EISENHOWER HEALTH
MEDICAL LABORATORY SCIENCE PROGRAM

STUDENT MANUAL

EISENHOWER HEALTH
SCHOOL OF MEDICAL LABORATORY SCIENCE

ORIENTATION

Program Administrative Staff

Program Director:	Jamie Stypinski, MBA, CLS/MLS(ASCP)
Department Secretary	Kathie Allen

Laboratory Administrative Staff

Clinical Laboratory Director	Ruel N. Del Rosario, MSHSA,CLS/MLS(ASCP)
Lab Operations Manager	Eddie Jacildo, MBA,MT(ASCP)DLM,CQA(ASQ)

Laboratory Supervisors:

Hematology Laboratory	Jillyn Librea, CLS/MLS (ASCP)
Chemistry Laboratory	William Guico, CLS/MLS (ASCP)
Microbiology Laboratory	Tracey Weiss, CLS/MLS (ASCP)
Transfusion Services	David Fanning, CLS/MLS (ASCP)

Education Facilitators

Microbiology	Aileen Mendoza, CLS/MLS (ASCP)
Hematology and Coagulation	Jillyn Librea, CLS/MLS (ASCP)
Immunohematology and Transfusion Services	David Fanning, CLS/MLS (ASCP)
Immunology and Serology	Anthony Weirich, CLS/MLS (ASCP)
Chemistry	Teresa Del Real, CLS/MLS (ASCP)
Urinalysis	Teresa Del Real, CLS/MLS (ASCP)

STUDENT HANDBOOK

POLICIES AND PROCEDURES

Policy 40070: Academic Progression and Student Guidance

Purpose:

This policy outlines the guidance resources and academic progression available to the School of Medical Laboratory Scientist students.

Policy:

1. Students must successfully meet the minimum requirements in both the rotation and didactic areas.
2. Overall academic progression is assessed using competency checklists, achieving passing scores (70% or better) in lecture and rotation series, and satisfactory evaluations in each clinical rotation.
3. Students are evaluated and advised by the clinical faculty during each department rotation.
4. The Program Director advises students both academically and personally throughout the year.
5. Students are encouraged to seek the advisement and mentorship of lab professionals.
6. For physician referral, the student may contact the Eisenhower Center for Healthy Living or the online physicians' referral at eisenhowerhealth.org: Find a Doctor.
7. Any meetings or discussion held with a student are held impartially and confidentially.

Policy 109969: Student Time Off and Attendance

Purpose:

Eisenhower's School of Medical Laboratory Science expects its students to report to his/her/their assigned rotation as scheduled and on time. On rare occasions, students may have a legitimate reason to be unable to appear or arrive on time.

Procedure:

1. **Holidays:** Students are entitled to be scheduled off on all official hospital holidays and the day after Thanksgiving. Currently the holidays are New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
2. **General Time Off:** Students are given 6 days of general time off that is to be used either as sick time or scheduled leave. Anytime missed beyond the 6 days given must be made up.

   For scheduled time off, a written request must be made on the appropriate form. Approval for time off must be approved by the Program Director.

   For sick time, a student must notify the Education Facilitator of the department he/she/they is currently rotating through and notify the School of Medical Laboratory Science at least 1 hour before his/her/their scheduled time to arrive. If a student is off sick 3 or more consecutive days, he/she/they must have a signed note by a physician. The student will likely have to make up that time in the rotation.

   If a student misses any lectures, it is necessary for the students to obtain the lecture notes from another student.

3. **Funeral Leave:** A student is allowed up to 3 days of leave following the death of an immediate family. "Immediate Family" is defined as a current spouse, registered domestic partner, parent, step-parent, grandparent, current parent-in-law, child, step-child or sibling.
4. **Jury Duty:** A student is allowed up to 40 hours for jury duty. Students should advise the court of this limitation for consideration of hardship. Students must provide court documentation of attendance to the Program Director.
5. **Excessive unscheduled absents in a 12 month period:**

   - 3 occurrences informal counseling
   - 4 occurrences formal counseling
   - 5 occurrences formal counseling with probation for 3 months
   - 6 occurrences dismissal from program

   Excessive tardies in a 90 day period:

   - 3 occurrences informal counseling
   - 4 occurrences formal counseling
   - 5 occurrences formal counseling with probation for 3 months
   - 6 occurrences dismissal from program

6. **Make up time:** If a student needs to make up time it must be approved by the Program Director. Any student that needs to make up 5 or more days in a department will make up the time at the end of the year, possibly prolonging the student's clinical year.

