ALLEGANY COLLEGE of MARYLAND
ENGAGE YOUR FUTURE

MEDICAL LABORATORY TECHNOLOGY

CLINICAL PRACTICUM STUDENT HANDBOOK

Spring 2024

CLINICAL AFFILIATES:

- Conemaugh Nason Medical Center - Roaring Spring, PA
- Conemaugh Memorial Medical Center - Johnstown, PA
- Conemaugh Meyersdale Medical Center - Meyersdale, PA
- Conemaugh Miners Medical Center - Hastings, PA
- Meritus Medical Center - Hagerstown, MD
- University of Pittsburgh Medical Center: Bedford Hospital - Everett, PA
- University of Pittsburgh Medical Center: Western Maryland- Cumberland, MD
- University of Pittsburgh Medical Center: Somerset, Somerset, PA
- West Virginia University Medicine: Grant Memorial Hospital - Petersburg, WV
- West Virginia University Medicine: Garrett Regional Medical Center - Oakland, MD
- West Virginia University Medicine: Potomac Valley Hospital - Keyser, WV

ALLEGANY COLLEGE
of MARYLAND

Allegany College of Maryland does not discriminate on the basis of age, ancestry/national origin, color, disability, gender identity/expression, marital status, race, religion, sex, or sexual orientation in matters affecting employment or in providing access to programs and activities.

For inquiries related to this policy, Title IX, and ADA/504, please contact:
Dr. Renee Conner, Dean of Student and Legal Affairs, Title IX Coordinator, ADA/504 Coordinator, 301-784-5206 / rconner@allegany.edu

Allegany College of Maryland is required to inform prospective and current students of important College policies. For full details on these key policies, please visit the Allegany College of Maryland website at allegany.edu/policy-mandates.

Allegany College of Maryland
Medical Laboratory Technology
Clinical Rotation Handbook
Spring 2024

This handbook is to be used in conjunction with Allegany College of Maryland Catalog and Student Handbook that is available at www.allegany.edu.

*To access the Catalog, click on the Course Offerings icon at the bottom of the homepage; to access the Student Handbook, go to Quick Links on the homepage and click on Student Handbook

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Allegany College of Maryland is accredited by the Middle States Commission on Higher Education (MSCHE), 1007 North Orange Street, 4th Floor, MB #166, Wilmington, DE 19801; 267-284-5011.

The MSCHE is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation. MSCHE offers the Statement of Accreditation Status for Allegany College of Maryland on their website.

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SECTION I

COLLEGE/PROGRAM INFORMATION

ACM MISSION, VALUES AND PRINCIPLES

ACM STRATEGIC PRIORITIES:

Our VISION:

We will be the college of choice that transforms lives, strengthens communities, and makes learners the center of everything we do.

Our MISSION:

We deliver diverse and relevant education centered around student success in a supportive and engaging community.

Our VALUES:

QUALITY	We improve through assessment.
INTEGRITY	We promote honesty and trust.
RESPECT	We foster dignity and worth.
OPPORTUNITY	We provide innovative choices.
WELLNESS	We promote healthy lifestyles.

MISSION-BASED GUIDING PRINCIPLES:

- To provide convenient geographical access to post-secondary education to people within the service region of the college.
- To provide financial access to a college education by assuring reasonable tuition rates, comprehensive financial assistance, and college scholarship opportunities.
- To provide quality education and services, in a safe and comfortable environment, at a reasonable cost.
- To support an environment that promotes quality teaching and learning.
- To promote a college that enhances lives and the community through education and service.
- To instill in our students a philosophy of life-long learning.
- To foster a pro-learning campus environment that embraces the values of Allegany College of Maryland.
- To develop the technical competence and knowledge and other essential skills that prepare students for direct entry into the workforce, for career change and advancement, or for transfer to another college or university.
- To continually assess our programs and services in order to promote and encourage continuous improvement.

GENERAL EDUCATION GOALS FOR STUDENTS

Allegany College of Maryland's General Education Goals and Outcomes have been developed in conjunction with Allegany College of Maryland's mission, vision, values and goals. Updated in 2013, these goals and outcomes are based on the Code of Maryland (COMAR) and on *Middle States of Characteristics of Excellence*, Standard 12. All degree graduates of Allegany College of Maryland will be able to demonstrate proficiency at the time of graduation (or at other key points) in each of the following Goals and Outcomes:

- **Written and Oral Communication** – Use reading, writing, speaking, and listening to communicate effectively.

- **Scientific and Quantitative Reasoning** – Use fundamentals of scientific investigation and/or mathematical concepts to explain or to solve problems.

- **Critical Analysis and Reasoning** – Analyze, synthesize and evaluate data and text.

- **Technological Competency** – Use discipline-specific technologies effectively.

- **Information Literacy** – Locate, evaluate, and use information ethically and effectively.

- **Personal and Civic Responsibility** – Explore and develop understanding for oneself and others, the community, and other cultures and engage with issues of local, national, and global significance.

- **Arts and Humanities Inquiry** – Explore and interpret expressions of human ideals, values and creativity across cultures.

STUDENT & LEGAL AFFAIRS EXPECTATIONS OF STUDENTS

Our Mission: Allegany College of Maryland is a lifelong learning community dedicated to excellence in education and responsive to the changing needs of the communities we serve. Our focus is the preparation of individuals in mind, body, and spirit for lives of fulfillment, leadership, and service in a diverse and global society.

EXPECTATION #1: Attend Class. Go to each of your classes each time it meets. Be on time and stay for the entire class session. If you must miss class because of illness or emergency, check your course syllabus to know the instructor's attendance policy. Make up any missed work promptly. (It is vitally important that you read each course syllabus! It contains what you need to know to be successful in that class; it also tells you what each individual instructor's expectations are.)

EXPECTATION #2 Do the Work. It is true that for every hour you spend in class you should study two hours outside of class. (If you are taking 12 credits, you should be studying/doing homework 24 hours each week.) Read each assignment. Turn in your homework when it is due.

EXPECTATION #3: Ask for Help. If you are having problems with a class or an assignment, help is available. See the instructor. Go to the Student Success Center for a tutor. Form a study group with classmates. Meet with your advisor. But don't wait until it is too late! Waiting until the final weeks of a semester is unlikely to help.

EXPECTATION #4: Read the Handbook. The Student Handbook is full of useful information to help you negotiate the often-roiling waters of college life. It also details the responsibilities of campus citizenship. (Ignorance of the rules is NOT an excuse for breaking them.) The answer to virtually any question you have about Allegany College of Maryland is in this Handbook.

EXPECTATION #5: Respect Others. One of the College's Core Values is Respect. Showing respect means many things, including being courteous in the classroom, hallway, library, cafeteria, courtyard, parking lot – anyplace you encounter other people. Respect also means treating others as you would like to be treated; insulting, humiliating, judging, or ignoring another person hurts feelings. Shouting and cursing are always inappropriate in a learning environment.

EXPECTATION #6: Be Responsible. We trust that you meet all obligations that are part of attending college. As an adult, you must learn to read all notices given to you, mailed to you, or posted for you to read, to show up for work study assignments, to pay your bills on time, and to manage problems/issues yourself without demanding special treatment or immediate gratification.

College is about more than merely attending classes and getting grades. College is about finding and creating opportunities to grow. It is about learning independence, making your own decisions, and becoming a community citizen. We are here to help you learn those things, too.

We promise to treat you with respect, to give you quality education, to act with integrity, to provide you with opportunities to learn and to grow as a person, and to promote wellness in mind, body, and spirit. That's our part. You must do yours.

INTRODUCTION TO OUR MLT PROGRAM

Allegany College of Maryland and all of our clinical affiliates welcome you to the clinical part of your education.

You are urged to review the classroom notes from on-campus lecture/lab courses and to use the knowledge gained during these courses as a basis for the clinical rotation. The clinical practicum portion of your education will be entirely different from any other courses.

It is our philosophy that we cannot teach you everything there is to know about the clinical laboratory, but we can supply you with the necessary basic clinical information so that upon completing the program you will be able to meet the requirements for an entry level Medical Laboratory Technician. We hope the clinical practicum experience will help stimulate you to think and seek answers. Through observation, practical experience, and building on the knowledge you have already assimilated, you will become a member of an important team of health professionals.

Please always keep in mind that you are dealing with human life while you are in the laboratory. All patient information is **confidential**. The external clinical rotation is a privilege. Training at the bench is a time-consuming experience for clinical faculty. Training students can slow down the workflow in a department. Patient results are **always** the number one priority.

Our very dedicated clinical staff trainers don't receive compensation for training students. Be sure to express your gratitude as it is valued and appreciated. Clinical trainers appreciate students that are dependable, motivated, prepared, patient, responsible and respectful.

The attitude you project to others about your educational experiences is often a true reflection of yourself as well as our program and college. You will get from the experience what you put into it. Good luck and we are here to support your learning.

The MLT Program at Allegany College of Maryland has enjoyed great success as evident by the job placement and certification examination scores below. We look forward to your successful journey.

Graduating Year	ACM-MLT Pass Rage ASCP-BOC Exam (*within 1st year*)	National Pass Rate ASCP-BOC Exam	% of Graduates Retained After Entering First Year of the Program	Graduate Job Placement in 1 year or Continuing Education
2022 (7/1/21-6/30/22)	100%	77%	71%	100%
2021 (7/1/20-6/30/21)	100%	77%	100%	100%
2020 (7/1/19-6/30/20)	100%	78%	100%	100%
3 Year Program Average	96%	N/A	93%	100%

MLT PROGRAM MISSION STATEMENT

The Medical Laboratory Technology Program at Allegany College of Maryland is responsive to the changing workforce needs of the clinical laboratory profession and is dedicated to meeting those needs and supplying laboratory professionals throughout our region.

Our focus is to provide our graduates with a solid foundation of laboratory technical competence and knowledge. We strive to instill in students the importance of lifelong learning and continual professional growth. Basic to the learning environment is a holistic and compassionate care for self and others.

MLT PROGRAM LEARNING OUTCOMES & OBJECTIVES

1. **Students will competently and safely collect appropriate specimens and perform routine clinical laboratory tests.**

   Program Level Student Learning Objectives for Program Learning Outcome #1

   1. MLT students will perform laboratory test procedures accurately and efficiently.

   2. MLT students will perform basic venipuncture techniques to collect appropriate blood specimens needed for analysis.

   3. MLT students will apply knowledge to analyze diverse types of information to choose an appropriate course of action in order to effectively collect or process specimens.

   4. MLT students will apply knowledge to analyze diverse types of information to choose an appropriate course of action in order to effectively analyze and interpret results.

   5. MLT students will demonstrate proper safety practices while performing procedures or collecting specimens.

2. **Students will possess the professional attitudes and behaviors critical to being a valued member of the healthcare/workplace team.**

   Program Level Student Learning Objectives for Learning Outcome #2

   1. MLT students will communicate effectively using professional interpersonal skills resulting in successful interactions with colleagues and patients.

   2. MLT students will behave in a manner consistent with the standards of the laboratory profession.

3. MLT students will describe the importance of continuing education in lifelong learning and in obtaining and maintaining professional credentialing.

OVERALL MLT PROGRAM GOALS

The ACM MLT program student will meet the needs of the laboratory community by completing program academic and internship requirements to graduate from the MLT program, achieve industry certification, and obtain relevant field employment.

Program Outcomes

- Students will successfully complete the program.
- Graduating clinical MLT students will pass the ASCP national certification examination.
- Graduating MLT students will gain relevant professional employment within one year of graduation from the program.
- MLT graduates and their employers will be satisfied with the training the student received in the ACM MLT program.

CURRENT ACM MLT CLINICAL AFFILIATE SITES

Conemaugh Memorial Medical Center - Johnstown, PA
Conemaugh Meyersdale Medical Center - Meyersdale, PA
Conemaugh Nason Medical Center - Roaring Spring, PA
Meritus Medical Center - Hagerstown, MD
University of Pittsburgh Medical Center: Bedford Hospital - Everett, PA
University of Pittsburgh Medical Center: Somerset - Somerset, PA
University of Pittsburgh Medical Center: Western Maryland - Cumberland, MD
West Virginia University Medicine: Garrett Regional Medical Center - Oakland, MD
West Virginia University Medicine: Grant Memorial Hospital - Petersburg, WV
West Virginia University Medicine: Potomac Valley Hospital - Keyser, WV

ACM MLT MANPOWER SHORTAGE DISGNATION

The Maryland Higher Education Commission has designated MLT as a Health Manpower Shortage program. Maryland residents from counties other than Allegany who are registered in these eligible programs may qualify for tuition subsidies. Funding available for these programs is based on funding from the State of Maryland and is thus subject to change each semester and some restrictions apply. Applications for Health Manpower must be submitted to the Admissions Office each semester the student would like to be considered in.

STUDENT CLINICAL ROTATION SELECTION AND SCHEDULING PROCEDURE

Clinical Placement Policy applies to how students are selected to fill clinical affiliate rotation sites. A student is eligible for clinical rotation when he/she has satisfactorily completed all the MLT didactic coursework in the student's course plan with a grade of "C" or better.

Annual rotation schedules are distributed to students and clinical affiliate sites. The ACM MLT program guarantees a clinical placement to every student because the maximum number of placements currently exceeds the maximum number of students we accept. We never accept more than we can place into clinical rotation. However, the maximum number of students that are accepted at a particular site is just that, maximal and not always optimal. The annual rotation schedule document outlines which students will be placed at respective clinical sites during the spring clinical semesters. Travel outside of the student's immediate geographic area may be required to guarantee placement.
Many factors are considered when developing the clinical rotation schedule for a student. They include, but are not limited to:

- The student's residence and proximity to the clinical affiliate site.
- The student's strengths and weaknesses.
- The student's transportation and/or childcare arrangements.
- The site's availability, strengths and limitations.
- Sites selected are required to have a legal affiliation agreement with ACM.

If the student requests for a specific location exceed the slots available, the rotation slots of the desired site will be divided and distributed between requesting students. Every effort will be made to minimize travel to other sites.

A student having to repeat clinical rotation(s) or take a clinical placement out of sequence will be subject to availability of clinical placement sites. These students will be placed in clinical sites which have space available.

If the clinical affiliate site cannot accommodate the number of students requesting the site, the four clinical rotations that make up the clinical practice sequence will be divided among requesting participants. This situation will require that a student travel to an alternative site affiliated with Allegany College of Maryland for all or part of the four required rotations.

The final placement is up to the discretion of the MLT Program Director and internship representatives.

CPR

Completion of Basic Life Support (BLS) Provider Course (American Heart Association) is not a requirement for the MLT Program.

LICENSURE

To practice as an MLT, the graduate must be licensed/certified in some states. Most employers, even in states without licensure, will only hire certified MLT's or expect graduates to pass the written certifications examination within 1-year of hire. Certification is predominately obtained by the industry accepted ASCP, American Society for Clinical Pathology.

A student who has been convicted of a felony may not be eligible for licensure as an MLT. Although you may complete classes in your field of study successfully, you should contact your state board of examiners for additional clarification on certification or licensure after completion of classes.

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PROGRAM ADVISORY COMMITTEE

The ACM MLT Program Advisory Committee meets at least twice a year. The committee members represent the tri-state laboratory community with practicing professionals, academic professionals, administrators, and a pathologist. The advisory committee provides valuable input into the program/curriculum to maintain current relevancy and effectiveness. Current members are as follows:

Allie Rohrbaugh, WVU Grant Memorial Hospital
Sammi Stott, WVU Garrett Regional Medical Center, ACM MLT Alumni
Dr. Annette Godissart, UPMC-Bedford Memorial Hospital
Theresa Lankey, UPMC-Western Maryland, ACM MLT Alumni
Kim Smith, UPMC Western Maryland, ACM MLT Alumni
Laurie Wilson, UPMC Western Maryland, ACM MLT Alumni
Kaitlyn Grimm, WVU-Potomac Valley, ACM MLT Alumni
Cindy LeComte, UPMC-Somerset Hospital
Molly Saunders-Bloom, Allegany College of Maryland, Professor Emeritus
Jeffrey Seiple, Meritus Medical Center,
Jonathan Adams, Meritus Medical Laboratory, ACM MLT Alumni
Sonya Reed, Children's Medical Group, ACM MLT Alumni
Windi Wilson, Regional Laboratory Director WVU Medicine, ACM MLT Alumni
Jason Elchin, Conemaugh Nason Medical Center
Molly Harrison, Conemaugh Memorial Medical Center

MLT PROGRAM CLINICAL LIAISONS

The ACM MLT Clinical Liaisons are employed by the clinical site and are an essential component of the students' clinical experience. These valued volunteers are a link between the MLT faculty and the clinical rotation site. They are responsible for:

- coordinating clinical instruction at the site
- maintaining effective communication with the program director or designee

The current liaisons for our clinical sites are as follows:

Conemaugh Memorial Medical Center: Molly Harrison
Conemaugh Nason Medical Center: Jason Elchin
Conemaugh Meyersdale Medical Center: Brandy Tipton
Meritus Medical Laboratory and Robinwood Center; Jeffrey Seiple
UPMC-Bedford: Dr. Annette Godissart
UPMC-Somerset Hospital: Cindy LaComte
UPMC-Western Maryland: Theresa Lankey
WVU-Garrett Regional Medical Center: Sammi Stott
WVU-Grant Memorial Hospital: Allie Rohrbaugh
WVU-Potomac Valley Hospital: Kaitlyn Grimm

ACADEMIC CALENDAR

MEDICAL LABORATORY TECHNOLOGY 210
Clinical Practicum
2024

SPRING SEMESTER 2024

January 3, 2024	Clinical Practicum Orientation
January 8, 2024	Clinical Practicum Begins
January 16, 2024	Classes Begin
January 15, 2024	**Dr. Martin Luther King, Jr (No Class)**
March 11-15, 2024	**Spring Break No Class**
March 28-29, 2024	**College Closed Spring Holiday**
May 8, 2024	Spring Semester Ends after last class
May 18, 2024	Commencement

SECTION II

CLINICAL PRACTICUM RULES, REGULATIONS FOR PROGRAM PROGRESSION AND DISMISSAL

MLT RULES AND REQUIREMENTS FOR PROGRAM PROGRESSION OR DISMISSAL

1. Medical Laboratory Technology Clinical Practicum course grades are based on varied assessments of didactic knowledge, campus laboratory skills, and clinical laboratory performance during each of their four clinical practicum course areas. A student must pass each rotation area in order to pass the MLT 210 course.

2. Failure to achieve a final grade of a "C" (70%) in any lecture/laboratory Medical Laboratory Technology course **may** result in dismissal from the program since MLT courses are sequential and require successful completion to move on to the next semester. A student may have to pause their MLT education until the course is offered again as MLT courses are only offered once per year. In this case, the student will need to reapply to the program. The Program Director will meet with each student to develop a revised, individualized completion plan.

3. Lecture/Lab courses (other than MLT 210) are graded "A" - "F" in the following manner:

   MLT Grading scale as follows:
   A 90-100%
   B 80-89%
   C 70-79%
   D 60-69%
   F ..... Below 60%

4. Clinical Practicum course (MLT 210) is graded as Pass/Fail. Students must pass each of the four rotations areas to pass the overall 12 credit course.

5. If the student fails just one rotation area, the student may be given the opportunity to receive an incomplete for MLT 210 Clinical Practicum rotation area grade and complete remediation or repeat the rotation in the following summer semester.

6. Any student that fails two or more rotation areas will have to repeat the clinical practicum course, MLT 210 the next Spring semester if eligible. Students will register for the entire rotation course. Placement is subject to the availability of clinical sites. In this case, the student will need to reapply to the program.

7. A student having to repeat MLT 210 Clinical Practicum out of sequence will be subject to availability of clinical placement sites. These students will be placed in clinical sites which have available space. No more than two attempts will be made to reschedule the student in a different clinical rotation site.

8. Unsatisfactory Course Performance Includes:

   a. Withdrawal from a Medical Laboratory Technology course.
   b. Change to audit status in a Medical Laboratory Technology course.
   c. A grade of D, X or F.

9. If you miss a test and are excused, make appropriate arrangements for making it up before the next class period.

10. Assignments/Examinations
Assignments must be submitted to the instructor or submitted via Brightspace on or before the due date. They are to be neat, clean and legibly written or typed. Evidence of cheating or plagiarism on examinations, quizzes, or written assignments will result in disciplinary action consistent with the College Student Handbook and the Allied Health Professional Standards.

11. A student can only repeat (because of unsatisfactory performance) two Medical Laboratory Technology courses. A student may repeat (due to unsatisfactory performance) an individual Medical Laboratory Technology course once only.

12. If a student fails to achieve a passing grade in more than two Medical Laboratory Technology courses the student will be dismissed from the Medical Laboratory Technology curriculum. The student can reapply for admission into the Medical Laboratory Technology curriculum. The student must meet with the MLT Program Director to discuss withdrawal or to create a new plan for program completion.

13. A student that fails an MLT course and wants to continue in the MLT Program will be subject to an academic review by the MLT Program Director. The Director, with input from MLT faculty members, will evaluate professional behavior as well as academic and laboratory performance.

    The Director will meet with the student to discuss the reasons for the failing grade and will recommend either withdrawal from the MLT program or create a revised plan of program completion.

14. Once admitted to the clinical phase, students are expected to complete Medical Laboratory Technology courses within four consecutive college semesters. This normal progression may be interrupted by a student's illness, the need to repeat a course, or other unforeseen circumstances. In order that continuity of the program is maintained, a maximum time limit of eight consecutive semesters (or four college years) will be allowed for completion of the program. Any student that may have a particular problem completing these courses within this time frame must be evaluated by the Director of the MLT program for determining a plan for program completion.

15. A student may withdraw due to poor academic performance, illness or personal reasons. Students who withdraw are not guaranteed readmission but if student withdraws under the medical disclosure procedure, they will be given priority. If a student is readmitted, it may be delayed due to the availability of clinical facilities. (The Medical Laboratory Technology Readmission Procedures is included in this handbook.)

16. A student can be dismissed from the MLT Program if the student violates HIPAA Federal Laws or displays conduct detrimental to the ethics of Medical Laboratory Technology.

17. Violation of personal conduct (see the Allied Health Professional Standards) rules will result in a behavioral intervention form being filed within the program. Depending on the nature of the offense, the Program Director may forward the non-professional conduct to the Allied Health Directors' Accountability Committee if the Director is seeking termination from the program. Discipline shall be determined by the Allied Health Directors' Accountability committee.

    If the offense is deemed to not warrant dismissal, the first offense will result in a counseling session between the MLT student and MLT faculty member and/or Program Director. If the offense is especially egregious such as breaking HIPAA confidentiality rules or is a safety issue, the student may not get a second chance and may be dismissed from the program.

    If a second offense occurs, the student will be issued a formal warning which will be placed in their student file. With this second offense the student will receive a prescriptive improvement plan noting a timeline for improvement and will be made aware that failure to comply with this plan will result in dismissal from the MLT program. (This will be documented by the MLT Program Director and signed by the student.) Failure to comply with the terms of the improvement plan will result in dismissal from the program.

    After the second attempt at remediation has failed or the infraction is especially egregious or a safety issue, the Program Director will submit a request for dismissal of the student from the program to the Allied Health Directors' Accountability Committee for review to recommend. The Committee will recommend whether to dismiss the student from the MLT program. Please refer to the Allied Health Professionalism Standards and procedures located in this handbook.

18. The clinical affiliates have the right to not allow students to do clinical practice at their facility if the student does not adhere to clinical affiliate regulations. The student must realize that failure to adhere to hospital policy may jeopardize completion of a degree in Medical Laboratory Technology.

19. The student may utilize the ACM Academic Grievance Policy in the disposition of a grievance or complaint without fear of recrimination or retaliation.

20. The ACM MLT program is an accredited program by the National Accrediting Agency for Clinical Laboratory Science (NAACLS). A student who satisfactorily completes the Allegany College of Maryland Medical Laboratory Program and graduates with an AAS, Associate of Applied Science, degree is eligible to take the American Society for Clinical Pathology (ASCP) Board of Certification (BOC) Examination after graduation. A student is not required to pass this external certification to graduate from the MLT curriculum.

ALLEGANY COLLEGE of MARYLAND
ALLIED HEALTH PROGRAM
Professional Technical Standards

Students are expected to demonstrate these professional technical standards* with or without reasonable accommodations.

1. Intellectual-conceptual abilities
Demonstrate the academic ability to absorb a large volume of technically detailed material, synthesize information, and apply data to solve complex clinical problems. Additionally, we/I-developed study skills, motivation, and personal accountability are essential to acquire information in a limited or accelerated timeframe successfully.

2. Behavior and social attributes
Demonstrate the ability to develop the emotional maturity to approach highly stressful human situations in a calm, safe, and rational manner. Students must display sound ethical integrity consistent with a healthcare professional*.

3. Communication
Demonstrate the ability to communicate accurately with patients, clients, other healthcare professionals and the community in order to elicit and share information, to detect changes in mood and activity, and to establish a therapeutic relationship. Students should be able to communicate effectively and with sensitivity when dealing with patients, clients and all members of the health care team in person, in writing and in all forms of documentation.

4. Observation
Demonstrate sufficient ability to observe demonstrations, clients and/or patients accurately from afar and within close proximity. Visual, auditory, tactile, and olfactory senses may be necessary for observations.

5. Motor capabilities
Demonstrate sufficient ability and stamina with or without reasonable accommodations to fulfill the customary requirements of the program and the profession. Gross and fine motor skills, as well as visual, auditory, tactile, and olfactory senses may be necessary to monitor, assess, and respond to patient care situations safely and efficiently.

Allegany College of Maryland maintains a strong institutional commitment to equal educational opportunities for qualified students with disabilities who apply for admission or who are already enrolled. The technical standards are not intended to deter any candidate for whom reasonable accommodation will allow the fulfillment of the complete curriculum. Students and prospective students who disclose their disabilities will have a confidential review by the Academic Access & Disability Resources Director to determine whether there are any reasonable accommodations or alternative mechanisms that would permit the candidate to satisfy the standards. This process is informed by the knowledge that students with varied types of disabilities can become successful career professionals. Contact adr@allegany.edu or 301-784-5234 for a confidential consultation.

*Refer to Professional Technical Standards/Program Guidelines/Course Syllabi/College Student Handbook

MEDICAL LABORATORY TECHNOLOGY PROGRAM
ALLEGANY COLLEGE OF MARYLAND
ESSENTIAL REQUIREMENTS

INTRODUCTION

The Associate of Applied Science Degree in Medical Laboratory Technology requires the acquisition of general knowledge and basic skills in all areas of the laboratory profession.

POLICY

Faculty in the Medical Laboratory Technology Department have a responsibility for the welfare of the patients treated or otherwise affected by students enrolled in the Medical Laboratory Technology Program, as well as for the welfare of students in educational programs of the Department. In order to fulfill this responsibility, the Medical Laboratory Technology Department has established minimum essential requirements that must be met, with or without reasonable accommodation, in order to participate in the program and graduate. The Medical Laboratory Technology Department, as part of Allegany College of Maryland, is committed to the principle of equal opportunity. The Medical Laboratory Technology Department does not discriminate on the basis of age, ancestry/national origin, color, disability, gender identity/expression, marital status, race, religion, sex, or sexual orientation in matters affecting employment or in providing access to programs and activities.

