# TRINITY COLLEGE OF NURSING & HEALTH SCIENCES



# Medical Laboratory Science (MLS)

## **Student Handbook**

2023-2024

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### Medical Lab Science Student Handbook

The purpose of this handbook is to provide information regarding the guidelines, policies and procedures for the Trinity College of Nursing & Health Sciences Bachelor of Science in Health Science MLS program. This information supplements the College Catalog. Students are expected to review and follow all policies in the Catalog including both College-wide policies and Laboratory department specific policies.

This document serves as a reference for all MLS program students. Please make an appointment with your academic advisor or Program Coordinator if you need further clarification.

### **MLS Mission Statement**

The mission of the Trinity College of Nursing and Health Sciences Medical Laboratory Science Bachelor of Science program is to provide baccalaureate-level education using innovative teaching and learning strategies that will develop Medical Lab Scientist for a career in the laboratory that promote the health of individuals, families, and communities.

### **MLS Program Goals**

Upon completion of the MLS Program at Trinity College of Nursing and Health Science (TCONHS), the graduate should be able to:

### Knowledge

- Integrate knowledge from humanities, natural and social sciences, mathematics, and Medical Laboratory Science to demonstrate professional practice
- Interpret laboratory results accurately based on diagnosis and determine when values are abnormal, critical, or erroneous
- Identify pre-analytical, analytical, and post-analytical test phases in all departments of the medical laboratory
- Understand administrative and management principles in the medical laboratory

### **Proficiency**

- Communicate effectively and professionally using interpersonal, oral, and written skills
- Demonstrate effectiveness in multitasking, working independently, and working with the interdisciplinary team to achieve the goals of the medical laboratory
- Perform quality control of laboratory tests and apply quality improvement procedures and continuous assessment to ensure the accuracy of laboratory testing.
- Respond to evidence-based changes in the medical laboratory by interpreting new procedures, continuing professional development, train/educate users, and providers of laboratory services, and reviewing advances in the medical laboratory profession.
- Understand, evaluate, and troubleshoot sources of error in laboratory testing

### Culture Care Values

- Demonstrate professional conduct when communicating with patients, laboratory personnel, and interdisciplinary team members
- Adhere to facility, state and federal medical laboratory safety guidelines, standards, and regulations

### **MLS Competencies**

Entry-level competencies for the MLS students will prepare the student to perform a full range of clinical laboratory tests in areas such as clinical chemistry, hematology/hemostasis, immunology, immunohematology, microbiology, urine, and body fluids. Entry-level medical laboratory scientists will have the following basic knowledge and skills:

- Prerequisite courses in biological sciences, chemistry and mathematics that provide the foundation for course work required in the laboratory science program.
- The curriculum must address pre-analytical, analytical, and post-analytical components of laboratory services. This includes principles and methodologies, performance of assays, problem-solving, troubleshooting techniques, interpretation and evaluation of clinical procedures and results, statistical approaches to data evaluation, principles and practices of quality assurance/quality improvement, and continuous assessment of laboratory services for all major areas practiced in the contemporary clinical laboratory.
- The program curriculum includes the following scientific content:
  - Clinical chemistry
  - Hematology/Hemostasis
  - Immunology
  - Immunohematology/transfusion medicine
  - Microbiology
  - Urine and body fluid analysis
  - Laboratory Operations
- Application of safety and governmental regulations and standards as applied to clinical laboratory science
- Principles and practices of professional conduct and the significance of continuing professional development.
- Communications sufficient to serve the needs of patients, the public and members of the health care team
- Principles and practices of administration and supervision as applied to clinical laboratory science
- Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services
- Principles and practices of clinical study design, implementation, and dissemination of results

**General Education Pre-Requisites** 

Prerequisite General Education Courses		
Humanities	Credits	
Written Communication	3	
Oral Communication	3	
Humanities Electives	12	
Humanities total	18	
Social Sciences		
Sociology	3	
Psychology	3	
Social Sciences total	6	
Natural Sciences and Mathematics		
Anatomy and Physiology 1	4	
Chemistry		
General Chemistry 1	4	
General Chemistry 2	4	
Biochemistry or Organic w/lab	4	
Biology		
Biology	4	
Microbiology	4	
Math		
College Algebra	3	
Statistics	3	
Natural Sciences and Mathematics total	30	
Electives		
Medical Terminology	2	
General Electives	24	
Electives total	26	
TOTAL	80	

