.

If a student misses the exam without a valid excuse, a reduction of 10% will automatically be assessed. Each subsequent missed exam will result in an additional 10% penalty. Exceptions may be made in emergency situations.

If a student exceeds five days of absences, (not including bereavement leave) this may result in probation or dismissal unless the student has been approved for leave of absence. Absences exceeding five days involving illness will be handled on a case by case basis and will require valid documentation such as a note from a physician.

Student Responsibility

Students must call and give as much notice as possible when they are going to be late. Calling does not excuse tardiness, but it does allow time for lab supervisors and clinical instructors to make appropriate staffing corrections. Students are responsible for making up any lab and/or lecture work missed during a scheduled day off. If additional days must be missed due to unusual and unforeseen circumstances, work not completed in a lab rotation will need to be made up at the discretion of the clinical instructor which can require the student to come in on evenings and weekends. Clinical instructor will work with the students to review missed work.

Laboratory Section Phone Numbers

Blood Bank:	(703) 776-3401
Core Lab (Processing, Chemistry, Hematology and Urinalysis):	(703) 776-3364
Microbiology:	(703) 645-6164
Coagulation:	(703) 645-6162
Donor Center (IBDS):	(571) 434-3619
Senior Technologist:	(703) 776-5757

General Rules for Classroom and Examination

- Students are expected to behave in a professional manner at all times throughout the course of study.
- Classroom and work areas must be kept clean and in orderly fashion
- Food and drink are permitted only in the lecture conference room. No food or drinks are permitted in the student laboratory sections or the student workroom.
- Students will not be permitted to have any personal belongings and/or academic materials during examination except for pen/pencil and a non-programmable calculator.
- Personal belongings may be stored in a locker or the student workroom.
- Students are permitted to use laptops during lecture and only in the lecture conference room and student workroom.

Leave of Absence

Student must formally request a leave of absence. Leave of absence may be granted in such situations as severe illness/injury, death of an immediate family member requiring a longer period of absence, birth of a child, and call to duty for military services. The request will be reviewed by the Program Director and the Program Supervisor of the program. The decision to grant or deny leave will depend of the situation, length of time and material/experiences that will be missed. No more than a month of absence will be approved.

Failure to formally request a leave of absence may result in dismissal. If the leave of absence is approved, the student will be responsible for completing all of the missed assignments. The clinical instructor will outline the missed assignments and additional time may need to be added each day and/or year in order to complete all the required assignments. Student must return back to school on the expected date set by the Program Supervisor. In case the student does not return on the expected date, the student will be allowed to reapply for an extension. If an extension is denied and the student does not return, the student will be subject to dismissal as outlined in the attendance policy.

In case a student's leave of absence is denied, the student will be required to continue attendance or choose to resign from the program. The student will be notified of the reason for denial in writing.

School Calendar

The start date of the program is mid-August of each year. The end date of the program is mid-July of the following year.

Class meets Monday through Friday during the school year except for the holiday/break periods listed below.

Labor Day 1 Day
Thanksgiving 1 Day
Christmas and New Year's Day Winter Break
Martin Luther King Jr. Day 1 Day
Memorial Day 1 Day
Independence Day 1 Day
*Inclement Weather 1 Day
*(Not guaranteed)

Inclement Weather

An inclement weather day is reserved for severe weather situations that may result in delay or cancelation of class. The decision to delay or close will be made by the Program Director. The students will be notified by email and telephone once the decision has been made. If the student is unsure, it is the student's responsibility to call the school.

Students are expected to arrive on time if the class is **not** delayed. If the class is to be delayed and the student chooses not to attend, this will count as a full day absence. The student should use good judgement and ability to drive in severe weather conditions.

Program Closure Teach Out Plan

NAACLS requires the MLS program to have a "teach out" plan in case the program unexpectedly closes due to natural and unnatural disasters or permanent closure. Intentional closure of the MLS program will be communicated to all students immediately.

Inova Fairfax Hospital School of Medical Laboratory Science takes very seriously the significance of a decision to close an educational program. Program closure requires thoughtful planning and careful consultation with all affected constituencies. Every effort will be made to inform each of our students as fully as possible about the closure. When possible, program closure will be made through a consultative process and only after all alternatives have been considered.

- The responsibility for the final decision to close a program will be made by the Program Medical Director, Program Director and the hospital Administrators.
- The following plan will be implemented in the event of a program closure:
- Inova Fairfax Hospital School of Medical Laboratory Science will teach out currently enrolled students.
- The program will no longer admit students to the August starting class. Students will be notified in writing about the program closure.
- The Program Director will be designated to clear students applying for the certification exam.

- In the case of a natural or unnatural disaster the program will work with other Inova facilities and hospitals to continue education and training until training can resume at the hospital laboratory.
- The MLS Program Director will notify NAACLS in writing within 30 days with information and timeline of program closure.