Program

Admission and retention decisions for Medical Laboratory Technology are based not only on prior satisfactory academic achievement, but also on non-academic factors that serve to ensure that the candidate can complete the essential requirements of the academic program for graduation. Essential requirements, as distinguished from academic standards, refer to those cognitive, physical, and behavioral abilities that are necessary for satisfactory completion of all aspects of the curriculum and for the development of professional attributes required by the faculty of all students at graduation. The following essential requirements have been developed in compliance with the Americans with Disabilities Act and the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

The following essential functions or technical standards are intended to identify essential skills/knowledge/attitudes needed in the Medical Laboratory Technology curriculum at Allegany College of Maryland:

1.1. Communication Skills

- 1.1.1. Communicate effectively in written and spoken English
- 1.1.2. Comprehend and respond to both formal and colloquial English
  - 1.1.2.1. Person to person
  - 1.1.2.2. By telephone
  - 1.1.2.3. In writing
- 1.1.3. Appropriately assess nonverbal and verbal communication

1.2. Large and small motor skills

1.2.1. Move freely from one location to another in physical settings such as the clinical laboratory, patient care areas, corridors, and elevators

1.2.2. Possess sufficient eye-motor coordination to allow delicate manipulations of specimens, instruments, and tools

1.2.3. Grasp and release small objects (e.g., test tubes, pipette tips, microscope slides and coverslips); twist and turn dials/knobs (e.g., on microscopes, balances, centrifuges, spectrophotometers)

1.2.4. Manipulate other laboratory materials (e.g., reagents, manual and automated pipettes)

1.3. Other physical requirements

1.3.1. Visual acuity

1.3.1.1. Identify and distinguish objects macroscopically and microscopically

1.3.1.2. Read charts, graphs, and instrument scales/readout devices

1.3.2. Lift and move objects of at least 20 pounds

1.3.3. Possess a sense of touch and temperature discrimination

1.4. Professional and application skills

1.4.1. Follow written and verbal directions

1.4.2. Possess and apply mathematical skills

1.4.3. Work under time constraints

1.4.4. Prioritize requests and work concurrently on at least two different tasks

1.4.5. Maintain alertness and concentration during a normal work period

1.4.6. Apply knowledge, skills, and values learned from course work and life experiences to new situations

1.4.7. Work safely with potential chemical, and biologic hazards using standard precautions

1.5. Valuing Skills

1.5.1. Show respect for self and others

1.5.2. Project an image of professionalism including appearance, dress, and confidence

1.6. Stability

1.6.1. Possess the psychological health required for full utilization of abilities

1.6.2. Recognize emergency situations and take appropriate actions

COLLEGE WIDE POLICIES

The most recent college policies for each of the following can be found at https://www.allegany.edu/policy-mandates/

1. ADA/504

In compliance with federal ADA/504 requirements, Allegany College of Maryland supports the belief that all otherwise qualified citizens should have access to higher education and that individuals should not be excluded from this pursuit solely by reason of handicap. The College is committed to the inclusion of students with disabilities within all areas of college life. Therefore, support services are intended to maximize the independence and participation of disabled students. Further, the College complies with applicable state and federal laws and regulations prohibiting discrimination in the admission and treatment of students.

Any student who wishes to receive accommodations must register with the Academic Access & Disability Resources Office, providing documentation of the declared disability. Once documentation is received, the Director will establish eligibility for specific accommodations based on the student's documented functional limitations and the essential functions of each course. Any student who wishes to declare a disability should contact the Academic Access & Disability Resources office at 301-784-5234. For more information visit the Academic Access & Disability Resources webpage.

2. FERPA

In compliance with the Family Educational Rights and Privacy Act of 1974, Allegany College of Maryland will not disclose any information from the students' educational records without the written consent of students except to personnel within the institution, to accrediting agencies carrying out their accreditation function, to persons in compliance with a judicial order, and to persons in an emergency in order to protect the health or safety of students, other persons, or other lawful exception. At its discretion, the institution may provide directory information to include: student name, address, email address, photo, dates of attendance, credentials earned, honors awarded, and alumni status. Students' rights, the College's obligations, and disclosure standards are detailed in the FERPA policy. View ACM's FERPA Policy. https://www.allegany.edu/policy-mandates/

3. TITLE IX

Allegany College of Maryland prohibits sexual harassment and sex discrimination by or against all students, employees, and campus guests. If you have any questions or concerns or if you need to make a complaint, contact ACM's Title IX Coordinator, Dr. Renee Conner in CC-12, by email at rconner@allegany.edu , or by phone at (301) 784-5206. For detailed information about policy, procedures, and prevention education, see https://allegany.edu/title-ix/index.html

Prohibited behaviors include: sexual assault, stalking, relationship violence, quid quo pro sexual harassment, hostile environment sexual harassment, gender discrimination, and attempts to commit such acts.

4. CHILD ABUSE MANDATED REPORTS

Allegany College of Maryland complies with Maryland law which requires all educators to report suspected child abuse. By law, educators are mandated reporters which means that if an educator suspects child abuse has occurred or if a person discloses that child abuse has occurred, the educator is required to make a report to Child Protective Services. A report must be made if regardless of when, where, or by whom the abuse occurred. For detailed information about Mandated Reporters including how to make a report, see here.

The College provides free counseling services. Also, the College's Title IX policy may also apply, so be sure to see the Title IX information.

5. CLERY ACT

A report on Allegany College of Maryland's Campus Security Policies and Crime Statistics (34 CFR Part 668) and the Clery Act, 20 U.S.C. 1092 (a) and (b) in accordance with the FBI Uniform Crime Reporting (UCR)/National Incident-based Reporting System (NIBRS) is available in the Office of the Dean of Student & Legal Affairs (College Center, room CC-12) or through the Department of Campus Safety and Special Police webpage.

6. HEROIN & OPIOID POLICY

Allegany College of Maryland recognizes drug and alcohol abuse/addiction as a health risk; the dangers associated with heroin and opioids are gravely concerning to this institution. The college urges everyone to be informed and offers educational resources (including treatment information). All new, full time students are required by Maryland law to participate in heroin/opioid training. In an overdose emergency, call 911. If you have any questions or concerns or if you need help, contact the Department of Campus Safety and Special Police by email or by phone at 301-784-5252 or the Office of Student & Legal Affairs by email, or by phone at 301-784-5206. *Allegany College of Maryland prohibits the possession and use of drugs and alcohol on all college property and in all college-affiliated activities without the express permission of the College President.

7. DRUG AND ALCOHOL USE

Allegany College of Maryland & Willowbrook Woods is a dry, clean, and clear campus. Allegany College of Maryland supports the efforts of the State of Maryland and the United States to provide workplaces and learning centers free of illicit drug use and free of unlawful alcohol use. The College supports and complies with the Federal Drug-Free Workplace Act of 1988, the Federal Drug-Free Schools and Communities Act Amendments of 1989, and drug and alcohol abuse policies of the Maryland Higher Education Commission.

It is the College's intention to provide and maintain a work environment for employees and students that is drug-free, healthful, safe, and secure. When any person is on College property and/or participating in a College-sponsored or College-sanctioned activity, the person is expected to be free of any illegal drugs/alcohol and capable of fulfilling their responsibilities unimpaired by any substance. Although the College recognizes drug/alcohol dependency as an illness and a major health problem affecting society, it also recognizes drug use and activity as a potential health, safety, and security problem. Students and employees requiring assistance in dealing with drug or alcohol abuse or dependency are encouraged to seek treatment.

8. MEDICAL DISCLOSURE PROCEDURE

Students are responsible for their own health and should always consult a qualified health care provider if a health or medical condition interferes with the students' ability to attend class in excess of what is permitted by the course syllabus or program requirements or to participate in an essential class function. Medically necessary absences will be excused with documentation from a qualified health care provider; students are responsible for contacting the instructor about if/how to complete any missed work. An information sheet with additional details is located on the Student and Legal Affairs webpage under both the Title IX tab and the ADA/504 tab.

9. FAITH-BASED/RELIGIOUS ACADEMIC ACCOMMODATIONS

The College's two, companion First Amendment Policies detail how ACM honors constitutional protections for speech, expression, assembly, and religion. The second policy (effective 7/1/23) is ACM's First Amendment Religious Freedom Policy. It also codifies Maryland law which requires all faculty/programs to provide these academic accommodations for sincerely held faith-based/religious practices:

- excuse absences for a student to observe faith-based or religious holidays or participate in organized religious activities and
- allow an alternative if a student misses an examination or other academic requirement pursuant to an absence excused under this policy.
-

An information sheet with details is located on the Student and Legal Affairs webpage. Direct any questions or concerns/grievances to the Dean of Student and Legal Affairs by calling 301-784-5206.

10. Allied Health Programs: HIPAA and Confidentiality Guidelines

PURPOSE:

To establish a consistent understanding of both federal law (Health Insurance Portability and Accountability Act) and professional standards regarding confidentiality in the health care setting. These specific guidelines are part of the larger Professionalism Standards with which all Allied Health students must comply. These Guidelines provide requirements, facilitate faculty's teaching the principles across all the related curricula, prepare students for both clinical experiences and future employment, minimize confusion by students who change programs, and hold students accountable for compliance.

BACKGROUND:

A patient's right to confidentiality of their medical information is vital to their treatment. Patients have the expectation (and now the legal right) for their information to be protected and, consequently, to have greater trust in their healthcare providers. The improper sharing of information can jeopardize patient care. All health care providers, entities which maintain medical information, and entities which provide health care insurance or billing are bound by HIPAA. They must have procedures in place to provide privacy and security of patient information and must certify that patient information is protected. Both the Privacy Rule and the Security Rule are required by HIPAA; Privacy Rule covers all forms of health information, and the Security Rule covers health information that is stored electronically. Students in the Nursing and Allied Health Programs at ACM are obligated to maintain the confidentiality and privacy of protected health information encountered at any clinical internship and/or on-campus or off-campus practicum site.

DEFINITIONS:

Confidentiality: Confidentiality is a broad concept that is used both in common conversation (ie., keeping a secret) and in professions including but not limited to health care. For Allied Health programs, "confidentiality" is used within its professional (not common) meaning. Confidentiality applies in many ways to the Allied Health student experience and to the health care/medical setting. HIPAA is a legally recognized type of confidentiality. Another legal type of confidentiality is FERPA (Family Educational Rights & Privacy Act) which is not the subject of this document. (See https://www.allegany.edu/legal-information/index.html for details.)

HIPAA: Health Insurance Portability and Accountability Act is a federal law that created national standards to protect sensitive patient information from being disclosed without the patient's consent. HIPAA's Privacy Rule regulates the use and disclosure of individuals' health information which is any information that could be used to reasonably identify an individual.

PRINCIPLES:

What information is protected as confidential?

Allied Health students should treat any patient information they obtain, see, hear, or acquire by any means in the course of their clinical experience as confidential. Patient information includes everything protected under HIPAA, billing/payment/insurance records, patient/family conversations, employee information unless permission is granted (e.g., schedules, wages, performance reviews, etc.), student information unless permission is granted (e.g., schedules, grades, performance issues, etc.).

What information is protected under HIPAA?

Protected health information includes all individually identifiable health information which relates to the patient's past, present, or future physical or mental health as well as the provision of health care to these individuals. It includes all common identifiers such as patient name, date of birth, social security number, address, phone number, etc.. It also includes any unique information that could reasonably be used to identify an individual such as photos, initials, location of the patient in the facility, unique treatment being performed,

job title, community role, relationships, and more. This information may NOT be disclosed to any person who is not authorized by the health care facility to have it. (See examples.)

Examples:

- Patients encountered in the internship/practicum site must not be described in any identifiable way for purposes other than direct patient care.
- Public discussion of patient who is identified by name or whose identity can be established from other information constitutes a violation of patient confidentiality and HIPAA.
- Students may *de-identify* the patient by using generalities so that the patient cannot be identified in classroom discussion of internship/practicum experiences for educational purposes.
- Students may only access information about the patients assigned to their care and may not access information about other patients, students, or themselves while participating in their internship/practicum.
- Students must ensure that files, records, databases, etc. to which they have authorized access are secured when not in use.
- Students should be conscious at all times of who is nearby to hear any conversations and refrain from discussing confidential information if unauthorized persons are present.
- During the internship/practicum students may not videotape, photograph or make audio recordings of themselves, fellow students or patients assigned to their care unless such activities are a necessary part of patient care as directed by a faculty member or site supervisor.
- Students may not post references about clinical sites or clinical experiences to social media.

ACCOUNTABILITY:

What is a breach of HIPAA?

A breach is defined by the U.S. Department of Health and Human Services as the "impermissible use or disclosure under the Privacy Rule that compromises the security or privacy of protected health information." (https://hhs.gov/hipaa/for-professionals/breach-notification/index.html).

What happens if confidentiality and/or HIPAA is violated?

Possible or suspected violations must be reported to the clinic site and program director/clinical coordinator immediately, and steps must be taken to mitigate the breach if possible. A determination must be made by the site and/or the program director/clinical coordinator that a violation actually occurred. If no violation occurred, then the matter is concluded or addressed by another process. However, if a violation occurred…

The consequences are serious.

- For a health care provider or covered entity, breaches must be disclosed to the patient and can be reported to the United States Health and Human Services Office for Civil Rights which enforces HIPAA. Patients may file formal complaints with OCR. This office conducts investigations. And violations result in civil monetary or criminal penalties.

- For health care workers, breaches result in adverse action by the employer including discipline which could mean suspension or termination. Many health care providers have a zero-tolerance rule which means any breach, no matter how small, results in the employee being fired. Additionally, the breach can be reported to the health care worker's licensing board which puts the worker's ability to work in health care – ever again – at risk.
- For ACM students, breaches may result in adverse action by the clinical site.
- For ACM students, breaches will result in adverse action by the College. Upon learning of any alleged HIPAA violation by a student, the Program Director will gather all the relevant information and forward everything to the Professional Standards Accountability Committee for a full review. The Committee will first determine if a HIPAA breach occurred. If so, the Committee will then determine the appropriate consequence(s) to the student.

Purpose:
To establish a consistent standard of professionalism for all Allied Health programs and students. This consistency facilitates faculty's teaching professionalism across all the related curricula, supports the expectations within the professions themselves, prepares students for both clinical experiences and future employment, minimizes confusion by students who change programs, holds students accountable for meeting the standard, and creates a systemic process for both accountability and review/appeal.

This document does not address course requirements, grades, or other purely instructional matters. See course syllabi and/or program manuals for academic information. Where student actions are addressed in course syllabi and in professionalism standards (eg., attendance), the instructor shall choose which procedure is to be applied consistently within the course or program – in consultation with the Program Director as needed.

Professionalism Statement and Standards:
As a student in an Allied Health Program at Allegany College of Maryland, you are required to conduct yourself in a professional manner in the classroom, in clinical/practicum settings, and in any setting or activity that is related to your program or course. Professionalism is broadly understood as how a person performs the duties of his/her job with respect to ethics, compliance with policies/procedures, compliance with workplace expectations, treatment of patients, and treatment of colleagues. For Allied Health students at Allegany College of Maryland, professionalism standards include but are not limited to the following expectations:

Students shall ~

1. Follow the profession's rules of ethics.
2. Be honest and trustworthy.
3. Never violate patient confidentiality or HIPAA.
4. Never provide care that is inconsistent with best practice or training.
5. Maintain appropriate boundaries.
6. Show compassion/sensitivity.
7. Practice effective written, verbal, and non-verbal communication skills by being
   (a) accurate
   (b) timely

(c) courteous in content
(d) courteous in tone/delivery

8. Report to class and to work
   (a) on time,
   (b) prepared/ready for the day's tasks,
   (c) clean, and
   (d) dressed in attire that is suitable for the day's tasks.
9. Follow directions and apply constructive feedback from instructors and supervisors.
10. Follow safety rules and shall not act in any way that endangers the safety of patients, clients, residents, other recipients of services, classmates, colleagues, or supervisors.
11. Not report to class, course or program/program-affiliated activities, or clinical sites impaired by a condition which renders the student unable to provide safe, competent care or safely participate in the educational experience.
12. Not report to class, lab, clinical site, course or program/program-affiliated activities impaired by the use of alcohol and/or other chemical agents that cause drowsiness, affect cognitive ability or judgement, and/or cause changes in behavior that negatively affect the student's safety, participation, or performance.
13. Follow the College policies including the Sexual Misconduct & Sex Discrimination (Title IX) Policy and the Code of Student Conduct*. Students are expected to be familiar with both policies.
14. Follow all local, state, and federal laws*.
    *Acts which violate these standards can prompt appropriate disciplinary action, criminal prosecution, and/or academic consequences [as described below].
15. Not engage in other acts/behaviors which are inconsistent with professional standards in the health care field. If the act/behavior could jeopardize professional employment, it could reasonably be considered a violation of these professionalism standards.

Students shall seek guidance if/when they do not understand what is expected or if they are unsure whether an act violates standards of professionalism. Students are encouraged to meet with instructors and supervisors privately if the student questions or disagrees with guidance, directions, or feedback.

Consequences for Non-professional conduct:
A violation(s) of professional standards will be addressed promptly by the instructor, clinical supervisor, or program director who shall make recommendations in accordance with the program guide/manual pursuant to the following procedures:

1) Immediate action will be taken on site to correct any unsafe or dangerous situation.
2) The situation/incident will be documented by any person with knowledge.
3) Documentation will be forwarded to the Program Director.
4) The Program Director will review the documentation and meet with the student to determine the appropriate next step(s). Other persons may also be contacted and other records may also be reviewed for information.
   (a) No action required / resolved by personnel on site
   (b) Written reprimand
   (c) Specific corrective action that is appropriate for the specific situation. Examples include remedial work, apology, or other task/assignment designed to assist the student's learning.

(d) Probation: student is on notice that any subsequent incidents of non-professional conduct place that student at risk of suspension from the program or dismissal from the program. Probation may be accompanied by specific corrective action designed to assist the student's learning.
(e) Recommendation: Suspended from program
(f) Recommendation: Dismissed from program

5) The Program Director may consult program faculty, other Program Directors, and/or other College personnel before making a final decision/recommendation.
6) If the Program Director determines that no action, written reprimand, specific corrective action, or probation is appropriate for the situation, the Program Director may implement that decision immediately via written notification to the student. When possible, the Program Director should meet with the student. The Program Director's decision is final.
7) If the Program Director recommends suspension or dismissal from the program, s/he will notify the student of this recommendation and inform the student that the Allied Health Directors' Accountability Committee will decide the appropriate action; the Program Director will provide the student with information about the next steps in this procedure. The Program Director will submit all the documentation along with his/her recommendation and reasoning to the Dean of Student & Legal Affairs (or designee)
8) The student shall have an opportunity provide his/her account of the alleged violation of professionalism standards by submitting a written statement for consideration by the Allied Health Directors' Accountability Committee within three business days. The statement is provided to the Dean of Student & Legal Affairs (or designee), ex officio member of the A.
9) The Allied Health Directors' Accountability Committee will review the documentation in a timely manner and meet with the Program Director for any questions or additional information as needed. The Committee has discretion to solicit information from other program faculty/staff as needed. The Committee has discretion to solicit information from the student and has discretion to meet with the student. The Committee may accept, modify, or deny the Program Director's recommendation. The Committee sends its written determination to the Program Director.
10) The Program Director implements the Committee's decision and notifies the student in writing. When possible, the Program Director should meet with the student to review the Committee's decision and next steps.
11) The student may accept the decision or appeal to Dean of Career Programs.

Appeal Process:
If a student chooses to appeal the decision by the Allied Health Directors' Accountability Committee, s/he shall notify the Dean of Student & Legal Affairs in writing. The student shall provide a written statement detailing the reason(s) why the student disagrees with the Committee's decision and what the student's alternative solution is. The Dean of Student & Legal Affairs forwards all the documentation to the Dean of Career Programs who reviews all the documents and meets with the student. The Dean of Career Programs may solicit additional information from other persons/records. The Dean of Career Programs determines whether to accept, modify, or deny the Committee's decision. The Dean of Career Programs notifies the student in writing.

If the Dean of Career Programs' decision is adverse to the student, the student may appeal the Dean's decision to the Senior Vice President of Instruction & Student Affairs following the same process. The Vice President may solicit additional information from other

persons/records. The Vice President determines whether to accept, modify, or deny the Committee's decision. The Vice President notifies the student in writing.

If the Vice President's decision is adverse to the student, the student may appeal the Vice President's decision to the President following the same process. The President may solicit additional information from other persons/records. The President determines whether to accept, modify, or deny the Committee's decision. The President notifies the student in writing.

*All steps in these procedures should be done in a reasonably timely manner – taking into consideration critical academic calendar dates, course/program deadlines, clinical schedules, impact upon the student, impact upon classmates, impact upon clinical personnel, impact upon faculty/staff, and other relevant factors. If the matter cannot be resolved in a timely manner, relevant persons (including the student) should be informed in writing of the reason(s) for any delay.

*All information shared during these processes shall be confidential in accordance with relevant laws and College policy.

Allied Health Directors' Accountability Committee:
Allied Health Directors' Accountability Committee is a sub-committee of the Allied Health Directors' Steering Committee. Membership in the Allied Health Directors' Accountability Committee is comprised of:

5 Allied Health Program Directors,
1 Allied Health Program Director who serves as an alternate when needed, and
the Dean of Student & Legal Affairs (or designee).

Allied Health Directors will serve on the Allied Health Directors' Accountability Committee on a rotating schedule to be determined by the Steering Committee.

The Dean of Student & Legal Affairs (or designee) is *ex officio*, manages the paperwork, and provides legal guidance to the process. As *ex officio*, the Dean has no vote in the Committee's decision. The Dean has discretion to consult the College's General Counsel as needed.

The Allied Health Program Director who has referred a student to the Committee may not serve in the process/meeting in which that student's matter is decided; the Program Director shall recuse himself/herself in such a situation. Any other Program Director who has a conflict of interest will likewise recuse himself/herself. The alternate will serve in such situations.

DISMISSAL FROM THE MLT PROGRAM

The MLT Program reserves the right to dismiss any student:

- who violates the college's HIPPA guidelines.
- whose GPA falls below 2.0 or doesn't complete the required general education courses.
- who fails to observe the regulations of the College or its Clinical affiliates.

- whose skills, attitude or behavior are viewed as inconsistent with professional standards.
- who does not meet the scholastic requirements of the MLT program. A student can repeat only two MLT courses and only repeat an individual MLT course once.

MEDICAL LABORATORY TECHNOLOGY READMISSION STATEMENT

A student in the curriculum may withdraw due to poor academic performance, illness, or personal reasons. Students who withdraw are not guaranteed readmission. Readmission may be delayed due to the availability of clinical facilities and/or instructors. A student who wishes to be readmitted to the program must complete an Application for Readmission form. This form can be obtained from the Director of the Medical Laboratory Technology Program at Allegany College of Maryland.

The student's application for readmission will be reviewed according to the following guidelines:

Readmission priority will only be given to students who have withdrawn for medical reasons or are in good academic standing with a grade point average of 2.0 or above. A physician's written statement should document the need to withdraw. (Date of return must be within one year from withdrawal date.)

Persons withdrawing due to poor academic performance or personal reasons will be readmitted according to the Medical Laboratory Technology admissions policy regarding current students (designated other applicants). They will be ranked competitively according to GPA with all students eligible for admission into the Medical Laboratory Technology curriculum.

Any student withdrawing from the Medical Laboratory Technology Program must meet the minimum requirements for admission into the Medical Laboratory Technology Program before readmission will be considered.

The student will be required to write in a letter which includes an explanation of how the student plans to be successful in their program if readmitted. The student must also meet with the program director.

APPLICATION FOR READMISSION TO THE MEDICAL LABORATORY TECHNOLOGY CURRICULUM

Date: _____

I. **To be completed by student:**

I wish to apply for readmission to the Medical Laboratory Technology Program and to re-enter the Program_____Semester, _____.

Name_____Phone_____

Address_____

_____
Signature

II. **To be completed by Advisor:**

The above named student is reapplying for admission to the Medical Laboratory Technology Program. Please list the following information:

Semester G.P.A._____

Cumulative G.P.A._____

III. **Review of Letter and Interview:**

Notes/Summary: _____

_____

_____

_____

IV. **To be completed by Program Director:**

Results of Readmission Review:

Approved_____Date_____

Not Approved_____Date_____

Reasons:_____

_____

Notified by:_____Date_____

INCLEMENT WEATHER

A. Students may sign up for the E-Safe text messaging notification system which will notify the student when there is an emergency, crisis or disaster, or a weather emergency closing or delay. E-Safe is found on the college website www.allegany.edu.

B. Should the college be closed, lecture/lab classes will not be held. Should classes be delayed the student will start classes at the time designated in the announcement. MLT students are expected to report when the college opens even if that opening time is in the middle of a scheduled class session.

C. For clinical rotation days scheduled on campus, students will also follow the college's closure or delayed opening schedule.

D. For clinical time at affiliate sites, students can use their judgement. Safety is a priority and should be the primary consideration. Students are responsible for notifying the clinical staff if they are delayed or cannot attend due to inclement weather. A notification of absence must be completed.

As a student in this program, you may be required to travel under adverse weather/road conditions. Allegany College of Maryland and this program value your safety and your educational needs.

We encourage you to register for the College's e-Safe alert system and monitor weather/road conditions. We encourage you to attend all clinical/internship hours when weather/road conditions are not an issue so you are on track to complete the course requirements; consistent and strong attendance on days when travel is not questionable will be important for any days you may need to miss pursuant to the next paragraph.

If ACM is closed or delayed (including weather related events), you may report to your clinical site in accordance with the site and this program's requirements or guidelines unless it is unsafe for you to do so. In that case, you must contact the site supervisor about your attendance and hours. If there is disagreement between you and the site supervisor about your attendance, you must contact your ACM clinical supervisor for directions.

ACM MLT PROGRAM TEACH OUT STATEMENT

Program Closure-Teachout Plan

The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) requires the MLT Program to have a "teach-out" plan if the program were to close or in the event of a catastrophic event.

If there is a catastrophic event and the MLT coursework could not be delivered at the Cumberland Campus, the first contingency plan would assess the College infrastructure and if possible, continue courses using technology delivered lectures/activities. If the

College's other campus buildings or locations in Pennsylvania remain intact, lab locations could be sought for the laboratory portion of didactic and clinical courses. If Allegany College of Maryland's infrastructure is so depleted that offering the courses are impossible, then the Allegany College of Maryland MLT program would reach out to other Maryland MLT Programs for assistance in providing the opportunity for current students to complete the program.

If one or more clinical affiliates are unable to accommodate students due to catastrophic event, the Program officials will work with the remaining affiliates to try to place students. There are also several hospitals and small clinic labs in the tristate area that could be explored as affiliates for the Blood Bank, Hematology and Clinical Chemistry rotations. If rotations must be paused, then assessments will be made, and simulations and activities will be used to the full extent to try to reach competency in all rotation areas.

Intentional closure of the Allegany College of Maryland's Medical Laboratory Technology program will be communicated to all students immediately. A plan will be submitted to NAACLS within 30 days of closure notification. That plan will include notification and support guarantees for both prospective and current students.

<u>For Prospective Students:</u>

1. Students will be informed that the program will not take a new cohort due to program closure.
2. Students will be advised regarding alternative majors/areas of study.
3. Students will be advised of opportunities to apply for other regional MLT or MLS programs.
4. Program closure information will be posted on the college website.
5. Students will receive assistance in applying for other laboratory science programs or transferring majors.

<u>For Current Students:</u>

1. Students will be informed of program closure.
2. Students will be allowed to complete MLT courses.
3. MLT faculty will work with clinical sites to facilitate completion of the clinical practicum.
4. Current students will be provided with the opportunity to finish the MLT degree.