### **MLS Curriculum Plan**

Summer		Credits
MLS 320	Laboratory Math and Operations	1
	Phlebotomy and Pre-analytical	
MLS 330	Variables	1
MLS 340	Cell Morphology	2
MLS 345	Clinical Immunology	2
MLS 410	Evidence Based Laboratory Medicine	1
MLS 420	Educational Development	1
	Total	8
Fall		
MLS 310	Urinalysis and Body Fluids	2
MLS 415	Clinical Chemistry	7
MLS 425	Clinical Hematology and Hemostasis	7
MLS 440	Laboratory Management	1
	Total	16
Spring		
MLS 430	Immunohematology	7
MLS 435	Clinical Microbiology	7
MLS 450	Medical Lab Science Review	1
	Total	16

### MLS Major: 40 General Education: 80 Program Total: 120

Students must earn a minimum of 120 credit hours to graduate

### Prior bachelor's degree Admission

Must meet the above General Education Pre-Requisites requirements and have a minimum of 2.8 GPA in science and math courses and minimum of 2.8 cumulative GPA.

### **Advanced Standing**

Prospective MLS students may request Advanced Standing credit for the following courses if they meet the requirements for each course:

- MLS 330: Phlebotomy and Pre-Analytical Variables
- Rotation credits for the following courses:
  - o MLS 425: Clinical Hematology and Hemostasis (2 credits clinical)
  - MLS 415: Clinical Chemistry (2 credits clinical)
  - MLS 430: Immunohematology (2 credits clinical)
  - MLS 435: Clinical Microbiology (2 credits clinical)

Prospective MLS students will follow the Advanced Standing process and use the Advanced Standing credit Portfolio form as a guide to provide evidence of experience.

Acceptable documentation to provide evidence of experience: -MLS 310: Phlebotomy and Pre-Analytical Variables

- MLT certification
- PBT certification
- Six months of experience working as a phlebotomist (training documentation must beprovided)

-Clinical rotation credits (MLS 425, MLS 415, MLS 430, MLS 435):

- MLT certification AND any of the following evidence to show experience noted on the portfolio form:
  - Training documentation
  - Competency documentation
  - Narratives with supporting documentation

No partial credit will be awarded for rotations. If evidence of experience cannot be provided for allisted items in each lab department section, Advanced Standing credit will not be awarded for that section.

### **MLS Course Descriptions**

### MLS 310 Urinalysis and Body Fluids – 2 Credits (HYB)

This course is intended to provide the student with a foundation to the physical, chemical, and microscopic properties of urine and body fluid analysis. Urinary and other diseases as they relate to urinalysis and body fluid findings will be discussed. Students will learn about quality control, quality assurance and safety pertaining to urinalysis and body fluid testing.

1 Credit Didactic, 1 Credit Clinical/Student Lab

MLS 320 Laboratory Math and Operations – 1 Credit (ONL)

This course is intended to cover general lab math, lab consumables, and standard lab equipment. MLS 330 Phlebotomy and Pre-analytical Variables – 1 Credit (HYB)

This course is intended to provide the student with the basic principles and techniques of specimen collection and pre-analytical variables within the clinical laboratory.

0.25 Credits Didactic, 0.75 Credits Clinical/Student Lab

### MLS 340 Cell Morphology – 2 Credits (ONL)

This course is intended to cover the skills needed when performing and interpreting manual differentials. Microscope skills, cell morphology and maturation sequences are topics included within this course. Emphasis is placed on interpretation of test results and correlation with patient condition. MLS 345 Clinical Immunology – 2 Credits (ONL)

This course is intended to teach the student a basic immunology background with emphasis on pathological conditions that relate to the clinical laboratory setting.

MLS 410 Evidence Based Laboratory Medicine – 1 Credit (ONL)

This course is intended to introduce the student to Evidence Based Laboratory Medicine (EBLM) compared to other forms of research.

MLS 415 Clinical Chemistry – 7 Credits (F2F)

This course is intended to cover the physiology of the body and biochemical processes that are present in normal and abnormal patient populations. Laboratory results will be evaluated for diagnosis or treatment of disease states. Included in this course is the study of carbohydrates, lipids, proteins, enzymes, non-protein nitrogen products, electrolytes, blood gases, acid base balance, hormones, tumor markers, therapeutic drugs, and toxicology. Students will gain experience during clinical hours on clinical chemistry instrumentation and practices. 5 Credits Didactic, 2 Credits Clinical/Student Lab <u>MLS 420 Educational Development – 1 Credit (ONL)</u>

This course is intended to provide the student with a basic understanding of instructional methods and student/staff development.