VIII. Tuition, Fees and Refunds

Tuition for the program is **\$4,500** and is paid according to the following schedule:

- \$100 due upon acceptance of the position and signing of the enrollment agreement
- \$880.00 due on the first day of class August 16, 2021
- \$880.00 due on October 8, 2021
- \$880.00 due on December 3, 2021
- \$880.00 due on February 4, 2022
- \$880.00 due on April 8, 2022

A 14 day grace period from the date each payment is due will be granted. After the grace period, a late penalty of \$20.00 a day will be charged for a maximum of 7 days.

Students are responsible for fulfilling all financial obligations to Inova Fairfax Hospital Medical Laboratory Science Program. Students who do not meet their financial responsibilities are subject to withdrawal from school.

Housing

Students are responsible for their own housing arrangements.

Meals

Students may bring their own lunches or may buy lunch in the Inova Fairfax Hospital cafeteria and café. A refrigerator and microwave are available in the lab staff lounge.

Transportation

Students are responsible for their own transportation to and from Inova Fairfax Hospital as well as to and from the clinical affiliate sites. Students are allowed to park for free in the employee garage at the Inova Fairfax Hospital Campus.

Textbooks

Students are responsible for purchasing all the required textbooks that are used for assigned reading and reference work. The approximate cost of textbooks is \$600.

Health Care and Insurance

Students are responsible for their own health insurance. Proof of insurance must be presented and kept on file for each student. Once accepted into the Program, students undergo a physical examination administered by the Inova Team Member Health Department for all new hospital employees. The examination and tests are without cost to students and employees. Hepatitis B vaccines and influenza immunizations are also available to all employees free of charge. Mandatory, annual PPD testing is administered by Inova Team Member Health Department and is part of Inova Fairfax Hospital's regulatory compliance.

Refund Policy

An enrolled student is a person who has been offered a position in the program and has paid the \$100 reservation fee and signed the enrollment agreement. Once the agreement and fee has been returned the enrolled student has three business days to cancel their enrollment for a full refund of the reservation fee. If the student decides to cancel their enrollment within the month prior to the start date they will not be entitled to a refund of the reservation fee.

A student who begins the program but withdraws or is dismissed during the first quartile (25%) of the period is entitled to receive a refund 75% of the stated cost of the program for that period. A student who starts the program but withdraws or is dismissed after completing second quartile (more than 25% but less than 50%) of the period is entitled to receive a refund 50% of the stated cost of the program for that period. A student who starts the program but withdraws or is dismissed after completing third quartile (more than 50% but less than 75%) of the period is entitled to receive a refund 25% of the stated cost of the program for that period. A Student who withdraws after completing more than three quartiles (75%) of the program shall not be entitled to a refund. A period is defined as the time beginning with the due date of the payment and ending the day before the next payment is due.

If a student chooses to withdraw, they must submit a formal written notice to include the expected last date of attendance and be signed by the student. In the absence of a formal written notice, the withdrawal is defined as fourteen calendar days after the student's last day of attendance.

If a student is in any way financially indebted to the Inova Fairfax Hospital School of Medical Laboratory Science, the student will not be able to graduate which includes the graduation ceremony and certification exam eligibility.

Financial Aid

The Inova Fairfax School of Medical Laboratory Science program does not participate in the federal student aid program.

IX. Services Available to Student

Academic/Course Advising

School officials (Program Director, Program Supervisor and clinical instructors) are generally onsite Monday through Friday from 7:00 am – 5:00 pm. Students are welcome to drop in or schedule an appointment.

Academic Support Services

The Program does not offer formal tutoring services, note taking assistance, or any other extra assistance in the laboratory and/or classroom. However, the clinical instructors are available if occasional assistance is needed in understanding the course material.

Professional Societies

Professional societies of Medical Laboratory Scientists are organized at national, state, and local levels to promote the continued advancement of the profession. Societies promote public recognition of the profession, encourage high ethical standards, advance the profession through recruitment and education, and re-emphasize responsibilities of the patient's medical team. Students in the Medical Laboratory Sciences program are eligible for student membership in the American Society for Clinical Laboratory Science (ASCLS) and the American Society of Clinical Pathologists (ASCP) and several other professional organizations. Students are strongly encouraged to become members and continue

membership when they graduate as part of their transition to a laboratory professional.

American Society for Clinical Pathology (ASCP)
Board of Registry Department
www.ascp.org
(312) 738-1336

American Society for Clinical Laboratory Science (ASCLS)
(301) 657-2768
www.ascls.org

Guidance Available to Students

The Program Director and Program Supervisor are available for student support and assistance regarding Program policies, practices and academic concerns. Any such guidance sessions remain confidential. At Inova Fairfax Hospital we ensure the right to privacy and confidentiality by creating and maintaining a secure and trusting environment. We will treat all student information as confidential. Discussion of these matters will be restricted to situations where the information is necessary to meet the student's needs. We protect students' confidentiality by preventing the disclosure of their personal information to any unauthorized parties. In addition, we do not discuss personal matters in the presence of a student. The Inova Fairfax Hospital School of Medical Laboratory Science adheres to the Inova Health System Policy Personnel Record Confidentiality.