In the event of a rapid program closure, the Program Director will complete a recommended completion plan for each student enrolled in the clinical phase of the Program and present a comprehensive plan for this completion to the Senior Vice-President of Instructional Affairs and the College President. This plan must be completed within 30 days (about 4 and a half weeks) of closure notification and submitted to NAACLS.

In the event of immediate program closure, the Allegany College of Maryland MLT Program Director will seek opportunities for current students in tristate area MLT programs.

SECTION III

MLT CLINICAL PRACTICUM REQUIREMENTS

MLT 210 CLINICAL PRACTICUM COURSE SYLLABUS/DESCRIPTION

DAY AND TIME OF CLINICAL ROTATIONS:

MLT 210 is offered Monday – Thursday in the spring semester.

Clinical days held at the ACM campus laboratory (AH 251) begin at 8:30 a.m. each Monday.

The laboratory time schedule varies with each laboratory rotation. Each student will follow their **daily schedule** and supervisor recommendations for the appropriate time to report. The following are general guidelines:

Students assigned to these respective clinical affiliates/rotation areas will be governed by these times. The student must be at the assigned hospital at the time designated on the daily rotation schedule or at a time mutually agreed upon with clinical staff. If a student is unable to be at the clinical facility at the designated time, the student is to call and email the appropriate personnel.

LOCATION OF CLINICAL ROTATIONS

The clinical practicum course is conducted using the ACM MLT classroom/laboratory and the clinical laboratory sites of our contracted clinical affiliates.

The student will report to the appropriately assigned location and be prepared for participation in the clinical/skills laboratory experience.

When off campus, students are governed by rules, regulations, and protocols of the off-campus site. In addition, students are subject to random drug testing and/or additional background checks per the site's request, which would be at the expense of the student. Pennsylvania may also require additional items to be completed.

During clinic hours, student's cell phones are to be kept in their locker or in their automobile. In the event the student should have a family emergency they are monitoring, they should notify the instructor and obtain a phone number to use for **emergency notification only**.

Family members and friends, etc., who accompany a student to school are not permitted in classrooms, clinics, or laboratories unless they are being seen as a client/patient in the clinic

Children are not permitted in classrooms or clinicals; they should never be left unattended in any area. It is YOUR responsibility to provide arrangements for the care of your children while you attend class, and you should have a backup plan for your childcare in case your caregiver becomes ill or has an emergency.

REQUIRED MATERIALS

Trajecsys Clinical Education Tracking System
Journal for note taking in clinical rotation
Pen used exclusively for clinical rotation
Scrubs (color and style chosen by the class members)
Clean comfortable closed-toe shoes
Health physical assessment
Vaccination/titer documentation
2-Step PPD
Background check appropriate for the clinical affiliate system ($50-$100)
Personal Health Insurance

RECOMMENDED MATERIALS

Board of Certification Study Guide, 7th edition, MLS-MLT, ASCP Editorial Board, 2022. ISBN 978-0-89189-6845

Quick Review Cards, Valarie Polansky, FA Davis, ISBN 0803604599

Clinical Laboratory Science Review: A Bottom Line Approach, 5th edition, LSUHSC Foundation, ISBN 0967043425

I. PURPOSE

A. COURSE SUMMARY/CATALOG DESCRIPTION

MLT 210 12 credit hours. Course is offered Monday-Thursday in the spring semester only. The course is up to 448 hours of clinic/practicum. Fee: $300 and a $25.00 NMWC fee. Study and supervised practice in affiliated clinical pathology laboratories. Pass/Fail grading.

This course consists of supervised health-related work experience that enables the students to apply specialized occupational theory, skills and concepts. Students rotate through the clinical affiliate site and complete 14-day rotations in:

- Clinical Chemistry/Urinalysis
- Hematology/Coagulation
- Blood Bank
- Microbiology/Serology.

MLT 210 includes all four rotations

The student receives a semester schedule which details the clinical affiliate site and rotation sequence for each student. The student also receives a daily rotation schedule for each rotation. This daily rotation schedule contains the report time for each day and the days' tentative activities. The daily schedule serves as a guide to the student's experience.

B. COURSE GOALS

Successful completion of the clinical practice experience requires that a student be able to do the following:

- Demonstrate proficiency in the specific clinical performance and knowledge objectives outlined for each rotation by passing the practical and written assessments given at the conclusion of each rotation.
- Maintain a safe laboratory environment by adhering to all applicable safety regulations presented throughout the MLT program.
- Demonstrate professional dependability by adhering to the dress code, through an excellent record of attendance, by being punctual, by obeying time schedules and by promptly notifying the MLT faculty and clinical faculty of any absences or tardiness.
- Demonstrate professional initiative by being prepared for each rotation day through reviewing material, asking questions and researching to deepen understanding, asking for additional work, and offering to assist clinical staff with tasks such as help restock supplies.
- Show professional reliability by completing all work and tasks given thoroughly and competently.
- Demonstrate good personal relationship skills through effective and appropriate written and oral communication with college, clinical laboratory and healthcare staff.
- Demonstrate progression in laboratory skills by effective organization, coordination of multiple tasks and insightful evaluation of results obtained.
- Utilize constructive criticism to correct deficiencies and improve performance.

C. SPECIFIC COURSE OBJECTIVES

This handbook contains the specific rotation objectives for each area. These objectives will help you take responsibility for your clinical learning and your review of the specific rotation's background material previously presented in the campus lecture/laboratory course. Use these to guide your study for the end of rotation examination.

D. CLINICAL PRACTICUM GENERAL EDUCATION LEARNING OUTCOMES:

Each General Education category includes a broad description and its specific numbered Learning Outcomes**.**

ACM GELO	Learning Outcome	Assessment Method	Program Benchmark
Critical Analysis and Reasoning: *Analyze, evaluate, and synthesize ideas within and across disciplines to address complex questions and problems.*	CAR-4 Identify and weigh alternative outcomes to a problem or case. CAR-5 Summarize, generalize, and draw conclusions.	MLT 210 Clinical Hands-on practical examinations for each of the 4 major rotation areas. These examinations are real-world simulations in performing analysis using discipline specific instrumentation and techniques, evaluation of data for its validity and proper documentation and reporting of results.	100% All students will achieve ≥ 70% performance on each of 4 practical, hands-on examinations given in each rotation area. Benchmark justification A score of 70% on practical examinations is the minimal competency level which acceptable.
Personal and Civic Responsibility: *Explore and develop understanding of oneself and others, the community, other cultures, and issues of local, national, and global significance*.	PCR-3 (Civic Awareness and Community Involvement): Participate in a community project and then complete either a spoken or written reflection that identifies the civic issues encountered and personal insights gained from this community experience.	MLT 210 Includes collaborative work among the allied health community through the NMWC and the interprofessional education (IPE) activities. Pre and post activity assessments are utilized to assess the ability of the activity to engage students toward a greater understanding of the working together in healthcare across disciplines.	
Scientific and Quantitative Reasoning: *Apply fundamental scientific and/or mathematical concepts to investigate, evaluate, and/or to solve problems*	SQR-1 Identify problems and formulate questions and hypotheses. SQR-2 Collect and summarize data. SQR-3 Draw appropriate conclusions based on data analysis. SQR-4 Use mathematical skills to solve application and/or real-world problems.	MLT 210 Clinical Hands-on practical examinations for each of the 4 major rotation areas. These examinations are real-world simulations in performing analysis using discipline specific instrumentation and techniques, evaluation of data for its validity and proper documentation and reporting of results.	All students will achieve ≥ 70% performance on each of 4 practical, hands-on examinations given in each rotation area.

Technological Competency: *Use the appropriate discipline-specific technologies to complete tasks effectively.*	TC-1 Demonstrate effective use of a specific technology to achieve a desired task outcome.	MLT 210 requires the use of Medialab and Medtraining online software in order to complete the online subject simulations and the required weekly examination simulator sessions. Additionally, each practical examination given in each of the 4 rotations requires the use of discipline-specific instrumentation and technology.	100% of students will use the technology to effectively navigate the required assignments. All students will achieve ≥ 70% performance on each of 4 practical, hands-on examinations given in each rotation area.
Written and Oral Communication: *Use writing and speaking skills to communicate effectively.*	WOC-1 Develop and articulate ideas coherently and cogently for a specific audience, purpose, and situation. WOC-2 Use standard English and conventions of usage appropriate to a discipline to produce substantially error-free and precise communications.	MLT 210 uses an evaluation survey instrument that is completed by clinical site supervisors and includes 2 items used in SLA assessment of MLT students. The supervisors complete the survey with their opinions evaluations are completed in the Trajecsys clinical management system on each student and given a rating of 1-5. Technical Evaluation Item: Accurately record results; write legible reports Professional Attitude Item: Communicate effectively using professional interprofessional skills resulting in successful interactions with colleagues and patients	All students will achieve a minimum of 4 out of 5 (80%) rating on the technical performance or professional attitude performance evaluation item. A 4/5 rating on the technical rating indicates a positive perception by clinical staff.

II. CLINICAL PRACTICUM COURSE RULES, PROCEDUES and REQUIREMENTS

In addition to the college policies in the ACM Student Handbook regarding academic standards and student conduct, the clinical practicum has additional rules of compliance. These rules are outlined in this handbook. Students are expected to follow these procedures. A failure to abide by the policies can result in termination from a clinical site or termination from the MLT program.

If the student fails to achieve a 70% or C grade for any MLT didactic course or a P or passing grade for the MLT 210 Clinical Practicum Course may result in dismissal from the Medical Laboratory Technology program. Refer to the MLT Academic Policies for further information.

A. BASIC CLINICAL PRACTICUM REQUIREMENTS

1. Complete health screenings including all necessary titers and immunizations. A 2-step PPD is also required.
2. Complete background screenings as required by the clinical practicum site.
3. Following the dress code and safety practices established for clinical rotation.
4. Regular and punctual attendance is required.
5. Complete all given assignments and tasks.
6. Follow established procedures when performing testing.
7. Successfully pass the written examinations and practical examinations for each rotation.
8. Demonstrate appropriate professional behavior as outlined in this handbook.
9. Purchase and use as required the clinical rotation tracking system for attendance and procedural competency documentation.
10. Complete the required professional development exercise prior to completion of MLT 210.
11. Cell phones are not to be used at the clinical rotation site except on breaks.
12. Demonstrate respect for the clinical training staff.
13. Provide evidence of personal health insurance coverage.

Failure to abide by these rules and regulations may jeopardize the ability of a student to complete the MLT program.

B. ATTENDANCE REQUIREMENTS

Regular and punctual attendance is **required**. The attendance policy for clinical rotations is much stricter than it is for regular college classes. Clinical schedules are not arranged around work schedules. The clinical time has to be made a top priority.

Whether it is an on-campus clinical day or a clinical rotation site day, there is no tolerance of absence or tardiness.

Each student is required to attend clinical/skills laboratories. Because of the clinical experience, responsibilities to patient and the student's loss of educational opportunities, student absences are unacceptable

The student must notify the clinical faculty and the MLT faculty of any absence or tardiness. Phone numbers and email addresses are published in this document as well as on Brightspace and Trajecsys. **The student should notify all parties as soon as possible – ideally before the student is scheduled to arrive and absolutely within 1 hour of the scheduled start time. Again, the student notifies both the clinical site and ACM faculty.**

The student should call the respective supervisor first. If unable to reach the supervisor, the student should call the clinical liaison or the general lab number to provide notice of absence from clinical rotation. The student must also email the clinical supervisor and the MLT department faculty with notification of absence. The student must also complete and email the absence form to both the clinical supervisor and MLT department faculty.

Absences from or tardiness to clinical rotations for reasons other than health or emergencies will not be tolerated. Students having excessive absences, tardiness or failure to notify of such absence or tardiness will be subjected to actions of the Behavioral Intervention Policy which may result in dismissal from the MLT Program.

All absences, regardless of excuse, will be made up by the student. The student must coordinate the make-up time with ACM and clinical faculty. **Make-up tests, papers, clinical hours and labs are not guaranteed.**

The notification of absence form, available on the Trajecsys clinical tracking system, must be completed by the student under consultation with the clinical instructor and ACM MLT Faculty/Program Director. The form is included as an information item in this handbook but must be completed online through Trajecsys.

C. PLAGIARISM AND CHEATING

The "Policy Regarding Student Cheating" as stated in the Allegany College Student Handbook (2024) will be followed in these courses.

Scholastic Dishonesty

A student attending ACM assumes responsibility for conduct compatible with the mission of the college as an education institution. Students have the responsibility to submit coursework that is the result of their own thought, research, or self-expression. Students must follow all instructions given by faculty or designated college representative when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, and falsifying documents. Penalties for scholastic dishonesty will depend upon the nature of the violation and may range from lowering a grade on one assignment to failing the course and/or expulsion from the college.

Academic dishonesty such as, but not limited to, the following may result in IMMEDIATE dismissal from the MLT program and withdrawal from all MLT courses. If the withdrawal date has passed the student will be given a "D" for each course.

1. Submitting homework assignments copied from others. Both the student and the student that the material was borrowed from will receive a "0" for the assignment and may be subject to the Academic Dishonesty Process and dismissal from the program.
2. Falsifying laboratory results.
3. Printing out examinations and copying to give to other students
4. Cheating on examination.

D. ACM FACULTY COMMUNICATION

The student.allegany.edu email will be the official email that MLT faculty will use to communicate with students as well as through Brightspace and Trajecsys announcements. Please check your college email and platform accounts often.

Personal cell phone communication between students and faculty members is utilized, but students should respect reasonable boundaries including late night texts.

Emails/texts to the instructors will be answered within 24 hours Monday through Friday when classes are in session and within 48 hours on weekends and breaks.

Trajecsys

Email communication to clinic personnel and ACM instructors can be sent through Trajecsys.

E. CLINICAL FACULTY COMMUNICATION

Email

The student.allegany.edu will be the official email that students will use to contact clinical personnel. Any email sent to clinic personnel should be copied to ACM faculty member, the MLT Program Director, the clinical site liaison and the appropriate clinical rotation supervisor so that all parties are informed in case someone is unavailable to address the message. All emails should be limited to professional conversations relevant to the clinical rotation and should be grammatically well written.

Phone

The phone numbers for clinical sites are also posted in this handbook and also on Trajecsys and will be used to notify the clinical site of the student's tardiness or absence from clinical rotation.

Trajecsys

Email communication to clinic personnel and ACM instructors can be sent through Trajecsys.

Your communication with clinical site personnel should be through Trajecsys, work phone or their work email. No personal email or phone numbers should be used for communication.

F. CELL PHONE USAGE

Usage of cell phones, texting, and other electronic devices in campus classrooms, and laboratories is at the discretion of each course instructor.

Please refer to the Student Handbook Policy on Use of Cellular Telephones. If extenuating circumstances exist that warrant the use of a cell phone, the instructor must be made aware of that circumstance prior to the start of class. The instructor reserves the right to approve or deny the student's request. In addition, each instructor reserves the right to enforce this policy as they deem appropriate, which may include dismissal from the class. Any reasonable enforcement of this policy will be upheld by the Program Director. Students who disagree with the decision may opt to appeal against the decision by using the proper channels. Check with the Program Director for instructions on how to initiate the process.

Cell phone use in the clinical setting is NOT permitted. After clocking in to Trajecsys, student's cell phones during clinic hours are to be kept in their locker or in their automobile. In the event the student should have a family emergency they are monitoring, they should notify the instructor and obtain a phone number to use for **emergency notification only**.

Violations of the cell phone guideline may/will result in a behavioral intervention form being filled by clinical or college instructors.

G. PROFESSIONAL EXPECTATIONS

1.Professional Conduct

As a student, you are expected to maintain a professional and ethical bearing throughout your training (classroom, skills lab, clinical) and any representation you perform that is associated with the College.

Professional conduct must be of the highest order to ensure confidence of the patient in the student, the school, and the profession. Courtesy and consideration of the patient must always prevail. Grades will be influenced by the student's attitude and finesse in handling patients and in their relationship with other students and members of the staff. Students will be evaluated on their affective performance, as well as their cognitive and psychomotor domains.

The student will always display courteous behavior towards the instructor/client/patient, regardless of race, ethnicity, national origin, religion, creed, color, disability, age, veteran status, familial status, sex/gender identity or sexual orientation.

As future auxiliary members of the healthcare profession, students' conduct, attitude, and appearance are expected to be consistent with the highest level of professional life. Strict adherence to your respective program's Code of Ethics/Professionalism Standards will be enforced.

2.Confidentiality, Client Records, Privacy:

- You are always expected to identify yourself to the client/patient. You must always have a college photo ID or Clinical Site ID if appropriate while at the practicum site and when working with clients/patients.
- You will not discuss clients outside of an appropriate learning situation such as a classroom or conference room. **Client names and records must be kept confidential.** If you are found guilty of breach of confidentiality, you will be subject to disciplinary action and/or dismissal. HIPPA (Health Insurance Portability and Accountability Act) guidelines are to be always adhered to.
- Under no circumstances are you allowed to remove a client record or information from the facility. You may review the record with permission of the clinical instructor, but no part of it shall be permitted outside of the facility.
- When writing papers/reports about clients, the identity of the client should be protected by using an alias or as Mr. or Ms. "XYZ".
- If you violate these policies/guidelines, you can be dismissed from the clinical site and or program.
- Conversations between classmates should be of a professional nature. Remember, you are in an "open area" and the volume of your voice will carry throughout a clinical area.
- The utmost respect is to be given in protecting the client's right to privacy. Always knock on the door and announce yourself, arrange clothing and covers/drapes to maintain the client's modesty, and protect your client from injury.

3. Social Media

- Allegany College of Maryland does have a Student Communication Policy to which the Allied Health Program will adhere. The Student Communications Policy can be found in the Student Handbook 2023-2024.
- As students, please remember to exercise caution and sound judgment when utilizing social networking as the information disseminated can be far reaching and potentially detrimental on many levels.
- Social Media documentation of clinical experiences is not allowed and **will** result in immediate dismissal from the program.

4. Clinical Expectations:

The Allied Health student is expected to abide by the Professionalism Standards of Allied Health Programs.

A few examples of these are:

a. Adhere to acceptable ethical and legal practices.
b. Be prepared in theory and practice to complete the clinical focus for the day within the prescribed time limit.
c. Be fit for duty and in an appropriate uniform.
d. Be responsible for the care of the assigned clients and related tasks.

Students may be removed from the clinical area at the discretion of the instructor. Reasons for removal include, but are not limited to:

a. Inadequate preparation for the clinical assignment.
b. Inability to apply knowledge and skills from previously completed courses.
c. Inappropriate verbal or non-verbal communication with patients, staff, and or instructors.
d. Not displaying appropriate 'fit for duty' requirements.

Violations of any of the clinical/skills laboratories guidelines may/will result in point reductions in the professional conduct evaluation as well as jeopardize the student's ability to complete the program.

5. Smoking/Juuling: This is not permitted on the ACM campus or on the grounds of clinical affiliate sites.

6. Student Appeal Process:

You always have the right to be heard and to appeal decisions made by the program director and/or faculty.

- If a student has a complaint against a faculty member, he or she may request a meeting with that faculty member. If the meeting does not bring about a resolution, the student may make a formal complaint, in writing, to the program director, outlining the problem and the steps already taken to resolve the problem.
- The program director will review the situation and will meet with both the student and the faculty member in order to come to a resolution.
- If the student still does not feel that the situation has been satisfactorily resolved, he or she should then submit a complaint, in writing, to the office of the Dean of Enrollment, Academic, and Student Services. An appointment will be scheduled with the Dean or designee for further action.
- In the case of a complaint against the program or the program director, the student may request a meeting with the program director to discuss

the issue. If this does not resolve the situation to the student's satisfaction, he or she may follow the procedure outlined in #3 above.

For additional guidelines, please refer to: "Allegany College of Maryland Student Handbook: Grievance Policies and Procedures for Students."

III. COURSE REQUIREMENTS /ASSIGNMENTS

Instructional Methodology - the instructional methods used in this course include the following**:**

a. Review old course lecture materials such as worksheets and PowerPoint Presentations
b. Review content specific Medialab.com and Medtraining.org models
c. Brightspace On-line Learning Management System (quizzes, resources) for lecture/lab course content
d. Complete and written quizzes or assignments
e. Laboratory Practice via simulation modules
f. Internet Resources (YouTube, etc.)

- Computer Programs (MedTraining.org and Medialab.com) and other rotation specific simulator programs
- Certification examination simulations
- Comprehensive Written examinations
- Experiential practical examinations

Time Commitment

According to "Hints on How to Succeed in College Classes" http://tinyurl.com/n83tktx you should budget your time per week for this 12-hour credit course as follows:

1. Reading textbook and class notes from the subject area: 1 to 2 hours
2. Assignments: 8-12 hours
3. Time for review and test preparation: 3 to 5 hours
4. Total study time per week: 12 to 15 hours **PER WEEK**

Instructor Recommendations

The clinical student should be prepared for a process of review different from other types of classes that the student may have previously taken. The student will need to review SOPs, lecture material from previous classes, and will have procedural notes taken during rotation to review.

A great way to prepare for each clinic session is to:

1. Review the rotation objectives.
2. Review the rotation schedule prior to the day to know what time to report and what is tentatively scheduled for the day.
3. Review appropriate notes from previous relevant lecture/lab coursework.
4. Write down questions that you have as you review the material.
5. Look the questions up in the required textbook or review the PowerPoint

slides again.

6. If you are confused on a concept or principle, have your question(s) available to discuss during rotations or to ask of the ACM MLT faculty.
7. If you start to get lost in understanding the material, please don't wait to seek help. Make an appointment or email the ACM MLT faculty instructor as soon as possible.
8. Work on clinical quizzes and computer subscription programs regularly in order to reinforce the background information with what procedures are being performed in the rotation.
9. Practice techniques until competency is achieved
10. Utilize case simulators as appropriate to improve skills
11. Utilize the examination simulators and examination review resources

Preparation for Written Examinations

Exam questions are created from the course objectives. One helpful way to study is to create a study guide by writing or typing the objective and then record the information pertaining to that objective.

No one study strategy works for everyone, but the best approach is to be active and to make this a daily process. Keep up with assignments, review any lecture or lab session material within 24 hours of class or rotation and review it consistently in small increments. Studying the material in small increments more often as an on-going process will result in more effective learning than cramming for an examination. Devote 2-3 hours per week doing this review.

IV. CLINICAL PRACTICUM GRADING AND EVALUATION

1. A comprehensive written examination and experiential practical examination will be given at the end of each clinical rotation.

2. Announced/unannounced take home quizzes will be given during each clinical rotation and will be used to compute a portion of the final grade.

3. Written exercises if required, must be:
   a. legible or typed
   b. handed in or submitted to Brightspace on or before the due date.

4. Students must demonstrate an adequate level of expertise determined by the supervisor in each clinical area; refer to student evaluation report for categories of expertise.

   a. Interim Student progress reports will be filled out by the respective clinical area supervisor or assigned staff. These reports will be given to students at the Halfway point of each clinical rotation area and must be sent through the Trajecsys system to the college MLT program instructors to be kept in the student's file. The student's strengths and weaknesses shall be documented. The report will be brief stating areas in need of improvement and ways in which improvement can be

accomplished. These reports are to help the student be successful in their clinical rotation area.

b. A final clinical practicum evaluation report will be filled out by the supervisor of each area after students complete that section of the clinical rotation and sent through the Trajecsys system to the college MLT program instructors to be kept in the student's file. This evaluation report includes both technical skill and professional behavior evaluations.

5. A behavioral intervention form will be completed on any student with repeated absences or late arrivals to the clinical placement or other behavioral/ professional conduct issues. This form will state areas in need of improvement and ways in which improvement must occur to successfully pass the Clinical Practicum rotation course. This form is completed through the Trajecsys system.

6. A grade of "P" must be obtained in each clinical area.

7. Please refer to each rotation area in the Clinical Rotation Guidebook section of this handbook for grading details which are specific to the rotation area.

V. CLINICAL PRACTICUM GRADE CALCULATION

An overall 70% grade must be obtained in order to pass each of four individual clinical rotations. Clinical Practicum Evaluation shall consist of the following:

Clinic Assignments: Each rotation area will incorporate clinic assignments including quizzes, worksheets and computer instruction (Medialab and Medtraining tutorials and possibly simulations) in some form (written or electronic - announced, unannounced). *20% of Grade*

Interim Evaluation Report: Each student shall receive a progress report midway through their clinical rotation (sample report follows). *Non-graded*

Practical: Each area will have a final practical (practical formats are found at the end of each clinical section). A student must make at least 70% on the final practical. If 70% is not achieved, the student may be allowed to redo the practical. *20% of Grade*

Final Evaluation Report: Each student will receive a final evaluation of technical and professional performance which will be figured into the student's overall clinical rotation grade. *30% of Grade*

Final Examination: A departmental final examination is given the last day of each clinical rotation. All clinic students will take the same examination. A few differences in the examination will occur to encompass differing hospital technology. A student must make at least 65% on the written comprehensive

final. If 65% is not achieved, the student may be allowed to take an alternate examination. If the student fails to make 65% on the retake examination, the MLT faculty will discuss remediation and the option to repeat the exam or repeat the clinical rotation. *30% of Grade*

VI. SAFETY and INFECTION CONTROL

A. Insurance

All students are covered by liability insurance by being registered in the clinical course. Additional insurance may be purchased by students through the Business Office, or on their own and at their expense.

The student must assume responsibility for all medical expenses incurred because of any type of exposure to infectious agents or injury incurred in any campus setting or clinical/lab setting. Students enrolled in the Allied Health programs are required to have and maintain their own personal health insurance.

Proof of insurance is required. Health insurance information is available at the Business Office in the College Center and is at your own expense.

The Nurse Managed Wellness Center monitors compliance with this health insurance requirement. Clinical students submit verification each semester to the clinic manager.

B. Exposure Control

1. On-campus and clinical site policies contained in exposure control plans must be followed for your safety as well as to protect patients/clients.
2. No food, drink or chewing gum is allowed in the clinical site laboratory for safety reasons. In the MLT classroom, each faculty member has the right to prohibit food and/or drink if they choose to do so.
3. Safety glasses with side shields, gloves, head coverings, shoe covers, and masks will be required for some procedures. This is for your protection, and the safety of the client.
   Aerosol producing procedures mandate the wearing of plastic aprons by the clinician and the client.
4. If a gown or uniform becomes visibly blood-spattered during treatment procedures, it must be changed and put in the proper bag for laundering.
5. Disposable personal protective equipment will be discarded according to specific clinical instruction.
6. Students will abide by the Infection and Exposure Control Manual policies at all times. Clinical instructors will give direction as to where to find this item.

C. Security

Purses, books, coats, cell phones, and all other personal items are the responsibility of the student and should not be left unattended. These items are not permitted in the clinical or lab area and should be locked in your car or a locker, along with any personal school equipment/instruments (which should be labeled or engraved to denote ownership).

