Medical Laboratory Technician Student Handbook 2024-2025 Admission Year

Higher Education Center
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SOUTHWESTERN COLLEGE

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WELCOME

Welcome to Southwestern College (SWC) Medical Laboratory Technician Program. Each one of you is embarking on a journey that will lead you on an adventure of learning and growth, both personally and professionally.

The MLT Handbook is your guide to all of the policies and procedures for the program. Let it be your reference during your time at SWC. Your faculty will provide you with all the tools necessary for your success. However, you, as the student, are the one in charge of the results of your education. It is vital for you to remain focused and dedicated to your studies to reach your goals.

You have chosen laboratory science as your field of study and your future career. The laboratory medicine profession is one of excitement, intrigue and is very demanding. You will find the same during your educational experience. Remaining active and engaged during your time in the MLT program will allow you to navigate through any difficult stresses. The program, like the profession, is both challenging and rewarding and you will constantly encounter new learning.

I strongly encourage you to bring your curiosity, enthusiasm, and love of learning. The MLT faculty and staff wish you the best of luck and highest academic achievements throughout your program. Welcome to SWC, have fun, and enjoy every minute!

Sincerely,

Deanna M. Reinacher, Ed.M., MLS(ASCP), CLS
MLT Program Director

Introduction

The Medical Laboratory Technician program will provide a quality educational program that complies with the established essentials and guidelines of an accredited educational program for the Medical Laboratory Technician. The college recognizes that to achieve this, the student must be able to grasp technical and theoretical knowledge and successfully apply this knowledge in a clinical setting.

The program recognizes the importance of professional standards, morals, and ethical obligations to the community while committing itself to an educational program. Development of professional competence, personal growth and effective patient care will be major areas of concentration in providing the community and the profession with entry level Medical Laboratory Technicians.

The number of students accepted each fall is dependent on the number of available clinical site placements. The program begins each year in the fall semester and continues for 18 months with graduation at the completion of the final fall semester. The Medical Laboratory Technician Program consists of lectures and laboratory experiences at the National City Higher Education Center, followed by practical clinical experience at affiliated clinical laboratories. While class times and days will vary, all didactic lecture and lab classes are in the evening generally from 4:00pm-9:30pm, Monday through Friday at the National City Higher Education Center. All clinical experiences are day hours, generally 7:00am-3:30pm, Monday through Friday. Students are not in classroom and clinical experiences at the same time, except for the final semester, which includes a review course and meetings 1 day per week. The MLT program is a full-time program. Classes are not offered on a part-time basis.

General Description

A Medical Laboratory Technician performs routine clinical laboratory testing procedures to provide scientific information needed in diagnosis, prognosis and treatment of disease. Technicians use sophisticated instrumentation for these evaluations, which encompass quantitative and qualitative chemical and biological analyses of body specimens. Technicians function under the supervision of a qualified practitioner **or** Clinical Laboratory Scientist.

The program prepares students for a career in Medical Laboratory Technology through the studies in humanities, social and natural sciences, and the field of Medical Laboratory Technology. Emphasis is placed on the clinical practice in the context of laboratory medicine. Graduates are eligible to take a nationally recognized certification examination.

Program Mission Statement

The mission of the Southwestern College Medical Laboratory Technician Program is to provide students with the technical skills and knowledge needed to perform routine clinical laboratory testing in all major areas of the laboratory. In addition, we will foster a culture of life-long learning by instilling the value and confidence necessary in a student-centric environment.

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Program Goals

1. To produce graduates eligible to take a nationally recognized certification examination from the American Society for Clinical Pathology (ASCP).

2. To facilitate and foster the values necessary to practice laboratory medicine within the ethical and legal framework of the profession and the community.

3. To produce students who exhibit professional behavior consistent with current academic and professional standards.

4. To develop students who can analyze, interpret and perform laboratory tests proficiently.

5. To help students acquire and strengthen problem solving and critical thinking skills.

6. To assist students in performing all necessary duties in a safe environment utilizing all the latest techniques in the laboratory arena.

7. To produce students who have the knowledge and respect needed to safely deal with hazardous materials.

8. To develop positive student attitudes for the pursuit of lifelong professional growth and development.

9. To provide graduates with the skills necessary to secure entry-level employment as a medical laboratory technician.

Program Competencies

1. Collect and process biological specimens for analysis. Store or transport samples for analysis using appropriate preservation methods.
2. Identify and correct procedural errors or results in laboratory testing, within predetermined limits.
3. Conduct quality control procedures on analytical tests, equipment, reagents and media.
4. Operate and maintain laboratory equipment and instrumentation.
5. Communicate effectively and behave professionally with patients, laboratory personnel and other members of the health care team.
6. Correlate laboratory test results with common diseases or conditions.
7. Apply basic scientific knowledge in learning new procedures.

Graduates' competencies are evaluated by the completion of didactic and clinical learning objectives. In addition, critique of the program from students and faculty, and feedback from employers are used to assure the competencies of graduates.

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Program Student Learning Outcomes (SLOs)

1. Ability to articulate professionally and competently with all stakeholders in the healthcare setting regarding patient care.
2. Analyze and evaluate medical laboratory science theory to achieve a minimum passing score of 400 on the American Society for Clinical Pathology (ASCP) board of certification exam.

NAACLS Accreditation

The program is nationally accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) at 5600 N. River Road, Suite 720, Rosemont, IL 60018
FAX, (773) 714-8886, Phone (773) 714-8880, or (847) 939-3597.

Additional information concerning the accreditation process can be found on the NAACLS website: www.naacls.org.

Career Options

A Medical Laboratory Technician's (MLT) responsibility will vary according to the size of the institution where they are employed and the extent of services it offers. This work may include:

- Performing routine tests in medical laboratory for use in prevention, diagnosis, treatment and management of disease.
- Collecting specimens, cultivating, isolating and identifying microorganisms for analysis.
- Using sophisticated biomedical instruments to generate accurate and reliable test results.
- Performing medical research to further control and cure diseases.

Course Descriptions, Objectives and SLO's

The instructor/student ratios for the didactic courses are 1:20; 1:15 for the labs and the clinical rotations are 1:2.

Affective Objectives

- Student demonstrates professionalism by complying with the attendance policy.
- Student demonstrates initiative by reviewing objectives and completion of reading assignments prior to class (coming to class prepared).
- Student submits assignments by the stated deadline.
- Student demonstrates enthusiasm and interest in the course by asking questions, participating in class discussions and meeting with professor during office hours as needed.
- Student utilizes constructive criticism to correct deficiencies and improve performance.
- Student collaborates cooperatively with professor and fellow students to achieve the goals of each assigned activity.
- Student displays flexibility and adaptability to change.
- Student demonstrates the ability to coordinate multiple tasks.
- Student uses supplies and reagents efficiently.

- Student demonstrates progression in laboratory skills by effective organization.
- Student demonstrates insightful evaluation of results obtained by paying close attention to detail.
- Student treats patient information/test results as confidential and releases information only following established protocol.
- Student conveys information (verbally) in a clear, concise manner.
- Student conveys information (written) in a clear, concise manner.
- Student asks pertinent questions.
- Student responds to questions in a thoughtful manner.

MLT 79 Medical Laboratory Technician Certification/Licensure Examination Preparation
Provides students with concepts and techniques necessary to pass the national American Society for Clinical Pathologists (ASCP) examination as well as the California state license examination. Focuses on the application of critical thinking and emphasizes theory of laboratory concepts.

- Student will discuss and describe components of the American Society for Clinical Pathologists (ASCP) test plan and Computer Adaptive Testing (CAT).
- Student will read and interpret instructions and examination material provided by the state licensing and national certification agencies.
- Student will correlate laboratory test results to the diagnosis and treatment of disease.
- Student will appraise the concept of test-taking strategy to read question stems with greater accuracy and eliminate distractions.
- Student will apply the theory of clinical laboratory medicine in a mock exam process by identifying illustrations, photomicrographs, and analyzing lab data.

SLO**:** Inspect and examine written criteria provided by the state licensing and national certification board to appropriately apply and to meet all requirements for the examinations.

MLT 80 Introduction to the Clinical Laboratory Profession
Introduces functions and duties of a Medical Laboratory Technician (MLT). Emphasizes clinical laboratory safety issues, laboratory equipment, basic laboratory techniques, basic laboratory mathematics, regulatory agencies, and professional responsibilities relative to other departments of health care.

- Student will describe the laboratory/departments' organizational structure within the health care delivery system.
- Student will identify and apply medical terminology regarding the structure and function of the human body.
- Student will identify and explain the professional conduct and personal communication skills that are required in relation to patients, laboratory personnel, the public, and other health care professionals.
- Student will define and apply the ethical and legal responsibilities of the profession.
- Student will demonstrate proper infection control, safety and appropriate waste disposal practices.

- Student will demonstrate proper ergonomic practices related to computer use and laboratory equipment.
- Student will identify and distinguish between California state licensure and National certification.
- Student will identify the parts and functions of the light microscope and model proper use and care of a microscope.
- Student will demonstrate and apply the standard precautions utilized in the laboratory according to the Occupational Safety and Health Administration (OSHA) guidelines.
- Student will demonstrate the safe use and disposal of biohazardous material.
- Student will perform basic laboratory mathematical calculations necessary to perform tests, make dilutions, and prepare solutions.
- Student will demonstrate and explain correct pipetting technique, solution and dilution preparation, including serial dilutions.
- Student will perform proper specimen aliquoting and labeling techniques.
- Student will demonstrate adequate skills for slide preparation and slide staining techniques.

SLO: Student will be able to apply basic laboratory math to prepare solutions, dilutions and solve standard deviation and coefficient of variation equations.

MLT 90 Clinical Urinalysis and Body Fluids
Introduces various properties and constituents of urine and body fluids via "on hands" learning. Emphasizes interpretation and handling of urine and body fluid specimens. Includes examination of urine and body fluids physically, chemically and microscopically, and compares these clinical values to health and disease.

- Student will examine and describe the anatomy and physiology of the human urinary system.
- Student will identify and describe the three main components of a routine urinalysis.
- Student will summarize, identify, and describe quality control and quality assurance as it applies to the urinalysis department of the clinical laboratory.
- Student will analyze test results and correlate the values to diseases or conditions affecting the kidney or urinary tract.
- Student will describe and evaluate body fluid analysis procedures in terms of the clinical laboratory requirements.
- Student will describe and evaluate miscellaneous specimens according to standard laboratory procedures.

SLO: Determine the diagnostic and therapeutic significance of laboratory results.

MLT 90L Clinical Urinalysis and Body Fluids Laboratory
Introduces various techniques and safety procedures in clinical urinalysis. Emphasizes examination of urine and body fluids.

- Student will demonstrate and apply the standard precautions utilized in the urinalysis laboratory according to Occupational Safety and Health Administration (OSHA) mandates.