Policy 40049: Minimum Pass Level

Purpose:

The student must successfully fulfill the minimum requirements in each section of the didactic lecture program and in each section of the bench-level program. This policy defines the minimum pass level.

Responsible Persons:

The School of Medical Laboratory Science Program Director, Education Facilitators and/or Section Supervisors.

Procedure:

1. Successful completion of all didactic and rotation areas with a minimum passing grade is mandatory to graduate and obtain the certification by the school. Granting of the certificate is not contingent upon passing an external certification or licensure exam. The student will be evaluated and/or graded by the following means:

- Didactic lecture examinations
- Bench-level examinations
- Students' ability to perform laboratory tests accurately and within minimum time limits in an organized manner
- The demonstration of good affective behavior (See Student Evaluation Form)

2. The grading scale used in reporting all scores:
   A = 90-100%
   B = 80-89%
   C = 70-79%
   unsatisfactory = <70%

3. In order to pass a departmental rotation, a student must achieve a cumulative score of 70% on the examinations and an average rating of "3" on the non-academic rating scale of the Student Evaluation Form. If a student gets below 70% or below an average rating of "3" on the non-academic rating scale of the Student Evaluation Form, the student has failed the department rotation.

4. To pass, a student must achieve a cumulative grade of 70% or higher on all administered exams in each didactic lecture series. Any cumulative grade below 70% is considered failing.

5. If a student scores less than 70% in either a didactic lecture series or a rotation area, the student will be given review materials for self-study. Within a two week period, the student will have to take and pass a separate written examination. The score of the separate examination **will not** be counted towards the student's final grade in that lecture series or rotation area, but must be a passing grade (>70%) to demonstrate understanding of lecture or rotation. Failure to obtain a grade of 70% or greater will result in an extension of the clinical rotation year, in which during this time the student must show proficiency either through a practical or written exam at the discretion of the program director. However, an extension of the clinical year will not result in an extension of the stipend.

6. Failure to achieve at least a 70% in a rotation area or lecture series during a student's probationary period will result in dismissal from the program.

Policy 40069: Student Service Work Policy

Purpose:

This policy defines the conditions under which students may perform service work.

Policy:

1. Students are not meant to be a substitute for service work in place of regular staff.
2. Service work by students in clinical settings outside of regular hours must be non-compulsory, paid, supervised on site and subject to employee regulations.
3. The student can show evidence that they can work outside of the academic hours and still maintain an overall B Average. If this average is not maintained, the student will be asked to discontinue the service work.
4. The student must be able to demonstrate proficiency before accepting a part-time job in the clinical laboratory. Service work outside of academic hours are limited to a maximum of 12 hours per week.
5. The student must receive prior approval from the Program Director.
6. Students may work on either Saturday or Sunday (student hours are Monday through Friday). They are hired by the Laboratory Services Director and are under the direct supervision of the scientist/technologist-in-charge of the department in which they work. Under special circumstances, students may work Monday through Friday after their student hours.

Policy 40090: Trainee Grievance and Appeal Policy

Purpose:

Describes the procedure to ensure that each and every student has the opportunity to express complaints, grievances and/or appeal a decision involving a disciplinary action

Procedure:

Time limits given in the appeals procedure are intended to ensure prompt and thorough action on the appeal. However, any time limits specified in this procedure may be extended by mutual agreement of the parties involved.

1. A student having any problem with staff, education facilitator, faculty or fellow trainees should discuss it with the Program Director and/or the Clinical Training Coordinator. The complaint should be made as soon as possible and preferably made in writing.
2. If dissatisfied, the student may elevate the complaint to the Laboratory Services Director and Program Director in writing, who shall, within five working days, offer their solution to the problem.
3. If still unresolved, an Impartial Grievance Committee consisting of four persons appointed by the Program Director and the Laboratory Services Director, will hear the student's complaint. The student may select another student of his/her choice to be present at any time during the appeal process. The recommendation of the Committee shall be submitted to the Laboratory Services Director and Program Director within three working days following its recommendation.
4. The decision of the Committee will be reviewed by the Program Director and conveyed to the student in writing within one week following receipt of the Committee's recommendation. This decision will be final.