In the event a student leaves any type of possessions in a classroom or campus lab, the item or items will be sent to the ACM Security Office. The College is NOT responsible for any lost items. The campus Security Office lost and found can be reached at 301-784-5555. The campus security officers can be reached at any time at 301-784-5555

College Mandatory Policies
Allegany College of Maryland is required to inform prospective and current students of important College policies, including Non-Discrimination, Title IX, Clery Act, Heroin & Opioid, Drug and Alcohol Use, Academic Disabilities, FERPA, Accreditation, and Gainful Employment Disclosure. The link below will take you to the official college page with the current policies. https://www.allegany.edu/policy-mandates/

TRAJECSYS

You will use the Trajecsys online clinical management and tracking system throughout your clinical rotations. Prior to beginning the Clinical Practicum portion of the program, you will visit https://www.trajecsys.com/ and create an account by clicking "Register" in the upper right-hand corner. You will need to purchase access to the system for less than 6 months. The cost for less than 6 months is $75.00. You may pay this fee by either paying directly online via credit/debit card, check or money order or through the bookstore, purchased either outright or with financial aid.

The Trajecsys system will be used to report your arrival and departure to/from clinic, recording your daily activities and experiences, housing all clinic documents, evaluations, competencies, posting announcements, communicating with clinic site personnel, along with other functions, as appropriate. When logging your arrival and departure to/from clinic, you may access the Trajecsys system on a computer in the lab (if allowed) or from your personal mobile device. You must allow Trajecsys to access your location.

All forms associated with the Clinical Practicum will be housed in Trajecsys. You will use the system to initiate, view, and comment on items addressed with the forms. The "Notification of Absence" form will be filled out on the Trajecsys site by you if you must miss a clinic day. You will first notify the appropriate clinic staff by phone and email, then fill out the form in order to provide documentation of the missed day and planned makeup time. The clinic staff will utilize Trajecsys to submit interim and final Clinical Evaluations. You will have access to these evaluations and will be able to comment on the evaluation, if desired. You are expected to, at a minimum, comment with your name to serve as a record that you have reviewed the evaluation. If a "Behavioral Intervention Form" becomes necessary, it will also be filled out in Trajecsys. Again, you will have the

option to comment and, at a minimum, are expected to comment with your name to serve as a record of your review.

After each day in the clinic, you are expected to record the tasks that you participated in that day. This serves as a record and a reminder of your clinical experiences and the number of procedures you are learning. Your performance on your final clinic practical will also be recorded in Trajecsys, when feasible.

As you graduate, you will have the ability to export a spreadsheet of your clinic activities. This will be useful to you when you are developing your resume and going to job interviews. You will be able to share with your future employers everything you have accomplished!

SERVICE WORK STATEMENT AND STUDENT STATUS

MLT students are not expected to perform service work and are not permitted to be scheduled in place of qualified staff during any clinical rotation.

Students may be allowed to perform testing on patients, but only after demonstrating competence and under supervision of the clinical site staff.

If the student works at the clinical site as a paid employee, all working hours to be paid to the employee will be scheduled during non-instructional hours. No student scheduled for clinical rotation is to be concurrently working as an employee. Service work such as this is voluntary and occurs outside of rotation hours.

COMPUTER PROGRAM AND SUBSCRIPTION SERVICES

The Allegany College of Maryland Medical Laboratory Technology program subscribes to two online training and competency services that are utilized as a portion of the educational requirements and training of the students. These services are Medtraining.org Solutions and Medialab.com (referred to as MedTraining and MediaLab) found on the internet at http://www.medtraining.org/ and http://medialab.com respectively.

Each clinical practicum rotation includes tutorials and quizzes assigned from each of the services specific to the rotation area. A weekly checklist is included in this handbook for each rotation section. However, as the services add and discontinue tutorials the list will change accordingly, therefore, please refer to the hard copy list provided to you with each rotation.

Completion of the tutorials is required, and the average of all modules will be incorporated into the Clinical Assignments grade.

Simulation programs for urinalysis, hematology, microbiology, and body fluids are available through MediaLab. The scores for the simulation program are included as part of the clinic assignments grade or as part of the content area practical examination. Microbiology simulations will be graded as follows: Correct identification of genus and species 2 points, correct identification of genus only 1-point, incorrect identification of

both genus and species 0 points.

Exam simulator is available for each rotation area and is to be used as a practice/rehearsal tool in prepping for the final written rotation examination. Each student is to complete 2 exam simulator sessions per week specifically practicing in the specific rotation content.

Laptops are available from use by clinical students to complete assignments on campus.

Pre-Clinic- Due prior to the start of Clinical Practice

Medialab.com

Simulators
Body Fluid Simulator – 1-15 Fluid Simulator Cases

Tutorials:
COVID-19: Basics and Biosafety Precautions
Dermal Puncture and Capillary Blood Collection
Ethics and Code of Conduct in Healthcare
Minimizing Pre-Analytical Variability During Venipuncture, Urine Sample Collection, and Sample Processing
Routine Venipuncture
Special Topics in Phlebotomy
Body Fluid Differential Tutorial

MedTraining.org

HIPAA 101
Introduction to Analytic Quality Assurance

CDC (Centers for Disease Control) Laboratory Trainings:

Introduction to the LIMS & Other Information Systems
Introduction to Laboratory Informatics: Life of a Result (Complete 2nd)
Introduction to Laboratory Informatics: Life of a Sample (Complete 1st)
Introduction to Clinical Laboratory Improvement Amendments of 1988 (CLIA)
Ready? Set? Test! Patient Testing in Important. Get the Right Results

Post Clinic – Review Modules (due prior to due date of grades)

Medialab.com

Communication Basics for Laboratory Leaders
Laboratory Effectiveness: Clinical Laboratory Utilization
Inspection Preparation, Process, and Corrective Action
Risk Management in the Clinical Laboratory
Evidence-Based Practice Applied to Clinical Practice

Personnel Qualifications and Performance Evaluation
Autoimmune Diseases and Antinuclear Antibody Testing: Methods and Staining Patterns
Medtraining.org

Training Library:
- Laboratory Methods
- Anti-nuclear Antibody
- Crithidia
- ANCA
- Mouse Stomach Kidney
- ANA

Competency
ANA
ANCA
MSK

STUDENT HEALTH STATEMENT

Conditions in the clinical setting may include diseases and conditions that could have an impact on pregnancy in all stages, as well as other illnesses. Students are required to notify the program director immediately when pregnancy or illness is suspected or confirmed.

An updated health care provider's statement and/or physical is required when any changes in a student's current physical and/or mental status occurs that disrupts the student's ability to perform the "Allied Health Program's Essential Functions and MLT– Professional Technical Standards." The ability to perform these "Essential Functions" was signed when the admission physical exam was submitted upon admission to the MLT program.
A change in health status that may affect "Essential Functions" would include, but is not limited to a major illness, surgery, injury, pregnancy complications, birth of a child or hospitalization. The health care provider's statement must be provided before the student returns to the class/clinical setting. Students are expected to return able to perform "Essential Functions". A student may be required to complete another physical exam form.

Good communication with the faculty, clinical instructor and the MLT Program Director surrounding a change in health status is imperative to protect the welfare and safety of the student. It is advised that a student who has a change in health status consult their health care provider regarding limitations, if any, especially when working in areas of direct care in clinical agencies or working with hazards at any time in the program. **It is the student's responsibility** to provide whether there are any applicable restrictions and limitations from their health care provider to the course faculty, clinical instructor and MLT Program Director as a result of their health care condition. **If possible**, reasonable accommodation may be provided that is responsive to the student's health condition.

STUDENTS HEALTH AND LIABILITY ISSUES

Allegany College of Maryland does not directly have health care or hospitalization coverage available to students. Students entering health programs must be aware, by virtue

of the training's clinical nature, that they may be exposed to infectious disease or processes and their inherent risks. Students are required to provide proof that they have health insurance coverage each semester.

There is an umbrella liability insurance policy for students. This policy provides $10,000,000 of excess liability coverage over the limits of the basic automobile, general, professional, and employee's liability policies. Also, $5,000,000 primary liability is provided for those hazards not covered by basic policies subject to the exclusions of the policy and retention of $10,000. Students do not need to purchase additional liability insurance.

All students entering the clinical phase of the curriculum must have a physical examination no later than three months before clinical rotation. The examination consists of a personal health history and student physical examination. Required inoculations and vaccinations include:

- Tetanus-Diphtheria booster within the past 10 years
- MMR Vaccine (2 vaccinations or MMR titer)
- Varicella history and a (2 vaccinations or varicella titer)
- Proof of negative 2-step PPD
- Proof of either Hepatitis B vaccination, antibody testing revealing immunity to Hepatitis B, or declination of Hepatitis B vaccination.
- Seasonal Flu Vaccine
- Proof of COVID Vaccine or Vaccine Waiver (if allowable)

Students are referred to the Emergency Room for any accidents occurring while at the clinical site. Any medical expenses related to disease or injury incurred during training programs shall be the responsibility of the student and/or the student's third-party health insurance.

ACCIDENT PROCEDURES

Blood and Body Fluid Exposure

Students who experience exposure to any potentially infectious material (needle stick, mucous membrane, through non-intact skin, or airborne inhalation) require situation specific follow-up. It is the responsibility of the individual to report the incident to the clinical instructor and seek medical evaluation/care as soon as possible (preferably within one hour).

1. First aid will be provided for the students sufficient to get the situation under control.

2. For a campus laboratory incident, notify the course instructor immediately.

3. For a clinical site incident, notify the immediate clinical supervisor, the clinical site liaison and the ACM MLT Program Director as soon as possible.

4. The student should report to the emergency room for follow-up evaluation/treatment.

5. The student will be responsible for the cost of this visit either by directly paying or through the billing of the student's personal health insurance.

CRIMINAL BACKGROUND CHECKS

MLT students entering the clinical rotation component of the program must have a completed criminal background check on file by the college provider who performs such checks. If a student's criminal background checks return evidence of a felony criminal conviction or other serious charges that could result in a clinical affiliate denying clinical rotation access to that student, a review of the situation will be conducted by the program director. Students are advised in the MLT orientation class (MLT 110) that our clinical affiliates require evidence/validation of a criminal background check as per clinical affiliate/college contract agreements. If a student has a criminal history, the clinical affiliate has the right to deny that student access to its facility and the program must disclose such information to the affiliate and allow the affiliate the right to deny or approve access to said clinical affiliate. Failure to be placed in a clinical rotation would prevent the student from completing the MLT clinical program.

STEPS FOR CLINICAL ROTATION CHALLENGE

1. Request for Clinical Rotation Challenge must be submitted to the director of the Program six weeks prior to the beginning of clinical rotation. *

2. Requests must be made in writing and are to include area(s) students wish to challenge and previous work experience in the areas to be challenged.

3. Clinical Rotation Challenge shall include: (2 steps)

    a. A practical examination to establish the student's proficiency in the clinical challenge area - a minimum of 75% on this practical examination is required.
    b. A written examination containing questions pertinent to the challenged area. A minimum of 70% on this written examination is required.

4. Both written and practical examinations must be completed two (2) weeks prior to the beginning of the clinical rotation. *

5. Student(s) who successfully challenge(s) the clinical rotation is/are still required to register for Medical Laboratory Technology Clinical Rotation and pay fees to the Business Office for the credit hours earned.

CAMPUS LABORATORY SAFETY

1. Campus laboratory (AH251) will be available for practice when it is not being used for classes and the MLT faculty are available to supervise activity.

2. Street clothes may be worn except during clinical practicum rotation days. Apparel must be conservative and professional in nature. Shoes should be closed-toed. Long pants should be worn for laboratory.

3. Excessive jewelry and piercing will not be permitted due to safety concerns.

4. Students are expected to adhere to all safety and appearance guidelines when in the student laboratory. This includes using proper protective equipment such as wearing a lab coat, protective eyewear and gloves. A student not following the established policies will be asked to leave the classroom.

5. Students are to dispose of all biological fluids and sharps into properly labeled, puncture-resistant containers with lids and follow the exposure control plan for the AH251 campus laboratory.

6. Students will disinfect workstations as appropriate.

EXPOSURE CONTROL PLAN

Exposure control policies and procedures are available electronically on each Brightspace course site. Students are expected to read and follow the appropriate measures when performing laboratory exercises in the MLT classroom AH 251.

The following policies are available under the exposure control plan:

- Blood borne Pathogen Exposure Control Plan
- Chemical Hygiene Plan
- Laboratory Infectious Waste Disposal
- Management of Hazardous Chemicals
- Medical Waste Disposal

PROFESSIONAL DEVELOPMENT REQUIREMENT

Each student must complete the following professional development activity in order to be giving a passing grade in the final clinical rotation course.

MLT 210
Professional Development Requirement

Objectives of this exercise:
Describe the significance of continued education.
Formulate an individualized strategy for studying and prepping for the certification examination.
Identify the requirements to maintain certification.
Describe the significance of allowing a certification to lapse.
Formulate an individualized job search resume.
Outline ways and strategies to gain relevant field employment.

Part 1: Job Search

Submit a Professional Resume

In addition to usual resume information highlight: graduation date, ASCP BOC eligibility, LIS and instruments used during rotation

Submit a Job Search Plan

Outline strategies you intend to use and your plan to gain employment

Part 2: Certification Plan

How do you plan to study for certification exam?

Outline a tentative study schedule and resources you will use

Once certified, how do you keep your certification? What is required to maintain certification?

What is your plan to meet those requirements?

What is the significance of continuing professional education?

What steps must be taken if you allow your certification to lapse and how it can be reinstated?

www.ascp.org www.ascls.org

SECTION IV

PROFESSIONALISM

ALLEGANY COLLEGE OF MARYLAND

AFFECTIVE OBJECTIVES

The following Affective (Professional Conduct) Objectives are a graded portion of all Medical Laboratory Technology didactic courses. One aspect of building a professional behavioral pattern is to be honest, dependable, reliable, and to demonstrate respect for other Allied Health professions.

The MLT Advisory Committee developed an instrument to evaluate professional attitude/responsibility characteristics displayed by the clinical student. The evaluation is based on the objectives below, but it is abbreviated on the actual clinical rotation evaluation instrument.

1. **Demonstrate dependability and initiative during technical coursework.**

   1.1. Be punctual for classes.

   1.2. Attend all scheduled classes.

   1.3. Assist others when necessary.

   1.4. Read assigned material prior to learning experience/arrived prepared for the class.

   1.5. Complete assignments.

   1.6. Comply with assignment deadlines.

   1.7. Contribute to classroom discussions

   1.8. Follow through on tasks.

   1.9. Volunteer for extra assignments and projects.

   1.10. Leaves work area clean and returns all supplies to appropriate place.

   1.11. Strive to complete all assignments and tasks with competency.

   1.12. Use only accepted laboratory techniques such as pipetting.

   1.13. Investigate the accuracy of the results by double-checking values and calculations of values.

2. **Demonstrate respect for instructors, laboratory staff, and fellow students.**

   2.1. Share equipment and supplies when necessary.

   2.2. Respect the workspace of co-workers.

   2.3. Confer with peers and instructors about questions on the material.

2.4. Maintain a good working relationship with students and instructors.

2.5. Obey the time schedule for assignments and breaks.

2.6. Accept constructive criticism.

3. Display proper communication skills.

3.1. Follow verbal instructions with minimal assistance.

3.2. Ask when assistance is required.

3.3. Maintain a professional nature of conversation.

3.4. Exhibit good written communication skills.

4. Maintain honesty and integrity.

4.1. Report results in an accurate manner.

4.2. Preserve the patient's right to confidentiality.

4.3. Comply with the laboratory rules and regulations.

4.4. Uphold academic integrity by following policies regarding cheating.

4.5. Strive to be accountable for individual work.

4.6. Respect the knowledge of the trainers.

5. Develop organizational skills which improve efficiency.

5.1. Adopt a strategy for organization of the workload.

5.2. Demonstrate flexibility by adjusting to changes in the workflow/workload.

5.3. Complete assignments in an organized manner.

5.4. Coordinates work and activities to allow for the performance of multiple tasks.

6. Strive to display principles and practices of professional conduct.

6.1. Follow the guidelines for proper dress and appearance.

6.2. Present a positive professional attitude when on duty.

Allegany College of Maryland MLT Program

Professional Dress Code

An individual's appearance while working and while training to work in the healthcare field communicates an aspect of professional integrity. Dress codes are a best practice in the field and are designed to address infection control, patient safety, staff safety, professionalism, and more. Regarding professionalism, healthcare facilities expect personnel to look and act professionally, to make a good first impression, to be a good representative of the facility, to appear knowledgeable/skilled, and to be easily identifiable to patients.* Students should be cognizant of the fact that the Allegany College of Maryland school uniform represents the school, MLT Program and the profession. Appropriate conduct should be displayed when in the school uniform on or off campus/clinical.

All students shall adhere to the following dress/grooming code:

A. Clinical
    1. Clothing
        a. Uniforms must be clean, neat, wrinkle-free, fit properly, and in good condition. Students are not permitted to wear any part of the uniform with other street clothes. Uniforms must be odor free.
        b. Students must wear solid shoes, socks that cover the ankle if the pants have a cuff, and the required uniform pants and shirt. Shoes must be clean and modest in appearance. Shoes must be enclosed, closed-toe and closed heel, with no holes.
        c. Students may wear a plain white turtleneck/crewneck underneath the uniform.
        d. Students are permitted to wear only the matching cover-up over the uniform. No other cover-up may be worn.
        e. Uniform pants shall be no longer than one inch above the sole of the shoe.
        f. Undergarments may not be visible.
        g. Photo ID badge must be worn at all times during clinical assignment. The badge must be visible and should not be worn below the waist. It can be worn on a lanyard as long as it is not a safety hazard.
        h. Uniforms are to be worn when present when attending clinical assignments, both on-campus and external clinical site. During clinical experience uniforms are required.
        i. Special instructions for clinical areas where uniforms are not required will be given by instructors.
    2. Uniform Equipment
        a. Pen
        b. Name badge
        c. Small notebook for note taking
    3. Grooming/Appearance
       Students are expected to be well-groomed and clean, including free of odors.
        a. Hair

Hair must be styled neat and clean. If the length is longer than the collar line, it must be raised above the collar line. Fancy barrettes, combs, or other ornaments may not be worn. Hair must be of an appropriate natural color – e.g. no pink, blue, green or striped hair. All students must also follow guidelines for wearing N95 masks, if provided through fit testing, which includes facial hair except mustache.

b. Head coverings
Head coverings of any kind cannot be worn unless they are necessary for infectious control, for safety reasons or for the observance of religion or ancestry/national origin. Any head coverings worn at the clinical facilities must be clean and a matching solid color to the uniform; black, white, or teal (match uniform color as much as possible). The head covering should be clean and without pattern, logo, or other adornments. The head covering should be secured away from the face to prevent it (like hair) from impeding vision or creating an infection control hazard (i.e. come in contact with patients). Head coverings' size/shape should not interfere with other healthcare personnel's ability to see or to provide patient care.
*All other head coverings (baseball hats, visors, or head coverings worn as an accessory or to conceal unkempt hair, etc.) are not permitted while in uniform.

c. Jewelry
No jewelry, including body jewelry, is to be worn with the uniform except a plain metal wedding band and/or pierced earring studs, limited to one in each ear lobe.
Rings may not be worn in isolation, operating room or in the Nursery, or any area defined by the clinical agency
No other visible body piercing, including tongue piercing may be worn in the clinical setting.

d. Cosmetics:
Make-up must be in moderation. Scented body lotions, essential oils, heavy perfumes, and after-shave lotions are not permitted.

e. Personal hygiene
Students are expected to be clean and free from any bodily odor.

f. Fingernails.
Fingernails must be clean, short, and smooth to ensure student and patient safety, in accordance with the Center for Disease Control Guidelines, only natural nails may be worn during assigned clinical experiences. Nail polish, gel coatings, or artificial nails of any kind are not permitted.

g. Tattoos
Tattoos must be covered with the following exceptions:
    i. Tattoos which cannot be covered (example – around the eye);
    ii. The covering interferes with infection control measures (example – hand washing/sanitizing); and/or
    iii. Clinical site policy allows all tattoos to be exposed

4. Other
    a. Substances

Since chewing gum, tobacco, cannabis, snuff, vaping, and alcohol use is not permitted, these items are not permitted to be carried or on the student's person.

b. Headphones/earbuds.
Headphones, earbuds, or any device whose purpose is to deliver music, phone calls, or other auditory content unrelated to the class, clinic, or lab experience is prohibited. (Devices/equipment necessary for the student to be able to hear or to interpret course content is permitted.)

Violation of the professional dress code in the clinical setting will result in the student being dismissed from the clinical site at the discretion of clinical site personnel. A notation of violation of professional behavior made in the student's file through the use of behavioral intervention form. The day will be made up at the facilities and faculty's discretion and convenience. If the facility staff refuses to have the student return, it could result in clinical failure if alternative site for rotations cannot be secured.

B. Campus Laboratory

1. Students must be in appropriate uniform in campus laboratory as described for clinicals in A.1.a-f above for all scheduled practice times, evaluation of skills, and in the simulation lab. Students may also wear a plain black, crewneck sweatshirt over the uniform as needed for warmth in the lab. Students who are practicing in the lab on their own time (not scheduled), the appropriate clothing is classroom clothing as described in C.2.

2. Students must be properly groomed as described in A.3 above apart from tattoos, which are not required to be covered during labs unless they violate ACM policy. (A tattoo could violate policy if, for example, it contains a direct a threat, is defamatory, is obscene, or is otherwise not protected speech.)

3. Substances and devices are prohibited in campus laboratory as described in A.4 above.

A violation of the professional dress code in the campus laboratory setting will result in the student being dismissed from the activity. Students will be able to return when dress code requirements have been met. Repeated offenses will result in a behavioral intervention form being completed and a meeting with the program director.

C. Class

1. Appropriate clothing for the classroom is your uniform as described in A.1.a-f above, OR you can wear a pair of khaki pants with a solid color polo style shirt. This change is in an effort to promote professionalism and refrain from distracting from the learning environment. Students may also wear a plain black, crewneck sweatshirt over the uniform as needed for warmth in the classroom or testing locations.

2. Students must be properly groomed as described in A.3 above apart from tattoos, which are not required to be covered in class unless they violate ACM policy. (A tattoo could violate policy if, for example, it contains a direct a threat, is defamatory, is obscene, or is otherwise not protected speech.)

3. Substances and devices are prohibited in clinical setting as described in A.4 above.

4. "Class" includes lecture, group activities, and tests.

A violation of the professional dress code in the class setting will result in the student being dismissed from the class. Students will be able to return when dress code requirements have been met. Repeated offenses will result in a behavioral intervention form being completed and a meeting with the program director.

CLINICAL ROTATION EXPECTATIONS

A final evaluation form will be completed by each unit instructor in each rotation. This evaluation contains both technical and behavioral components.

Below is a summary of the criteria and expectations of clinical students with regard to each criterion.

1. **Initiative**

   If your work is completed, look for little things to do and do them. Supervisors appreciate individuals who will do this. If you have used up a reagent, see that there is more of it or if possible, prepare it. Cleanup work benches and instruments. In short, make everything as you would like to see it. If you have the time, do more than the required number of procedures in the department. Volunteer to help the laboratory if the workload is exceptionally heavy and you have some free time.

2. **Reliability**

   Know where the procedure manual is in each department and strictly adhere to the directions therein. Be honest and accurate in reporting your results. Results should be neatly and accurately recorded. If you have any reason to question a result, do not report it until you have checked with the teaching instructor or supervisor. If you find that you made an error, report it immediately; do not try to cover it up. Utilize the quality control procedure as a basis for any decision you may have to make. As long as you are students at the assigned hospital, you will be expected to abide by all the established personnel and other administrative policies that apply to you.

3. **Dependability**

   Arrive in the laboratory a few minutes early and be ready to go. Do not take excessively long coffee and lunch breaks. Remember coffee breaks are a privilege, not a right -- don't abuse. Do not make appointments during your scheduled work hours unless it is unavoidable. Do not ask someone else to do your work for you unless it is necessary. Use common sense when problems occur. If an instrument is malfunctioning or there is some other type of problem, notify the teaching instructor or supervisor. Do not just ignore the situation. (If the instructor feels you can solve the problem, he/she will let you know this. Plan your work to meet all ordinary and occasional unusual situations.)

4. **Personal Relationships**

   Attempt to maintain a good working relationship with all members of the laboratory staff (students, technologists, instructors, and supervisors). Present good personal and professional appearance always. Accept instructions and constructive criticism from the instructors when they give you advice. Learn to develop a

positive attitude about yourself and about others. Learn to develop self-confidence.

5. **Skills**

Interpersonal communication during clinical rotation shall be limited to discussion pertinent to clinical work! Consistently use good technique when performing laboratory tests. Check all your calculations very carefully and know how to derive the formula or factors you are utilizing. Record and report all your findings in a neat and orderly manner. Learn to coordinate your work activities so that you can do more than one test at a time. Know the theory involved in every procedure you do so that you can better understand the significance of normal and abnormal results. Learn to do basic trouble shooting and maintenance on every instrument you use.

Any student found to be falsifying test results, misusing information, or cheating in any manner will be subject to automatic dismissal from the program.

A copy of all grades and evaluation forms will be placed in the student's file maintained in the MLT Department.

CONFIDENTIALITY

The student will refrain from disseminating all information of a confidential nature which shall be acquired while assigned to a clinical affiliate.

Violation of confidentiality constitutes grounds for dismissal from the program.

CLINICAL BEHAVIORAL INTERVENTION PROCEDURE

This form will be utilized by the clinical area supervisor or program faculty to inform an MLT student of unsatisfactory behavior while at the clinical practicum site or in the MLT classroom. This report should cite unprofessional behavior and improvement that needs to occur for a student to successfully complete the clinical practicum rotation or graduate from the program. The report form is found in this MLT Handbook and on-line on the Trajecsys Clinical Tracking System. The form is submitted to the MLT Program Director at srohrbaugh@allegany.edu. The report will be reviewed by the appropriate Medical Laboratory Technology student with the MLT program faculty.

The first offense will result in a counseling session between the MLT student and MLT faculty member and/or Program Director.
If a second offense occurs, the student will be issued a formal warning which will be placed in their student file. With this second offense the student will receive a prescriptive improvement plan noting a timeline for improvement and will be made aware that failure to comply with this plan will result in dismissal from the MLT program. (This will be documented by the MLT Program Director and signed by the student.) Failure to comply with the terms of the improvement plan will result in dismissal from the program.

After the second attempt at remediation has failed or if any infraction is especially egregious, the Program Director will submit a request for the Allied Health Directors' Accountability Committee for review to recommend dismissal from the program. The Committee will recommend whether to dismiss the student from the MLT program.

A student can be readmitted to the program by filing a formal letter of appeal to the MLT Program Director. This letter must be presented to the MLT Program Director within 30 days after dismissal from the program. A committee made up of the MLT faculty will review the letter of appeal. A decision on whether to readmit the student will be made within 10 days of receipt of the letter. A student will only be readmitted following approval from the MLT Committee.

If the student is not satisfied with the decision made by the MLT faculty the student may follow the Academic Grievance Policy.

CLINICAL PRACTICE OVERVIEWS OBJECTIVES AND GUIDEBOOK

MLT CLINICAL PRACTICUM
GENERAL OBJECTIVES AND EXPECTATIONS

Knowledge of basic sciences and their application to clinical laboratory sciences.

The student must demonstrate a knowledge of biology, chemistry, physiology, and other basic sciences by being able to perform both manual techniques and complete automated techniques according to the norms of a quality-controlled program.