In addition, Inova Fairfax Hospital offers an Employee Assistance Program (EAP) at no charge. Students may confidentially contact the EAP for up to three private counseling sessions for any personal problem. Referrals for further care may be made by the EAP as necessary. The Medical Laboratory Science Program advises students to refer to Inova Health System Policy Employee Assistance Program found on Inovanet.

Employment Assistance

Prior to graduation from the Program students receive instruction on interviewing skills and preparation of resumes. Because of the nation-wide shortage of Medical Laboratory Scientists, the students have not had difficulty in obtaining employment for at least the last five years. Graduates are in demand because they have had recent training in all aspects of the laboratory and are often hired as generalists. Every effort is made to recruit the Program graduates for employment within Inova Health System. Students have access to the job vacancy listing for this laboratory as well as opportunities throughout the system.

X. Student Records

Graduation

At the end of the clinical year and upon successful completion of all program requirements, students are awarded a certificate and a pin from the Inova Fairfax Hospital School of Medical Laboratory Science Program and are eligible to sit for the Board of Certification (BOC) of the American Society of Clinical Pathologist (ASCP). Our expectation is that 100% of Inova Fairfax Hospital Medical Laboratory Science program graduates who take the ASCP Board of Certification exam will pass.

Students are made aware of the certification examination options available during the orientation week. The school provides application information for the Medical Laboratory Scientist ASCP Board of Certification exam. Additionally, the school purchases ASCP exam simulator via Medialab for the students to study with throughout the year. Information on ASCP Board of Certification exam is also available on the ASCP website: <http://www.ascp.org>

Obtaining the certificate for successful completion of the program is not in any way contingent

upon taking or passing the Board of Certification examination. A student who is enrolled in a 3+1 option will receive transfer credit to their universities upon completing the program. The baccalaureate degree is awarded by their universities per the affiliation agreement.

Records

Student records are maintained for admission records, evaluation, graduation records, financial records and any counseling or advising sessions. Information permanently maintained in the student record include material submitted for application to the Program, grades, evaluations submitted by clinical instructors for required course work, student transcripts and financial records.

After a class has graduated, the files are maintained in a secured location. Files have been maintained since the Program's inception in 1964. Files from the last ten years are secured on laboratory premises and in an electronic database with backup. All files from years prior to 2005 are secured in an Inova Health System contracted record storage facility with other official hospital records and may be retrieved as needed.

Transcripts

Transcripts are prepared at the end of the year, or at intervals as requested by the degree-granting institutions. Individual students must advise the Program Supervisor at least one (1) week in advance when transcripts are needed. Transcripts are kept on file and forwarded to affiliated universities of three-plus-one program students upon completion of the Program. The university affiliates award the Baccalaureate degrees upon satisfactory completion of the clinical year.

Students may have access to their files upon request. However, release of information to any other individual or organization is prohibited without the written consent of the student. Files are available to accrediting organizations during Program evaluation for accreditation. A list of documents maintained for graduates and enrolled students are:

- Application for admission
- College transcript showing degree earned or letter from affiliated college stating that the student will be granted a degree upon successful completion of the Program.
- Evaluation of transcript
- 2 letters of recommendation
- Evaluations from each laboratory section
- Grades from each lecture series and laboratory rotation
- Final transcript
- Financial records

Releasing Information from student files policy

It is the policy of Inova Fairfax Hospital Medical Laboratory Science program that “personally identifiable information”, other than “directory information” from a student’s education records, will not be disclosed to any party or organization which does not have legitimate right of access to the information without the written consent of the affected student. Husbands and wives are not entitled to obtain records of their spouses without the consent of the spouse regardless of dependency.

To obtain access to one’s records, a student must advise the custodian of the records of his or her desire to examine such records. If desired, the student may also request an explanation and/or copies of such records. Examinations will be permitted under conditions that will prevent alteration or mutilation of the record. If the student believes the record content to be inaccurate, the student may submit a request to amend the record.

**INOVA FAIRFAX HOSPITAL
MEDICAL LABORATORY SCIENCE PROGRAM**

PERSONAL DAY REQUEST

I, _____,

plan to take one of my five (5) personal days off on _____.

I, _____,

plan to take off _____ to attend my college graduation. This will not count as one of my five (5) personal days off.

Signature

Date

NOTE TO STUDENTS

When requesting a day off, submit the original PERSONAL DAY REQUEST form to the laboratory rotation Clinical instructor, and give a copy to the Program Supervisor.