Policy 40109: Student Withdrawal Procedure

Purpose:

Describes the procedure for withdrawal from the School of Medical Laboratory Science program

Procedure:

1. The student must notify the Program Director and the Laboratory Services Director of their decision to withdraw from the School of Medical Laboratory Science program in writing.
2. The student does not repay the institution for any stipend or fellowship funds received. However, the stipend or fellowship terminates on the date of withdrawal.
3. Laboratory Field Services, California Department of Public Health must be notified, in writing, by the student within fifteen days. In addition, the Program Director shall notify the California Department of Public Health within fifteen days regardless of whether the student is terminated or withdraws.

Policy 40129: Student Probation and Termination

Purpose:

Defines the criteria and process for placing a student on probation or student termination

Probation:

1. A student may be placed on probation if any of the following criteria exist:

- Consistently poor performance in lecture series.
- Consistently poor performance during department rotations.
- Attitudes which are incompatible that may affect other laboratory personnel or the quality of health care given to patients.
- Chronic or excessive tardiness or absenteeism.
- Smoking on hospital grounds
- Lack of regard for written protocols, both hospital and lab protocols.
- Failure to follow correct break and lunch period protocols.
- Disrespectful, Retaliatory or Disruptive behavior including but not limited to:
    - shouting or using profane/offensive language
    - degrading or demeaning comments
    - unreasonable refusal to cooperate with others in assigned responsibilities
    -

Termination:

1. A student may be terminated for the following reasons:

- Repeated acts for which a student has already been placed on probation.
- Cheating on examinations or on laboratory work which can be documented will result in immediate dismissal.
- Plagiarism
- Any mistreatment of a patient, physician, employee or fellow student, including physical or verbal abuse, which can be documented, will result in immediate dismissal.
- Any form of physical assault or inappropriate physical contact.
- Student refuses to follow instruction given by a supervisor or others in authority.
- Reporting to the laboratory under the influence of any intoxicant or habit forming drugs may result in immediate dismissal.
- Disclosure of patient confidentiality will result in immediate dismissal.
- Theft and/or damage of hospital property

Disciplinary Action and Dismissal:

1. A record of counseling and/or disciplinary action will be kept in the student's file
2. A performance improvement plan (PIP) may be set in place.

    - The PIP will list the areas needed for improvement and the action plans with target dates set.
    - The PIP will be reviewed and signed by both the Laboratory Service Director and Program Director.

3. Disciplinary actions constitute the following:

    - The 1st offense will be a verbal warning.
    - The 2nd offense will be a written warning with a 30-100 day probationary period depending on the severity of the situation.
    - The 3rd offense will be a second written warning with another probationary period or an extension of the original probationary period.
    - The 4th offense is dismissal from the program.

4. Any student has the privilege of appealing by following the School of Medical Laboratory Science's appeal procedure.
5. When a student is terminated, the Program Director will notify the Laboratory Field Services, California State Department of Public Health in writing within fifteen days.

STUDENT HANDBOOK

CURRICULUM:

Approximately one week prior to the start of the MLS program, the Human Resources department will provide the Eisenhower Medical Center orientation program and the Employee Health department will conduct a personal health assessment. The student's first day consists of reviewing the School of Medical Laboratory Science policies, safety policies, program schedules and expectations. After completing orientations, the students will begin their clinical rotations.

COURSE NUMBER AND DESCRIPTION

MLS 500 Introduction to Medical Laboratory Science

During this course students learn the importance of quality assurance, quality control, and compliance with regulatory accrediting agencies. Concepts of laboratory management, like quality management, laboratory administration, safety, problem-solving, ethics, laboratory information systems and professional conduct, are taught to the students through workshops.

MLS 501 Chemistry Laboratory Rotation (12 Weeks)

The chemistry and special chemistry clinical course consists of routine chemistry procedures, endopharmacology, and therapeutic drug monitoring. Students will have the opportunity to use the laboratory's state-of-the-art instrumentation to become familiar with the automation and computerization processes of the modern medical laboratory. Quality control and calibration result reports are reviewed to explain the importance of QC and accurate calibrations. The vital role of equipment maintenance, both daily and monthly, is emphasized. In the tenth week of the clinical rotation, students will visit the Respiratory Therapy department to observe and learn blood gas methodologies and arterial blood punctures. Weekly tests and unknowns exam are given.