- Student will demonstrate the safe use and disposal of biohazardous materials.
- Student will review and evaluate quality control results in the urinalysis department.
- Student will describe and list the urine specimen collection methods and preservatives.
- Student will demonstrate, by performance, the proper procedure for the physical analysis of urine.
- Student will demonstrate, by performance, the proper procedure for chemical analysis of urine.
- **Student will identify and describe the function of each part of the microscope as it relates to performing microscopic urinalysis.**
- Student will demonstrate, by performance, the proper procedures for miscellaneous body fluid counts and differentials.

SLO: Evaluate case study presentations by other students.

MLT 100 Clinical Hematology/Coagulation
Introduces the origin of the various types of blood cells and homeostatic process. Includes human hematological disorders and classification based on clinical laboratory findings.

- Student will explain the study of hematology and summarize its basic concepts and basic morphologies.
- Student will examine and describe hematopoiesis in the human fetus, newborn and adult.
- Student will describe the requirements for bone marrow specimen collection, handling, storage and preparation.
- Student will evaluate and describe red blood cell (RBC) metabolism as it relates to the RBC membrane, hemoglobin structure function, and RBC metabolic pathways.
- Student will compare and contrast erythrocyte maturation in its various stages of normal and abnormal development.
- Student will distinguish between the various anemias, correlating red blood cell morphology, and laboratory test values for each type.
- Student will compare and contrast leukocyte maturation in its various stages of normal and abnormal development.
- Student will identify and explain the various types of leukemia classifications, and correlate cell morphology and laboratory test values for each type.
- Student will examine and describe specific changes in leukocyte morphology, number and function in relation to diagnosis of disease.
- Student will compare and contrast various types of lymphomas, myeloproliferative disorders and lipid storage diseases and correlate cell morphology and laboratory test values for each type.
- Student will identify and evaluate the regulation of thrombosis and anticoagulant therapy.
- Student will summarize and describe platelet and hemostatic mechanisms.
- Student will differentiate and explain the circulating anticoagulants (Inhibitors).
- Student will summarize and describe the disorders of plasma clotting factors including laboratory test results and clinical manifestations.
- Student will categorize the disorders of primary hemostasis.
- Student will analyze and explain the events that take place in fibrinolysis.

- Student will summarize and identify the events that take place in primary and secondary hemostasis.
- Student will examine and describe disseminated intravascular coagulation according to clinical and laboratory abnormalities.

SLO: Evaluate patient case studies and their clinical correlation. Demonstrate communication skills to ensure correct, effective, courteous and appropriate information transfer.

MLT 100L Clinical Hematology/Coagulation Laboratory
Introduces various techniques and safety procedures used in the clinical hematology laboratory. Emphasizes morphology, the identification of common human blood cells, platelet function tests, and intrinsic and extrinsic clotting pathway testing.

- Student will demonstrate and apply the standard precautions utilized in the hematology laboratory according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate the safe use and disposal of biohazardous materials.
- Student will set up and review Erythrocyte Sedimentation Rate (ESR), Sickle cell and reticulocyte counts tests.
- Student will calculate red blood cell (RBC) indices and interpret the significance of their changes in the various anemias.
- Student will demonstrate and describe the use of an automated hematology and coagulation analyzers including start-up, routine operation and maintenance.
- Student will compare and contrast normal ESR ranges, reticulocyte counts for adult males, females, and infants.
- Student will identify the parts and functions of the light microscope and model proper use and care of the microscope.
- Student will compare and contrast normal RBC, WBC and hematocrit ranges for adult males and females as well as infants and adolescents.
- Student will prepare peripheral blood smears and perform differential cell counts on normal and abnormal specimens.
- Student will list the specimen collection procedures and discuss how these can affect test results.
- Student will identify and describe quality control and quality assurance as it applies to the hematology department of the clinical laboratory.
- Student will evaluate and describe methods of measurements used in automated hematology and coagulation instrumentation.
- Student will describe the Activated Protein C Resistance (APCR) and the prevalence in Caucasians versus Hispanic, African American, Asian and Native American populations.
- Student will compare and contrast the various instrument options for performing PT, PTT and fibrinogen tests.
- Student will relate the importance of International Normalized Ratio (INR) in monitoring anticoagulant therapy.

- Student will discuss and identify the mechanism of action for Prothrombin Time (PT) test and Activated Partial Thromboplastin Time (PTT) test.
- Student will illustrate the anatomy and physiology of the thrombocyte (platelet).
- Student will compare and contrast manual white blood cell, RBC and platelet (PLT) counts with those from the automated hematology analyzer.
- Student will describe the inherited Protein C Deficiency in infants.
- Student will describe the prevalence of Factor V Leiden deficiency in African Americans and Asians versus Europeans.
- Student will describe the X-linked recessive disorder of Factors VIII (Hemophilia A) and IX (Hemophilia B).
- Student will discuss and identify the mechanism of action for the platelet function analyzers.

SLO: Demonstrate essential troubleshooting techniques used in professional practice. Demonstrate thinking and reasoning skills by performing quality testing in accordance with standard operating procedures while practicing standard precautions.

MLT 102 Clinical Hematology, Coagulation, Urinalysis and Body Fluids Practicum
Introduces entry-level clinical laboratory practice and experience in the department of hematology, urinalysis, coagulation, and body fluids. Emphasizes technique, accuracy, and precision.

- Student will demonstrate and apply departmental procedures for safety according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate and explain the safe use and disposal of biohazardous materials.
- Student will demonstrate proficiency in the operation of automated or semi-automated instrumentation.
- Student will summarize and identify the test methods and principles learned during their rotation.
- Student will interpret and evaluate all hematology and coagulation values.
- Student will interpret and evaluate all urinalysis and body fluid values.
- Student will demonstrate professionalism in appearance and behavior while in the laboratory setting.
- Student will explain and demonstrate the specimen processing and handling, criteria for specimen rejection, and use of laboratory information system (LIS).

SLO: The Students will demonstrate knowledge of fundamental principles of Clinical Hematology, Coagulation, Body Fluids and Urinalysis by obtaining a minimum score of 75% on the Performance Checklist (PCL) at the end of the clinical rotation.

MLT 110 Clinical Chemistry I
Provides theoretical, fundamental, basic instrumentation methodologies, and includes practical concepts associated with testing procedures used in the clinical chemistry laboratory. Include important characteristics of proteins, carbohydrates, lipids and NPNs, and the relationships to diseases.

- Student will demonstrate and apply the fundamental concepts critical to any analytical procedure.
- Student will demonstrate and describe the use of basic supplies and equipment correctly.
- Student will identify and summarize the use of standard precautions as they apply in the chemistry laboratory according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will summarize and explain quality control and quality assurance as it applies to the chemistry department of the clinical laboratory.
- Student will describe how a laboratory arrives at normal ranges and control ranges with different instruments.
- Student will review and summarize the different basic instrumentation methodologies used in laboratories including the mechanism of measurement and analytical limitations associated with each method.
- Student will compare and contrast electrolyte measurement methodologies (ISE's) used in the clinical laboratory and the clinical significance of laboratory results.
- Student will review and list the general properties of amino acids and proteins, abnormalities related to each, and methods of analysis.
- Student will list the proteins assayed in the clinical laboratory, identify their common methods of analysis, relate laboratory results to clinical significance, as well as evaluate their relationship to liver function.
- Student will evaluate and describe basic characteristics of enzyme kinetics and enzyme methods of measurement.
- Student will identify and explain the carbohydrates assayed in the clinical laboratory, their common methods of analysis, and relate laboratory results to clinical diagnosis and relationship to liver and pancreas function.
- Student will examine the non-protein-nitrogen substances (NPNS) commonly analyzed in the clinical laboratory, their relationship to renal and liver function, and identify the clinically significant results and relate these laboratory results to metabolism, chemical, and physical properties.
- Student will identify and review the lipids assayed in the clinical laboratory as well as their common methods of analysis and relate laboratory results to clinical significance.
- Student will describe the principles behind different point of care (POC) instruments and explain the responsibilities of the tech assigned to a POC program.

SLO: Determine the diagnostic and therapeutic significance of laboratory results.

MLT 110L Clinical Chemistry I Laboratory
Introduces general laboratory principles and specific basic instrumentation methodologies used in clinical chemistry analysis. Reviews laboratory math and a reintroduction to quality control and quality assurance. Emphasizes variables of the preanalytical phase, characteristics important to quality lab technique, and safety.

- Student will demonstrate and apply the standard precautions utilized in the chemistry laboratory according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate and explain safe use and disposal of biohazardous materials.
- Student will compare and contrast different types of chemistry laboratory instrumentation.
- Student will evaluate the difference in specimen types and assess how they affect chemistry analysis as part of the preanalytical phase.
- Student will demonstrate, by performance, the basic laboratory mathematics necessary to perform tests, make dilutions, and prepare solutions.
- Student will explain and describe the principle of spectrophotometry and its applications in clinical chemistry.
- Student will define quality assurance and quality control and evaluate their interrelationships and differences as they apply on a daily basis in the laboratory.
- Student will demonstrate and explain the correct pipetting techniques and dilution preparation, including serial dilutions.
- Student will use proper pipetting, dilution techniques, and application of spectrophotometry, and prepare a standard curve.
- Student will identify and explain the proteins and enzymes assayed in the clinical laboratory, their common methods of analysis, and clinical significance.
- Student will identify and explain the non-protein-nitrogen substances (NPNS) - such as creatinine, BUN, and Uric acid - assayed in the clinical laboratory, their common methods of analysis, and clinical significance.
- Student will practice creatinine clearance calculations.
- Student will perform and explain the carbohydrates, lipids, and electrolytes assayed in the clinical laboratory, their common methods of analysis, and clinical significance.

SLO: Demonstrate safe laboratory practice to include maintenance of working environment, abiding by all safety rules and regulations.

MLT 111 Clinical Chemistry II
Emphasizes the relationship between liver, cardiac, endocrine and pancreatic function with laboratory test results. Introduces important characteristics of electrolytes, acid-base balance, trace metals, therapeutic drug monitoring and tumor markers.

- Student will review and summarize the different basic instrumentation methodologies used in laboratories including the mechanism of measurement and analytical limitations associated with each method.
- Student will compare and contrast the different electrolytes analyzed in the clinical laboratory and the clinical significance of the laboratory results.

- Student will discuss and identify the differences and causes of body acidosis and alkalosis conditions.
- Student will examine and explain trace elements, vitamins, and the regulatory mechanisms within the body to include the analyte, physiology involved, and clinical significance.
- Student will identify and distinguish between the heme-derivatives and hemoglobinopathies commonly analyzed in the clinical laboratory including their clinical significance, metabolism, and chemical and physical properties.
- Student will identify and list some of the common characteristics of the different porphyrias.
- Student will describe and explain the role of liver function in bilirubin metabolism, identify the tests used for bilirubin analysis, and relate laboratory results to clinical diagnosis.
- Student will evaluate and describe the common cardiac diseases, diagnostic tests, and routine treatment for heart disease.
- Student will identify and describe the tests and methods of the endocrine system, including the clinical significance of laboratory results.
- Student will examine and describe the concept and clinical utility of therapeutic drug monitoring (TDM) and clinical utility of toxicology.
- Student will identify and describe specific toxicology terminology.
- Student will list and discuss the basic steps of pharmacokinetics.
- Student will describe the common pancreatic and gastrointestinal tract diseases and identify the diagnostic tests used.
- Student will identify and describe the commonly ordered tumor markers assayed in the clinical laboratory.
- Student will describe the commonly ordered body fluid chemistry tests and their diagnostic clinical significance.