MLS 425 Clinical Hematology and Hemostasis – 7 Credits (F2F)

This course is intended to present the theory of hematologic principles and the study of coagulation. Hematology principles include the formation of blood cells, cell morphology and the correlation of laboratory results to disease states. Coagulation principles include the clotting and fibrinolytic activity of the blood, and the correlation of laboratory results to disease results. Students will gain experience during clinical hours on hematology and coagulation instrumentation and practices.

5 Credits Didactic, 2 Credits Clinical/Student Lab

MLS 430 Immunohematology – 7 Credits (F2F)

This course is intended to provide the student with an entry-level knowledge on blood group systems, antibody screening, compatibility testing, and blood component processing. Clinical experience will allow students to perform blood typing, antibody identification, complete blood compatibility testing, and observe how components are used to support patients.

5 Credits Didactic, 2 Credits Clinical/Student Lab

MLS 435 Clinical Microbiology – 7 Credits (F2F)

This course is intended to provide an entry-level knowledge in the study of bacteriology, virology, mycology, and parasitology in relationship to disease in humans. Topics include clinical signs and symptoms of disease process, specimen collection and processing, modes of transmission and methods of identification. Clinical experience will allow students to process a variety of patient specimens in the microbiology laboratory and gain experience with a wide variety of state-of-the art procedures and equipment for the isolation and identification of pathogenic microorganisms.

5 Credits Didactic, 2 Credits Clinical/Student Lab

MLS 440 Laboratory Management – 2 Credits (ONL)

This course is intended to provide the student with basic laboratory management skills including human resources, financial management and laboratory accreditation.

MLS 450 Medical Laboratory Science Review – 1 Credit (ONL)

This course is intended to help students review pertinent information from courses throughout the MLS program prior to certification exam.

0.25 Credits Didactic, 0.75 Credits Clinical/Student Lab

### College E-mail, the My Pulse Portal and Blackboard Learn

Students are issued a Trinity College e-mail and My Pulse account and log-in information after acceptance into the MLS program. Students are required to use these electronic services to facilitate communication with faculty and staff at the College. Students are expected to check College email daily when classes are in session. MLS courses also use the Blackboard Learn System, which uses the College email address as the username.

A full review of all electronic services will be held for students during orientation. The email system will prompt a password change every 6 months. Please be aware that IT will disable a

student's e-mail account for non-usage. Students must maintain active use of the College email system. For problems logging into e-mail, call the IT Service Center, which is available 7 days a week 24 hours a day at (309) 779-2371.

For technical assistance with the My Pulse student portal, call the College Student Services office for assistance, Monday – Friday 8:00 am to 4:30 pm, at (309) 779-7700.

For technical assistance with the Blackboard Learn system, contact the College Educational Technologist Monday-Friday 8:00 am to 4:30 pm for assistance at (309) 779-7814 or by email: Mathew.Oles@trinitycollegeqc.edu

Trinity College makes every effort to maintain excellent communication with our student body, the College expects students to maintain all their electronic accounts to assist in this process.

### **Cornerstone Requirements**

Students are assigned to complete various e-learning modules in the UnityPoint Health Cornerstone System on an annual basis, and at other times as assigned. Students will be informed via email regarding new Cornerstone assignments. Students must complete the Cornerstone assignment before the designated deadline, as these modules are required for compliance with College and UnityPoint Health Trinity policies. Failure to complete the assigned Cornerstone modules will be addressed through the Corrective Action process. See "Corrective Action Process" in the College Catalog.

### Service Work

Students are not to be used in the clinical laboratory to perform testing in place of qualified clinical staff. Students must be performing testing under supervised conditions with clinical staff. Any service work that is performed by students outside of regular clinical hours will be non-compulsory. If needed, the College or clinical site can justify if learning experiences are needed outside of regular academic hours.

Students may work outside of normal academic hours, but it may not interfere with the course or clinical schedule.