MLS 502 Chemistry Lecture Series

In the Chemistry lecture series, students to learn about routine chemistry procedures, therapeutic drug monitoring and endopharmacology. Students learn about test analytes, clinical significance of tests and the diseases they relate to, testing methodologies, serological procedures, reproductive endocrinology, hepatitis, HIV testing, tumor marker testing and other miscellaneous infectious disease testing. Theoretical exams are given covering material learned in lecture series.

MLS 511 Urinalysis Laboratory Rotation (4 Weeks)

Students learn about physical, chemical, and microscopic evaluation of urine samples. The first week is spent learning the procedures of the macroscopic portion of urinalysis and in the second week, microscopic analysis is introduced. Additionally, students are instructed in special procedures that are done as part of the automated urinalysis workstation in the Chemistry section. Body fluids are taught to students during this rotation. Cell counts, differentials, and crystal analysis are performed and reviewed with students on the different types of body fluids. A set of three quizzes will be given during the rotation.

MLS 512 Urinalysis Lecture Series

Renal anatomy and physiology relating to the formation and content of urine in health and disease is covered. Additionally, urinalysis screening procedures and their application in the diagnosis of renal, systemic, metabolic disorders are covered. A cumulative exam is given.

MLS 521 Body Fluids Laboratory Rotation

Body fluid introduction and testing is studied in the Urinalysis rotation.

MLS 522 Body Fluids Lecture Series

This course covers anatomy and physiology of body sites and the body fluids that are associated with those sites for analysis. Testing methods, such as cell counts, differentials, chemical and microbiological, are discussed. Body fluids reviewed during this course are cerebrospinal fluid, serous fluids, synovial fluid and semen. A cumulative exam is given.

MLS 531 Hematology/ Coagulation Laboratory Rotation (8 Weeks)

The Hematology clinical rotation consists of the study of blood and particularly its cellular components. The students begin their rotation by becoming familiar with the operation and theory of the automated instrumentation, including the importance of quality control. Emphasis is placed on identification of white blood cells and evaluating red blood cell morphology by performing manual differentials. Proper identification is essential for the accurate diagnosis of leukemias, anemias and infectious processes. The department has an extensive file of abnormal slides and computer based learning resources. Students observe bone marrow biopsies performed by the attending pathologists and receive training in proper slide preparation. The pathologists review abnormal morphology with the student as they view the slides together under a double-model microscope. Coagulation instruments and coagulation testing are also studied. In both the coagulation and hematology sections of this rotation, emphasis is placed on the performance on the routine assays and the problem-solving that is required when there are discrepant results. Weekly exams are given throughout this rotation.

MLS 532 Hematology Lecture Series

The hematology lecture series includes the study of whole blood components with emphasis placed on procedures, both automated and manual, for the diagnosis of hematologic disorders. Analytical methodologies, as wells as the correlation of tests with the disease state, are taught. Topics include hematopoiesis, proliferative disorders, normal and abnormal hemoglobins, anemias, and leukemias. Theoretical exams are given covering material learned in lecture series.

MLS 541 Coagulation laboratory experience is presented during the Hematology rotation.

MLS 542 Coagulation Lecture Series

The coagulation lecture series includes an in depth study of the hemostatic mechanism, study of the intrinsic and extrinsic systems, platelet and vessel function and hypercoagulability. Analytical methodologies for the detection of abnormalities are studied for all systems. A cumulative exam is given covering material learned in lecture series.

MLS 551 Immunology/Serology Laboratory Rotation (6 Weeks)

The main areas of study during the Immunology clinical rotation are Serology, Electrophoresis, Immunology and Flow Cytometry. For each concentrated area of clinical rotation, a study guide with questions and objectives, utilizing textbooks and articles, is given to each student to complete. Rotation exams, clinical objectives, case studies and unknown specimens are assigned to facilitate and assess the learning process. The student learns to perform manual tests such as cold agglutinins, RPR test, cryptococcal antigen agglutination test, and ANA and ENA tests for detecting antinuclear antibodies. Also, the student learns how to run patient samples, evaluate QC, and calibrate an automated instrument using the Helena Electrophoresis System. Problem solving, interpretation and critical thinking skills are developed during the Immunology rotation as students learn test methods and disease states associated with each test.

MLS 552 Immunology/Serology Lecture Series

The immunology lecture series covers the topics of basic immunology theory, cellular and humoral immunology, autoimmune and immunoproliferative disorders, immunologic and serologic procedures and immunology of infectious diseases. Principles of methodologies in relationship to clinical diagnosis and correlation with human disease are stressed. Problem solving of discrepant results and troubleshooting of assay performance is stressed through case study simulations. A cumulative exam is given covering material covered in the lecture series.