SLO: Exhibit analytical and critical thinking skills necessary to succeed in laboratory medicine.

MLT 111L Clinical Chemistry II Laboratory
Introduces clinical chemistry tests specific to the special chemistry department. Emphasizes sodium and calcium assays as well as lipid and iron panels.

- Student will demonstrate and apply the standard precautions utilized in the chemistry laboratory according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate and explain the safe use and disposal of biohazardous materials.
- Student will perform sodium and calcium serum analysis in the laboratory.
- Student will practice converting normal reference ranges into different units of measurement for electrolytes, calculate anion gaps, and calculate osmolality.
- Student will identify acidosis and alkalosis conditions with and without compensation from a series of case studies or laboratory ABG values.
- Student will perform iron and total iron-binding capacity analysis, practice percent saturation calculations, and discuss the clinically significant results and relate them to disease conditions.

- Student will perform a lipid panel and explain the lipids assayed in the clinical laboratory, their common methods of analysis, clinical significance related to heart disease, and calculations for Low Density Lipoproteins (LDL).
- Student will use a variety of case scenarios and apply the various endocrine tests in diagnostic exercises.
- Student will use a variety of case scenarios to understand the use of Therapeutic Drug Monitoring (TDM) and tumor markers in the clinical setting.
- Student will describe and explain the role and different methodologies used in a point of care (POC) program in the clinical setting.

SLO: Demonstrate administrative skills consistent with philosophies of quality assurance, and continuous quality improvement.

MLT 112 Clinical Chemistry Practicum
Introduces entry-level clinical laboratory practice and experience in the department of general and special chemistry. Emphasizes technique, accuracy, and precision. Includes instrumentation bench and manual methods.

- Student will demonstrate and apply departmental procedures for safety according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate and explain the safe use and disposal of biohazardous materials.
- Student will explain and demonstrate the specimen processing and handling, criteria for specimen rejection, and use of laboratory information system (LIS).
- Student will demonstrate, by performance, the operation of automated or semi-automated instrumentation.
- Student will summarize and identify the test methods and principles learned during their rotation.
- Student will interpret and evaluate the chemistry and special chemistry values.
- Student will demonstrate professionalism in appearance and behavior while in the laboratory setting.

SLO: The Students will demonstrate knowledge of fundamental principles of Clinical Chemistry by obtaining a minimum score of 75% on the Performance Checklist (PCL) at the end of the clinical rotation.

MLT 120 Clinical Microbiology
Introduces microorganisms of medical microbiology with emphasis on the characteristics of clinically significant microorganisms and their biochemical profile, media for isolation, and identification methods for selected pathogens. Emphasizes identification methods, theories, and techniques used in basic bacteriology, parasitology, virology, and mycology.

- Student will demonstrate and apply the standard precautions as they apply in the Microbiology laboratory according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will list and describe the fields of study included in microbiology.

- Student will compare and contrast the organization of the microbiology department in a small and large laboratory.
- Student will describe the processes involved in an infection and how nosocomial infections are acquired.
- Student will identify and design a quality control program in the microbiology department.
- Student will design a system for proper specimen collection and transport for the microbiology department.
- Student will identify and describe clinically significant microorganisms noted in clinical microbiology laboratories.
- Student will define and organize a microorganism identification system.
- Student will describe and discuss the actions of antibiotics on microorganisms.
- Student will compare and contrast the various methods for susceptibility testing including advantages and disadvantages.
- Student will categorize the organisms that are required to be reported to the state's Department of Health Services and describe how this is accomplished.
- Student will list and describe the general characteristics of medically important fungi.
- Student will list and describe the general characteristics of medically important parasites.
- Student will compare and contrast laboratory protocols for viruses, Rickettsiae and anaerobic bacteria.
- Student will demonstrate and describe the local public health lab reporting requirement by selecting reportable organism, condition and submitting proper documentation.

SLO: Demonstrate basic knowledge and technical ability essential to the practice of Clinical Laboratory science.

MLT 120L Clinical Microbiology Laboratory
Introduces various techniques and safety procedures in clinical microbiology. Emphasizes morphology and identification of common pathogenic organisms.

- Student will demonstrate and apply the standard precautions utilized in the microbiology laboratory according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate safe use and disposal of biohazardous materials.
- Student will identify and list the parts and functions of the light microscope and model proper use, and care of the microscope.
- Student will describe and demonstrate the basic principles of specimen collection.
- Student will demonstrate and describe the proper techniques for smear preparation and primary media inoculation.
- Student will list the stains used in the gram stain, differentiate, and compare their function.
- Student will compare and contrast normal flora versus pathogens of selected body sites as they appear on selective media.

- Student will demonstrate and describe the technical skills in interpreting laboratory, and identification and sensitivity testing for common classifications of microorganisms.
- Student will identify and describe the general characteristics of medically important fungi.
- Student will identify and describe the general characteristics of medically important parasites.
- Student will summarize the differences between the viruses, Rickettsiae and anaerobic bacteria.
- Student will demonstrate the technical skills required for microbial workup on specimens with mixed organisms.

SLO: Demonstrate error recognition and the ability to integrate and interpret analytical data and establish a course of action to solve problems.

MLT 121 Clinical Microbiology Practicum
Introduces clinical laboratory practice and experience in the department of microbiology. Emphasizes technique, accuracy, and precision. Includes instrumentation as well as bench and manual methods.

- Student will demonstrate and apply departmental procedures for safety according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate and explain the safe use and disposal of biohazardous materials.
- Student will explain and demonstrate the specimen processing and handling, criteria for specimen rejection, and use of laboratory information system (LIS).
- Student will demonstrate, by performance, the operation of automated or semi-automated instrumentation.
- Student will summarize and identify the test methods and principles learned during their rotation.
- Student will describe, discuss and perform quality control procedures involving media, equipment and sensitivity testing.
- Student will identify and describe current State and Federal regulations regarding microbiology specimens.
- Student will demonstrate professionalism in appearance and behavior while in the laboratory setting.

SLO: The Students will demonstrate knowledge of fundamental principles of Clinical Microbiology by obtaining a minimum score of 75% on the Performance Checklist (PCL) at the end of the clinical rotation.

MLT 130 Clinical Immunohematology
Introduces basic genetics, blood collection and preservation, blood group antigens and routine blood bank procedures. Includes transfusion safety and federal regulatory requirements. Compatibility testing and antibody identification are emphasized.

- Student will identify and describe blood banking and immunohematology principles.

- Student will compare and contrast the mode of inheritance of the major blood groups.
- Student will compare and contrast the basis of Rh nomenclature.
- Student will identify and describe the principle and state the significance of the direct (DAT) and indirect antiglobulin test (IAT).
- Student will summarize the principle and significance of the antibody identification procedure.
- Student will compare and contrast the four major causes of transfusion reactions and the means of detection in the laboratory.
- Student will compare and contrast the mechanisms of sensitization in both Rh and ABO hemolytic disease of the newborn (HDN), and the effects of the antigen-antibody complex of the fetus.
- Student will identify and describe the preparation, storage requirements, effects of storage, and the use of blood components.
- Student will identify and explain the criteria for the selection and screening of blood donors.
- Student will compare and contrast the regulations and accrediting agencies of the blood donor centers and transfusion services.

SLO: Adhere to rules and regulations promoting workplace and patient safety and Continuous Quality Improvement (CQI).

MLT 130L Clinical Immunohematology Laboratory
Introduces the various techniques and safety procedures used in clinical blood bank laboratory. Emphasizes immunohematology procedures and techniques to measure analytes qualitatively and quantitatively.

- Student will demonstrate and apply the standard precautions utilized in the immunohematology laboratory according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate safe use and disposal of biohazardous materials.
- Student will demonstrate by performance the acceptable immunohematology techniques which are essential for patient testing.
- Student will perform and interpret quality control procedures.
- Student will illustrate by diagramming the mode of inheritance of the major blood groups.
- Student will compare and contrast the inheritance and antigen frequency of major blood groups, secretor blood group substances, and major antigens as related to different ethnic groups.
- Student will identify and describe the criteria for donor selection.
- Student will describe the principle and state the significance of the direct, and indirect antiglobulin test.
- Student will define and describe the principle and significance of the antibody identification procedure.

- Student will define and describe the routine prenatal testing and postnatal laboratory investigation to prevent Hemolytic disease of the Newborn (HDN).
- Student will compare and contrast the different methods and procedures utilized for compatibility testing.
- Student will describe and identify the procedure for processing various blood components.

SLO: Provide accurate patient results using laboratory standards.

MLT 131 Clinical Immunology and Immunohematology Practicum
Introduces clinical laboratory practice and experience in the department of serology and blood banking. Emphasizes technique, accuracy, and precision. Includes the introduction of different instrumentation as well as bench and manual methods.

- Student will demonstrate and apply departmental procedures for safety according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate and explain the safe use and disposal of biohazardous materials.
- Student will explain and demonstrate the specimen processing and handling, criteria for specimen rejection, and use of laboratory information system (LIS).
- Student will demonstrate, by performance, the operation of automated or semi-automated instrumentation.
- Student will interpret and evaluate the compatibility results and other serological values.
- Student will summarize and identify the test methods and principles learned during their rotation.
- Student will demonstrate and explain the procedures relating to blood and blood components following the guidelines of the clinical site.
- Student will demonstrate professionalism in appearance and behavior while in the laboratory setting.

SLO: The Students will demonstrate knowledge of fundamental principles of Clinical Immunology/Immunohematology by obtaining a minimum score of 75% on the Performance Checklist (PCL) at the end of the clinical rotation.

MLT 132 Clinical Immunology
Introduces the science of immunology and serology through the study of theories and processes related to natural body defenses. Includes the immune response and principles of antigen-antibody reactions.

- Student will describe and list the concepts of non-specific and specific immunity.
- Student will identify and describe the immunologic responses involved in preventing and combating infections.
- Student will identify and explain the structure, function, and characteristics of immunoglobulins.
- Student will evaluate and describe the mechanisms that protect the body from disease or injury and explain the parts and functions of each.

- Student will describe and compare the etiology, epidemiology, signs and symptoms, and diagnostic evaluation of various immune disorders.

SLO: Apply critical thinking skills to solve serological problems encountered, specifically, utilizing immunology principles and theories and applying these to results obtained.

MLT 132L Clinical Immunology Laboratory
Introduces the various techniques and safety procedures used in the clinical serology laboratory. Emphasizes serological procedures, and techniques to measure analytes qualitatively and quantitatively.