The student should develop and demonstrate competency in:

1. collecting, processing, and analyzing biological specimens and other substances;

2. performing analytical tests of body fluids, cells, and other substances;

3. recognizing factors that affect procedures and results, and taking appropriate actions within predetermined limits when corrections are indicated;

4. monitoring quality control within predetermined limits;

5. performing preventive and corrective maintenance of equipment and instruments or referring to appropriate sources for repairs;

6. applying principles of safety;

7. respecting the confidentiality of all information obtained in the clinical laboratory and the hospital;

8. demonstrating professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and with the public;

9. recognizing the responsibilities of other laboratory and health care personnel and interacting with them with respect for their jobs and patient care;

10. applying basic scientific principles in learning new techniques and procedures;

11. relating laboratory findings to common disease processes;

12. recognizing and acting upon individual needs for continuing education as a function of growth and maintenance of professional competence.

PHLEBOTOMY OBJECTIVES

Medical Laboratory Technology Clinical Practice 210

General Phlebotomy Goals

1. The student will gain an understanding of the duties of a clinical phlebotomist.

2. The student will receive practical experience and/or observe specimen collection techniques in the various clinical areas: medical/surgical, pediatrics, nursery, emergency treatment, intensive care, and outpatient.

3. The student will follow all the types of isolation techniques and the precautions which must be observed. The student will practice standard precautions in all phlebotomy situations.

4. The student will receive instructions regarding safety rules and regulations applicable to phlebotomists.

Phlebotomy Technical Objectives

1. Perform the following phlebotomy techniques.
   A. venipuncture (adults) - REQUIRED
   B. finger puncture (adults)
   C. butterfly collection (adults)

2. Observe, when possible, the heel puncture procedures in the nursery, venipuncture procedures on children, venipuncture by butterfly collection and sweat chloride testing. The student is not required to perform these techniques.

3. Observe in-patient phlebotomy collections.

4. Select the proper collection tube or tubes from the laboratory requisition information for blood specimen collection including blood bank, hematology, chemistry, serology, and microbiology specimens.

5. Select the proper equipment needed for the phlebotomy procedure.

6. Practice standard precautions when exposed to blood and body fluids.

7. Dispose of contaminated waste, including all sharps according to institutional guidelines.

PHLEBOTOMY EVALUATION AND REQUIREMENTS

1. All students will have 2 days of scheduled phlebotomy experience:

   a. Students in Phlebotomy rotation during the Hematology rotation will report for one day of outpatient phlebotomy experience in an outpatient phlebotomy setting at respective hospital outpatient drawing station. *See daily rotation schedule for times and location.

   b. Students in Phlebotomy rotation during the Chemistry rotation will report for one day of outpatient phlebotomy experience at the respective hospital outpatient drawing station. *See daily rotation for time/location.

2. A checklist is provided to assist the student in tracking the various techniques performed, types of specimens collected and hospital area where techniques were performed.

3. All clinic students will complete the following Medialab.com programs prior to their first of clinical phlebotomy rotation day:
   - Routine Venipuncture
   - Dermal Puncture and Capillary Blood Collection
   - Special Topics in Phlebotomy

4. Competence in phlebotomy will be measured by the following:

   a. Practical performance. A student will complete at least fifteen (15) documented, successful adult venipunctures.
   b. The student's completion of the MediaLab and Medtraining (phlebotomy) tutorials.
   c. An additional day(s) will be scheduled on a Friday if the student is unable to achieve the 15 successful venipuncture collections in the two scheduled days.

PHLEBOTOMY ROTATION
CHECKLIST

This checklist serves to guide the student and the staff phlebotomist as to the types of phlebotomy experiences that the student should perform or observe.

	Performed	**Observed**
A. **Phlebotomy Technique**		
1. proper patient identification	_____	_____
2. venipuncture		
a. adult (15 minimum)	_____	_____
b. children (observe only)	_____	_____
3. finger puncture		
a. adult	_____	_____
b. children (observe only)	_____	_____
4. heel stick	_____	_____
5. butterfly collection	_____	_____
6. multiple tube collections	_____	_____
B. **Clinical Area Where Phlebotomy Was Performed or Observed (Check all appropriate areas)**		
1. medical/surgical	_____	_____
2. pediatrics	_____	_____
3. nursery	_____	_____
4. emergency treatment	_____	_____
5. intensive care	_____	_____
6. outpatient	_____	_____
C. **Collection Tube Used (Check any used)**		
1. red top	_____	_____
2. serum separator tube	_____	_____
3. heparinized tube	_____	_____
4. EDTA	_____	_____
5. sodium citrate tube	_____	_____
6. blood culture	_____	_____
7. plasma separator tube	_____	_____

D. **Tests for Which Blood is Collected (check all that apply)**

	Performed	**Observed**
1. crossmatch	_____	_____
2. type/screen	_____	_____
3. protime or APTT	_____	_____

4. CBC _____ _____
5. sedimentation rate _____ _____
6. HbA_1c _____ _____
7. electrolytes _____ _____
8. glucose _____ _____
9. cardiac enzymes _____ _____
10. therapeutic drugs _____ _____
11. chemistry profile _____ _____
12. RPR/serology tests _____ _____
13. mono spot _____ _____
14. RA screen/titer _____ _____
15. blood culture _____ _____
16. ammonia levels _____ _____
17. lactate level _____ _____

E. **Urine Collection**

1. Explain to patient how to collect a 24-hour collection _____ _____
2. Explain to patient how to collect a clean catch urine _____ _____
3. Explain to patient how to collect a routine urine plus transfer to BD vacutainer tubes if necessary _____ _____

F. **Throat Swab Culture Collection** _____ _____

G. **Documentation**

	# Venipunctures	Butterfly Collections	Capillary Punctures
Day #1 (Hematology Rotation)	_____	_____	_____
Day #2 (Chemistry Rotation)	_____	_____	_____

The student is required to submit the Venipuncture Documentation Log with initials and signature of the Phlebotomy Supervisor to ACM faculty after completing the third day.

ALLEGANY COLEGE OF MARYLAND
MEDICAL LABORATORY TECHNOLOGY
PHLEBOTOMY ROTATION
VENIPUNCTURE DOCUMENTATION LOG

Phlebotomy Extern Name: _____

Extern Site: _____

Supervisor(s) working with MLT students (please list):

_____
_____
_____

Instructions: Students must be supervised during venipunctures and skin punctures. It is the responsibility of the student to maintain documentation. All attempted punctures should be recorded. The student is required to complete a minimum of 15 successful venipunctures. Under the type of puncture indicate type of draw such as vacutainer, syringe and needle or butterfly with vacutainer or syringe. A full signature is required by the supervisor/preceptor when the form is completed. Each day the supervising phlebotomist should be listed on the top of the form and initial the venipuncture.

Date/Patient Number	**Venipuncture Site (ante cubital fossa hand)**	**Skin Puncture Site**	**(V) Vacutainer (S) Syringe (B) Butterfly (C) Capillary**	**(S) Successful (U) Unsuccessful**	**Supervisor Initials**
TOTAL					

Date/Patient Number	Venipuncture Site (ante cubital fossa hand)	Skin Puncture Site	(V) Vacutainer (S) Syringe (B) Butterfly (C) Capillary	(S) Successful (U) Unsuccessful	Supervisor Initials
TOTAL					

Phlebotomy Supervisor – Please evaluate the student on the following item:

	YES	NO
Student is able to relate to patients during the phlebotomy process		
Comments:		

_____ _____

MLT Student Initials Date

_____ _____

Phlebotomy Supervisor Initials Date

_____ _____

ACM Faculty Signature Initials Date

CHEMISTRY CLINICAL PRACTICE OVERVIEW

CHEMISTRY CLINICAL PRACTICE OVERVIEW

The Chemistry/UA rotation is 4 weeks in duration for 4 days a week. Each Monday, the student(s) report to AH 251 on the ACM campus as part of the rotation. The focus of instruction these days will be to bring theory to practice by bridging classroom study and activities to how this knowledge and the skills are deployed in the clinical hematology/coagulation laboratory. Clinical site days are spent in the clinical affiliate chemistry laboratory section using the automated equipment, performing special chemistries and in the urinalysis department. One of the days will be outpatient phlebotomy day.

The focus of the 4 Monday sessions and assignments will be as follows:

Week	Day/Time	Location/Activity	Responsible Person
1	Monday **WEEK 1 – Campus Clinic Day 1 Schedule and Weekly Assignment**	**ACM Campus AH251:** **Pre-session Assignments:** 1. Introduction to Quality Control (Medialab) 2. Clinical Chemistry Worksheet Part 1 (Chemical Analytes & Reference Ranges) 3. Clinical Chemistry Worksheet Part IV (Chemistry Panels) 4. Calibration if Clinical Laboratory Analytes **On-campus Session #1 Workload** 1. Beckman Coulter Training for AU5800 2. Quality Control Review 3. Calibration 4. Troubleshooting 5. Medialab Modules **Week 1 Homework – due Monday of Week 2** Clinical Chemistry Worksheet 1. Part III (Chemistry Analytes Clinical Significance) Medialab Trainings: 1. Chronic Kidney Disease 2. Diabetes: Diagnosis, Laboratory Testing, and the Current American Diabetes Association Guidelines 3. Laboratory Methods to Aid in the Detection of Sepsis 4. Metabolic Syndrome 5. Quality Control 6. Descriptive Stats Medtraining Modules: 1. Chemistry (Competency Assessment) 2. Cardiac Markers	8:30 am ACM Faculty, Stacy Senka

		Misc Work 1. Exam simulator on Medialab at least 2x/week 100 questions each session (only chemistry and UA) 2. Medialab Urinalysis Simulator 1-5 3. Module 3 & 4 Endocrinology Quiz 4. Module 4 – Glucose Metabolism & Diabetes 5. Module 7 – Misc. Tests	
	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	7:00 am Clinical Affiliate
2	Monday **WEEK 2 – Campus Clinic Day 2 Schedule and Weekly Assignments**	**ACM Campus AH251** Pre-session Assignments: Complete week 1 assignments prior to campus lab session. **On-campus Session #2 Workload** 1. Beckman Coulter Training for DXI 2. Immunoassay Videos 3. Review Immunoassays 4. Serum Protein Electrophoresis 5. Immunofixation Electrophoresis 6. Medialab Modules if time **Week 2 Homework – due Monday of Week 3** Clinical Chemistry Worksheet 1. Part II (Immunoassay) 2. Part V (TDM) 3. Part IX (Essay Questions) 4. Part VIII (Electrophoresis) 5. Tumor Markers Medialab Modules 1. Laboratory Assessment of Thyroid Function 2. Pituitary Hormones 3. Vitamin D 4. Tumor Markers 5. Cardiac Biomarkers 6. Electrophoresis 7. Adrenal Gland Function & Disorders 8. Linear Regression Analysis Medtraining Modules 1. Protein Electrophoresis	8:30 am ACM Faculty – Stacy Senka

		2. Protein Electrophoresis (Competency Assessment) 3. Laboratory Methods (Immunology section) Misc. Work 1. Exam simulator on Medialab at least 2x/week 100 questions each session (only chemistry and UA) 2. Medialab Urinalysis Simulator 6-10 3. Module 5 – Water & Electrolytes, Bone Minerals, Nutrition, Trace Elements, Vitamins, Body Fluids 4. Module 6 – Lipids, Atherosclerosis & Cardiac Disease	
	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	7:00 am Clinical Affiliate
3	Monday **WEEK 3 – Campus Clinic Day 3 Schedule and Weekly Assignments**	**WEEK 3 – Campus Clinic Day 3 Schedule and Weekly Assignments** Pre-session Assignments: Complete week 2 assignments prior to campus lab session. **On-campus Session #3 Workload** 1. Beckman Coulter Training for Iricell 2. Manual Urinalysis 3. Image Review 4. Drugs of Abuse 5. Phlebotomy Practice **Week 3 Homework – due Monday of Week 4** Clinical Chemistry Worksheet 1. Part VII (Iron, TIBC, Ferritin) 2. Part X (Urinalysis) 3. Part VI (Drugs of Abuse) Medialab modules: 1. Chemical Screening of Urine by Reagent Strip 2. The Urine Microscopic: Microscopic Analysis of Urine Sediment 3. Drug Testing Methods in the Clinical Toxicology Laboratory	8:30 am ACM Faculty – Stacy Senka

		4. Pharmacology for the Clinical Chemist: Therapeutic Drug Monitoring and Pharmacogenomics Medtraining Modules 1. Fern Test 2. Urinalysis 3. Urinalysis (Competency Assessment) 4. Urine Sediment 5. Amniotic Fluid Misc. Work 1. Exam simulator on Medialab at least 2x/week 100 questions each session (only chemistry and UA) 2. Medialab Urinalysis Simulator 11-19 3. Module 3 – Urinalysis & Renal Disease Quiz 4. Module 8 – Liver, Gastrointestinal & Pancreas	
	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	7:00 am Clinical Affiliate
4	Monday **WEEK 4 – Campus Clinic Day 4 Schedule and Weekly Assignments**	**ACM Campus – AH251** **WEEK 4 – Campus Clinic Day 4 Schedule and Weekly Assignments** Pre-session Assignments: Complete week 3 assignments prior to campus lab session. **On-campus Session #4 Workload - Fluids** 1. Exam Review & Case Studies 2. Urinalysis Practical 3. Osmolarity 4. Chemistry Math **Week 4 Homework – due by the Written Clinical Examination** Clinical Chemistry Worksheet 1. Finish any incomplete sections Medialabs 1. Laboratory Diagnosis of Cystic Fibrosis 2. Proficiency Test Handling and Communication 3. POCT: The Applications, Advantages, and Challenges	8:30 am ACM Faculty – Stacy Senka

		4. DOT and DHHS Urine Specimen Collection Training Medtraining 1. Toxicology (Competency Assessment) Misc Work 1. Exam simulator on Medialab at least 2x/week 100 questions each session (only chemistry and UA) 2. Medialab Urinalysis Simulator 20-30 (will be counted toward practical grade) 3. Module 1 & 2 Acid Base Balance, Heme synthesis, Bilirubin and Iron Metabolism **Brightspace Quizzes:** 1. Abbott Quiz 2. Chemistry Quiz 3. Urinalysis Quiz	
	Clinical Site Tuesday, Wednesday, and Thursday – ACM Written Exam	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	7:00 am Clinical Affiliate

The student's Pass/Fail grade in Clinical Chemistry rotation is calculated based on the following:

Competencies (Skills and Knowledge)

1. Evaluation
   (Technical and Professional Performance) 30%

2. Examinations, clinical assignments, and practicals derived in the following manner: 70%
   - 20% - Clinic Assignements : Average of Quizzes, worksheets, and computer training (Medialab, Medtraining, Simulations)
   - 20% - Urinalysis Practical
   - 30% - Final Written Examination given by MLT Department

CLINICAL SITE RESPONSIBILITIES

Student Workload

Students in the clinical chemistry section of Clinical Practice perform repeat automated testing on hospital patients under supervision. They are also given patient workloads to perform. This workload is performed under direct supervision of the technologist/technician in charge of the student.

1. Automation

   Students should be able to make decisions such as:
   - Does the sample need to be repeated and are there instrument flags?
   - What do the error codes mean?
   - Does the sample meet criteria for critical values and if so, how should this be handled?
   - How are samples verified?
   - Location of QC specimens
   - Is the QC within the expected range?
   - What happens when the instrument flags the results or reagents (this is handled by technologist in charge of students, but student is expected to observe procedure)
   - What alternate methods are available as backup?
   - Procedural book location for chemistries performed on instrument

2. Electrophoresis

3. Urinalysis
   Student should be able to make decisions such as:
   - Does dipstick agree with the microscopic portion?
   - Do the results need a confirming test?
   - How sample is verified
   - What procedure to follow if sample is to be rejected or quantity is not sufficient

4. Osmolality

5. HbA_1C

6. Manual drug testing

7. BNP

8. Chemistry Profiles: Cardiac, Electrolyte, Lipid, Liver, Metabolic

Supervising Tech

Daily Workload

The supervising tech for the day can be a Medical Laboratory Technologist or Medical Laboratory Technician. The student is responsible for being prepared and motivated for the day's activities. The supervising tech should direct the learning and oversee all work being done by the student. The supervising tech should have input into the student evaluation.

Clinical Supervisor

In each of our clinical affiliates, the laboratory section supervisor or manager is the contact person for the college along with the clinical liaison. These individuals are responsible for ensuring the mid-term and final evaluations are completed and forwarded to the department. Any tech can assume this responsibility, and it is this person supervising the student rotation in that section that is appointed as clinical faculty.

Practical Examination

The practical examination format is found in the Medical Laboratory Technology Handbook.

Evaluation Reports

An evaluation of the student is to be filled out at the middle and end of the rotation in the clinical tracing systems, Trajecsys. The interim evaluation report is simplified to give the student a report on progress and to identify areas of difficulty (See sample interim evaluation report in the appendix.) The final evaluation report includes the technical and professional components. The technical and professional component is used to compute 30% of the student rotation grade. The report should be completed by the person in charge, although input should be sought from those having direct contact with the student.

Clinic Assignments

The program uses Brightspace quizzes, Clinical Chemistry module quizzes, computer instruction modules (Medialab, Medtrainings, and simulations) and clinical chemistry worksheets to ensure the student reviews the didactic material relevant to the rotation. The average of all clinic assignments constitutes 20% of the final clinic grade. The quizzes are given by the department. The student uses texts, notes, procedures, etc. as resources for the quizzes.

Written Examination

A written, comprehensive examination is given by the department on the last day of the rotation. The test is taken at the Allegany College of Maryland campus. It counts as 30% of the final grade. A student must make at least 65% on the written comprehensive final. If the student fails to achieve a 65%, the student will be permitted to take an alternative examination. If 65% is not achieved on the second examination, MLT faculty will meet to

decide if the student must repeat the rotation or do remediation and retake an alternate examination.

CLINICAL ROTATION
MEDICAL LABORATORY TECHNOLOGY 210
CLINICAL CHEMISTRY ROTATION OBJECTIVES

Clinical Performance Objectives in Chemistry
Upon completion of the Microbiology/Serology clinical rotation the MLT student is expected to be able to:

I. Safety

1. Always use appropriate personal protective equipment when working with patient samples.
2. Locate all fire extinguishers, eye wash stations and safety showers.
3. Locate Material Safety Data Sheets, chemicals carcinogens list, and hazardous chemicals list.
4. Handle and dispose of contaminated materials according to standard precautions.

II. Specimen Preparation

1. Comply with the standard operating procedure for specimen handling and distribution.
2. Accept only specimens that meet standard laboratory protocol.
3. Describe corrective measures for samples that are lipemic, icteric or contain paraproteins.
4. Describe corrective measures for samples that are rejected due to quantity not sufficient, hemolyzed, improper patient identification, improper tube collected, or a sample with a value over the linearity.
5. Perform or observe the specimen processing necessary to load an automated chemistry analyzer.

III. Quality Control, Quality Assurance, Regulatory Issues

1. Evaluate quality control results according to criteria established for each test.
2. Describe the various periodic (daily, weekly) maintenance routines for each piece of equipment used during clinical rotations.
3. Observe basic computer applications where relevant.
4. Document instrument maintenance and quality control.
5. Organize patient workload and manage time to complete task assignments in specific time allowed.
6. Report critical and discrepant results to clinical instructor/supervisor.
7. Follow the confidentiality policy of the facility during testing procedures and reporting according to HIPAA guidelines.
8. Describe the process used to implement a new lot number of control material.

9. Accurately and legibly log in and always maintain required records.
10. Pipette accurately.
11. Reconstitute control sera and standards with accuracy and reliability without direct supervision.
12. Perform quality assurance procedures for each test analysis and consistently maintain required documentation.
13. Evaluate quality control data, recognize out-of-control data and perform troubleshooting measures according to laboratory policies for all laboratory procedures.
14. Apply Westgard rules to quality control decisions, recognize out-of-control situations, and perform actions outlined in the SOP when these situations occur.
15. Determine and implement the course of action to be taken when delta checks are not correlated.
16. Recognize test results that need to be checked by repeat testing and those that are beyond the limits of linearity and perform procedures as defined by SOP when these occur.

IV. Routine Daily Activities

1. Perform clerical work including test logs, recording and reporting laboratory results with 95% accuracy.
2. Properly prepare reagents, calibrators, standards and controls for daily use
    a. Recognize acceptability: expiration date, labeling, appearance, contamination
    b. Select correct pipette and use correctly
3. Observe daily calibration and maintenance checks on chemistry instruments.
4. Operate automated and semi-automated analyzers utilizing appropriate quality control and obtaining reportable results.
    a. Assemble reagents, standards, calibrators and controls
    b. Prepare instrument for use
    c. Verify that the instrument is operating properly.
5. Prepare specimens for use in chemistry procedures, evaluating suitability for tests ordered:
    a. Separating serum and cells in an appropriate manner.
    b. Completely and accurately labeling transfer tubes prior to placing sample in the tube.
    c. Assessing adequacy of sample for tests ordered.
    d. Determine the effects of hemolysis, lipemia and icterus on results.
6. Recognize and act upon out-of-control results according to established laboratory protocol.
7. Prioritize samples based on urgency of test requests.
8. Identify abnormal, out of range and critical values and take appropriate action.
9. Prepare specimens for shipment to reference laboratories.
10. Perform chemistry procedures including daily start-up, calibration and quality control procedures.

a. Correctly follow written procedure.
b. Determine concentration of unknown samples and controls.
c. Maintaining controls with +/-2 standard deviations.

11. Describe the clinical significance, interfering substances and specimen requirements for routine clinical chemistry tests.

V. Reference Ranges and Clinical Significance

1. Recognize reference ranges, therapeutic ranges, and critical values and always perform procedures that are required by the SOP when these occur.
2. Differentiating normal from abnormal chemistry results in correlating abnormal values and associated disease states.
3. List the tests which comprise the following:
   a. Complete Metabolic Panel (CMP)
   b. Basic Metabolic Panel
   c. Renal Function
   d. Liver
   e. Cardiac

VI. Analytical Principle

1. Observe the sample path or flow in 2 instruments.
2. Discuss the theoretical principles for each analytical methodology.
3. Recognize common malfunctions of the instruments.
4. Recognize interfering substances for each procedure performed.
5. Describe the effect of interfering substances for each procedure performed.
6. Define the principles of the following methodologies:
   a. End-point spectrophotometry
   b. Kinetic spectrophotometry
   c. Ion-selective electrodes
   d. Osmometry
   e. Electrophoresis
   f. Chemiluminescence
   g. Immunoassay
   h. Fluorescent polarization
   i. Immunofixation
   j. Nephelometry
7. Classify clinical chemistry assays to their methodologies. (some assays are listed on the procedure checklist page)
8. Perform end-point chemistry analysis accurately on patient specimens using the automated chemistry analyzer.
9. Identify factors affecting enzymes kinetics.
10. Discuss special sample preparation and handling for tests such as ammonia and lactate.
11. Perform analysis of patient specimens by the ion-selective electrode and analyzer.
12. Perform or verify calibration or standardization of electrochemical method.

13. Recognize electrochemistry instrument problems and warnings and perform procedures to correct these problems.
14. Following instructor demonstration and using the electrochemistry instrument manual and maintenance manual, perform, with minimal supervision, maintenance and troubleshooting procedures assigned by the instructor.
15. Perform analysis of patient specimens by automated immunoassay analyzer.
16. Perform or verify calibration or standardization of immunoassay method.
17. Recognize instrument problems and warnings and perform procedures to correct problems on immunoassay analyzers.
18. Following instructor demonstration and using the immunoassay instrument manual and maintenance manual, perform, with minimal supervision, maintenance and troubleshooting procedures assigned by the instructor
19. State the principle of serum protein electrophoresis (SPE), the measurement of separated fractions, and procedures of identifying the five major protein fractions in the order in which they migrate on the electrophoresed agarose gel.
20. State the principle of densitometric quantitation of separated electrophoresis fractions.
21. Discuss/observe steps needed to prepare CSF and urine samples as well as other adaptations needed for protein electrophoresis of body fluids.
22. Correlate electrophoretic patterns of protein with disease states.
23. State the principle of the analysis of patient urine and serum specimens by osmometry.
24. Describe the calibration or standardization of the osmometry instrument.

VII. Clinical Chemistry Calculations

1. Perform clinical chemistry calculations to include:
    a. Specimen Dilations
    b. Morality
    c. Normality
    d. Anion Gap
    e. Creatinine Clearance
    f. LDL
    g. % Solution
    h. Serial Dilutions
    i. Converting Metric Units

VIII. Urinalysis: Clinical Setting

Upon completion of the clinical training session the student is expected to be able to:

1. Use the automated dipstick analyzer or yellow IRIS for the chemical and or microscopic urinalysis
2. Perform a routine urinalysis
3. Recognize incorrect dipstick readings
4. Perform a urinalysis microscopic examination
5. Identify cellular and formed elements in urinary sediment

6. Correlate disease states which relate to abnormal chemical or physical property results, and microscopic results
7. Recognize discrepancies in the dipstick and microscopic results
8. Understand how pH, handling of the specimen, and specific gravity, drugs (etc.) will affect urinalysis results.

The procedures which will be performed during the clinical chemistry rotation are as follows:

Chem panels _____

Drugs _____

Troponin _____

CK-MB _____

Protein Electrophoresis and Immunoelectrophoresis _____

Hormones _____

Osmolality _____

Urinalysis _____

Tumor Markers _____

Fertility Studies _____

Hemoglobin A1C _____

Glucose Tolerance Test _____

Anemia Tests _____

B_{12}/Folate _____
Iron/Ferritin _____

Specimen preparation _____

Reagent preparation _____

Lab calculations review _____

Quality control review _____

Final will include digital image test of CAP and urinalysis slides and performance of complete urinalysis.

EVALUATION AND REQUIREMENTS FOR CLINICAL CHEMISTRY

a. Achievement of the goals and objectives in chemistry will be measured by the following:

(1) Daily observation of student performance by staff technologists, technicians, and supervisor for mastery of objectives.

(2) Satisfactory completion of assigned computer training modules (medialab, medtraining, and simulators) for chemistry.

(3) Completion of supplemental urinalysis and chemistry questions.

(4) Achievement of satisfactory practical performance of chemistry and urinalysis procedures evaluated by supervisory clinical personnel.

(5) Completion of 30 Urinalysis Case Simulations.

(7) Urinalysis practical - satisfactory performance.
5 complete urinalyses in 1 hour
25 laser disc image identification
10 Urine Case Simulations

(8) A written comprehensive clinical chemistry examination given by the Medical Laboratory Technology Department.

(9) A student who fails to achieve a 70% overall in any clinical rotation area must reapply to retake the specific clinical area in which an unsatisfactory grade has been obtained. Refer to Medical Laboratory Technology readmission policy. The student may proceed with their assigned clinical rotation schedule and need only reapply to repeat the deficient area.

b. Students will receive an interim evaluation at the middle of the rotation. This progress report will be completed by the clinical supervisor. Any Deficiencies will be brought to the attention of ACM faculty and be addressed by the student with the support of ACM faculty and the clinical supervisor.

Digital Images and Laser Disc Images can be utilized throughout the rotation at the Allegany College of Maryland Campus.

MediaLab Urinalysis Case Simulation: This is a great resource for practicing urinalysis – including microscopic evaluation! You will perform all 30 Urinalysis Case Simulations then compare your results with the experts. Ten simulation sessions will be included as part of the urinalysis practical.

1. 30 urinalysis case simulations on Medialabinc.net will be assigned at the beginning of the rotation to be completed prior to the practical.

2. You will complete all 30 case simulations prior to the final rotation day, comparing results with the expert analysis while listening to the expert interpretation of the case. Watch the introductory video under the "Tutorial" tab when you open the first case.

3. The first 20 must be completed as practice and the last 10 (20-30) will be graded as part of the urinalysis practical.