Medical Laboratory Science Program

2021 – 2022 Lecture Series and Laboratory Rotation

Number Of Weeks	Lecture Series
1	Orientation
6	Chemistry
3	Urinalysis
7	Hematology
4	Coagulation
1	Christmas Holiday No Lecture
2	Parasitology
6	Immunology
8	Microbiology
5	Blood Bank

Number Of Weeks	Laboratory Rotation
6	Chemistry
12	Hematology/UA/Flow
2	Coagulation
7	Blood Bank
1	Project Week
9	Microbiology
1	Inova Blood Donor Center
3	Quest Diagnostics Lab
1	Phlebotomy

Student:	Laboratory Section:
Start Date:	Finish Date:

Student Professional Behavior Evaluation

Affective Objectives:

1 – Initiative

- Displays dependability and initiative by completing all assigned tasks promptly.
- Pursues additional educational experiences and resources.
- Seeks unsolicited tasks/ additional responsibilities.
- Looks for things to do during slack periods, such as restocking supplies & assisting others.

Needs Improvement Does Not Meet Standards	Provisional Does not consistently meet Standards	Competent Meets Standards	Commendable Above Standards
(1 pt) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

2 – Technique (at entry level)

- Performs manual & automated tests according to written procedures & instructions in an acceptable time frame.
- Works independently after instruction; recognizes problems or discrepancies & attempts to determine cause of problem.
- Recognizes and acknowledge personal limitations of knowledge and skills and seek help when appropriate
- Reports results accurately and efficiently (at entry level)
- Demonstrates the ability to follow written instructions and show attention to detail.

Needs Improvement Does Not Meet Standards	Provisional Does not consistently meet Standards	Competent Meets Standards	Commendable Above Standards
(1 pt) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

3 -- Knowledge

- Demonstrates understanding of basic theory
- Demonstrates knowledge of theory & clinical significance of laboratory tests by correctly responding to oral questioning & written tests.
- Demonstrates the ability to learn by applying and integrating data from previous disciplines to this clinical rotation to resolve problems.
- Identifies problems and errors or any malfunctions.
- Questions unusual results & verifies these through further checks and/or testing

Needs Improvement Does Not Meet Standards	Provisional Does not consistently meet Standards	Competent Meets Standards	Commendable Above Standards
(1 pt) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

**INOVA FAIRFAX HOSPITAL
MEDICAL LABORATORY SCIENCE PROGRAM
LABORATORY EVALUATION**

4 -- Organization

- Maintains a clean and orderly work area
- Complies with institutional safety policies and procedures
- Completes lab assignments in a timely fashion
- Exhibits ability to multi-task
- Restocks reagents and supplies

<u>Needs Improvement</u> Does Not Meet Standards	<u>Provisional</u> Does not consistently meet Standards	<u>Competent</u> Meets Standards	<u>Commendable</u> Above Standards
(1 pt) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

5 -- Professionalism

- Maintains professional appearance and department according to the Inova Fairfax Hospital personnel policy and the Medical Laboratory Science Program dress code guidelines. Wears ID badge properly at all times.
- Is an ambassador of the organization, promoting a positive image of Inova. Does not gossip. Serves as a peer role model to others exhibiting standards of behavior at all times.
- Is accountable for whereabouts at all times. Always arrives on time and remains in the department for the scheduled period. When arriving late, calls to provide as much notice as possible.
- Adjusts to changing workflow and staffing when necessary.

<u>Needs Improvement</u> Does Not Meet Standards	<u>Provisional</u> Does not consistently meet Standards	<u>Competent</u> Meets Standards	<u>Commendable</u> Above Standards
(1 pt) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

6 -- Confidentiality and Privacy

- Demonstrates conscientious attitude toward patient confidentiality and the importance of accurate and precise patient results.
- Understands and practices HIPAA privacy regulations.
- Protects the privacy of other students and laboratory employee's by preventing the disclosure of their personal information to any unauthorized parties.

<u>Needs Improvement</u> Does Not Meet Standards	<u>Provisional</u> Does not consistently meet Standards	<u>Competent</u> Meets Standards	<u>Commendable</u> Above Standards
(1 pt.) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

7 – Integrity / Personal Responsibility

- Is accountable for assigned work and follows policies and regulations as it applies to this rotation.
- Always willing to accept any task and then follows it through to completion.
- Exhibits ethical behavior.
- Demonstrates integrity by admitting to mistakes or errors and repeating questionable results.
- Seeks advice when necessary.

<u>Needs Improvement</u> Does Not Meet Standards	<u>Provisional</u> Does not consistently meet Standards	<u>Competent</u> Meets Standards	<u>Commendable</u> Above Standards
(1 pt.) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

**INOVA FAIRFAX HOSPITAL
MEDICAL LABORATORY SCIENCE PROGRAM
LABORATORY EVALUATION**

8 – Quality Safety

- Follows established safety and infection control procedures.
- Practices error prevention techniques and reports all safety hazards, accidents and incidents promptly and completely.