- Student will demonstrate and apply the standard precautions utilized in the immunology laboratory according to Occupational Safety and Health Administration (OSHA) mandates.
- Student will demonstrate safe use and disposal of biohazardous materials.
- Student will demonstrate by performing proper techniques of pipetting and preparing serial dilutions when conducting serological tests.
- Student will list specific diseases and describe the serological assays used to evaluate them.
- Student will perform and interpret, with 100 % accuracy, all serological assays.
- Student will demonstrate and apply principles of safety, quality assurance, and quality control in immunology/serology.

SLO: Apply knowledge gained from the laboratory and the textbook to trouble shoot and problem solve serological results obtained during student laboratory.

MLT 295 Selected Topics in Medical Laboratory Technology
Offered: Variable
Permits students to study relevant subjects within the field of medical laboratory technology. The specific objectives, methods of instruction and units of credit to be determined individually for projects proposed under this course description.

MLT 299 Independent Study
Limitation on Enrollment: Eligibility for Independent study.
Offered: Variable
Individual study or research in some area of medical laboratory technology of particular interest to the student and not included in regular courses of the College.

Admission Policy

An admission procedure has been instituted for the Medical Laboratory Technician Program. A separate online application is required for the program and a link is located on the SWC MLT website.

Medical Laboratory Technician Program (swccd.edu)

Applications are accepted from April 1 through June 25 of any given year for the upcoming FALL enrollment.

The program has prerequisite requirements for all potential students. Listed below are the specific science and required course prerequisites as well as additional prerequisites. All pre-requisites must be completed before applying to the MLT program. *Courses in progress or not completed will be reviewed on a case-by-case basis and left to the Program Director's discretion of acceptance.*

Pre-requisites: Science and Other Course Prerequisite Requirements

*Biol 260	Human Anatomy	4
*Biol 261	Principles of Human Physiology	4
*Biol 265	General Microbiology	4
*Chem 100	Introduction to General Chemistry	4
*Chem 110	Elementary Organic and Biological Chemistry	4
Comm 103 or 174 or 176	Oral or Interpersonal or Intercultural Communication	3
Math 119 or	Intermediate Algebra I or Elementary Statistics	4
Psych/Soc 270	Statistics for Behavioral Sciences	3
Engl 115	Reading Composition: Exposition and Argumentation	4
	TOTAL UNITS:	**33/34**

*The following criteria must be met for all ***SCIENCE COURSES***:

- **Every course must have a classroom-based (in-person) lab component completed.**
- **A *minimum of 4 units each* with a "C" grade or better**
- **Only courses with credit/grade assigned are accepted.**
- **No exam scores of any kind accepted as substitution.**
- **A cumulative *grade point average of 2.70 or higher***
- **Courses must be completed within eight (8) years of enrollment semester.**

*The following criteria must be met for ***MATH:***

- **A grade of "C" or better**
- **Only courses with credit/grade assigned will be accepted.**
- **No exam scores of any kind accepted as substitution.**
- **Courses must be completed within eight (8) years of enrollment semester.**

Please note: A credit/no credit grade or pass/fail in science and math courses will not be accepted. All other pre-requisite courses must be completed with a "C" grade or better. Quarter units are not equal to semester units. Transfer courses completed in the quarter system must be converted to required semester units and must meet the minimum unit requirements.

Additional Prerequisites Required

All prerequisites must be completed before applying to the MLT program. *Courses in progress or not completed at the time of application will be **reviewed case-by-case** and left to the Program Director's discretion of acceptance.*

1. **CA Phlebotomy Technician I or II (CPT I or CPT II) license**. License MUST be current and kept current during MLT program enrollment. National certification is **not** accepted.
2. **American Heart Association (AHA) Basic Life Support (BLS) certification**. Certification MUST be current and kept current during MLT program enrollment.
3. **A Student Education Plan (SEP)** must be completed with a counselor prior to submitting your application. The SEP must be less than 6 months old at the time of application to qualify. An SWC *student ID is needed to obtain an SEP. Please apply to the college then once the ID is received call 619-216-6665 x 4852 and ask to make an appointment with a counselor for MLT. You will need your student ID number.* Do not wait until the last minute because appointments fill quickly starting in April through the remainder of the semester. The SEP is a priority.
4. **Demonstrate college level reading proficiency** by means of one of the following:
    a. earn a "C" or better in RDG 158, English 115 or equivalent reading/English courses.
    b. the equivalent as demonstrated by an approved petition (petition forms available from the Southwestern College Assessment Office).
5. **Demonstrate requisite math proficiency** by means of one of the following:
    a. math proficiency as evidenced by earning a "C" or better in Math 119, Psyc/Soc 270 or higher-numbered math course or equivalent (Intermediate algebra). *Math 100 or Math 110 or Math 115 do not meet the minimum program standards.* Recommend Math 119 for transfer.
    b. the equivalent as demonstrated by an approved petition (petition forms available from the Southwestern College Assessment Office).
    c. No exam scores of any kind accepted as substitution.
6. **All general education courses necessary for an associate degree must be completed before** applying to the MLT program. *Courses in progress or not completed will be reviewed on a case-by-case basis and left to the Program Director's discretion of acceptance.*
    - All courses must be completed with a "C" grade or better.
    - Quarter units are not equal to semester units. Transfer courses completed in the quarter system must be converted to required semester units and must meet the minimum unit requirements.
    - ***It is the student's responsibility to verify all general education courses completed at outside institutions are equivalent to SWCs requirements. This is done by meeting with a counselor.***
7. Official copies of transcripts from institutions other than Southwestern College are required as part of the application process. Official transcripts must be sent directly from the external institution to SWC. You do need to include a copy of **ALL** unofficial transcripts with the application, including Southwestern College.

Additional items for application, if applicable:

1. Proof of bachelor's degree or higher via official transcripts
2. Lab experience as a phlebotomist or lab assistant – provide a copy of badge from employer **and** letter from HR verifying start date and current employment or end date.

Selection Process

Acceptance into the MLT program is based on a lottery system. The application period is from April 1 to June 25 of any given year.

Applications are completed online beginning April 1 of any given year.

Late applications will **not** be accepted/considered.

All applications are completed online. After the application deadline, all **complete applications** are fully reviewed. Those applicants with complete applications that meet all criteria are part of a computerized lottery drawing for a spot in the upcoming fall cohort. ***The number of students accepted is dependent on the number of clinical site placements available, which can vary from year to year.***

Incomplete applications are reviewed ***only*** after all complete application students have been accepted and there are remaining spots in the program. If an application was received incomplete (missing final course grade, missing CPT, missing documents, etc.) and the student receives a spot in the program, a conditional acceptance will be awarded. The conditional acceptance letter will have a deadline as to when the incomplete work must be completed, or the student will be dismissed from the program.

Acceptance/denial letters will be sent via email to students at the end of the first full week of July. If notification is not received from the MLT program by July 10, please call 619-216-6665 x4886. **Any student that does not respond to the email accepting their spot in the MLT program by the deadline stated in the email will be dropped from the program.** If a student was accepted and declines their spot in the program or is dropped, the next student on the list generated from the lottery will receive an acceptance letter. No students will be added to the cohort once the semester begins. The program does not keep a waitlist; students must reapply the following year.

Southwestern College does not discriminate against any person affiliated with the district on the basis of age, ancestry, color, ethnic group identification, national origin, religion, race, gender or sex, sexual orientation, physical or mental disability, veteran status, or on the basis of these perceived characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics.

It is required that all prerequisite requirements be completed prior to application. Prerequisite work in progress or not completed will be reviewed on a case-by-case basis and left to the Program Director's discretion of acceptance.

Requirements Completed After Acceptance

Once admitted to the Medical Laboratory Technician Program, you must provide verification of the following: Applicable forms and deadlines will be provided at the mandatory orientation.

1. Hepatitis B Immunity Verification
2. Tuberculosis Screening
3. FLU Vaccine
4. H1N1 Vaccine (may not apply to all clinical affiliates)
5. Diphtheria (Option Tdap- Tetanus, Diphtheria and Pertussis)
6. Rubeola and Rubella Immunity Verification or MMR (Measles, Mumps, Rubella)
7. Varicella (Chicken pox) vaccine or titer
8. COVID vaccines and booster
9. Physical Health Examination
10. Malpractice Insurance (Purchased by student each Fall semester)
11. SWC Student ID badge
12. ***Background check/drug screen: Students will be unable to attend clinical facilities for specified reasons, including the following convictions:**
    Murder, Felony assault, Sexual offenses/sexual assault, abuse, Felony drug and alcohol offenses (without certificate of rehabilitation), other felonies involving weapons and/or violent crimes, Felony theft, Fraud. Final placement status based on background check information is the clinical sites determination. No Dilute Urine- the urine sample must have yellow color to it or it may be rejected as dilute and the facility will not accept the student for clinical placement. The MLT program may not be able to accommodate (keep) a student if the facility will not accept them due to background issues or urine drug screen issues. Misdemeanor convictions will be reviewed by the program director. *A prescription card for medical marijuana will not be permitted as reason for positive drug screen.

Orientation

All new MLT students are required to attend a ***mandatory*** orientation on ***July 25, 2024, from 5:00pm-7:30pm*** at the Higher Education Center in National City. Specific meeting place will be sent to the students via their **SWC email**. Information regarding textbooks, schedules, immunizations, background check and drug screen, etc. will be discussed at orientation.

Occupational Hazards

Occupational hazards for the field of laboratory medicine may include but are not limited to exposure to infectious diseases such as AIDS or hepatitis, exposure to hazardous chemicals or substances, accidental injury, exposure to blood borne pathogens, exposure to radiation and allergic reactions to latex, or other chemical agents.

Tuition and Fees with Refund Policy

For students who meet the California residency requirement, the cost of the ***Medical Laboratory Technician Program*** **only** (not including pre-requisite requirements or general education courses) is currently *estimated* to be two thousand one hundred dollars ($2,100).

You can anticipate the following expenses during your program of study. These amounts are **estimates** only.

- Tuition: $2,100.00 (this does not include prerequisites or general education requirements)
- Textbooks: $ 1,500.00
- MLT National **(ASCP)** Exam fee: $ 225.00
- California MLT Licensure application fee: $ 235.00
- Uniforms, shoes, lab coats: $ 350.00
- Misc. (Parking permit, immunizations, CPR, background check, Malpractice insurance, ID badge): $ 520.00

Living expenses and the cost of transportation to campus and clinical facilities are not included in this estimated cost.

REFUNDS: Any questions concerning the refund policy should be addressed to the Admissions department.

Financial assistance may be available through the Financial Aid Office. Applications for assistance should be filed early (priority filing is the first week of March). Applications are available at the Financial Aid Office or the Higher Education Center.