INDICATORS OF ACHIEVEMENT

Students must achieve an overall 70% to pass the rotation. Achievement of 70% will be awarded in the following manner:

30% Technical and Professional Performance
Filled out by the supervisor in charge of the student's chemistry rotation.

20% Clinical Assignments
Average of quizzes, worksheets, and assigned computer modules and or simulations.

30% Written Final Examination
Comprehensive exam given by the ACM Medical laboratory department. A student must make at least 65% on the written comprehensive final. If 65% is not achieved, the student must take an alternative examination. If 65% is not achieved on a second exam, the student will be required to do remediation or to repeat the entire clinical rotation as determined by the MLT Program Director in consultation with program and clinical faculty.

20% Practical Examination
- Five complete urinalyses performed in one hour (see format for practical which follows)
- 25 laser disc urine microscopic images to identify
- 10 Urine Case Simulator Sessions

** A total of 70% must be achieved on each part of the practical. If a 70% is not achieved, the student will be able to repeat the practical one time. Failure to achieve a 70% on a 2nd practical will result in failure of the clinical chemistry rotation.

MEDICAL LABORATORY TECHNOLOGY 210
CLINICAL CHEMISTRY
URINALYSIS PRACTICAL

THE URINALYSIS PRACTICAL WILL CONSIST OF THREE PARTS:

a) 5 complete urinalysis determinations (20 points each) completed in 1 hour
b) 25 digital images of urinalysis sediment (25 points)
c) 10 Urinalysis Case Simulator Sessions (Medialab.com)

PART A - 5 COMPLETE URINALYSIS DETERMINATIONS:

1. Students in the chemistry rotation will practice complete urinalysis determinations for 1 1/2 hours.

2. Five patient urines will be provided for each student.

3. Students will do a complete urinalysis to consist of:
   a) clarity, color
   b) chemical determinations
   c) specific gravity
   d) low power/high power microscopic examination of each urine.

4. Students will have one hour to complete this portion of the UA practical.

5. Part A will be worth a total of 100 points (each urine will be worth 20 points).

6. A minimum total average of 70% must be achieved on both parts of the urinalysis practical. If a 70% is not achieved, the student will be able to repeat the practical one time. Failure to achieve a 70% on a 2nd practical will result in failure of the clinical chemistry rotation.

7. Each urine will be graded using the following format:

Criteria	100%	70%	50%	0
dipstick interpretation 4 points	Timing correct Reactions correct	Timing good 1 result incorrect	2 results interpreted incorrectly	More than 2 results incorrectly interpreted
Color/lucidity 1 point	Correct results agree with technologist	Results acceptable did not agree with technologist	Interpretation of 1 result incorrect	Interpretation of both results incorrect
Lpf 5 point	Correct results	1 minor result missed	1 major result missed	> 1 major and 1 = minor result missed
Hpf 10 points	Correct results	1 minor result missed	1 major result missed	> 1 major and 1 = minor result missed

This practical is timed. Each student is given five urines. Dipstick, color/lucidity and microscopic must be completed in 60 minutes.

PART B - LASER DISC SLIDES:

1. Students will review digital microscopic urine elements images throughout the urinalysis rotation as part of the Chemistry rotation.

2. Mosby Laser disc slides are available at Allegany College of Maryland in Room

   AH251 for student review. These slides are on Laser disc entitled Urinary Sediment by Paul Ward. In addition, the student has access to digital images through the Medtraining.org and Medialabinc.net subscriptions as well as the BrightSpace course site.

3. Twenty-five digital sediment images will make up the UA practical. Each student is given 25 digital images of urine sediment to identify. These digital images are taken from a laser disc atlas having 2080 total images. Grading consists of a total point score with 25 correct equal to 100%. Each number correct is divided by total possible for a score.

4. The total point count for this portion of the practical is 25 points (1 point each).

   A minimum of 70% is required on the combined urinalysis practical, image identification and case simulations. The practical may be repeated one time to achieve a 70%. If the student does not achieve 70% on the second try, a committee will meet to decide if the student must do remediation or repeat the rotation.
   Note: a maximum score that can be achieved on the repeat practical will be 80%.

PART C – URINE CASE SIMULATULIONS:

1. MediaLab Urinalysis Case Simulation**:** This is a great resource for practicing urinalysis – including microscopic evaluation! You will perform all 30 Urinalysis Case Simulations then compare your results with the experts. Ten simulation sessions will be included as part of the urinalysis practical.

2. 30 urinalysis case simulations on Medialabinc.net will be assigned at the beginning of the rotation to be completed prior to the practical.

3. You will complete all 30 case simulations prior to the final rotation day, comparing results with the expert analysis while listening to the expert interpretation of the case.
   Watch the introductory video under the “Tutorial” tab when you open the first case.

4. The first 20 must be completed as practice and the last 10 (21-30) will be graded as part of the urinalysis practical and using the same format as above.

MICROBIOLOGY CLINICAL PRACTICE OVERVIEW

MICROBIOLOGY CLINICAL PRACTICE OVERVIEW

The Microbiology/Serology rotation is 4 weeks in duration for 4 days a week. Each Monday, the student(s) report to AH 251 on the ACM campus as part of the rotation. The focus of instruction these days will be to bring theory to practice by bridging classroom study and activities to how this knowledge and skills are deployed in the clinical hematology/coagulation laboratory. The focus of the 4 Monday sessions will be as follows:

Week	Day/Time	Location/Activity	Responsible Person
1	Monday 8:30 am	**<u>Week 1-Campus Clinic Day 1 Schedule and Weekly Assignments</u>** Pre-Clinic Assignments **Complete CDC Lab Training Modules** (must save the certificate as a pdf or print and give to instructor the first day of microbiology rotation) 1. Core Microbiology Skills 2. Basic Culture Media 3. Biochemicals and Gram-Negative Organism ID 4. Biochemicals and Gram-Positive Organism ID **Brightspace Videos Quizzes** 1. Plate Streaking Videos / Quiz 2. Gram Staining / Quiz 3. Throat Culture / Quiz **Medtraining** 1. Gram Stain Training and Competency On-Campus Session 1 Workload 1. Gram Staining 2. Quality Control 3. Plate Streaking 4. Media Exercise 5. Bench Tests 6. Medialab Bacteriology Case Simulations (1,4,8,10,12,13,21,22,27,28,31,33,37) **Week 1 Homework-due Monday of Week 2**	ACM Faculty

		Medialab 1. Medically Important Aerobic Actinomycetes 2. Clostridium difficile Infection (CDI): Overview, Laboratory Tests and Updated Guidelines 3. Microbial Identification Using MALDI-TOF MS 4. PCR Fundamentals: Focus on Multiplex PCR Assay and the Advantages over Singleplex Assays Simulations: Bacteriology 12 Remaining Sessions of your choice **Worksheets** 1. Bench Test QC Organisms 2. Microbiology Media Assignment 2 Exam Simulator Sessions – Select the Microbiology/Immunology area for the type of test and then select 100 questions for each review. **Brightspace Quiz** 1. Gram Positive Quiz 2. Gram Negative Quiz	
Time TBA	Clinical sites Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	Clinical Affiliate
2	Monday 8:30 am	**<u>Week 2-Campus Clinic Day 2 Schedule and Weekly Assignments</u>** Pre-Clinic Assignments: Complete Week 1 Homework listed above On-Campus Session 2 Workload 1. Culture Work up (throat/urine) 2. Automation-Biochemical Test/MALDI-TOF 3. Case Studies 4. Review Bench Test QC Organisms 5. Review Microbiology Media Assignment **Week 2 Homework-Due Monday of Week 3**	ACM Faculty

		Medialab 1. Drug-Resistant Superbugs, Multi-drug Resistant Organisms: MRSA, VRE, *Clostridium difficile*, and CRE 2. Arthropods in the Clinical Lab 3. Case Studies in Clinical Microbiology 4. Latent Mycobacterim tuberculosis Infection and Laboraoty Test Methods 5. Corynebacterium and their Importance in Infections **Medtrainings** 1. Vaginal Wet Prep 2. Microbiology (Competency Training) Medialab Bacteriology Simulations (12 of the remaining your choice) 2 Exam Simulator Sessions – Select the Microbiology/Immunology area for the type of test and then select 100 questions for each review.	
Time TBA	Clinical sites Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	Clinical Affiliate
3	Monday	**<u>Week 3 – Campus Clinic Day 3 Schedule and Weekly Assignments</u>** Pre-Clinic Assignments-Completed week 2 homework listed above On-Campus Session 3 Workload 1. Culture Workup (Wounds) 2. Case Studies **Week 3 Homework-due Monday of week 4** **Medialab** 1. Tickborne Diseases 2. Tracking Antibiotic-Resistant Tuberculosis 3. HIV: Structure, Replication, and Detection	8:30 am ACM Faculty

		4. Acute Viral Hepatitis Panel **5.** Human Papilloma Virus (HPV) and Molecular Testing for Cervical Cancer **Medtrainings** 1. Hepatitis and HIV Antibodies (Medtraining) Remaining 12 Bacteriology Simulations **Brightspace Quiz** 1. Serology Quiz 2 Exam Simulator Sessions – Select the Microbiology/Immunology area for the type of test and then select 100 questions for each review.	
Time TBA	Clinical sites Tuesday, Wednesday and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	Clinical Affiliate
4	Monday 8:30 am	**<u>Week 4 –Campus Clinic Day 4 Schedule and Weekly Assignments</u>** Pre-Clinic Assignments-Completed week 3 homework (see above) On-Campus Session 4 Workload 1. Culture Work-up Vaginal, Sputum, Mixed Urine) 2. Serology Review 3. Exam Review 4. Case Studies Complete prior to Clinic Exam **Medialab** 1. Malaria 2. Mosquito-Borne Viral Diseases 3. Respiratory Case Study: Possible Pertussis Infection 4. Unmasking Respiratory Viruses: The Basics of Respiratory Viral Infections 5. Zika Virus: Overview and Laboratory Testing 6. Microfilariae in Humans	ACM Faculty

		Medtraining: 1. Skin KOH 2. Pinworm Examination 2 Exam Simulator Sessions – Select the Microbiology/Immunology area for the type of test and then select 100 questions for each review.	
Time TBA	Clinical sites Tuesday, Wednesday and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section. ACM Written Exam	Clinical Affiliate

Day(s) of the rotation are designated as serology days. Students observe serological testing and then after observation the student can perform serological tests with direct supervision. (See daily schedule for types of serology testing to be performed - if available at the clinical site.) Students also spend days practicing the processing and plating microbiological specimens, observing the technologists reading culture plates, performing identification of organisms on practice cultures and unknown cultures, doing organism identification from blood cultures, and performing TB, fungal and parasitological identification as available at the clinical site. The student can work independently on practice and unknown cultures receiving help on both practice cultures and unknown cultures. The final practical unknown cultures are done independently and feedback is received on them when they are completed and turned in for grading. The last day is spent at the college taking a final written examination.

The student's Pass/Fail grade is calculated based on the following:
Competencies (Skills and Knowledge)

1. Evaluation
   (Technical and Professional Performance) 30%

2. Examinations, clinical assignments, and practicals derived in the following manner: 70%

   20% - Clinical Assignements : Average of Quiz, Worksheets and Computer Training Modules and simulations (Medialab, Medtraining)

   20% - Final Practical
   30% - Final Written Examination given by Medical Laboratory Technology Department

*A total of 49 Bacteriology Simulations will be graded for a total of 98 points averaged into the Clinical Assignment grade. Proper identification of genus and species 2 points, proper identification of genus only 1-point, incorrect identification 0 points.

CLINICAL SITE RESPONSIBILITIES

Student Workload

The students in the Microbiology area perform plating of specimens, serological testing, and work-up of cultures that have been completed by the technicians in the microbiology area. Practice or unknown specimens simulated by microbiology technologists or Allegany College of Maryland clinical instructors are also given to the students. Some time is spent observing the reading of plates with the technologists. After observation students can work on practice and unknown cultures independently, asking for help in obtaining pure cultures and how to report organism(s) identified. The students have had clinical microbiology and are expected to have knowledge in how to identify the most commonly observed organisms – Gram positive and negative cocci, Enterobacteriaceae, and the non-fermenters.

The number of rotation days is a minimal of twelve (12) days, but this requires efficiency of the days spent at the clinical site.

The student can work with any microbiology tech, there are no special degree requirements for training personnel.

1. Automation: The student should be able to make decisions such as:
    - What preliminary testing should be done to ID organism before automation
    - How to properly dilute sample for automation
    - Is the sample a pure culture?
    - Does the sample need to be repeated?
    - Does the ID and susceptibility testing check?
    - Do I need to run additional susceptibility testing?
2. Plating: The student should be able to make decisions such as:
    - Specimen plating requirements
    - Proper streaking techniques for isolated colonies
    - Proper handling of specimens received in micro department

3. Serology: The student should be able to make decisions such as:
    - QC required to report results
    - Results that need repeated
    - Does the sample meet criteria for test performance?
    - Which tests require send outs and how this is done

4. Reading plates: The student should be able to make decisions such as:
    - ID of different colonies on plates
    - What distinguishing microscopic features will aid in ID
    - How to get isolated colonies
    - What tests should be performed for initial ID
    - When to set up manual sensitivities
    - What QC must be performed
    - What QC organisms are used for which tests

- Are reagents within acceptable outdates and how to reconstitute them
- How to report colony counts on urines and quantitation of organisms from other sites
- Institutions criteria for sample rejection

5. TB: The student should be able to make decisions such as:
   - What are the growth requirements of different Mycobacteria?
   - How does color of organism help in ID?
   - What tests will differentiate the Mycobacteria?

6. Mycology: The student should be able to make decisions such as:
   - Is the colony a yeast?
   - Is Germ tube testing appropriate?
   - Is there special media or stains that will help in identification?
   - What distinguishing microscopic features will aid in ID?

7. Parasitology: The student should be able to make decisions such as:
   - What processing of the specimen is appropriate?
   - Which tests will be performed to identify the causative organism
   - Which tests require send outs and how this is done

Supervising Tech

Daily Workload

The supervising tech for the day can be a Medical Laboratory Technologist or Medical Laboratory Technician. The student is responsible for being prepared and motivated for the day's activities. The supervising tech should direct the learning. The supervising tech should have input into the student evaluation.

Clinical Supervisor

In each of our clinical affiliates, the laboratory section supervisor or manager is the contact person for the college. This person is responsible for assuring the mid-term and final evaluations are completed and forwarded to the department. Any tech can assume this responsibility, and it is this person supervising the student rotation in that section that is appointed as clinical faculty.

Practical Examination

The enclosed practical examination format explains the types of specimens given to students for their unknown graded practical. The practical examination is started at least one week prior to the final examination. Students in the microbiology rotation may need to spend additional time for identification of unknown cultures due to the fact that organisms take a certain amount of time to grow and react in the media. The student is made aware that extra time may be needed. The practical examination constitutes 20% of the final clinical average**.**

Evaluation Reports

An evaluation of the student is to be filled out at the middle and end of the rotation using the clinical tracking system, Trajecsys. The interim evaluation report is simplified to give the student a report on progress and to identify areas of difficulty (see interim evaluation report in the Handbook.) The final evaluation report includes the technical and professional components. The technical and professional components are used to compute 30% of the student rotation grade. The report should be completed by the person in charge, although, input may be sought from those having direct contact with the student. See example evaluations in the appendix.

Clinical Assignments

The program uses quizzes, worksheets, and computer modules to ensure the student adequately reviews the didactic material relevant to the rotation. The average of all clinical assignments constitutes 20% of the final clinic grade. The quizzes are given by the department or the clinical supervisor. The student uses texts, notes, procedures, etc. as resources for the quizzes.

Written Examination

A written, comprehensive examination is given by the department on the last day of the rotation. The test is taken at the Allegany College of Maryland campus. It counts as 30% of the final grade. A student must make at least a 65% on the written comprehensive final. If a 65% is not achieved, a committee will meet to decide if the student must repeat the rotation or do remediation and retake an alternate examination.

CLINICAL ROTATION
MEDICAL LABORATORY TECHNOLOGY 210
CLINICAL MICROBIOLOGY ROTATION OBJECTIVES

Computer Aided Instruction
-- Microbiology aids available as a resource using the following computer aided instruction:

1) Anaerobe Educator
2) LWW's Organism Central
3) Making Sense of Microbiology for the Generalist – CACMLE
4) Microbiology – Wheel of Bacteriology – MediaLab, Inc.
5) Microbiology Mystery Theater – CACMLE
6) Miscellaneous Fastidious Gram Negative Bacilli – CACMLE
7) Antimicrobial Susceptibility Testing - CDC

-- Understand organism identification using problem solving in "Germware" CD-ROM.

-- Do assigned computer training including Medtraining and Medialab and Bacteriology Simulator.

-- Quizzes on BrightSpace:
1) Serology quiz
2) Gram positive quiz
3) Gram negative quiz

-- Other quizzes may be assigned as necessary by Clinical Faculty

Clinical Performance Objectives in Microbiology and Serology
Upon completion of the Microbiology/Serology clinical rotation the MLT student is expected to be able to:

I. SEROLOGY

1. Define the terms immunology, antigen, and antibody.
2. Explain the function of the immune system.
3. Describe the first line of defense, natural immunity, and adaptive immunity as body defense systems against microbial diseases.
4. Describe the principles of immunologic-serologic testing, including written procedural protocol, accuracy in testing and blood specimen preparation including the advantages/disadvantages of the procedures.
5. Perform, document, interpret, and explain serologic procedures to include, but not limited to, rapid Streptococcus kits, cold agglutinins, serologic test for syphilis (STS), Infectious mono, rotavirus, HIV, Hepatitis B, Hepatitis A, Hepatitis C, rubella, H. pylori, CMV, Influenza A & B, Varicella Antibody, Clostridium difficile, Anti-Nuclear Antibody (ANA)

6. Perform and report results of quality control explaining the rationale for performing the various types of QC.

II. MICROBIOLOGY

A. SPECIMEN PROCESSING

1. Apply the established procedures for obtaining or receiving specimens, including examination of requisitions and logging in of specimens if appropriate.
2. Differentiate between appropriate specimens for processing and those that should be rejected, including reason for the choice.
3. Identify and integrate reasons for choice of the appropriate media, atmospheric conditions, temperature, and length of incubation for culturing various types of specimens.
4. Explain and demonstrate the proper sterile and inoculation techniques for isolation of microorganisms.
5. Compare media selected for the cultures, whether standard, enriched, differential, or selective and identify what the medium contains and why it is used.
6. Demonstrate and explain standard precautions in handling bio-hazardous materials in the microbiology lab.
7. Review hazards that may be encountered and prevented in the microbiology lab.
8. Choose appropriate specimens for anaerobic cultures.
9. Evaluate correct methods for culture and transport of anaerobic specimens.
10. Evaluate correct collection and handling of samples for virology cultures/testing, if applicable.

B. QUALITY CONTROL AND QUALITY ASSURANCE

1. Perform and report results of quality control explaining the rationale for performing the various types of QC.
2. Use CLSI guidelines for quality control in microbiology to determine compliance.
3. Detect instrument malfunctions.

C. TESTING CONCEPTS AND PROCEDURES

1. Perform, document, interpret and describe staining procedures used in a microbiology laboratory.
2. Interpret and compare results of direct gram stain procedures, including cellular and bacterial morphology, and blood culture stains.
3. Interpret and evaluate results of sputum screens for culture, including the purpose of these screens.
4. Evaluate methods that may be used to isolate organisms in multiple organism cultures to obtain pure cultures.
5. Evaluate aerobic cultures and determine what constitutes normal flora and potential pathogens from various sources and types of specimens.
6. Perform and evaluate methods of colony counts and identification procedures on urine cultures and explain the significance of results obtained.

7. Perform, document, interpret and describe identification of gram negative organisms.
8. Perform, document, interpret and describe identification of gram positive organisms.
9. Explain the importance of reporting the isolation and identification of clinically significant organisms to the proper professional(s).
10. Evaluate the appearance of colonies growing anaerobically on media used for primary isolation of anaerobes and select appropriate identification testing.
11. Compare and contrast methods used for the identification of anaerobes.
12. Identify anaerobes that are considered endogenous and/or pathogenic by body site.
13. Describe appropriate identification techniques for *Clostridium difficile.*
14. Cite media and techniques used to grow and identify acid fast bacilli.
15. Perform specimen work upon practice unknown cultures from various body site.
16. Given a laboratory situation requiring screening tests, select the appropriate test to be performed.

D. BLOOD CULTURES

1. Explain the principles of the blood cultures instrument.
2. Describe how a positive blood culture is handled for rapid identification of the cause of the organism.
3. State proper blood culturing collection.

E. ANTIMICROBIAL SUSCEPTIBILITY

1. Use CLSI guidelines on susceptibility testing to ensure compliance.
2. Compare and contrast disk diffusion, MIC, and MBC methods for susceptibility testing, where applicable.
3. Select the appropriate method for susceptibility testing considering the type and origin of the organism.
4. Observe, perform, and evaluate results of automated methods for susceptibility testing.
5. Evaluate causes of development of antibiotic resistance.
6. Evaluate mechanisms of antibiotic action on the bacteria.
7. Evaluate antibiotic susceptibility and appropriate reporting of susceptibility testing for infections caused by specific types of organisms.

F. Reference Laboratory Send-Out

1. Using reference laboratory procedure manuals, process specimens for transport, where applicable.

OPTIONAL PROCEDURES (as available at the clinical site)

G. MYCOBACTERIOLOGY

1. Describe the principle of and perform the concentration-digestion and decontamination methods for acid-fast organisms.

2. Choose appropriate media, incubation conditions, and length of time for growth of the commonly occurring mycobacteria.
3. Compare and contrast acid-fast (such as Kinyoun) and fluorescent staining techniques.
4. Perform and interpret acid-fast and/or fluorescent staining for Mycobacteria.
5. Compare grouping of Mycobacteria other than tuberculosis (MOTT) and tuberculosis to determine relationships.

H. PARASITOLOGY

1. State the principle of the formalin/ethyl acetate concentration method for specimen processing and explain the sources of error and limitations.
2. Describe a proper collection technique for pinworms to optimize recovery of the organism.
3. Perform a concentration procedure to prepare a specimen for ova and parasite examination.
4. Prepare and examine wet preps for Ova and Parasites.
5. Prepare and examine smears for blood and tissue parasites.
6. Prepare and examine special stains for Cryptosporidium and Cyclospora.
7. Compare and contrast staining procedures for malaria and other parasites found in blood or body fluids.

I. MYCOLOGY

1. Identify fungi in slide culture, wet preps, LPCB preparations, or from pictures, slides or other representations.
2. Compare and contrast commercial yeast identification methods.
3. Identify and state the principle of basic tests used to identify fungi and yeasts.

J. VIROLOGY

1. Apply established procedures for obtaining or receiving specimens, including examination of requisitions and logging in of specimens.
2. Differentiate between appropriate specimens for processing and those that should be rejected, including reason for the choice.
3. Identify and integrate reasons for choice of the appropriate media, atmospheric conditions, temperature, and length of incubation for culturing various types of specimens.
4. Compare and contrast principles of basic, standard procedures for identification of common viruses.
5. Evaluate cytopathic effects caused by different viruses.

The student will learn operation and in some cases trouble shooting of equipment in a microbiological laboratory.

The equipment that will be used includes:

Automated microbiology organism ID instrument _____

Light microscope _____

37°C incubator _____

Fluorescent microscope (where appropriate) _____

CO_2 incubator _____

Centrifuge _____

Anaerobe system _____

Camplylobactor (bags) _____

Biological safety cabinet _____

Blood culture system _____

Serology analyzers/tests _____

The procedures which will be performed or observed include the following:

<u>Microbiology Procedures</u>

Plating _____

Isolation of pure cultures _____

Gram stain _____

Differentiating Tests:

a) Catalase _____

b) Oxidase _____

c) Hippurate _____

d) Indole _____

e) PYR _____

f) Esculin _____

g) Coagulase & Staphylococcus ID _____

h) Streptococci grouping (Beta Strep) _____

g) Bile Solubility for Pneumococcus _____

Grouping and typing of bacteria _____

Blood cultures _____

Salmonella typing sera _____

Shigella typing _____

A/P and other discs ID _____

X/V *Haemophilus* _____

Haemophilus/Neisseria ID _____

Automated identification instrument _____

Compact rapid identification system such as API or Crystal _____

Kirby Bauer _____

Beta-lactamase Test (CEFINASE) _____

Antimicrobial susceptibility _____

Acid fast stains _____

Fluorescent Stain for Mycobacteria _____

Candida albicans screen test _____

India ink _____

Recording and reporting _____

Quality control _____

Chlamydia testing _____

Serology Procedures

Serological identification of microorganisms _____

Mononucleosis test _____

Streptococcal testing _____

Influenza test _____
Rotavirus _____

RSV (Respiratory Syncytial Virus) _____

Rubella _____

HIV Testing _____

Hepatitis Testing _____

Viral send-outs _____

Serological test for syphilis - RPR
Qualitative and Quantitative _____

Clostridium difficile Toxin - EIA _____

Rheumatoid factors _____

ANA _____

FTA (Send Out) _____

EVALUATION AND REQUIREMENTS FOR CLINICAL MICROBIOLOGY/SEROLOGY

Achievement of goals and objectives in Microbiology/Serology will be measured by the following:

(1) Daily observation of the student performance by staff technologists, technicians and supervisors for mastery of the objectives and satisfactory practice unknown identification.

(2) Practical performance – measured by daily observation of student by supervisor and satisfactory completion of a practical examination consisting of identification of organisms in three clinical specimens. (Instructions in Handbook)

(3) Satisfactory evaluation by supervisor on clinical practicum report.

(4) Completion of supplemental microbiology and serology brightspace quizzes, worksheets, and computer modules and simulators.

(5) A written comprehensive Clinical Microbiology examination given by the Medical Laboratory Technology Department.

INDICATORS OF ACHIEVEMENT

Students must achieve an overall 70% to pass the rotation. Achievement of 70% will be awarded in the following manner:

30% ***Technical Performance Evaluation*** filled out by the supervisor in charge of the student's chemistry rotation.

20% ***Clinical Assignments*** – quizzes, worksheets, and computer modules (Medialab, Medtrainings, and simulations) which are graded, open-book exercises.

30% ***Written Final Comprehensive Examination*** - A student must make a minimum of 65% on the written comprehensive final. If a 65% is not achieved, the student must take a 2nd examination. If 65% is not achieved on a second exam, a committee will meet to decide if the student must repeat the rotation or do remediation.

20% ***Practical Examination*** – Students will receive three (3) clinical specimens for culture-workup (see format for practical)

Written Required Exercises:

The Medical Laboratory Technology department will give three graded BrightSpace quizzes. These quizzes will be open book. Modules and simulations from Medtraining and Medialab will be incorporated in the 20% Clinic Assignments grade.

MEDICAL LABORATORY TECHNOLOGY 210
CLINICAL MICROBIOLOGY
PRACTICAL EXAMINATION FORMAT

Each student will receive (3) clinical specimens for culture workup. Culture #1 – Urine*; Culture #2 – Sputum, BAL, Throat*; Culture #3 – Wound, vaginal, or stool*. The cultures will be plated or in broth.

The student will transfer the culture to media appropriate for the collection site, and be responsible for growing the culture under the appropriate atmospheric requirements.

After organisms have grown, the student will isolate each organism, identify the cultural isolates, and report the identification and reportable antibiotic regimen on the report form provided.

All automated results, procedural steps, additional testing must be shown on the report form.