### **Clinical Absence Policy**

Attendance in clinical is required. Students have a minimum of 24 clinical hours that must be completed in MLS 310 and MLS 330. Students have a minimum 96 clinical hours that must be completed in MLS 415, MLS 425, MLS, 430, and MLS 435. The clinical liaison must be notified prior to any clinical absence. Clinical make ups will be determined by the clinical liaison.

The required minimum clinical hours must be completed prior to the end of the semester. If a student fails to complete the minimum clinical hours, the student will fail the course.

## **Clinical Partners**

UPH-Trinity Quad Cities UPH-Peoria

Genesis Health System

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MercyOne Dubuque MercyOne Clinton CGH Sterling Weland Clinical Labs Rheumatology Associates

## MLS Program Complaints

The purpose of the Complaint Policy is to provide a formal process for students in the MLS program to register formal complaints regarding the MLS program and for the MLS program to track complaints for the purpose of improving the MLS program.

The student should put their concern(s) in writing and submit it to the Program Coordinator/Director who will meet with the student to discuss the concern(s). If a student's complaint falls within the purview of the College policy, the Program Coordinator/Director will assist the student to resolve their concern(s) as provided for in the specific policy. Other complaints will be addressed by the Program Coordinator/Director in consultation with or referral to the appropriate Director or Dean. The complaint will remain confidential and only be shared on a need-to-know basis. A written record of formal complaints and their resolution is reported by the Program Coordinators annually to the Dean of Nursing and Health Sciences.

### **Evaluation of Student Work**

MLS faculty are responsible for 100% of student evaluations.

### **Testing and Grading Policies**

### Testing, Test Review, and Written Assignments

The purpose of the MLS Test Administration and Review Policy is to provide for a consistent, orderly, and fair test administration and review process. Implementation of these procedures supports academic integrity and provides for an optimal testing environment to promote student success. The testing procedure is modeled after the ASCP exam testing procedure as a multiple-choice electronic testing.

### **Electronic Testing**

Some tests will be administered electronically. Tests are given on the date published on the course calendar. Students may not take a test prior to the scheduled date and time. Students are advised to arrive 15 minutes prior to the published start time of the test but will not be allowed to enter the test room until 5 minutes prior to the published start time. A student arriving late must enter the test area quietly and report to the proctor. On the test date, students should bring a fully charged laptop computer meeting the requirements outlined in the college catalog. Students who do not have a laptop must notify the faculty at the beginning of the semester so that space in the computer lab can be reserved. Students with laptop computers who experience technical difficulties at the time of the test will be provided a paper test.

Students may wear comfortable clothing suitable for the classroom environment to a test. Students may bring coats into the room but must put them on the back of the chair. Students

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wearing hooded apparel must leave the hood down and students may not wear hats or scarves. Students may not bring any personal items into the testing room including, but not limited to food, drink, books, bags, sunglasses, supplies, and electronic devices including smart watches, cell phones, tablets, recording devices or any other electronic devices. Keys may be brought into the testing room and must be placed in the area designated by the proctor.

Students may not bring any personal items into the testing room including, but not limited to: watches, food, drink, coats, jackets, books, bags, sunglasses, supplies, and electronic devices. Keys may be brought into the testing room and must be placed in the area designated by the proctor. No questions may be asked or answered during the test. All test supplies are provided by the College. If additional supplies are needed, the student should raise their hand to receive assistance.

Students are expected to care for their personal needs prior to entering the testing room. A student may not leave the testing room unless it is an emergency. Students may provide the College phone number as an emergency contact number. A staff member will give all emergency messages to the proctor who will deliver the message to the student. If a student must leave the testing room for an emergency the student must submit the test electronically at that time and may elect to have the completed test items graded or may elect to take the make-up test only if the student has not had a prior test absence during the course. Any student requiring an accommodation due to a disability must contact the Director of Student Services and External Relations. The student may require a different testing date and time depending on proctor availability.

### Paper/Pencil Testing

Paper/Pencil tests may be given, and students will be notified that the test will be paper/pencil. The policy is the same for both electronic and paper/pencil testing with the following exceptions:

- If the student must leave the room for an emergency the student will submit the test to the proctor and may not return to the testing room.
- The proctor will announce when there are 10 minutes remaining in the testing period. All students must submit their test to the proctor when the end time is announced.

### Posting of Exam Grades

Grades will be posted to the electronic course grade book no earlier than 48 hours unless circumstances warrant an earlier posting.