Grievance Procedures

The student is urged to consult with their Program Director concerning any problems or grievances that they might have during their training. The Program Director will attempt to remedy any problems or mediate disputes that occur. If the Program Director is unable to address the issue to the satisfaction of the student, the student may speak to the Dean at the Higher Education at National City. However, if the student is not satisfied with these attempts to mediate the dispute, Southwestern College has set up the Student Grievance Procedure. For information on this process, refer to the current Southwestern College catalog.

Decisions made by the Southwestern College MLT Program can also be appealed using the NAACLS Complaint Procedure described below. The procedure is also found on the NAACLS website: www.naacls.org.

NAACLS Complaints Procedure

Students are an important community of interest to accrediting bodies, and one of the goals of accreditation is the protection of students, in addition to the assurance of program quality. NAACLS is committed to the principles of honesty in reporting, professional integrity, and ethical conduct among officials of its programs, staff, and volunteers. When an alleged violation of these principles is brought to our attention, NAACLS acts in accordance with established policy.

Students with concerns about their program and who contact NAACLS are referred to the NAACLS Complaints Procedure. This procedure is the means whereby students, faculty, and the general public may address complaints regarding an accredited program.

NAACLS Complaints Procedure – Student / Faculty Responsibility

Before NAACLS may act on a student or faculty complaint, the student/faculty must provide the following:

1. Documentation that the student followed the institution's due process procedure on complaints.

- The student/faculty must first bring the issue to the faculty or program director. If this fails to produce satisfaction, the student/faculty must continue up the administrative hierarchy at the institution. Only when the institution's internal "due process" has been completed may NAACLS begin to act on a student/faculty complaint.
- An example of documentation may be (but is not limited to) a copy of a completed student grievance form, with proof of submission. These forms are often found in the program's student handbook.

2. As an accreditor, NAACLS cannot take action against a program unless it is in non-compliance with a standard. As a programmatic accreditor, NAACLS Standards have a limited scope. If you do not find a NAACLS Standard that would address your complaint, we recommend seeking out your school's institutional accreditor. In a written narrative, the student/faculty must state which Standards they feel this program has violated and provide any evidence.

- The student's/faculty's signature is also required along with the narrative.
- To access the NAACLS Standards, click the link below:

NAACLS Standards for Accredited Programs

After submission of the above items, NAACLS may become involved.

NAACLS Complaints Procedure – NAACLS Responsibility

1. Within two weeks of receipt of the complaint, the Chief Executive Officer will determine whether the complaint can be applied directly to a NAACLS Standard.

2. If the complaint does not apply to a standard, the Chief Executive Officer informs the complainant that NAACLS does not have the authority to judge the issue because it does not involve a violation of the Standards. NAACLS will take no further action.

3. If a violation of Standards may have occurred, NAACLS initiates correspondence with the institution and requests related documentation in writing.

4. Once the related documentation is reviewed, additional communication may be required, and if a violation has transpired, a resolution is worked out between NAACLS and the institution.

5. If the response is adequate, the Review Committee Chair informs the complainant and the program of the complaint status. NAACLS will take no further action.

6. If the response is inadequate, a site visit may be scheduled.

- If the program is going through the reaccreditation process and a site visit is scheduled within the next year, the site visitors will be asked to address the issue.

- If a site visit is not scheduled within a year, the CEO, the President of the NAACLS Board of Directors, and the Review Committee Chair will review the documentation available and, if appropriate, schedule an early site visit.

- In both cases, the issue would be addressed through the site visit, the program's response to the site visit team report, and the deliberations of the appropriate Review Committee and Board of Directors.

7. The Board President will inform the complainant and the program of the outcome.

All complaints that are reviewed by the Review Committee Chair and Vice Chair are summarized for the appropriate review committee. The NAACLS CEO reports on all active complaints at meetings of the Board of Directors.

For further information, or if you are unsure whether or not a complaint is related to the Standards, please contact the NAACLS office at info@naacls.org.

Rules and Regulations
Located in the Southwestern College catalog.

Causes for Dismissal
Located in the Southwestern College catalog.

Student Record Retention
Student records specific to the MLT program will be maintained for three years as hard copy then scanned and kept for an additional seven years in the MLT office. Student records containing student name, grades and credits and dates of admission and completion, are retained permanently by Southwestern College.

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Textbooks

Textbooks listed may need to be updated prior to the start of class.* ***This is a list for reference only*. ***Do not purchase textbooks until after mandatory meeting, and verification from your instructor***. *Only purchase texts required for the current semester enrolled.*

- Jarreau, Patsy. Clinical Laboratory Science Review: A Bottom-Line Approach. 5th ed. New Orleans: LSUMC Foundation, 2015. ISBN: 978-0967043425
- Mundt, L.A., Shanahan, K. Graff's Textbook of Urinalysis and Body Fluids. 3rd ed. Jones & Bartlett Learning, 2015 . ISBN: 978-1496320162
- Turgeon, Mary L. Clinical Laboratory Science Concepts, Procedures, and Clinical Applications. 9th ed. Maryland Heights: Elsevier, 2022. ISBN: 978-0323829342
- Harmening, Denise M. Clinical Hematology and Fundamentals of Hemostasis. 5th ed. Philadelphia: F.A. Davis Company, 2009. ISBN: 9780803617322
- Rifai, Horvath and Wittwer. Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics, (8th edition) 2019. Elsevier ISBN: 978-0-53044-6
- Turgeon, Mary L. Immunology & Serology in Laboratory Medicine. 6th ed. St. Louis, MO: Elsevier, 2017. ISBN: 9780323431477
- ASCP Board of Certification Staff. BOC Study Guide Enhanced Edition: Clinical Laboratory Examinations. 7th ed. United States: American Society for Clinical Pathology, 2022. ISBN: 978-0-89189-6609 ISBN: 978-0891896845
- Tille, P. Baileys and Scotts Diagnostic Microbiology. 15th Edition. St. Louis, MO: Mosby Elsevier, 2021. ISBN 978-0323681056
- Harmening, Denise M. Modern Blood Banking & Transfusion Practices. 7th ed. Philadelphia: F. A. Davis Company, 2018. ISBN: 0803668880
- MediaLab, LabCE Exam Simulator
  Exam Simulator - Practice for ASCP, AMT, and AAB Exams - LabCE
  Specific package: Exam Simulator for MLS, MT, and MLT Exams ($75.00)

Optional

- Strasinger, S. K., Di Lorenzo, M. S. Urinalysis and Body Fluids. 7th ed. Annandale, Virginia: F. A. Davis Company, 2020. ISBN: 978-0803675827
- Etzell, J.E., Bradley, K.T., Keren, D.F., et al. Urinalysis Benchtop Reference Guide – UABRG. 1st ed. College of American Pathologists (CAP), 2014.
- Young, S. C. A. Atlas of Hematology. 3rd edition. Burlington, MA: Jones & Bartlett Learning LLC, 2020. ISBN: 978-1975118259
- Fung, M., Grossman, B. J., Hillyer, C. D., Westhoff, C. M. Technical Manual of American Association of Blood Banks. 18th ed. Bethesda, MD: American Association of Blood Banks (AABB), 2014. ISBN: 978-1563958885
- Willis, L., clinical editor. Fluids and Electrolytes Made Incredibly Easy! 8th ed. Philadelphia: Lippincott Williams & Wilkins, 2023. ISBN: 978-1975209315
- Bettelheim, Frederick A., Brown, W. H., Campbell, M. K., et al. Introduction to General, Organic and Biochemistry. 12th ed. Cengage Learning, 2019. ISBN: 978-1337571357

Course Sequence Policy

First Semester		
MLT 80	Introduction to Clinical Laboratory Profession	2.0
MLT 100	Clinical Hematology/Coagulation	3.0
MLT 100L	Clinical Hematology/Coagulation Lab	1.0
MLT 110	Clinical Chemistry I	3.0
MLT 110L	Clinical Chemistry I Lab	1.0
MLT 90	Clinical Urinalysis and Body Fluids	1.0
MLT 90L	Clinical Urinalysis and Body Fluids Lab	0.5
MLT 132	Clinical Immunology	1.0
MLT 132L	Clinical Immunology Laboratory	0.5
Second Semester		
MLT 102	Clinical Hematology/Coagulation/ Urinalysis and Body Fluids/ Practicum	3.0
MLT 111	Clinical Chemistry II	3.0
MLT 111L	Clinical Chemistry II Lab	1.0
MLT 120	Clinical Microbiology	3.0
MLT 120L	Clinical Microbiology Lab	1.0
Third Semester (Summer Session II)		
MLT 130	Clinical Immunohematology	3.0
MLT 130L	Clinical Immunohematology Lab	1.0
MLT 112	Clinical Chemistry Practicum	3.0
Fourth Semester		
MLT 121	Clinical Microbiology Practicum	3.0
MLT 131	Clinical Immunology/Immunohematology Practicum	3.0
MLT 79	MLT Certification/Licensure Examination Preparation	2.0
		39.0

All Medical Laboratory Technician Courses are offered in the above sequence. Each course builds upon the previous and concurrent courses taken; therefore, courses ***cannot*** be taken out of sequence. Each Medical Laboratory Technician course is offered only once during the academic year. Classroom and laboratory-based courses are Monday-Friday, evening only. Practicum coursework is full-time day hours (40 hours per week) for the length of the course.

Retention Policy

A student is given two attempts within the program to achieve success. Students who fail to earn a 75% ("C") or better in any Medical Laboratory Technician course will be dismissed from the program effective on the last day of that course and must reapply for admission. Once a completed application is received, readmission will be based upon a space-available basis. Students may be readmitted only once. A second failure to earn 75% ("C") or better in any Medical Laboratory Technician course will result in automatic dismissal from the program with no option for readmission. Failure to earn a 75% ("C") or better in two (2) or more Medical Laboratory Technician courses in the same semester will result in automatic dismissal from the program with no option for readmission.

A student may self-withdraw from no more than two courses in the first fall semester only; no withdrawals are accepted in further semesters. Self-withdrawal from courses will cause dismissal from the program and will count as an attempt and the student must reapply for admission. Self-withdrawal of three or more classes or self-withdrawal of two courses with one 'F' in the first fall semester results in dismissal from the program with no option for readmission.

A student who fails to earn a 75% ("C") or better in any Medical Laboratory Technician course must meet with the faculty and the Director of the Medical Laboratory Technician Program within one week. The student may also meet with the Dean of the Higher Education Center, National City.

After a second failure to earn a 75% ("C") or better in any Medical Laboratory Technician course, the student is encouraged to meet with a counselor and the Director of the Medical Laboratory Technician Program to discuss alternative educational and career opportunities.

Students who have been out of the program for two semesters or more will be subject to evaluation of skills and knowledge to assess that the retention of content is sufficient to ensure safe practice when they re-enter the program. This evaluation may include written testing and/or actual clinical practice. Auditing of some courses may be necessary before readmission.