The students will have **4-5 days** (from initial isolation) in which to identify their cultural unknowns.

These results will be given to the program instructor for grading. The grade will be derived in the following manner:

*Mixed cultures with normal flora plus pathogens from these sites.

MICROBIOLOGY UNKNOWN/MIXED SPECIMEN CULTURES
MEDICAL LABORATORY TECHNOLOGY 210

Name: _____Course:_____Date:_____

Criteria	100% of points	75% of points	50% of points	0% of points
Correct Media	All Media Correctly Chosen	1 Media Incorrect	2 media incorrect	> 2 Media Incorrect
Streaking technique	Good technique: Isolated colonial growth	Adequate technique: 3rd streak colonies not completely isolated	1 plate not streaked correctly	Technique incorrect
Gram Stain Interpretation	Gram Stain reactions and morphology correct	Either Gram reaction or morphology incorrect: corrected	Gram stain morphology incorrect, was not corrected	Gram Stain not performed
Preliminary Tests (spot or kit)	All appropriate tests were performed	1 test was not performed or should not have been performed	2 tests not performed correctly	Wrong tests performed
Interpretation of preliminary tests	All tests interpreted correctly	Interpretation of 1 test incorrect	Interpretation of 2 tests incorrect	Interpretation of more than 2 tests incorrect
Vitek Microscan or Phoenix	Inoculated correctly	Not inoculated correctly but test rerun	Not inoculated correctly, rerun more than 1 time	Not inoculated correctly did not rerun
Vitek Microscan or Phoenix interpretation	Interpreted correctly; ID 85% or greater	ID less 85%; Ran back-up test	ID less 85%; did not run back up	Interpreted incorrectly; Did not run back-up test
Sensitivity	Interpreted correctly; Appropriate antibiotics	Interpreted correctly but did not need to run antibiotics	Incorrect interpretation; repeated work	Incorrect interpretation and use of antibiotic battery
Quantitation of organism	Quantitation correct	Quantitation of 1 organism incorrect	Quantitation of 2 organisms incorrect	Quantitation of more than 2 organisms incorrect; organisms were not correctly identified
Correct ID	Organism was correctly identified	Organism was not identified after 1st try; has to repeat	Organism was not identified after 2nd try; has to repeat	Organism not correctly identified

There may be more than one organism/culture. Criteria are applied for each organism.

Each section of the Microbiology Clinical Practical Rubric will be worth 10 points. Each organism in each culture will be graded separately using the Microbiology Rubric. A total maximum for all 3 cultures would be 300 points. If a culture has 2 unknown organisms, each unknown will be graded on a 100-point scale and the grades will be averaged (example urine unknown 1 = 90 points; unknown 2 = 80 points; total = 170; 170 divided by 2 = 85 points for culture.) A grade of at least 70% must be achieved to pass the practical. If a student receives a grade less than 70%, he/she may retake the practical one time. If the student fails to achieve a 70% on a second practical, the student must repeat the microbiology rotation.

HEMATOLOGY CLINICAL PRACTICE OVERVIEW

HEMATOLOGY
CLINICAL PRACTICE
OVERVIEW

The Hematology rotation is 4 weeks in duration for 4 days a week. Each Monday, the student(s) report to AH 251 on the ACM campus as part of the rotation. The focus of instruction these days will be to bring theory to practice by bridging classroom study and activities to how this knowledge and skills are deployed in the clinical hematology/coagulation laboratory.

The focus of the 4 Monday sessions and assignments will be as follows:

Week	Day/Time	Location/Activity	Responsible Person
1	Monday **WEEK 1 – Campus Clinic Day 1 Schedule and Weekly Assignment**	**ACM Campus AH251:** **Pre-session Assignments:** 1. Complete the CBC Worksheet 2. Complete Medialab: RBC Morphology 3. Complete Medialab: Describing a RBC Population Using RBC Indices **On-campus Session #1 Workload** 1. Go over automation Principles (Worksheet) 2. CBC Troubleshooting 3. Go over decision rules in a hematology workload 4. Anemia overview review 5. RBC slide morphology **Week 1 Homework – due Monday of Week 2** 7 Medialab Trainings: 1. Red Cell Disorders: Peripheral Blood Clues to Neoplastic Conditions 2. Erythrocyte Inclusions 3. Alpha Thalassemia 4. Beta Thalassemia 5. Hemoglobinopathies 6. Macrocytic Anemias 7. Microcytic Anemias 8. Authentic and Spurious Causes of Thrombocytopenia Medialab RBC Simulator sessions – complete 15 of the 25 cases. Complete a minimum of 2 Exam Simulator Sessions – Select the Hematology area for the type of test and then select 100 questions for each review.	8:30 am ACM Faculty, Stacey Rohrbaugh

	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	7:00 am Clinical Affiliate
2	Monday **<u>WEEK 2 – Campus Clinic Day 1 Schedule and Weekly Assignments</u>**	**ACM Campus AH251** Pre-session Assignments: Complete week 1 assignments prior to campus lab session. **On-campus Session #2 Workload** 1. Manual Testing: ESR, WBC and Platelet by hemacytometer, reticulocyte 2. WBC Differential and Platelet Estimate 3. Bacterial vs. Viral Infection 4. Acute vs Chronic Leukemia **Week 2 Homework – due Monday of Week 3** Medialab Trainings: 1. Case Studies in Hematology - Nonmalignant WBC Disorders Cell Disorders: Peripheral Blood Clues to Neoplastic Conditions 2. Variations in White Cell Morphology-Granulocytes 3. White Cell and Platelet Disorders: Peripheral Blood Clues to Nonneoplastic Conditions 4. Acute Leukemia with a Focus on WHO Classification 5. Chronic Myeloid Leukemia 6. Myeloproliferative Neoplasms 7. Myelodysplastic Syndromes 8. Bone Marrow Aspiration: Normal Hematopoiesis and Basic Interpretative Procedures Medialab Advanced WBC Simulator sessions – complete 6 of the 12 Advance WBC Simulator cases (1-6). Minimum of 2 Exam Simulator Sessions – Select the Hematology area for the type of test and then select 100 questions for each review. **Brightspace Quiz:** 1. Hematology Lab Math	8:30 am ACM Faculty
	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	7:00 am Clinical Affiliate

3	Monday **WEEK 3 – Campus Clinic Day 1 Schedule and Weekly Assignments**	**WEEK 3 – Campus Clinic Day 1 Schedule and Weekly Assignments** Pre-session Assignments: Complete week 2 assignments prior to campus lab session. **On-campus Session #3 Workload** 1. WBC Differentials 2. Coagulation Review **Week 3 Homework – due Monday of Week 4** Medialab modules: 1. Fundamentals of Hemostasis 2. Common Coagulopathies 3. Detecting and Evaluating Coagulation Inhibitors and Factor Deficiencies 4. New Oral Anticoagulants 5. Laboratory Evaluation of the Lupus Anticoagulant Medialab RBC Simulator sessions – complete final 10 cases (16-25). Medialab Advanced WBC Simulator sessions – complete the last 6 of the 12 Advance WBC Simulator cases (7-12). Minimum of 2 Exam Simulator Sessions – Select the Hematology area for the type of test and then select 100 questions for each review. **Brightspace Quizzes:** 1. Special Hematology 2. Coagulation	8:30 am ACM Faculty – Stacey Rohrbaugh
	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	7:00 am Clinical Affiliate
4	Monday **WEEK 4 – Campus Clinic Day 4 Schedule and Weekly Assignments**	**ACM Campus – AH251** **WEEK 4 – Campus Clinic Day 4 Schedule and Weekly Assignments** Pre-session Assignments: Complete week 3 assignments prior to campus lab session. On-campus Session #4 Workload - Fluids	8:30 am ACM Faculty

		1. Medialab Body Fluid Simulator sessions 16-30 2. Fluid Review **Week 4 Homework – due by the Written Clinical Examination** Medialabs 1. Introduction to Flow Cytometry 2. Cerebrospinal Fluid 3. Case Studies in Pediatric Hematology Medtraining 1. Lab Training Library a. Hematology b. Coagulation c. Cerebrospinal Fluid d. Seminal Fluid e. Serous Fluid f. Synovial Fluid 2. Competency Assessment: a. Coagulation b. Hematology c. CSF/Serous d. Semen Analysis Minimum of 2 Exam Simulator Sessions – Select the Hematology area for the type of test and then select 100 questions for each review. **Brightspace Quizzes:** 1. Body Fluids	
	Clinical Site Tuesday, Wednesday, and Thursday – ACM Written Exam	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	7:00 am Clinical Affiliate

The design of this curriculum model is to correlate, to the extent possible, the activities of each Monday with activities and procedures that the student is exposed to or performs each Tuesday, Wednesday, and Thursday while at the clinical site.

During this rotation, one day is dedicated to phlebotomy training in outpatient setting for students to complete their requirement of 15 successful venipunctures.

The student will complete practical competency examinations, quizzes and assignments, Medialab case simulators, Medialab's CE & Compliance modules, Medtraining's modules

during the rotation as well as a comprehensive written examination.
The student's pass/fail grade is calculated based on the following:

1. Evaluation
   (Technical and Professional Performance) 30%

2. Examinations, Clinic Assignments, and
   practicals derived in the following manner: 70%

   20% - Average of Quizzes, Worksheets and Computer Programs
   (Medialab, Medtraining and Simulations)
   20% - Final Practical
   30% - Final Written Examination given
   by Medical Laboratory Technology Department

CLINICAL SITE RESPONSIBILITIES

Student Workload

Students will be under the direct supervision of the hematology technicians and scientists assigned to the department for the day. The student performs tasks on patients with the supervision of the tech working with the student that day. The weekly/daily rotation schedule serves a guideline and individual experiences each day may vary by workload and situations. Students should actively seek opportunities to engage in learning opportunities that are present during their time in the hematology, coagulation and fluid analysis areas. The student should understand the control measures in place as well as observe/shadow as much as possible any unique and challenging events occurring in the department.

Often, the student performs differentials on slides that have been verified. This allows the student to compare their report to that of a tech. This is critical with abnormal differentials.

The campus days prepare the student for the hands-on experiences they encounter and reviews knowledge. The quizzes and computer tutorials assist the student in reviewing theoretical knowledge and morphology competency. The goal of the days which are spent in the clinical hematology lab is to gain competency in performing manual and automated procedures. During this time, students should focus on learning the skills necessary to complete/manage a hematology workload.

Procedures routinely included in student workload:

1. Automated CBC

   Student should be able to make decisions such as:
   - Does the sample need repeated?
   - Does the sample meet criteria for critical values and if so, how should those values be handled?
   - Does the hemoglobin and hematocrit match?
   - Are there any instrument or definitive flags?
   - Can the automated CBC differential be verified?
   - Will the CBC require a scan or a manual differential?

2. Manual Differential

3. Fluid Cell Counts (As available depending on workload)

4. Manual Reticulocyte Count

5. Automated Reticulocyte Count (Where available)

6. Erythrocyte Sedimentation Rate

7. PT and APTT

8. Fibrinogen levels

9. FDPs and/or D-Dimer

10. Special Tests as available (Tests such as osmotic fragility, sickle cell, etc.)

Supervising Tech

Daily Workload

The supervising tech for the day can be a Medical Laboratory Technologist or Medical Laboratory Technician. The student is responsible for being prepared and motivated for the day's activities. The supervising tech should direct the learning and oversee all work being done by the student. The supervising tech should have input into the student evaluation.

Clinical Supervisor

In each of our clinical affiliates, the laboratory section supervisor or manager is the contact person for the college along with the clinical liaison. These individuals are responsible for assuring the mid-term and final evaluations are completed and forwarded to the department. Any tech can assume this responsibility, and it is this person supervising the student rotation in that section that is appointed as clinical faculty.

Practical Examination

Part I
The automation practical examination format (to follow) explains the procedures by which student competency is assessed. This part of the practical is completed at the clinical site on Day 15. A grade is given on this part. The clinical competency part of the practical examination consists of running 10 patient CBC specimens with differentials and decisions applied as appropriate being performed, and 5 PT specimens, and coagulation controls run appropriately.

Part II
The student will complete the 12 Advanced WBC Differential Simulation cases and 25 RBC Morphology Simulation cases on Medialab.com. The 12 WBC case scores will be averaged together to comprise the simulation score and the RBC Morphology is a requirement for the practical.

The automation competency grade, the morphology portion and the simulation score are then averaged together to be the practical grade percentage. This grade makes up 20% of the final rotation grade. The student must achieve a 70% on the combined Hematology/Coagulation automation practical and the morphology practical, and the simulation practical.

Evaluation Reports

An evaluation of the student is to be filled out at the middle and end of the rotation in the clinical tracking system, Trajecsys. The interim evaluation report is simplified to give the student a report on progress, to identify areas of difficulty, and ways to address those difficulties.

The final evaluation report includes the technical and professional components. The final evaluation report is used to compute 30% of the student's rotation grade. The report should be completed by the person in charge, although input may be sought from those having direct contact with the student. See sample evaluations in the appendix.

Clinic Assignments

The program uses quizzes, worksheets, and computer modules and simulations to ensure the student reviews the didactic material relevant to the rotation. All the clinic assignments are averaged and constitute 20% of their Hematology final rotation grade. The quizzes are given by the department or the clinical supervisor. The student uses texts, notes, procedures, etc. as resources for the quizzes.

Written Examination

A final written, comprehensive examination is given by the department on the last day of the rotation. The test is taken at the Allegany College of Maryland campus. It counts as 30% of the final grade. A student must make at least 65% on the written comprehensive final. If a student fails to achieve 65%, the student will be allowed to take an alternate examination. If 65% is not achieved on the retake examination, MLT faculty will meet to decide if the student must repeat the rotation or do remediation and retake an alternate examination.

MEDICAL LABORATORY TECHNOLOGY 210
OBJECTIVES – HEMATOLOGY

Pre-Clinical Review Objectives

1. Review clinical procedures – ACM campus session I.

Upon completion of this review session the student is expected to be able to:
a. Describe the theory and application of automated cell counters
b. Describe histograms and scatterplots.
c. Describe the decisions made on an automated blood count result to include:
- Critical values
- Confirmation values
- Instrument flags and definitive flags
- Ordering a scan of the blood film or ordering a full manual differential.
- Other decisions such as clumped platelets, cold agglutinins, lipemia, etc
d. Relate RBC morphology to specific types of anemias.

2. Review clinical procedures - ACM campus laboratory session II.

Upon completion of this review session the student is expected to be able to:
a. Perform manual cell counts on whole blood for WBC, RBC, & platelets
b. Perform a reticulocyte count
c. Perform an erythrocyte sedimentation rate
d. Review WBC morphology (CAI)
e. Perform manual differentials with RBC morphology evaluation
f. Differentiate WBC morphology seen in bacterial and viral infections.
g. Describe the differences between acute and chronic leukemia.

3. Review WBC differentials—ACM campus laboratory session III.

Upon completion of this review session the student is expected to be able to:
a. Perform WBC differentials to include abnormal WBC, RBC and platelet conditions.
b. Report and quantitate abnormal morphology in the correct format using standardization criteria provided.
c. Review coagulation cascade, disorders, therapeutics and testing

4. Examination review —ACM campus laboratory session IV.

Upon completion of this review session the student is expected to be able to:
a. Review Case studies
b. Review hematologic disorders
c. Develop study strategies for the exam
d. Review body fluid cell analysis

General Hematology Clinical Rotation Objectives

Upon completion of the clinical training time, the student is expected to be able to:

1. Describe automated cell counter operation, maintenance and quality control.

2. Perform automated cell counts using the appropriate cell counting instrumentation.

3. Make decisions on automated CBC results and take appropriate follow-up steps when necessary

4. Perform proper quality control and adhere to quality assurance policies.

5. Perform differentials on appropriate specimens evaluating leukocytes and RBC morphology.

6. Perform several abnormal differentials on leukemia and anemia blood smears evaluating leukocytes and RBC morphology.

7. Organize and perform a supervised, typical hematology workload on patient samples from the daily workload.

8. Perform automated coagulation testing and appropriate daily instrument maintenance. (Performance of several normal and abnormal PT and APTT samples from the daily workload and quality control.)

9. Perform or observe, as available, osmotic fragility, Sickle cell testing, stain preparations bone marrow studies, and special coagulation procedures.

10. Demonstrate dependability and initiative during the rotation by being punctual, eager to learn, or help others when assistance is necessary.

11. Cooperate with fellow laboratory workers.

12. Show concern for patients and adhere to practices which reflect a concern for quality patient results.

13. Comply with safety standards established by the laboratory department.

Clinical Performance Objectives in Hematology

Upon completion of the Hematology clinical rotation, the MLT student will be able to:

I. Safety

1. Always use appropriate personal protective equipment when working with patient samples.
2. Locate all fire extinguishers, eye wash stations and safety showers.
3. Locate Material Safety Data Sheets, chemicals carcinogens list, and hazardous chemicals list.
4. Handle and dispose of contaminated materials according to standard precautions.

II. Specimen Preparation

1. Comply with the standard operating procedure for specimen handling and distribution.
2. Accept only specimens that meet standard laboratory protocol.
3. Describe corrective measures for samples that are lipemic, icteric or contain paraproteins.
4. Describe corrective measures for samples that are rejected due to quantity insufficient, wrong anticoagulant, cold agglutinin, clotted, hemolyzed, improper patient identification, improper tube collected, or a sample with a value over the linearity.

III. Quality Control, Quality Assurance, Regulatory Issues

1. Evaluate quality control results according to criteria established for each test.
2. Describe the various periodic (daily, weekly) maintenance routines for each piece of equipment used during clinical rotations.
3. Observe basic computer applications where relevant.
4. Document instrument maintenance and quality control.
5. Organize patient workload and manage time to complete task assignments in specific time allowed.
6. Report critical and discrepant results to clinical instructor/supervisor.
7. Follow the confidentiality policy of the facility during testing procedures and reporting according to HIPAA guidelines.
8. Describe the process used to implement a new lot number of control material.
9. Accurately and legibly log in and always maintain required records.
10. Pipette accurately always.
11. Reconstitute control sera and standards with accuracy and reliability without direct supervision.
12. Perform quality assurance procedures for each test analysis and consistently maintain required documentation.

13. Evaluate quality control data, recognize out-of-control data and perform troubleshooting measures according to laboratory policies for all laboratory procedures.
14. Apply Westgard rules to quality control decisions, recognize out-of-control situations, and perform actions outlined in the SOP when these situations occur.
15. Determine and implement the course of action to be taken when delta checks are not correlated.
16. Recognize test results that need to be checked by repeat testing and those that are beyond the limits of linearity and perform procedures as defined by SOP when these occur.

IV. Technical Procedure Objectives for Hematology

1. State the principle operation for each of the following determinations for the instrument utilized in the laboratory in which the student rotates.
    - Cell counts (white cell, red cell, platelets, and reticulocytes [where appropriate])
    - Cell identification
    - Hemoglobin
    - Hematocrit
    - Red cell indices
    - RDW
2. Operate automated hematology instrumentation with minimal supervision and within acceptable ranges.
3. Perform non-automated hematology testing with minimal supervision and within acceptable ranges.
4. Using the automated hematology analyzer, perform a minimum of 40 CBC's and differentials.
5. Recognize abnormal flags on automated instrumentation.
6. Recognize all critical values and/or discrepant results on CBC and differentials.
7. Report all critical values and/or discrepant results on CBC and differentials to the clinical instructor.
8. Identify the corrective actions necessary for abnormal automated results.
9. Differentiate between normal and abnormal scattergram (plot) patterns.
10. Identify normal (reference) values for the following routine assays:
    - WBC count and WBC subpopulations
    - RBC indices
    - RBC count
    - Platelet count
    - Hemoglobin
    - Sedimentation rate
    - Hematocrit
    - Reticulocyte count
11. Demonstrate proper technique in preparing peripheral smears for microscopic examination to the satisfaction of the clinical instructor.
12. Evaluate a minimum of 25 peripheral blood smears for acceptable cellular

distribution and staining to the satisfaction of the clinical instructor.
13. Perform a minimum of 25 peripheral smears with a combination of normal and abnormal results with 95% proficiency.
14. Perform a manual WBC count using the hemacytometer method and with 95% accuracy.
15. Identify abnormal red cell morphologies to include: microcytes, macrocytes, ovalocytes, spherocytes, target cells, sickle cells, schistocytes, burr cells, teardrops, acanthocytes, and rouleaux.
16. Grade abnormal red cell morphologies according to laboratory guidelines.
17. Identify qualitative white cell inclusions to include toxic granulation, toxic vacuolization, Döhle bodies, Auer rods.
18. Identify red cell inclusions to include Howell Jolly bodies, Pappenheimer bodies, basophilic stippling, siderotic granules, Heinz bodies.
19. Grade hypochromia and polychromasia according to laboratory guidelines.
20. Given a peripheral smear or digital image, identify the stages of immature white cells.
21. Given a peripheral smear or digital image, identify the stages of immature red blood cells.
22. Correct the WBC count for nucleated red blood cells according to laboratory guidelines.
23. Given a peripheral smear or digital image, recognize, but not speciate, malarial forms.
24. Recognize abnormal platelet morphology.
25. Perform or describe manual reticulocyte counts. If performed, the results should be within 20% of the technologist-recorded result.
26. Perform platelet estimate to correlate the slide and automate platelet counts.
27. Explain the principle of the ESR and factors which might interfere with accurate results.
28. Perform the ESR with minimum supervision and within acceptable ranges.
29. Describe or perform a sickle cell screen (solubility test).
30. Interpret a sickle screen according to laboratory guidelines.
31. Differentiate normal from abnormal hematology results.
32. Correlate abnormal hematology values with abnormal disease states.
33. Describe the role of the MCV and RDW in the classification of Anemia.
34. Differentiate the types of microcytic, macrocytic and normocytic anemias as to morphology, physiology and diagnostic tests.
35. Describe the use of cytochemistry for classification of acute leukemias.
36. Describe the use of flow cytometry in the classification of acute leukemias.
37. Compare and contrast the chronic and acute leukemias in terms of onset and major cell type.
38. Describe the myleoproliferative and myelodysplastic disorders with reference to WHO classification, and hematologic lab findings.

V. Technical Procedures for Body Fluids

1. Discuss the technique for preparation of body fluids for performance of cell counts and differentials
2. Perform/observe preparation of body fluids for performance of cell counts and differentials [where appropriate].

3. Recognize cells specific to each body fluid type to include:
    - Histiocytes
    - Mesothelial cells
    - Malignant cells
    - Macrophages with inclusions
    - Crystals
    - Bacteria
    - Yeast
4. Describe special stains that may be performed on body fluids to detect cells and inclusions that re indicative of certain disease states.
5. Perform cell counts with 95% accuracy and differentials within 20% of the predetermined values on body fluids [where appropriate].

VI. Technical Procedures for Coagulation

1. Perform a minimum of 10 Prothrombin times and Partial thromboplastin times.
2. Explain the principles of the following procedures and the reagents used:
    - PT
    - PTT
    - Thrombin time
    - Quantitative fibrinogen
    - FDP
    - D-dimer
3. Describe or perform:
    - quantitative fibrinogen
    - thrombin time
    - FDP
    - D-dimer matching technologist results
    - describe the laboratory testing used to monitor anticoagulant therapy
4. Describe possible pathologic complications of anticoagulant therapy.
5. Describe the intrinsic and extrinsic coagulation pathways.
6. Relate appropriate laboratory test results with specific factor deficiencies.
7. Perform minor troubleshooting procedures of available coagulation reagent.
8. Correlate common coagulation and platelet disorders with available patient history, information and coagulation test results.
9. Describe the procedure or perform platelet function testing on a PFA-100 analyzer.
10. Identify common pre-analytic variables that may adversely impact patient results, including:
    - storage
    - type of anticoagulant
    - short draw
    - clotted sample
    - hematocrit >55

- lipemia
- hemolysis

11. When given patient history and coagulation test results, correlate thrombotic disorders with available patient history and coagulation test results.
12. In addition to the procedures listed above, describe the principle, clinical significance, and reagents used for the following coagulation tests:
    - Factor assays
    - Mixing studies
    - Lupus anticoagulant (anticardiolipin assay)
    - Factor 5 Leiden
    - Protein S
    - Protein C
    - Antithrombin assay
    - Factor 10 Assay
    - PFA-100
13. State the tests used to monitor Coumadin and Heparin administration.
14. Describe how newer anticoagulants are monitored.

The procedures which will be performed or observed are as follows:

1. Complete blood count

   Primary Automated Cell Counter _____

   Quality Control Procedures _____

2. Manual white count _____

3. Reticulocyte _____

4. Sedimentation rate _____

5. Spinal fluid cell counts _____

6. Other fluid cell counts _____

7. Screen for schistocytes _____

8. Bone marrows
   (1) making slides _____
   (2) staining and processing _____

9. Quality Control _____

10. Slide study of abnormal cases _____

11. Differentials - normals & abnormals _____

12. Coagulation (Automated Coagulation Analyzer)
    (1) Prothrombin time _____
    (2) Partial thromboplastin time _____
    (3) Fibrinogen _____
    (4) D-Dimer Test _____
    (5) Quality Control _____

Working Knowledge of Instruments

The student is required to learn how to operate the equipment in the hematology laboratory. The equipment used is as follows:

Automated CBC Analyzer _____

Automatic Slide Stain _____

Automated Coagulation Analyzer _____

PFA-100 _____

EVALUATION AND REQUIREMENTS FOR CLINICAL HEMATOLOGY

Achievement of the goals and objectives in Hematology will be measured by the following:

(1) Daily observation of the student performance by staff technologists, technicians, and supervisors for mastery of objectives. Mastery of objectives will be reflected in the final clinical evaluation.

(2) Practical performance - measured by daily observation of student by supervisor and satisfactory completion of a practical examination composed of doing automated CBCs, differential counts, erythrocyte morphology and platelet estimates as appropriate on patient specimens.

(3) Satisfactory evaluation by supervisor on Clinical Practicum report.

(4) Completion of Hematology Supplemental quizzes and computer aided instruction.

(5) A written comprehensive Clinical Hematology examination given by the Medical Laboratory Technology Department.

(6) Students must score a minimum average of 70% on the examination, quizzes, practicals, and competencies. A student who fails to achieve a 70% overall in any clinical rotation area must reapply to retake the specific clinical area in which an unsatisfactory grade has been obtained. Refer to Medical Laboratory Technology readmission policy. The student may proceed with their assigned clinical rotation schedule and need only reapply to repeat the deficient area.

MEDICAL LABORATORY TECHNOLOGY 210
HEMATOLOGY REQUIRED EXERCISES

BRIGHTSPACE QUIZZES:

1) Coagulation Quiz
2) Hematology Math Quiz
3) Specials Quiz
4) Fluids Quiz

Internet Tutorials and Quizzes:

1) Lab Training Library www.medtraining.org
University of Washington – Department of Lab Medicine

Student must complete the computer modules and the quiz on Lab Training Library and for an average that will be incorporated into the clinic assignment grade Competency Assessment include the following:

2) Media Lab – www.medialab.com

Compliance & CE and Case Simulators

Slide Study, Digital Images, and Laser Disc Images can be utilized throughout the rotation at the Allegany College of Maryland Campus.

MediaLab WBC Differential Simulator Competency Assessment and RBC Morphology Simulation: This is a great resource for practicing white blood cell and red blood cell identification! You will perform the 12 advanced differential cases and the 25 RBC morphology simulations and then compare cell identifications with the experts. The simulation sessions will be included as part of the Hematology Practical.