### Academic Integrity

Each student is responsible for the authenticity of his or her own work. Should an exam proctor observe suspected cheating during an exam, the proctor will document the observed behavior, meet with the student immediately at the end of the exam, and report the incident to the Dean of Nursing and Health Sciences. A student who has taken the exam may not communicate any information about the exam to any students who were absent. Sharing information about exam question(s) in any form is cheating. Cheating may result in disciplinary action up to and

including dismissal from the College. (See "Academic Honesty and Integrity" and "Corrective Action" policies.)

### **Missed Exams**

Students are expected to take exams at the times scheduled on the course calendar. A student may make up a maximum of one missed exam per course. The make-up exam will be an alternate equivalent form of the original exam. Failure to take the make-up exam on the date and time scheduled will result in a grade of zero (0) for the exam. If it is necessary for a student to make up more than one exam, see the Incomplete Grade Policy in the College Catalog.

### **Proctored Quiz Policy**

Some courses may include proctored quizzes (scheduled or unscheduled) during face-to-face course meetings as an assessment strategy. Students absent for any reason during a quiz may not make it up. Faculty will allow 1.5 minutes per question for quizzes. The lowest quiz score of the semester will be dropped.

### Written Assignments Policy

Written instructions and grading criteria will be provided for all assignments in the MLS program. Students should seek faculty guidance for further clarification as needed. Students may request faculty to review a rough draft for guidance, up to one week before the assignment is due. General feedback and guidance will be given as faculty time permits. Each course syllabus will specify the policy for submitting work after the deadline including any grading penalty for late submissions. All assignments designated as meeting a clinical objective must be completed at a minimum of 77% level prior to the end of the course to meet the corresponding clinical objective(s).

### Late Assignment Policy

Assignments must be submitted in a format accessible to faculty before the assignment deadline posted on the Course Calendar. Students must use only Microsoft 365 applications as provided by the College to create files for submission to a Blackboard drop box. Faculty are unable to view other file types. It is the student's responsibility to verify that each submission has uploaded correctly to the drop box in Microsoft 365 format. When the assignment deadline has passed, missing submissions or those not viewable by faculty will be considered late. The earned assignment grade will be reduced by 10% for each day or partial day an assignment is late. Assignments that are 10 or more days late will receive a zero (0) but must be submitted to meet the related clinical or course objective(s). Failure to submit assignments on time may result in failure of the course. Assignments noted on the Clinical Evaluation Tool must be completed to a passing score (77%) prior to deduction of points due to late submission, to meet the related clinical objective(s).

### **Grade Rounding Policy**

All class grades including final examinations will be reported to two decimal places (hundredths), whereas all final course grades will be reported to one decimal place (tenths). A final course grade with decimal of 0.5 or greater will be rounded to the next highest whole number. A final course grade with decimal of 0.4 or lower will round down to the next lower whole number. Examples: Example 1: The final weighted total grade output in Blackboard is 93.479. Faculty will round to one decimal place (93.5), which will result in a final course grade of 94. Example 2: The final weighted total grade output in Blackboard is 93.432. Faculty will round to one decimal place (93.4), which will result in a final course grade of 93.

### **Student Assistance Program**

All students are eligible to participate in the Student Assistance Program (SAP)\* as offered through Precedence, Inc. and UnityPoint Health - Trinity. Counselors are available to assist students with personal or other issues that arise while a student is at the college. Students may seek SAP assistance independently or can be referred by their Advisor/Program Coordinator or Dean. Brochures are available in the Student Services Department or from an Academic Advisor. SAP services are available 365 days per year, 24 hours per day by calling: (800) 383-7900 or (309) 779-2273. Services are located at: 3416 Blackhawk Rd, Rock Island, Illinois. This is a free, limited, confidential program and will not be part of the student's academic record. The SAP resource can assist students in accessing the appropriate resources to deal with concerns that might interfere with their personal and educational development while in college. The service is available to every student who has a difficulty or concern. Included in the service is assistance with personal, social, academic, professional, and vocational concerns. Concerns such as drug and alcohol abuse, marital problems, financial trouble, and others can be addressed. \*The student assistance program is part of the Trinity Regional Health System Employee Assistance Program (EAP).