Grading Policy

The Grading System employed in the Medical Laboratory Technician Program is a grading scale. Courses in the Medical Laboratory Technician Program are not offered credit/no credit.
The Medical Laboratory Technician Program percentages for grades are as follows:

GRADE	PERCENT RANGE
A	91-100%
B	82-90.9%
C	75-81.9%
D	70-74.9%
F	69.9% and below

A grade of 75% ("C") or better is required in all Medical Laboratory Technician courses for progression in the Medical Laboratory Technician Program and to graduate.

Rigor and Dedication

The content of MLT curriculum is of high rigor and requires a considerable amount of work outside of class. Students must make a commitment to their education and understand that what worked in high school or other community college general education courses will NOT work in MLT. It is recommended that the student not work while they are enrolled in the program; however, if there is a need to work, part-time hours are the best option. It is extremely challenging to work full-time and do well in the MLT program, but it can be done.

Withdrawal Policy

Students that withdraw from the program for personal reasons must reapply for admission. Once a properly completed application is received, the student will be placed in the applicant pool and evaluated as a new applicant. Students who withdraw from the program are encouraged to make

an appointment with a counselor and the Director of the program. Personal, academic, and career counseling is always available to the student and may be given at that time.

Graduation Requirements

Please note that Southwestern College graduation requirements need to be met before completion of the program. *It is required that you complete the graduation requirements along with the prerequisites of the Medical Laboratory Technician Program*. Students must consult a counselor to assist them in developing a Student Educational Plan (SEP) to ensure all requirements are met on schedule. Call the Higher Education Center in National City at (619) 216-6665 ext. 4851 for an appointment. You must have SWC student ID to make an appointment.
Upon completion of all requirements, the student will receive an Associate of Science degree from Southwestern College and be eligible to apply for the American Society for Clinical Pathology (ASCP) examination to practice as a Medical Laboratory Technician.

Issuing a degree or certificate IS NOT contingent upon the student passing any type of external certification or licensure examination.

Additionally, the student must apply to the State of California, Department of Health Services Laboratory Field Services (LFS) Division to receive state licensure.

Persons with Disabilities

To request alternate forms of this application or for assistance in requesting accommodations for disabilities, contact Disability Supports Services at (619) 482-6512.

***MLT Faculty and Staff** *Appointments are required.

Name	Office #	Phone #	E-mail Address
Deanna Reinacher, Ed. M., MLS(ASCP), CLS MLT Program Director All Externship Courses/Review	**7101C**	**(619)216-6673**	**dreinacher@swccd.edu**
Martha Martinez-Tribolet Program Technician	**7101C**	**(619)216-6665 X4886**	**mtribolet@swccd.edu**
Ron Bajet, MBA, MT(ASCP), CLS Clinical Hematology/Coagulation Clinical Microbiology	**7110**	**(619)216-6665 x4859**	**rbajet@swccd.edu**
Myrna Gurfinkiel, MA, MT(ASCP), CLS Clinical Chemistry I and II	**7110**	**(619)216-6665 x4859**	**mgurfinkiel@swccd.edu**
John Stephan, MLS(ASCP), SBB Introduction to Clinical Laboratory Profession Clinical Immunohematology/Blood Bank Clinical Immunology	**7110**	**(619)216-6665 x4859**	**jstephan@swccd.edu**
Xavier Campos, CLS Clinical Urinalysis and Body Fluids	**7110**	**(619)216-6665 x4859**	**xcampos@swccd.edu**
Zain Nezha, CLS Adjunct Instructor	**7110**	**(619)216-6665 x4859**	

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Dress Code Policy and General Regulations at Clinical Sites

The purpose of the dress code policy is to clarify prudent professional dress behavior and specify clinical dress requirements. These standards are the minimum. If a clinical site chooses to have more stringent requirements, the student is obligated to comply. If the clinical site is less stringent, the student will comply as stated below.

The Medical Laboratory Technician is a representative of Southwestern College and a guest at the clinical site. Each student is expected to demonstrate professionalism through an appropriate attitude, personal appearance, and performance of clinical responsibilities.

1. **CLOTHES** – Clean and unwrinkled scrubs covered with a white lab coat. Most uniform shops carry uniforms appropriate to the health care setting. **Street clothes are not permitted at clinical sites.**
2. **LAB COAT** – A lab coat and nametag must be worn at all times in the laboratory. Your nametag should be worn in all testing areas and non-testing areas.
3. **SHOES** – Shoes with soft soles to prevent slips/falls on hard surface floors are required. Sandals, crocks, open heel, open toe, shoes with heels or wedges, boots, etc. are not permitted.
4. **COSMETICS** – Facial cosmetics may be used with discretion.
5. **NAILS** – No artificial nails are to be worn. Nails should be kept short and clean.
6. **HAIR** – Hair should be clean and neat. Hair that is longer than shoulder length must be pulled back and secured so that it does not interfere with or become a hazard while working. At no time should the hair interfere with or obstruct the student's ability to see clearly (regardless of length).
7. **PERFUME** – Heavy (strong) perfume or cologne is not permitted; it is recommended that no fragrances be used.
8. **SMOKING** – Smoking is not permitted in/at any of the clinical sites, student labs or classrooms.
9. **JEWELRY** – Wedding bands, wristwatches, ear studs for pierced ears are acceptable. No long decorative chains, necklaces or bracelets.
10. **STANDARD PRECAUTIONS -** Gloves must be worn at all times when working with biological materials. Protective eyewear, if glasses are not worn, will be worn at all times when working with any procedure or equipment that could create an aerosol.
11. **HYGIENE** – Good personal hygiene is expected and encouraged at all times.
12. **ID Badge** – Issued SWC student ID badge will be worn at all times while participating in any activities involved with the Medical Laboratory Technician program.
13. Any clothes that serve as the first line of defense (surgical gown, lab coat, gloves, etc.) during testing procedures or in the lab are ***not*** allowed to be worn in public or non-testing areas. Lab coats that require laundering are worn and stored in clean areas only and taken home to be laundered, if not supplied by the hospital.
14. A student arriving to class or lab dressed improperly will be asked to leave until they meet the dress standards. Absences due to improper dress are an unexcused absence.

Clinical Affiliates

All students will be supervised by qualified personnel during all clinical rotations. Not all sites may be accepting students each year or for every externship rotation. *This may cause a delay in placement and progression in the program delaying planned graduation date.*

Students **cannot** choose their externship location **and vice versa**. **Any connection to a site disqualifies a student from being placed at that site/corporation for training**. This includes, but is not limited to, the student being an employee of the corporation (Sharp, Scripps, etc.), having any family members employed by the corporation, requested by a 'friend of a friend' etc.

Scripps Mercy Hospital, Chula Vista 435 H Street Chula Vista, CA 91910 Phone: (619) 691-7430	Scripps Memorial Hospital La Jolla 9888 Genesee Ave La Jolla, CA 92037 Phone: (858) 626-4123
Scripps Clinic Medical Laboratory Services in Sorrento Mesa 9535 Waples Street San Diego, CA 92121 Phone: (858) 554-9688	Scripps Mercy Hillcrest 4077 Fifth Ave. San Diego, CA 92103 Phone: (858) 832-2478
Palomar Medical Center-Escondido 2185 W Citracado Pkwy Escondido, CA 92029 Phone: (442) 281-5000	Palomar Medical Center- Poway 15615 Pomerado Road Poway, CA 92064 Phone: (858) 613-4000
SCPMG Otay Mesa Medical Offices Laboratory 4650 Palm Avenue San Diego, CA 92154	SCPMG Kaiser 8080 Parkway Dr La Mesa, CA 91942
San Diego Blood Bank 3636 Gateway Center Ave. Suite 100 San Diego, CA 92102 Phone: (619) 400-8296	Kaiser Permanente San Diego Medical Center 9455 Clairemont Mesa Blvd San Diego, CA 92123 Phone: (858) 266-5000
Family Health Centers of San Diego 823 Gateway Center Way San Diego, CA 92102 Phone: (619) 515-2321	Sharp Memorial Hospital 7901 Frost St. San Diego, CA 92123
Sharp Rees-Stealy Medical Group 1400 E. Palomar Chula Vista, CA 91913 Phone: (619) 446-1562	Sharp Rees-Stealy Medical Group 300 Fir Street San Diego, CA 92101 Phone: (619) 446-1562
Rady Children's Hospital 3020 Children's Way San Diego, CA 92123 Phone: (858) 576-1700	Sharp Chula Vista Medical Center 751 Medical Center Ct. Chula Vista, CA 91911 Phone: (619) 502-5800
Sharp Copley Lab 5651 Copley Dr. San Diego, CA 92111	Sharp Rees-Stealy Medical Group 8701 Cuyamaca St Santee, CA 92071

Patient Confidentiality

The Health Insurance Portability and Accountability Act of 1996 (HIPPA) is a federal law that defines patients' rights to privacy and to control how their personal healthcare information is used. The law specifies who can access patients protected, identifiable health information and when disclosure of this information is permitted. At each of the clinical affiliate facilities, every student will be required to review, understand and practice the confidentiality and privacy of every patient as prescribed by the law.

Students will be oriented to facility policies and will observe all procedures related to patient confidentiality and release of information during clinical rotations. Students are also cautioned to maintain the confidentiality of their peers, instructors, clinical staff, and clinical facilities. Students will keep personal beliefs and opinions a private matter. A breech in the confidentiality policy may be cause for immediate dismissal from the program.

Standards of Student Conduct

In joining the academic community, the student enjoys the right and shares the responsibility of exercising the freedom to learn. Like other members of the academic community, each student's conduct is expected to be in accordance with the standards of the college that are designed to promote its educational purposes. A charge of misconduct may be imposed upon a student for violating provisions of college policy/procedure, state education statutes and regulations and/or administrative codes. Where a student is subject to charges of misconduct, such charges shall be processed in accordance with the Southwestern Community College District's policy and procedure No. 5500.

The Superintendent/President's designee shall, in consultation with the Academic Senate, establish procedures for the imposition of discipline of students in accordance with the requirements for due process of the Federal and State law and regulations. The procedures shall clearly define the conduct that is subject to discipline and shall identify potential disciplinary actions including, but not limited to, the removal, suspension or expulsion of a student. The procedures shall be made widely available to students through the College Catalog and other means.

Discipline Process

The MLT program has a disciplinary process in place to monitor and remediate negative and unprofessional behaviors and misconduct. When a student is found in violation of an MLT policy, procedure, classroom rule, professionalism behavior, or any other inappropriate act the student will receive a counseling memo from the faculty, staff, program director, or clinical faculty. The *memo is the first* step in the disciplinary process and will include the date and time of meeting with the student, the classification and description of the incident/behavior, any notable discussion points, remediation/corrective action plans, and signatures of student and faculty, staff, program director, or clinical faculty.