MLS 561 Immunohematology/Transfusion Services Laboratory Rotation (6 Weeks)

The student is trained in all facets of pre-transfusion testing, including ABO and Rh testing, antibody detection, compatibility testing and the procedures used in the identification of unexpected antibodies. Samples are provided to the student as unknowns for identification purposes. Transfusion reactions, ABO discrepancies and release of blood in emergency situations are also covered. Written exams and a practical exam are administered during the student's rotation.

MLS 562 Immunohematology/Transfusion Services Lecture Series

The immunohematology lecture series covers the collection, processing, storage and shipment of blood, immunologic and genetic principles, blood groups, pre-transfusion testing, clinical considerations in transfusion practices and immunohematology tests and procedures. Case studies and a cumulative final are given upon completion of the lecture series.

MLS 571 Microbiology Laboratory Rotation (12 Weeks)

The clinical rotation in microbiology consists of theory and application in the studies of Clinical Bacteriology, Mycology, Parasitology, Mycobacteriology and Virology. The students learn to use a wide variety of techniques to identify pathogenic microorganisms, including culture and isolation, direct exam, serology and use of automated equipment. The student also learns various staining procedures and is trained in the proper set up and interpretation of bacterial susceptibility studies. Students take weekly exams (practical and/or written) and a final exam.

MLS 572 Microbiology Lecture Series

The microbiology lecture series covers the topics of clinical bacteriology, mycology, parasitology, mycobacteriology and virology. Principles of testing methodologies, including antibiotic susceptibility of bacteria, techniques for isolation, identification and clinical relevance by body site of pathogenic or potentially pathogenic bacteria in humans are discussed. The parasitology lecture portion of the series will cover the major groups of medically important parasites and the correct identification of the pathogenic organisms.

The mycology lecture portion of the series will cover the medically important fungi, including yeast, dermatophytes, opportunistic and dimorphic fungi. Emphasis is placed on morphologic identification of the pathogenic organisms. The virology lecture portion of the series will cover the medically relevant viruses. The course will teach the students the procedures and the techniques used for isolating and identifying viral organisms. Theoretical exams are given covering material learned in lecture series as well as case studies.

MLS 581 Phlebotomy and Central Processing Rotation (1 Week)

Students will spend time learning the theory and techniques of phlebotomy during their Transfusion Services rotation. Instruction emphasizes the importance of proper specimen collection and processing as the first step in quality testing and ultimately, quality patient care. Additionally, students are able to rotate into the specimen processing department at the beginning of the clinical rotational year for a few days. Here the students learn the correct process to sort and receive samples into the lab properly. Students will learn how to handle samples coming to the lab through the tube system from the hospital, and from couriers bringing sample into the lab from outpatient clinics. Students will learn to accept or reject a sample, as well as what to do with sample for special testing.

MLS 582 Phlebotomy and Central Processing Workshop

The phlebotomy workshop covers the proper specimen collection process, the regulatory and ethical issues, safety issues, the correct venipuncture equipment, complications that can occur, special blood collection processes, and quality assessment. An additional workshop is given at the beginning of the year that reviews Eisenhower Medical Center's process for central specimen processing.

MLS 590 Research – Capstone Project

A workshop is given that includes an instructional strategies workshop, which reviews education methodologies and research methodologies and techniques. The capstone project requires that students formulate a research question, perform a literature search using appropriate reference materials, and pursue a project that could serve as the basis for a larger research study. The research process culminates in the research project being presented, either as a poster presentation or PowerPoint, to a venue of medical laboratory science peers.

MLS 595 Additional Hospital Labs Rotation (2-3 weeks)

Students will spend time learning specimen processing for the department. Students will have the opportunity to use laboratory's state-of-the-art instrumentation to become familiar with the automation and computerization processes of the modern medical laboratory; with an emphasis in chemistry, hematology, coagulation and urinalysis. Students will also have the direct opportunity to work with Point of Care instrumentation and to see minor maintenance.

MLS 600 End of year review and comprehensive written exam

This course serves as a review of medical laboratory science for the individual preparing for the national certification examination(s). The major categories of laboratory medicine are addressed through question and answer sessions and mock exams.