### **Plan for Program Closure**

TCONHS plans to maintain the MLS program indefinitely. However, if there is a possibility that future situations and conditions might lead to a seize or pause of the MLS program, the following steps will be initiated by the Program Director or the Dean of Nursing and Health Sciences:

- 1. Notify NAACLS of pending closure
  - a. Timeline for closure
  - b. Rationale/basis for closure
  - c. Number of students affected by closure
  - d. Plans to assists students affected by closure
- 2. Notify Admissions Office to prevent additional student recruitment into the MLS program
- 3. Implement a plan to allow students to complete program through sister college programs
- 4. Implement a plan to allow students to complete clinical rotations with clinical liaisons

### **Plan for Temporary Closure of Facilities**

If the physical facilities at TCONHS are unusable due to unforeseen circumstances, MLS students will be able to complete their clinical hours at their assigned locations and complete the didactic portion online through Blackboard. TCONHS will notify NAACLS of the hardship and seek input.

### **Accreditation Status**

Trinity College of Nursing and Health Sciences is currently seeking accreditation from the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) for the Bachelor of Health Science in Medical Lab Science program.

NAACLS is a nonprofit organization that independently accredits Medical Laboratory Scientist Programs. Strict standards required for this accreditation help to ensure the quality of education within the MLS program and help to prepare students with the ASCP certification examination. Eligibility for students to certain certification exams depends on achieving "serious applicant status" and/or program approval from NAACLS.

If you have questions about the accreditation process, you can contact NAACLS at:

Mail: NAACLS

5600 N. River Rd. Suite 720 Rosemont, IL 60018 Phone: 773-714-8880 Email: <u>info@naacls.org</u> Website:<u>https://www.naacls.org</u>

### ASCP-BOC Certification Exam

Students who graduate from Trinity College of Nursing and Health Science, having received their Bachelor of Health Science in Medical Lab Science, are eligible (pending NAACLS approval) to take the national certification exam. The MLS program does not require students to take or pass the ASCP certification exam. Degrees will be awarded once the students complete the MLS program requirements, regardless of certification status.

### **ASCP-BOC Ethical Behavior**

Recognizing that my integrity and that of my profession must be pledged to the best possible care of patients based on the reliability of my work, I will:

- Treat patients with respect, care, and thoughtfulness.
- Develop cooperative and respectful relationships with colleagues to ensure a high standard of patient care.
- Perform my duties in an accurate, precise, timely, and responsible manner.
- Safeguard patient information and test results as confidential, except as required by law.
- Advocate the delivery of quality laboratory services in a cost-effective manner.
- Strive to maintain a reputation of honesty, integrity, and reliability.
- Comply with laws and regulations and strive to disclose illegal or improper behavior to the appropriate authorities.

• Continue to study, apply, and advance medical laboratory knowledge and skills; and share such with other members of the health care community and the public.

• Render quality services and care regardless of patients' age, gender, race, religion, national origin, disability, marital status, sexual orientation, political, social, health, or economic status. www.ascp.org/boc

### **ASCP-BOC MLS Scope of Practice**

A Medical Lab Scientist (MLS) has the appropriate educational background to perform, interpret, and correlate laboratory procedures that require the broad exercise of independent judgment and responsibility with minimal technical supervision. An MLS maintains equipment and records; performs quality assessment activities related to test performance; and may also function as a supervisor, educator, manager, consultant, or researcher within a medical laboratory setting. The term MLS includes persons performing a broad range of laboratory procedures as well as persons concentrating their activities in an area such as blood banking, chemistry, hematology, immunology, microbiology, histology, or cytology. The MLS understands roles and relationships of practitioners in the health-related fields. Examples of the scope of duties for the MLS are:

• Follows established procedures for collecting and processing biological specimens for analysis.

• Performs chemical, microbiologic, immunologic, hematologic and immunohematologic laboratory procedures that require limited independent judgment.

- Recognizes unexpected results and instrument malfunction and takes appropriate action.
- Provides laboratory information to authorized sources.
- Demonstrates laboratory technical skills to other laboratory personnel.
- Evaluates and solves problems related to collection and processing of biological specimens for analysis.
- Performs full range of chemical, microbiologic, immunologic, hematologic and immunohematologic laboratory procedures.
- Differentiates and resolves technical, instrument, and physiologic causes of problems or unexpected test results.
- Participates in the evaluation of new techniques and procedures in laboratory.
- Incorporates principles of educational methodology in the instruction of laboratory personnel, other health care professionals and consumers.
- Provides administrative and technical consulting services on laboratory testing.
- Gives direction and guidance to technical and support personnel. www.ascp.org/boc