<u>Needs Improvement</u> Does Not Meet Standards	<u>Provisional</u> Does not consistently meet Standards	<u>Competent</u> Meets Standards	<u>Commendable</u> Above Standards
(1 pt.) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

9 – Interpersonal Relationships and Attitude

- Displays a pleasant, positive attitude & is easy to work with.
- Demonstrates acceptance of advice & constructive criticism by not repeating mistakes.
- Communicates and maintains cooperative relationships with instructors, fellow students and coworkers.
- Offers sound suggestions for improvement instead of complaining
- Considerate when sharing equipment and supplies.
- Demonstrates self-control, tact and respect for others in classroom and clinical setting.
- Is positive and receptive to change.

<u>Needs Improvement</u> Does Not Meet Standards	<u>Provisional</u> Does not consistently meet Standards	<u>Competent</u> Meets Standards	<u>Commendable</u> Above Standards
(1 pt.) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

10 – Attentiveness

- Pays attention to instructions.
- Is alert, attentive and enthusiastic.
- Contributes to discussions and ask relevant questions.

<u>Needs Improvement</u> Does Not Meet Standards	<u>Provisional</u> Does not consistently meet Standards	<u>Competent</u> Meets Standards	<u>Commendable</u> Above Standards
(1 pt.) <input type="checkbox"/>	(2 pts) <input type="checkbox"/>	(3 pts) <input type="checkbox"/>	(4 pts) <input type="checkbox"/>

OVERALL PERFORMANCE ASSESSMENT

Total Points	Divided by	Performance Expectations Total Points	=	Score
	/	40	=	

Score	Multiply by	Weight	=	Overall Performance Rating Score
	x	100%	=	

FINAL LABORATORY EVALUATION GRADE _____

DATE _____

MEDICAL LABORATORY SCIENCE PROGRAM LABORATORY ROTATION

COURSE CONTENT & INSTRUCTOR EVALUATION

- | | | |
|--|---|---|
| <input type="checkbox"/> BLOOD BANK | <input type="checkbox"/> HEMATOLOGY LAB | <input type="checkbox"/> PHLEBOTOMY |
| <input type="checkbox"/> CHEMISTRY LAB | <input type="checkbox"/> DONOR CENTER | <input type="checkbox"/> QUEST |
| <input type="checkbox"/> COAGULATION LAB | <input type="checkbox"/> MICROBIOLOGY LAB | <input type="checkbox"/> URINALYSIS LAB |

Each of the following statements describes a basic aspect of the laboratory rotation and/or instructor behavior. Evaluate each one using the scale at the right. Reserve the highest score (5) for unusually effective or high quality performance and the lowest score (1) for unusually ineffective performance. Comment on any rating of 3 and below. NOTE: The term "instructor" applies to all technologists who teach, coach, mentor, tutor and/or in some way provide training to students during this rotation.

RANGE: Low → 1 → 2 → 3 → 4 → 5 → High

- _____ Instructors in this laboratory rotation were professional role models.
- _____ Instructors were current in the theoretical and technical knowledge of the subject.
- _____ Instructors were polite to students and laboratory staff members at all times.
- _____ If a mistake was made, I was not embarrassed or humiliated by the instructors and they were always patient when offering explanations.
- _____ Instructors were fair and consistent in evaluating students; criticism given to me was constructive.
- _____ Instructors were enthusiastic about the subject they were teaching and made the course interesting. This motivated me to do my best work.
- _____ I was praised when I performed a task well.
- _____ A sufficient amount of time was given to cover the subject material.
- _____ Directions provided for each new procedure were presented in a clear and concise manner.
- _____ A sufficient amount of time was allotted to become proficient in performing a test procedure.
- _____ Theory was presented to supplement understanding the principle associated with each procedure.
- _____ Students were questioned periodically to confirm that purpose, principle and procedure were understood for each test to be learned.
- _____ I was encouraged to ask questions and was provided answers in a timely manner.
- _____ Objectives for learning were provided at the beginning of the rotation and the material covered during the rotation supported these guidelines.
- _____ In terms of both behavior and examinations, I understood what was expected of me.
- _____ My work was evaluated within enough time to allow mistakes to be corrected.
- _____ Examinations were graded and returned promptly.
- _____ The work space provided for students was adequate and distractions were kept to a minimum.

Please comment on any evaluation ratings of 3 or less.

Describe the most useful aspects of this laboratory rotation. In what way was it beneficial to you?

List your suggestions for ways in which this lab rotation could be improved.

Student Signature: _____ **Date:** _____

NOTE: Student signature is required to document completion of evaluations. Comments and ratings will be shared anonymously with clinical instructor.