If a student accumulates three counseling memos of any kind, a remediation form is completed. The *remediation form is the second level* of the disciplinary process and is intended to create a specific plan to get the student focused on correcting the behavior in a specific amount of time. There will be a plan review date and **if the student does not meet the remediation** plan by the

review date, the next step in the discipline process occurs. If the student meets the remediation process, the student continues with the course and the document is kept in the student's file. The student's failure to meet the remediation requirements will require a face-to-face meeting with the program director within 48 hours of failing the remediation. At the meeting, the program director will discuss any one or more of the following:

1. If the remediation was given by the ***clinical site for a technical skill*** the faculty of that discipline will review the remediation and meet with the program director. They will discuss the technical skills taught in the course to determine if the student's lack or poor technical skill was classroom influenced or if the student could not grasp the skill.
2. If the student's lack of performance is due to a lack of instruction, the student is allowed the opportunity to receive extra help to increase the skill. The faculty is required to remedy the deficiencies.
3. If the student could perform the skill but was unable to perform at expected levels, the program director will discuss with the student the plan of extra skill practice to increase the technical skill.
4. If the student lacks the skills entirely, a decision may be made by the program director, in conjunction with faculty and clinical faculty input, that the student must fail the course.

An example scenario provided to illustrate the process.

The third, and final step of the process shows the student remediated the issue, took extra steps to remedy the deficiency, or failed the course. Examples of misconduct include, ***but are not limited to***: poor attendance (being late, leaving early, failure to notify…), poor attitude (appearance of disgust, talk back, arrogance, sobbing, etc.), out casting a classmate, violation of dress code, lack of professionalism (immature), failure to turn in homework, copying another student's work, failure to meet deadlines, and any other actions or behaviors identified by faculty, staff, or program director of the MLT program and its clinical sites as inappropriate.

Disciplinary Actions Violations

The following conduct shall constitute good cause for discipline, including but not limited to the removal, suspension, or expulsion of a student, except for conduct that constitutes sexual harassment under Title IX, which shall be addressed under AP 3433 Prohibition of Sexual Harassment under Title IX, and AP 3434 Responding to Harassment Based on Sex under Title IX.

1. Cheating, or engaging in other academic dishonesty including copying from another's work; discussion prohibited by the instructor; obtaining exam copies without permission; and using notes, other information, or devices that have been prohibited.
2. Plagiarism in individual or group work or in a student publication, including the act of taking the ideas, words or specific substantive materials of another and offering them as one's own without giving credit to the sources.
3. Unauthorized preparation, giving, selling, transfer, distribution, or publication, for any commercial purpose, of any contemporaneous recording of an academic presentation in a classroom or equivalent site of instruction, including but not limited to handwritten or typewritten class notes.

4. Disruptive behavior, willful disobedience or the open and persistent defiance of the authority of, or persistent abuse of, college personnel, which may or may not include habitual profanity or vulgarity.
5. Assault or battery upon another person or any threat of force or violence or causing, attempting to cause or threatening to cause physical injury to another person.
6. Possession, sale or otherwise furnishing any firearm, knife, explosive, or other dangerous object, including, but not limited to, any facsimile firearm, knife or explosive, unless, in the case of possession of any object of this type, the student has obtained written permission to possess the item from the Superintendent/ President or his/her designee.
7. Unlawful possession, use, sale, offer to sell, furnishing, or being under the influence of any controlled substance; alcoholic beverage, or intoxicant of any kind; Unlawful possession of offering, arranging or negotiating the sale of any drug paraphernalia.
8. Committing or attempting to commit robbery or extortion.
9. Causing or attempting to cause damage and/or defacing College District property or private property on College District controlled facilities.
10. Theft, attempted theft, or knowingly receiving stolen College District property or private property.
11. Willful or persistent smoking in any area where smoking has been prohibited by law or by regulation of the College District.
12. Engaging in harassing or discriminatory behavior based on race, sex, gender, religion, sexual orientation, age, national origin, disability, or any other status protected by law.
13. Engaging in intimidating conduct or bullying against another student through words or actions, including direct physical contact; verbal assaults, such as teasing or name-calling; social isolation or manipulation; and cyber-bullying.
14. Committing sexual harassment as defined by law or by College District policies and procedures.
15. Willful misconduct which results in injury or death to a student or to college personnel or which results in cutting, defacing, or other injury to any real or personal property owned by the College District.
16. Misrepresentation and/or impersonation includes arranging for or allowing another individual to impersonate or otherwise misrepresent the student, in person or in an online environment.
17. Dishonesty, forgery, alteration or misuse of college documents, records or identification, or knowingly furnishing false information to the College District.
18. Unauthorized entry upon or use of College District facilities.
19. Lewd, indecent or obscene conduct or gestures on College District-owned or controlled property, or at College District sponsored or supervised functions.
20. Engaging in expression which is obscene; libelous, or slanderous; or that incites students as to create a clear and present danger of the commission of unlawful acts on any College

District premises, or the violation of lawful College District administrative procedures, or the substantial disruption of the orderly operation of the College District.

21. Engaging in physical or verbal disruption of instructional or student services activities, administrative procedures, public service functions, authorized curricular or co-curricular activities or prevention of authorization guests from conducting the purpose for which they are College District property.
22. Engaging in physical or verbal intimidation or harassment of such severity or pervasiveness as to have the purpose of effect of unreasonably interfering with a student's academic performance, or College District employee's work performance, or of creating an intimidating, hostile or offensive educational or work environment.
23. Violation of Board policies and/or procedures governing the use of student user accounts, computers, and telecommunication devices, including but not limited to the unauthorized entry, opening or viewing of a file; the unauthorized use of another individual's identification and password; arranging for, allowing, and/or impersonation of one person by another; sending obscene or abusive messages or files; and/or use of computing facilities to interfere with the work of another student or employee of the College District.
24. Violation of a duly issued restraining order, stalking, and/or a pattern of conduct with intent to follow, alarm, or harass another person, and/or which causes that person to reasonably fear for his or her safety, and where the pattern of conduct persisted after the person has demanded that the pattern of conduct cease.
25. Persistent, serious misconduct where other means of correction have failed to bring about proper conduct or where the presence of the student causes a continuing danger to the physical safety of students or others.
26. Violation of college regulations or state laws.

Attendance Requirement (Didactic Training)

The MLT Program student must meet the established attendance requirements of Southwestern College. Please refer to the most current Southwestern College catalog for specific information. All didactic courses are in the evening only. In addition, the MLT program requires that students accrue no more than **three (3) absences *total*** *(not 3 in a single class)* within one semester. Missing more than three (3) days *total* in one semester may result in dismissal from the program. Maxing out absences in any two semesters will result in dismissal from the program with no opportunity for reenrollment. Any student that will be late or needs to leave early must notify the faculty member ahead of time. *If a student must miss class (illness, accident, etc.) the faculty member MUST be notified **before** class begins. It is up to the faculty to decide if any missed work should/can be made up.* Failure to comply with these requirements results in a counseling memo and negatively affects your course grades and possibly your seat in the program.

Attendance Requirement (Clinical Externship)

The Medical Laboratory Technician student will attend **all** clinical rotations/days as assigned. Absences, arriving late, and leaving early are not acceptable. Personal appointments, scheduling personal plans, etc. are not allowed during scheduled clinical hours/days.

Excused absences include:

1. personal illness
2. death in the immediate family
3. the discretion of the clinical instructor and the Medical Laboratory Technician Program Director (prior permission required)

Unexcused absences include:

1. Transportation issues
2. Leaving early
3. Arriving late

In the event of an unexcused absence, the make-up time is not allowed on a holiday, weekend, or using any potential extra days between externship/s and class/es.

Attendance Rules:

1. Any three leave early or arrive late combinations is equal to one unexcused absence.
2. One unexcused absence and two excused absences combined will result in dismissal from the program, with re-entry at a later date through the application process and only if space is available.
3. Three excused absences will result in counseling and potential dismissal from the program, with re-entry at a later date through the application process and only if space is available.

ALL makeup time MUST be pre-approved by the clinical site and the program director. It is the student's responsibility to notify their assigned clinical instructor and MLT program director, **prior to the start** of a clinical day, if the student is going to be absent or late. The student must speak to an individual in the lab (preferably the clinical instructor); leaving a message on voicemail is unacceptable. An email must be sent to the program director within one hour of the clinical start time with reason for absence. Failure to telephone the clinical instructor and email the Program Director will weigh heavily on the clinical rotation evaluation grade.

If any MLT core course grade's (current or past) are failing, a clinical rotation will not be granted. Laboratory tests that are not performed in all clinical affiliates are given emphasis in the student laboratory while students are still taking their didactic courses.

The clinical rotations are designed to help the student develop technical and professional skills for the career. Clinical rotations are viewed as a job; therefore, no-shows, excessive absences, and unprofessional behavior will not be tolerated and result in counseling memos and possible dismissal.

***The clinical rotations are highly structured; therefore, absences may result in a student being dropped from a particular rotation; resulting in enrollment at another time, only if space is available. ***

IN THE EVENT OF A CLINICAL ABSENCE, THE STUDENT MUST:

1. *Contact the clinical faculty before the clinical starting time.* ***THIS IS YOUR #1 PRIORITY!*** Asking a fellow student to inform the instructor of the absence is **not** acceptable. The student must inform the instructor personally. *Do not leave voicemail messages. You must speak to a person.*

2. Contact the MLT program director ***no later than one hour*** after the scheduled starting time for your scheduled shift. *Email to dreinacher@swccd.edu* . Calls can be made to (619) 216-6673. Leave a message on voicemail. *An email MUST be sent to the program director.*
3. *In the event of a catastrophic situation (death in the immediate family, hospitalization, etc.), and you cannot attend clinicals, the program director must be notified* ***immediately****.*
4. *If you are late for clinicals or need to leave early, you must notify your clinical faculty and the Program Director.*
5. *No scheduled personal appointments, time off, etc. are to be made during clinical hours.*
6. *Students are not allowed to attend clinical more than 40 planned hours in one week.* If there is make up time, it must be approved by the clinical site and program director before completion.

Due to the nature of our courses, each class/rotation serves as a building block of knowledge for the next class/rotation. Each student is responsible for all assignments, materials, examinations etc. when absent from class. Make-up exercises or alternative learning experiences will be planned according to the limits set by the program director. As a reminder, personal electronic equipment is not allowed during lectures, labs, and clinical practicums.

Service Work

Students will not be used to substitute for regular employees as part of their training. Students of the MLT Program should be aware that any service work performed at any of our affiliates is:

- Not required (it is your decision to do)
- Cannot occur during the training hours.
- Should not interfere with your progression through the MLT program.
- Cannot be counted towards your training hours requirement.

Examples of service work….

- Working as a phlebotomist, specimen processor, lab aide while completing MLT practicum
- Working in the student laboratory as a student worker
- Continuing to work pm shifts or weekends in a clinical affiliate during your progression through the MLT program.

During clinical practicum: Students will not be used to substitute for regular employees as part of their training. Service work by students in clinical settings outside of academic hours must be noncompulsory.

Students should apply themselves to the program first. Financial needs requiring the student to work long hours outside the program should be discussed with the Program Director as scholarships or financial aid may be in order. Please refer to Southwestern College's Financial Aid office for assistance.