MEDICAL LABORATORY SCIENCE PROGRAM LECTURE SERIES

COURSE CONTENT & INSTRUCTOR EVALUATION

- | | | |
|---------------------------------------|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> CHEMISTRY | <input type="checkbox"/> COAGULATION | <input type="checkbox"/> BLOOD BANK |
| <input type="checkbox"/> URINALYSIS | <input type="checkbox"/> HEMATOLOGY | <input type="checkbox"/> IMMUNOLOGY |
| <input type="checkbox"/> PARASITOLOGY | | <input type="checkbox"/> MICROBIOLOGY |

Each of the following statements describes a basic aspect of the course and/or instructor behavior. Reserve the highest score (5) for unusually effective or high quality performance and the lowest score (1) for unusually ineffective performance. Please comment on any rating of 3 and below. Make comments on the reverse side.

RANGE: Low → 1 → 2 → 3 → 4 → 5 → High

- _____ 1. The instructors had command of the subject and presented course material in an organized way.
- _____ 2. The instructors discussed current developments and related the lecture topics to other areas of knowledge when appropriate.
- _____ 3. The objectives for each lecture were clearly stated and the lesson material supported these objectives.
- _____ 4. The instructors were sensitive to the response of the class and encouraged student participation.
- _____ 5. The instructors were enthusiastic about the subject.
- _____ 6. The instructors made the course interesting and therefore I felt motivated to do my best work.
- _____ 7. The instructors helped broaden my interests, viewpoints and appreciation of the subject.
- _____ 8. I was encouraged to ask questions and to express my views.
- _____ 9. The lecture material was presented at a rate that allowed me to comprehend the material as it was presented.
- _____ 10. Examinations were graded and returned promptly. Instructors communicated the exam return date.
- _____ 11. Instructors were able to provide practical applications of principles as they were being presented in lecture.
- _____ 12. Questions that were asked on examinations correlated with the course objectives and course content.

Please comment on any evaluation ratings of 3 or less.

Describe the most useful aspects of this laboratory rotation. In what way was it beneficial to you?

List your suggestions for ways in which this lecture series could be improved. Was a sufficient amount of time given to cover the subject material?

Student Signature: _____ Date: _____

NOTE: Student signature is required to document completion of evaluations. Comments and ratings will be shared anonymously with clinical instructor.

**INOVA FAIRFAX HOSPITAL
MEDICAL LABORATORY SCIENCE PROGRAM
LECTURE SERIES
INDIVIDUAL INSTRUCTOR EVALUATION FORM**

Lecture Series / Subject _____

Presented by _____ Date _____

Each of the following statements describes a basic characteristic of the instructor's presentation. Reserve the highest score (5) for unusually effective or high quality performance and the lowest score (1) for unusually ineffective performance. Please comment on any rating of 3 and below.

RANGE: Low → 1 → 2 → 3 → 4 → 5 → High

_____ 1. The instructor clearly understood the subject and presented the lecture in such a way that the content was comprehensible.

_____ 2. Information presented during lecture covered the stated course objectives.

_____ 3. The lecture material was presented in a clear and organized manner and at a rate that allowed me to comprehend the facts as they were presented.

_____ 4. Practical application of the principles presented in the lecture was provided by the instructor when applicable.

_____ 5. My participation was welcomed during the lecture. The instructor encouraged me to ask questions and to express my views.

_____ 6. The way in which the material was presented helped broaden my interests, viewpoints and gave me an appreciation of the subject.

_____ 7. The instructor was punctual.

_____ 8. The instructor had a sufficient amount of time to cover the subject material.

_____ 9. The instructor was enthusiastic about the subject.

_____ 10. The instructor was prepared for the lecture.

Please comment on any evaluation ratings of 3 or less.

Describe the most useful aspects of this lecture. In what way was it beneficial to you?

List your suggestions for ways in which this lecture/instructor could be improved.

Student Signature (optional): _____ Date: _____

Note: Comments and ratings will be shared anonymously with the clinical instructor.

**INOVA FAIRFAX HOSPITAL
SCHOOL OF
MEDICAL LABORATORY SCIENCE
SENIOR GRADE RECORD**

Student: _____ **Student Number: #** _____

Program Start Date: _____

Program End Date: _____

GRADES				
COURSE	LECTURE	LABORATORY	COMBINED	FINAL GRADE AFTER ADJUSTMENT FOR COMPREHENSIVE EXAM
Hematology				
Coagulation				
Urinalysis				
Chemistry				
Microbiology				
Blood Banking				
Immunology				

The passing grade is 70%. The lecture grade comprises 60% and the laboratory grade comprises 40% of the final grade. The Comprehensive Examination adjusts the grade by 10%. Final grade = 90% (Lab x 40% + Lecture x 60%) + (Comp. x 10%). The passing grade for the Comprehensive Examination is established at 70%.

Deborah L Hixon, MBA, MT(ASCP)SM
Program Director

STUDENT PROJECT GUIDELINES



STUDENT PROJECT: OVERVIEW

Early in the year the Program Supervisor and the Medical Director solicits possible topics for student projects from pathologists, laboratory supervisors and clinical instructors. These topics are provided to the students for consideration. All projects are submitted to the Medical Director and Program Supervisor for final approval. Generally the projects are handled in the following way:

- > **Topic Selection** - Select a topic that interests you.
You may suggest your own topic or choose one from the submitted list.
- > **Research** - Research the topic.
Read the literature available in the laboratory related to your project. Talk to the individual who submitted the topic, or if one that you selected, talk with the individuals in that area.
- > **Advisor Selection** - Select an advisor for your project.
Usually the person who suggested the project, a pathologist, section supervisor or a clinical instructor is the advisor.
- > **Writing Proposal** - Write a project proposal with the assistance of your advisor.
Have the proposal signed by your advisor and submit the signed proposal to the Medical Director and Program Supervisor for final approval of the project. NOTE: Reagents cannot be ordered without project approval.
- > **Performance** - Perform the project.
Keep notes and results of all work performed on your project. Meet with your advisor as needed.
- > **Writing Project** - Write the project in **scientific form**.
Submit the project to the Medical Director and Program Supervisor for approval after your advisor has initialed his/her approval on the final draft.
- > **Oral Presentation** - Give an oral presentation of the project.
Prepare visual aids and/or handouts. Practice the presentation prior to delivery.

The preceding seven steps are a general guideline on how to proceed with a project. Please bring any concerns or problems to the attention of the Program Supervisor.

STUDENT PROJECT: FORMAT GUIDELINES

The following format is most often used in scientific writing:

- > **Title**
This is the only section that is self-explanatory. The title should be as brief as possible, but still convey exactly what the paper is about.
- > **Abstract**
An abstract is an opening statement that summarizes the entire paper. This is a brief statement of five or six well-composed sentences to prepare the reader for what to expect.
- > **Introduction**
This section varies in length, depending on the topic. It should include pertinent historical background, discussion of the clinical significance of the topic, advantages and disadvantages of older methodologies and the methodologies being investigated, and the reasons for doing the project.
- > **Methods and Materials**
This section should include a detailed procedure and a list of reagents and equipment used along with their respective manufacturers and ordering information. This section should answer the following questions:
 - How did you do the project?
 - What materials did you use and where did you get them?

The Methods and Materials section should be very detailed and comprehensive because your project may be supplemented by future work.

- > **Data**
This section should include all tables, graphs, histograms, formulae, etc. Include all data. Data should be presented in a legible format. Occasionally, follow-up work is done on projects by another person at a later date. It is important to have details in this section.
- > **Discussion**
This section should include your conclusions about the project. It should include information about possible interfering substances, improvements that could be made in the project, recommendations for what can be done with your information and work. The statements you make about the project should be supported by the data you have presented.
- > **References**
All references should be included in the bibliography. The student should consult a textbook for writing papers for the proper format.
- > **Signatures of Advisor and Student**
Submit a rough draft to your advisor for approval. The advisor will point out any errors or clarifications that need to be made. When the advisor has approved and initialed the final copy, give a copy to the Medical and Program Directors.

NOTE: Allow ample time for approval.

STUDENT PROJECT: PROCESS DESCRIPTION

1. Topic Selection

Select the topic as early as possible to allow adequate time for preparing the proposal. Choose a topic that you either know about or have an interest in. If you devise your own topic, be sure to investigate the feasibility with clinical instructors and the supervisor in that section. You should discuss clinical importance, cost, equipment availability, reagent preparation, availability of specimens and an estimate of time involved to complete the project. The best source of clinical information is the pathologist. Sources for technical information include laboratory managers, supervisors, clinical instructors and the library. The project proposal must be submitted and approved prior to the winter holiday break. ***The Medical and Program Directors must approve all projects before starting.***

2. Topic Research

Perhaps the most frequent error made by students when doing projects is failure to obtain adequate background information. The first sources of information available to you are your textbooks. From these books, one can usually obtain a list of references for individual papers and journals. Use the Inova Fairfax Hospital Medical Library and ask the librarians for help as needed. Another good source of information is the manufacturer or technical representatives from companies related to your project - ask them for information. When doing your literature research, take good notes and ask yourself the following questions:

- What is the clinical significance of the lab test procedure you plan to work on?
- What are the current methodologies for the test?
- What are the drawbacks and pitfalls of the previous methods?
- What are the advantages of the different methodologies?
- If patient specimens are needed, are they available?
- Can this project be done in the time I have available?