Policies and Procedures When Applied Education Cannot Be Guaranteed

When a student enrolled in the program cannot be placed at an externship site for unforeseen circumstances or situations that are beyond the program's control, the first step would be to reach out to current sites for additional placements. A second avenue is to try to acquire a new site/s

for placement. When these avenues fail to provide the student with placement, the student will follow the Incomplete Grade policy explained in the college catalog. Students in 'Incomplete' status will complete their rotations once the previously assigned student finishes their rotation.

Delays in starting rotations are possible in some circumstances. These delays can be caused by sites not approving training placements in a timely manner, students not completing required documentation in time, lack of site placements, etc. In these instances, every effort will be made by the MLT program to locate a placement, push a site to approve a placement, or anything else related to delays caused by the sites or the program. Delays caused by student circumstances are not guaranteed timely placement and may result in an Incomplete course grade requiring completion at a later date. Any delays pertaining to placements at a site have the potential to cause a delay in graduation date.

Health Care

All First Aid kits and emergency kits are located within the Dental Hygiene Clinic. For minor injuries, the lab faculty member should accompany the injured student to the clinic and provide necessary treatment. Limited health care services may be available in the Higher Education Center on days and times the Campus Nurse is scheduled. If additional care is necessary, the student will be instructed to seek treatment at the Sharp Rees-Stealy Clinic, which is contracted with Southwestern College. First aid that is more extensive or emergency treatment may be necessary at a local hospital. Paramedics will be summoned as needed, depending on the severity of the problem.

At the clinical setting students will be afforded health care at those facilities, and they are covered under Southwestern College's Workers Compensation insurance. A 2-page workers compensation form is to be submitted to Risk Management within 24 hours of any incident. If follow up care is needed, then the student is to go to Sharp Rees-Stealy Clinic. The insurance carrier should forward any medical bills received because of the incident to the risk management department for payment.

Essential Functions and Technical Standards

Health Sciences programs establish technical standards and essential functions to ensure that students have the abilities required to participate and potentially be successful in all aspects of the respective programs. Students are required to meet technical standards and essential functions for the Medical Laboratory Technology program as indicated below. Satisfactory completion of the MLT Program and successful employment following graduation demands your ability to meet the following requirements. If you are uncertain as to your ability with any of these essential functions, please consult with the MLT Program Director.

1. **Observational** - Ability to participate actively in all demonstrations, laboratory activities and clinical experiences in the professional program component. Such observation and information require functional use of visual, auditory and somatic sensations.
    a. Observe laboratory demonstrations in which biological (i.e., body fluids, culture materials, tissue sections, and cellular specimens) are evaluated for their biochemical, hematological, immunological, and histochemical components.
    b. Characterize the color, odor, clarity, and viscosity of biological, reagents, or chemical reaction products.

c. Employ a clinical grade binocular microscope to discriminate among fine structural and color (hue, shading, and intensity) differences of microscopic specimens.
d. Read and comprehend text, numbers, and graphs displayed in print and on a video monitor.

2. **Movement** - Sufficient motor ability to execute the movement and skills required for safe and effective performance of duties.
   a. Move freely and safely about a laboratory.
   b. Reach laboratory bench tops and shelves, patients lying in hospital beds or patients seated in specimen collection furniture.
   c. Travel to numerous clinical laboratory sites for practical experience.
   d. Perform moderately taxing continuous physical work, often requiring prolonged sitting or standing, over several hours.
   e. Maneuver phlebotomy and culture acquisition equipment to safely collect valid laboratory samples.
   f. Possess finger and manual dexterity necessary to control laboratory equipment (i.e., pipettes, inoculating loops, test tubes) and adjust instruments to perform laboratory procedures.
   g. Use a computer keyboard to operate laboratory instruments and to calculate, record, evaluate, and transmit laboratory information.
3. **Communication** - Ability to communicate effectively in English using verbal, non-verbal and written formats with faculty, other students, clients, families and all members of the healthcare team.
   a. Read and comprehend technical and professional materials (i.e., textbooks, magazine and journal articles, handbooks, and instruction manuals).
   b. Follow verbal and written instructions to perform laboratory test procedures correctly and independently.
   c. Clearly instruct patients prior to specimen collection.
   d. Effectively, confidentially, and sensitively converse with patients regarding laboratory tests.
   e. **Communicate** with faculty members, fellow students, staff, and other health care professionals verbally and in a recorded format (writing, typing, graphics, or telecommunication).
   f. **Transmit information** to clients, fellow students, faculty and staff, and members of the healthcare team.
   g. Independently prepare papers, prepare laboratory reports, and take paper, computer, and laboratory practical examinations.
4. **Intellectual** - Ability to collect, interpret and integrate information and make decisions.
   a. Possess intellectual skills: comprehension, measurement, mathematical calculation, reasoning, integration, analysis, comparison, self-expression, and criticism.
   b. Be able to exercise sufficient judgment to recognize and correct performance deviations.
   c. Apply knowledge to new situations and to problem solving scenarios.
5. **Behavioral** - Possess the emotional health and stability required for full utilization of the student's intellectual abilities, the exercise of professional judgment, the prompt completion of all academic and patient care responsibilities and the development of mature, sensitive and

effective relationships with faculty, fellow students, clinical instructors, patients and other members of the healthcare team.

a. Manage heavy academic schedules and deadlines.
b. Be able to manage the use of time and be able to prioritize actions to complete professional and technical tasks within realistic constraints.
c. Possess the emotional health necessary to effectively employ intellect and exercise appropriate judgment under conditions of physical and emotional stress.
d. Be able to provide professional and technical services while experiencing the stresses of task-related uncertainty (i.e., ambiguous test ordering, ambivalent test interpretation), emergent demands (i.e., "stat" test orders), and a distracting environment (i.e., high noise levels, crowding, complex visual stimuli).
e. Be flexible and creative and adapt to professional and technical change.
f. Recognize potentially hazardous materials, equipment, and situations and proceed safely to minimize risk of injury to patients, self, and nearby individuals.
g. Adapt to working with unpleasant biologicals.
h. Support and promote the activities of fellow students and of health care professionals. Promotion of peers helps furnish a team approach to learning, task completion, problem solving, and patient care.
i. Be honest, compassionate, ethical and responsible. Accept responsibility and accountability for one's own actions. The student must be forthright about errors or uncertainty. The student must be able to critically evaluate his or her own performance, accept constructive criticism, and look for ways to improve performance (i.e., participate in enriched educational activities). The student must be able to evaluate the performance of fellow students and tactfully offer constructive comments.

(Adapted from: Fritsma, G.A., Fiorella B. J., and Murphey, M. Essential Requirements for Clinical Laboratory Science. CLS 1996. Vol. 9, pp 40-43)

SOUTHWESTERN COLLEGE

MLT Program Essential Functions Acknowledgment

I certify that I have read and understand the 2024/2025 ***MLT Program Essential Requirements*** for admission and graduation and that I meet each of the functions.

**This signed document is to be returned as part of the application process.*

Student (Print Name):_____ Date: _____

Student's Signature: _____ Date: _____

Witness Signature: _____ Date: _____

SOUTHWESTERN COLLEGE

MLT Student Handbook Acknowledgment

I, _____, acknowledge that by
Print Name
signing this document, I have received the 2024/2025 Medical Laboratory Technician Student Handbook. I acknowledge that I have received, reviewed, and understood each section of the Student Handbook. I also understand that the school's Catalog also contains policies and procedures that apply to my enrollment and time in the program. I understand that failure to comply with the established policies may result in suspension or termination from the program. I understand that policies and procedures may change while I am a student in the program, so if I have any questions about the Student Handbook or the school's Catalog, I am to contact my program director or program faculty.

**This signed document is to be returned as part of the application process.*

_____	_____
Printed Name	Program Start Semester and Year
_____	_____
Student's Signature	Date
_____	_____
Program Official's Signature	Date

Medical Laboratory Technician
Prerequisite Course Equivalency Grid for SDSU and Region 10 Community Colleges
2024-2025

*THIS GRID IS AN ADVISEMENT TOOL **ONLY**, NOT A GUARANTEE OF COURSE EQUIVALENCY FOR PRIOR COURSEWORK.*

College	BIOL 260 Course Equivalency	BIOL 261 Course Equivalency	BIOL 265 Course Equivalency	CHEM 100 OR 170 Course Equivalency	CHEM 102 OR 110 Course Equivalency	COMM 103 OR 104 Course Equivalency	ENG 115 115H OR AND 140 Course Equivalency	Math 119 or PSYC/SOC 270 or Equivalent
Southwestern	BIOL 260^	BIOL 261^	BIOL 265^	CHEM 100^ or CHEM 170^	CHEM 102^ or CHEM 110^	COMM 103 or COMM 104	ENGL 115 or ENGL 115H or ADN 140	MATH 119 or PSYC/SOC 270 or see math completion options below.
SDSU	BIOL 212	BIOL 261	BIOL 211 & BIOL 211L	CHEM 100	CHEM 102	COMM 103	ENG 100 or RWS 100	MATH 140 or see math completion options below.
****GCCCD***	BIO 140***	BIO 141 & BIO 141L***	BIO 152	CHEM 115 or CHEM 120	CHEM 102 or CHEM 116	COMM 122	ENGL 120	MATH 103 or MATH 108 or MATH 110 or see math completion options below.
Imperial Valley	BIOL 200 & BIOL 202 or BIOL 204	BIOL 200 & BIOL 202 or BIOL 206	BIOL 220	CHEM 100	CHEM 160	COMM 100	ENGL 110	MATH 091 or MATH 098 or see math completion options below.
MiraCosta	BIO 210/210H	BIO 220	BIO 230	CHEM 115/115H	CHEM 112 or CHEM 116	COMM 101	ENGL 100/100H	MATH 64 or *see math completion options below.*
Palomar	BIOL 210	BIOL 211	BIOL 212	CHEM 100	CHEM 104	SPCH 100	ENG 100	MATH 56 or MATH 60 or see math completion options below.
*****SDCCD***	BIOL 230	BIOL 235	BIOL 205	CHEM 100 & CHEM 100L or CHEM 152 & CHEM 152L	CHEM 130 & CHEM 130L	COMS 103	ENGL 101 or ENGL 105	MATH 92 or MATH 96 or see math completion options below.

Additional Math courses accepted through substitution process: College Algebra, Trigonometry, Pre-Calculus, Calculus

***GCCCD:** Grossmont Cuyamaca Community College District includes Cuyamaca and Grossmont. ****SDCCD:** San Diego Community College District includes City College, Mesa College, and Miramar College. *****Southwestern College will accept Grossmont College's BIO 144 & 145 to satisfy the Anatomy and Physiology requirement; both courses must be completed to satisfy the requirement. **^** All science courses used to substitute science pre-requisites must include a laboratory component. **^** All science courses need 2.7 GPA, minimum of 4 units each, "C" grade or better and eight-year recency.*

Updated by Martina Peinado, Articulation Officer, 2021-2022: Rev. 12.06.2021 (mp)