3. Advisor

Your advisor may be a pathologist, section supervisor, clinical instructor, or a hospital physician. It is important that you keep your advisor informed on the progress of your project. After finding an advisor, discuss all aspects of the project listed in Step 1 in selecting a topic. Your advisor will be able to help you anticipate time and material needs for the project. ***Thoroughly discuss your project with your advisor!***

Let your advisor know what your deadlines are. Do not expect your advisor to accept the first draft of the proposal you submit. You may be asked to re-think, re-do, and re-submit. Work out a time schedule with your advisor that allows you sufficient time. Both you and your advisor should keep in mind that the proposal initialed by the advisor is like a contract. Subsequent work can be done in a future project.

4. Writing a Proposal

Before any project can be started, a written proposal must be approved, first by your advisor and then by and Program Supervisor.

The proposal need not be lengthy but must contain some vital information. It should be typewritten and signed by you and your advisor. A copy of the signed proposal is then submitted to the Program Supervisor for final approval. A copy of your proposal will be retained in your file. The Program Supervisor can provide sample project proposals from former students as examples.

STUDENT PROJECT: PROCESS DESCRIPTION (Continued)

Include the following information in the proposal:

- Title
- Historical Background - A brief statement about your project's relevance to a particular disease state, diagnosis, treatment, etc. All information should be documented with proper footnotes. The IFH Library has books on writing scientific papers.
- Principle of the method(s) you will investigate.
- List of materials needed - equipment, reagents, etc.
- Number and types of samples you plan to analyze.
- Length of time you expect to spend on the project.
- Estimate of total cost of the project.
- Summary of the project and expectations

Basically, the primary objective of the proposal is to provide evidence to support the decision to perform the project. To accomplish this, the project needs to have some clinical significance, offer better method for analysis or provide data on currently used methods.

You should exhaust the laboratory's many resources before ordering any new materials. Consult section supervisors about reagents and equipment availability. If you find that we do not have the required material, investigate different companies and compare prices. Prices for reagents may vary. Your advisor or section supervisor will help you with the cost information.

No equipment or materials should be purchased prior to approval.

When all the vital information is organized into a good format, submit it to your advisor for approval. Once the Medical Director and Program Supervisor have approved the project proposal, supplies may be ordered. Your advisor or department supervisor will assist you in ordering.

Laboratory reagents must be labeled with the date of receipt and stored under proper conditions. Ensure that your reagents are stored properly and note the expiration date. Material Safety Data Sheets will be provided by the manufacturer for your reagents and must be on file in the laboratory section.

5. **Project Performance**

The following are general guidelines to help you perform your project accurately and safely:

- Consult your advisor.
- Do not try to do your project in a brief period of time.
- Read the Material Safety Data Sheets and follow all safety guidelines when dealing with chemicals. Know the hazards of each and use personal protective equipment and engineering controls along with good work habits.
- When handling any biological materials, follow the OSHA Blood Borne Pathogens Standard and the Exposure Control Plan. A copy of this is available for you in each lab section and from the Program Supervisor. Follow all safety and infection control policies.

- Plan and organize your work.
- Take extensive notes while you are doing your project.
- Ask questions. The laboratory has many knowledgeable sources. If they do not know the answer, they can direct you to the correct source.
- Run as many samples as possible, being sure to include the different categories that you outlined in your proposal.
- Think about your results and use your reasoning abilities.
- If your project does not turn out as anticipated, all is not lost. Proving that something does not work or is not cost-effective is equally as important in laboratory science as proving the contrary.

6. **Writing a Project**

Most scientific papers follow a standard format with some variations. Care should be taken to reference all sources with the proper documentation of footnotes and a bibliography.

Personal computers are available for students to prepare their projects. Check with the Program Director for availability and locations of computers for student use.

Students are expected to adhere to the standards of academic integrity and abide by the honor policy. Academic dishonesty will not be tolerated. Refer to the Academic Integrity and Honor Policy defined in this student handbook.

7. **Oral Presentation**

In the process of performing your project and writing the paper, you have thoroughly researched and learned information about your topic. Now you must prepare yourself to communicate effectively what your project involved. Prepare yourself to report on what you did, why you did it, what the outcome was and what you learned in the process.

- Organize your thoughts for the presentation by preparing notes on index cards. Reading your paper is not acceptable.
- When possible, prepare visual aids and/or handouts.
- Practice your presentation in the classroom with the Program Director, your classmates, or your advisor in advance. Remember that you are now the expert on this topic. Knowing this should give you a feeling of confidence during the presentation.
- The oral presentation should not include the detail that you were required to include in your written paper. Summarize. Following your presentation, ask if there are any questions. Your advisor will be available to help with answers.
- In concluding, acknowledge help you received from your advisor or other individuals.

NOTE TO STUDENTS

Completion of this program and permission to sit for the ASCP Board of Certification Examination is contingent upon completion and presentation of the student project.