ACM MLT Classroom Computers and Laptop Cart

The MLT department also has a dedicated laptop cart which can be accessed using username ah244 and no password.

INDICATORS OF ACHIEVEMENT

Students must achieve an overall 70% in the clinical rotation.
Student will be evaluated for completion of the objectives by the following system:

30% - Technical and Professional Performance Evaluation
- Filled out by clinical supervisor

20% - Clinical Assignments
- Average of all quizzes, worksheets, and computer modules (Medialab, Medtraining and simulations)

30% - Written Final Examination
Comprehensive exam given by the ACM Medical Laboratory Technology department - A student must make at least 65% on the written comprehensive final. If a 65% is not achieved, the student will be allowed to take an alternate examination. If the student fails to get 65% on the retake examination, the MLT department will meet to discuss remediation and the option to retake an additional alternate clinic exam or repeat the clinical rotation.

20% - Practical Examination

- 10 automated CBCs complete with decisions and differentials as indicated

- 5 automated PTs, run controls, and make decisions

- Case Simulations
  - 12 Advanced WBC differentials
  - 25 RBC morphology simulation cases

- A total of 70% must be achieved on the automated, simulator and morphology parts of the Hematology practical. If a 70% is not achieved, the student will be able to repeat the part(s) of the practical one time. Failure to achieve a 70% on a second practical will result in failure of the Hematology rotation. The maximum score that can be achieved on a 2nd practical is 80%.

MEDICAL LABORATORY TECHNOLOGY 210
CLINICAL HEMATOLOGY PRACTICAL

The Hematology practical consists of hematology and coagulation automation, a hematology morphological CD practical, and WBC simulator. The CD portion is taken at ACM on the day of the written examination. Both portions of the automation practical (taken at the clinical site) must be on a single rotation day.

PART I: AUTOMATION

CBC COMPETENCY

The student will receive 10 EDTA blood samples, chosen at random, to perform automated CBC analysis. The student will be responsible for the analysis of the CBC data to include:

1) Does the sample need to be repeated?
2) Does the sample have any critical values and how are such values handled?
3) Do the hemoglobin & hematocrit match?
4) Are there any abnormal results present and what actions may be necessary? (Instrument and definitive flags)
5) Can the automated differential be verified?
6) Will the CBC require a 50-cell scan or a full 100-cell differential?

The CBC data will be documented by attaching a copy of the scatterplot. All decisions and manual scans or differential results will be recorded on the scatterplot. All results requiring verification by repeating the sample analysis should be repeated and documented by attaching the second scatterplot.

The student will receive 10 points for each specimen. The results must match previous results and the differentials are to be within 95% confidence limits.

The average CBC percent score will count as 50 % of the Hematology Practical.

COAGULATION COMPETENCY

The student will run the normal and abnormal controls for both the PT and APTT. The student will then perform PT tests on 5 samples. The samples, printouts, or written results should be attached. The PT value and INR should be recorded. Results should be interpreted for repeat values, critical values, and appropriate decisions should be documented.

Each sample and the controls will be worth a total of 5 points. The samples should match each other within the 6% CV limit and within previous results within 6%.

The average Coagulation percent score will count as 25% of the Hematology Practical.

PART II: SIMULATIONS: ADVANCED WBC DIFFERENTIALS and RBC MORPHOLOGY SIMULATOR

The student will complete the 12 advanced WBC differentials and the 25 RBC Morphology simulator sessions during the Hematology rotation. The average percent score will count as 50% of the Hematology Practical.

Total Practical Grade

The Automated CBC/Coag Practical and Case Simulations grades are averaged to calculate the Hematology Practical grade.

- average CBC percent score will count as 50 %
- average Coagulation percent score will count as 25%
- average percent score of the 12 Advanced WBC cases will count as 25%

The student must achieve a 70% on the combined Hematology/Coagulation Automation, Differential Simulations. If 70% is not achieved, the student will be able to repeat the deficient practical component one time. Failure to achieve a 70% on the second overall practical will result in failure of the hematology rotation. The maximum score that can be achieved on the second practical is 80%.

MEDICAL LABORATORY TECHNOLOGY 210
CLINICAL HEMATOLOGY PRACTICAL

I. Automated CBC Practical _____ PPE Used

Specimen #/Accession #	**(A)Action (V)Verify (S)Scan M=Manual Diff**	**Critical**	**Confirmation Value**	**Over the Literary**

II. Coagulation _____ PPE Used

Control Results Correctly _____
Tech Signature

Specimen #/Accession #	**Critical**	**Confirmation Value**	**Over the Literary**

ALLEGANY COLLEGE OF MARYLAND
MEDICAL LABORATORY TECHNOLOGY 210
HEMATOLOGY PRACTICAL PERFORMANCE CRITERIA AND GRADING

I. Point System

A. Complete Blood Count = 10 CBCs will be run through the automated machine. Each fully automated CBC will be worth 5 points. Each CBC requiring a manual scan or 50 cell differentials will be worth 7 points and each CBC that requires a manual differential will be worth 10 points.

<u>Automated CBC Grading Rubric</u> – Each automated CBC is graded according to the criteria listed below.

CATEGORY	100% of Points	75% of Points	50% of Points	0% of Points
Proper Protective Equipment (0.5 points)	All necessary PPE is worn.	Student is missing 1 element of PPE.	Student is missing 2 elements of PPE.	No PPE is worn
Accepts only correctly identified specimens/those that meet the standard laboratory protocol. (0.5 points)	All specimens are recognized for their appropriateness.	Student does not check for clots or mix correctly.	Student does not check for a clot and specimens are not mixed correctly.	Specimen is improperly identified.
Perform the CBC according to the Established Procedure (1 point)	Student commits no mistake.	Student commits 1 mistake.	Student commits 2 mistakes.	Student commits more than 2 mistakes.
Recognize abnormal flags on automated instrument. (1 point)	Specimen flags are appropriately recognized as necessary.	Specimen flag is not recognized as necessary.	More than 1 specimen flag is not recognized as necessary.	More than 2 specimen flags are not recognized as necessary.
Recognize all critical values and/or discrepant results on CBCs. (1 point)	Discrepant results/critical results are recognized as necessary.	N/A	N/A	Discrepant results/critical results are not recognized as necessary.
Correctly recognize criteria for verifying CBC or performing a manual scan or differential (1 point)	Correctly recognize criteria for verifying CBC or performing a manual scan or differential.	N/A	N/A	Correctly recognize criteria for verifying CBC or performing a manual scan or differential.

<u>Manual Differential Grading Rubric</u> – Each CBC that requires a manual diff review will be graded according to the criteria listed below.

CATEGORY	100% of Points	75% of Points	50% of Points	0% of Points
Perform the WBC differential with 95% proficiency. (1 point)	Perform the WBC differential with 95% proficiency.	N/A	1 parameter is outside the 95% proficiency.	2 parameters are outside the 95% proficiency.
Identify and quantitate abnormal WBC morphology. (1 point)	Student correctly identifies and quantitates abnormal WBC morphology as appropriate.	N/A	Student correctly identifies, but does not quantitate abnormal WBC morphology as appropriate.	Student does not correctly identify or quantitate abnormal WBC morphology as appropriate.
Identify and quantitate abnormal RBC morphology (1 point)	Student correctly identifies and quantitates abnormal RBC morphology as appropriate.	N/A	Student correctly identifies, but does not quantitate abnormal RBC morphology as appropriate	Student does not correctly identify or quantitate abnormal RBC morphology as appropriate.
Platelet estimate and morphology evaluation is appropriate. (1 point)	Student correctly identifies abnormal platelet morphology as appropriate and quantitates the estimate.	N/A	Student incorrectly identifies abnormal platelet morphology or incorrectly quantitates the estimate	Student incorrectly identifies abnormal platelet morphology and incorrectly quantitates the estimate.
Accepts only properly prepared and stained slides for review. (1 point)	Accepts only properly prepared and stained slides for review.	N/A	N/A	Specimen is improperly prepared or stained and not recognized by student.

<u>Manual Slide Review (Scan or 50 cell Diff</u>) – This portion is worth 2 points. One point is for using appropriate slide and the other point depends on the reason for the review.

CATEGORY	100% of Points	75% of Points	50% of Points	0% of Points
Perform the WBC differential with 95% proficiency. (1 point)	Perform the WBC differential with 95% proficiency.	1 parameter is outside the 95% proficiency.	2 parameters are outside the 95% proficiency.	More than 2 parameters are outside the 95% proficiency.
Identify and quantitate abnormal WBC morphology. (1 point)	Student correctly identifies and quantitates abnormal WBC morphology as appropriate.	N/A	Student correctly identifies, but does not quantitate abnormal WBC morphology as appropriate.	Student does not correctly identify or quantitate abnormal WBC morphology as appropriate.
Identify and quantitate abnormal RBC morphology (1 point)	Student correctly identifies and quantitates abnormal RBC morphology as appropriate.	N/A	Student correctly identifies, but does not quantitate abnormal RBC morphology as appropriate.	Student does not correctly identify or quantitate abnormal RBC morphology as appropriate.
Platelet estimate and morphology evaluation is appropriate. (1 point)	Student correctly identifies abnormal platelet morphology as appropriate and quantitates the estimate	N/A	Student incorrectly identifies abnormal platelet morphology or incorrectly quantitates the estimate.	Student incorrectly identifies abnormal platelet morphology and incorrectly quantitates the estimate.
Accepts only properly prepared and stained slides for review. (1 point)	Accepts only properly prepared and stained slides for review.	N/A	N/A	Specimen is improperly prepared or stained and not recognized by student.

B. Coagulation – 5 PT (Prothrombin Times) will be run on the automated coagulation analyzer. Two levels of controls will also be run for PT/APTT Activated Partial Thromboplastin Time). Each PT will be worth 5 points and the controls will be worth 10 points. Coagulation practical is worth a total 35 points.

Coagulation Grading Rubric

CATEGORY	100% of Points	75% of Points	50% of Points	0% of Points
Proper Protective Equipment (1 point)	All necessary PPE is worn.	Student is missing 1 element of PPE.	Student is missing 2 elements of PPE.	No PPE is worn
Accepts only correctly identified sp ecimens that meet the standard laboratory protocol. (1 point)	All specimens are recognized for their appropriateness.	N/A	N/A	Specimen is improperly identified or an inappropriate specimen in used.
Run the PT and APTT controls correctly. (10 points--1 time not each specimen)	Controls are correctly run.	N/A	Either the PT or the APTT control is incorrect.	Neither control is run correctly.
Perform the automated PT time producing accurate results. (1 point)	Student obtains accurate results within acceptable % CV limits.	N/A	N/A	Student does not obtain accurate results within acceptable % CV limits.
Recognize all critical values and discrepant results. (1 point)	Recognize all critical values and discrepant results as appropriate.	N/A	N/A	Student fails to recognize critical values or a discrepant result.
Correctly report out the PT result. (1 point)	Correctly report out the PT result.	N/A	The INR is not reported correctly.	The PT and INR are not reported correctly.

Calculation of the Practical Grade

CBC/Coag

The total points obtained by the student will be divided by the total possible points. This will constitute the automated practical portion and each section will be calculated together.

The average CBC percent score will count as 50 % of the Hematology Practical.

The average Coagulation percent score will count as 25% of the Hematology Practical.

Case Simulations

The 12 Advanced WBC cases will be averaged together and this will constitute the case simulation practical portion. The 25 RBC simulators must be completed, but will not be averaged into the grade.

The average percent score of the 12 Advanced WBC cases will count as 25% of the Hematology Practical.

Total Practical Grade

The Automated CBC/Coag Practical and Case Simulations grades are averaged to calculate the Hematology Practical grade.

- average CBC percent score will count as 50 %
- average Coagulation percent score will count as 25%
- average percent score of the 12 Advanced WBC cases will count as 25%

Total Hematology Grade

To successfully complete the Hematology rotation, the student must obtain an overall grade of 70% on the practical, 65% on the written examination (in two attempts), and an overall 70% for the total rotational grade. The total grade will include the written examination (30%), quizzes (20%), practical (20%) and technical and professional performance evaluation (30%).

IMMUNOHEMATOLOGY CLINICAL PRACTICE OVERVIEW

BLOOD BANKING
CLINICAL PRACTICE
OVERVIEW

The Blood Banking rotation is 4 weeks in duration for 4 days a week. Each Monday, the student(s) report to AH 251 on the ACM campus as part of the rotation. The focus of instruction on these days will be to bring theory to practice by bridging classroom study and activities to how this knowledge and skills are deployed in the clinical immunohematology laboratory. The focus of the 4 Monday sessions will be as follows:

Week	Day Time	Location/Activity	Responsible Person
1	Monday 8:30	**Week 1-Campus Clinic Day 1 Schedule and Weekly assignments** Pre-Session Assignment **Medialab** 1. Introduction of the ABO Blood Group System **Medtraining** 1. Introduction of Transfusion Service (Training Library) **Worksheet** 1. Blood Bank Clinic Review Day-1 On-Campus Session 1 Workload 1. Review Blood Bank Worksheet Day 1 2. Orientation to Ortho Gel System 3. Quality Control **Week 1 Homework-due Monday of Week 2** **Medialab** 1. Overview Of Major Antigens of the Rh Blood Group System 2. Red Cell Crossmatch Techniques **3.** The Human Leukocyte Antigen System **Medtaining:** 1. Transfusion Safety: Specimen Collection (Training Library) 2. Transfusion Safety: Specimen Collection (Competency) 3. Transfusion Service: Basic (Competency)	

		Worksheet 1. Rh System Review 2. Blood Bank Clinic Review-Day 2 2 Exam Simulator Sessions-Selecting Blood Bank for the type of test and the select 100 questions for each review Work on Blood Bank Quiz Packet (180 points)	
	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	Clinical Affiliate
2	Monday	**Week 2 Campus Clinic Day 2 Schedule and Weekly Assignments** Pre-Session Assignment-Completed Week 1 homework (see above) On-Campus Session 2 Workload 1. Review Worksheet's Rh and Blood Bank Clinic Day 2 2. DAT Ortho and Tube Method 3. Type and Rh Cord Blood Ortho Gel 4. Compatibility Testing Quiz **Week 2 Homework-due Monday of Week 3** **Medtraining** 1. Transfusion Safety: Testing and Issuance (Training Library) 2. Transfusion Safety: Testing and Issuance (Competency) 3. Transfusion Safety: Ordering and Administering (Training Library) 4. Transfusions Safety: Ordering and Administering (Competency) 5. Transfusion Service: Intermediate (Competency) **Medialab** 6. Antibody Detection and Identification 7. Warm Antibodies and Autoantibodies in Blood banking 8. A Series of Antibody Panels 9.	8:30 am ACM Faculty

		2 Exam Simulator Sessions-Selecting Blood Bank for the type of test and the select 100 questions for each review Work on Blood Bank Quiz Packet (180 points)	
	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	Clinical Affiliate
3	Monday	**<u>Week 3 Campus Clinic Day 3 Schedule and Weekly Assignments</u>** Pre-Session Assignments-complete week 2 homework (see above) On-Campus Session 3 Workload 1. Blood Bank Gel Quiz (15 points) 2. Type and Screen Ortho Gel 3. Antibody Identification 4. Crossmatching 5. Phenotyping Computer Training 1. An Overview of Blood and Blood Components **<u>Week 3 Homework-due Monday of Week 4</u>** **<u>Medialab and Medtrainings</u>** 1. ABO Typing Discrepancies 2. Hemolytic Disease of the Fetus and Newborn 3. Rh Negative Female with Anti-D at Delivery: A Case Study 4. The Disappearing Antibody: A Case Study 2 Exam Simulator Sessions-Selecting Blood Bank for the type of test and the select 100 questions for each review Work on Blood Bank Quiz Packet (180 points)	8:30 am ACM Faculty

	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section.	Clinical Affiliate
4	Monday	**<u>Week 4 - Campus Clinic Day 4 Schedule and Weekly Assignments</u>** Pre-Clinic Assignments-Completed Week 3 homework (see above) On-Campus Session 4 Workload 1. Blood Bank Case Studies 2. Type and Crossmatching 3. Blood Bank Final Workbook 4. Antibody Identification Final Exercise Complete final Medialab and Medtrainings: 1. Immune Hemolytic Anemias 2. Current Good Manufacturing Practices for Transfusion Services 3. Transfusion Reactions 4. Adverse Effects of Fresh Frozen Plasma Transfusion: TRALI, TACO and Allergic Reactions 2 Exam Simulator Sessions-Selecting Blood Bank for the type of test and the select 100 questions for each review Blood Bank Quiz Packet-due before final clinic exam (180 points) Computer Training 1. Case Studies from the Transfusion Service	8:30 am ACM Faculty
	Clinical Site Tuesday, Wednesday, and Thursday	Detailed schedules corresponding to the students' clinical site will be developed and inserted in this section. ACM Written Exam	Clinical Affiliate

The activities on Tuesday, Wednesday and Thursday should correlate to the extent possible with the focus of the Monday session so to maximize the learning experience.
The student's Pass/Fail grade is calculated based on the following:

Competencies (Skills and Knowledge)

1. Evaluation
   (Technical and Professional Performance) 30%

2. Examinations, clinical assignments, and practicals derived in the following manner: 70%

   20% - Average of clinical quizzes, Witten assignements, and computer modules (Medialab, Medtraining, and simulations)

   20% - Final Practical
   (must make a minimum of 70% on the practical)

   30% - Final Written Examination given by Medical Laboratory Technology Department. A student must make at least 65% on the written comprehensive final. If a 65% is not achieved, the student may be allowed to take an alternate examination. If the student fails to get a 65% on the retake examination, the student will be required to do remediation, or repeat the clinical rotation.

*Note: Students must score a minimum of 70% on a practical examination in order to successfully complete the blood bank rotation. See the enclosed format.

CLINICAL SITE RESPONSIBILITIES

Student Workload

The Blood Bank students in existing clinical sites mostly perform tests on patients that have been completed and verified. Currently, the supervisor or students for the day selects the samples and directs student learning as questions or problems arise.
The students have the expectation that they are going to be given samples and perform the testing while working mostly independently. The supervising tech should be available if help is needed as well as to check the student results for accuracy. The student should not expect direct supervision at all times and the preclinical days prepare the student to adapt blood bank technique specific to the institution.

In some clinical placement sites, the student is working along the staff MLT or MLS in blood bank and those techs will direct the student's daily workload.

Procedures Routinely Included in Student Workload:

1) Perform ABO Forward and Reverse Typing
2) Perform Rh typing through Du if necessary
3) Perform Direct Antiglobulin Test - polyspecific /monospecific
4) Perform Cord Blood Work-up
5) Perform Antibody Screens
6) Perform Antibody Identification
7) Perform Quality Control and Daily Maintenance
8) Perform Crossmatch
9) Perform Rh Immune Globulin Candidacy
10) Perform Detection of Fetomaternal Hemorrhage by the Rosette Test (Fetal Screen)
11) Observe the Release of Components from the Laboratory
12) Observe the Rotation of Blood Bank Component Inventory
13) Observe the Electronic Crossmatch

The number of rotation days have been reduced to a minimum, but this requires efficiency of the days spent at the clinical site.

Supervising Tech

Daily Workload

The supervising tech for the day can be a Medical Laboratory Scientist or Medical Laboratory Technician. The student is responsible for being prepared and motivated for the day's activities. The supervising tech should direct the learning. The supervising tech should have input into the student evaluation.

Clinical Supervisor

In each of our clinical affiliates, the laboratory section supervisor or manager is the contact person for the college. This person is responsible for assuring the mid-term and final evaluations are completed and forwarded to the department. Any tech can assume this responsibility, and it is this person supervising the student rotation in that section that is appointed as clinical faculty.

Practical Examination

The enclosed practical examination format explains the types of procedures given to students and how the practical is graded. Another practical examination format is enclosed and illustrates the types of specimens given to try to "standardize" the practical. The practical must be successfully completed to pass the rotation. The practical is taken on Day 12 of the rotation. The practical constitutes 20% of the final clinical average. The student must pass the blood bank practical to pass the rotation.

Evaluation Reports

An evaluation of the student is to be filled out at the middle and end of the rotation in the clincal tracking system, Trajecsys The interim evaluation report is simplified to give the student a report on progress and to identify areas of difficulty. The final evaluation report includes the technical and professional components. The technical and professional component of the final evaluation is used to compute 30% of the student rotation grade. The report should be completed by the person in charge, although input may be sought by those having direct contact with the student. See example evaluations in the appendix.

Clinical Assignments

The program uses take home quizzes, worksheets, and computer tutorials/quizzes to ensure that the student adequately reviews the didactic material relevant to the rotation. The average of all the clinical assignments constitutes 20% of the final Immunohematology grade. The quizzes are given by the department. The student uses texts, notes, procedures, etc. as resources for the quizzes.

One, written comprehensive blood bank quiz
Medialab/Medtraining Assignments
Activities and exercises on Monday sessions

Written Examination

A written, comprehensive examination is given by the department on the last day of the rotation in the clinical tracking system, Trajecsys. The test is taken at the Allegany College of Maryland Campus. It counts as 30% of the final grade. A student must make a 65% on the written comprehensive final. If 65% is not obtained in the first examination, the student will complete a second examination. If a 65% is not achieved on the second examination, the student will be required to do remediation, or to repeat the entire clinical rotation as determined by the MLT Program Director in consultation with program and clinical faculty.

CLINIC ROTATION
MEDICAL LABORATORY TECHNOLOGY 210

OBJECTIVES – BLOOD BANK

1. Review Clinical Procedures - Allegany College of Maryland Campus Lab Session I.

   Upon completion of this review session the student is expected to be able to:
   a. Perform, document, and interpret ABO grouping procedure.
   b. Perform, document, and interpret Rh typing procedure.
   c. Perform, document, and interpret indirect antiglobulin test (D^u).
   d. Describe each of the above procedures showing thorough understanding of the theory and practical applications.

2. Review Clinical Procedures - Allegany College of Maryland Campus Lab Session II.

   Upon completion of this review session the student is expected to be able to:
   a. Describe the similarities and differences between the indirect and direct antiglobulin tests.
   b. Perform, document, and interpret the direct antiglobulin test.
   c. Describe the work-up of the specimen with a positive DAT.
   d. Perform, document, and interpret the procedures done for a Cord Blood work-up.
   e. Perform, document, and interpret the antibody screen.
   f. Perform appropriate antibody identification on positive antibody screens.
   g. Describe each of the above procedures showing a thorough understanding of the theory and practical applications.

3. Review Clinical Procedures - Allegany College of Maryland Campus Lab Session III

   Upon completion of this review session the student is expected to be able to:
   a. Describe antibody identification procedures and draw conclusions on the identification of specific antibodies.
   b. Describe problems in antibody identification.
   c. Perform routine, complete, crossmatching to include donor type recheck.
   d. Perform the phenotyping procedure and discuss the applications of the test.
   e. Identify appropriate blood groups for the transfusion of packed cells and fresh frozen plasma.
   h. Describe each of the above procedures showing a thorough understanding of the theory and practical applications.

4. Clinical Setting: Upon Completion of the Clinical Training Sessions, the student is expected to be able to:
   a. **Specimen Handling and Processing**
      1. Following departmental protocol, demonstrate safe work practices by:
         - Wearing personal protective equipment (PPE) as required.

- Handling and disposing of contaminated materials according to standard precautions.
- Handling chemicals according to safety procedures.

2. Identify the types of blood samples and collection tubes appropriate for routine testing in the blood bank.
3. Determine the acceptability of a sample for compatibility testing based on sample age, sample appearance and institutional policy.
4. List the minimum information required for labeling samples for blood bank testing.

b. **Quality Assurance/Quality Control and Regulatory Issues**

1. Use all blood bank equipment including centrifuges, cell washers, incubators, agglutination viewers.
2. Perform all routine maintenance tasks on the equipment used.
3. Perform basic trouble shooting on the equipment used.
4. Perform daily quality control for routine testing according to the operating procedures of the laboratory with 100% accuracy.
5. Recognize discrepant results in routine ABO, Rh and antibody screen testing with 100% accuracy.
6. Report all discrepant results to the clinical instructor.
7. List the quality control activities that are performed monthly, quarterly, and annually.
8. Perform and document appropriate daily quality control procedures for all blood bank reagents.
9. Observe, and if allowed, perform and document appropriate daily quality control checks on temperature regulated equipment.
10. Perform or observe basic laboratory computer applications where relevant.
11. State the patient confidentiality policy of the facility that complies with HIPPA guidelines for testing and reporting procedures.
12. List the accrediting and inspection agencies that monitor blood banks and transfusion services.

c. **Routine Technical Procedures – ABO/Rh, Ab Screen and DAT**

1. Using a "0 to 4+" scale, grade macroscopic and automated system agglutination reactions within ± 1agglutination grade of the instructor.
2. Prepare a 3-5% red cell suspension as needed for tube testing.
3. Label test tubes for routine testing according to laboratory procedure without error.
4. Perform ABO and Rh testing on a minimum of 25 samples with 100% accuracy.
5. Interpret the results of ABO and Rh testing without error.
6. Perform weak D testing on designated patient samples when available. (optional)*
7. Perform ABO confirmatory testing on a minimum of 10 donor segments with 100% accuracy.
8. Perform antibody screening on a minimum of 20 samples to the satisfaction of the clinical instructor.
9. Explain the next steps to be taken to investigate a positive antibody screen.
10. Compare and contrast direct and indirect antiglobulin testing regarding principle, procedure and application.
11. Identify sources of false negative and false positive error in antiglobulin testing.

12. Perform DAT on a minimum 2 samples to the satisfaction of the clinical instructor.

d. **Routine Technical Procedures – Crossmatching and Transfusion Management**

1. Label test tubes for routine compatibility testing according to laboratory protocol without error.
2. Perform the appropriate crossmatch procedure, immediate spin (IS) or Full (IAT), on a minimum of 10 samples when given the relevant patient information and the policy of the laboratory.
3. Select the most appropriate donor units to crossmatch with a patient when ABO specific red cells are available and when not available.
4. Select the most appropriate donor units when the patient presents with:
    - single alloantibody
    - multiple alloantibodies
5. Interpret the results of crossmatching with 100% accuracy.
6. Explain possible causes of an incompatible crossmatch.
7. Describe the policies for emergency release and massive transfusion.
8. Distinguish ABO and Rh-related HDN according to clinical and serologic presentation.
9. Perform or describe the prenatal (mother) and postnatal (mother and newborn) serologic workups for managing cases of HDN.
10. Observe or describe the procedures for RhIg administration including candidate selection, FMH screening, and dosage determination.
11. Compare and contrast the following adverse reactions to transfusion with regard to cause, classic signs & symptoms, and serologic investigation (if applicable):
    Immediate Hemolytic Urticarial
    Delayed Hemolytic Anaphylactic
    Febrile Non-hemolytic Bacterial sepsis
    TRALI (optional) Volume Overload (optional)
12. Describe a typical transfusion reaction work-up.
13. Compare and contrast warm and cold reacting autoantibodies with regard to serologic presentation, related testing and transfusion approaches.

e. **Reference Procedures**

1. Perform routine antibody identification panels on a minimum of 5 samples according to the acceptable precision of the laboratory.
2. Interpret the results of routine and selected cell panels to determine the specificity of single and multiple antibodies (simple).
3. Perform or describe the following reference techniques to assist in antibody identification.
    - Selected cell panel
    - Red cell (antigen) phenotyping
    - Enhancement media (PEG & LISS) and Enzyme treatment
    - Acid Elution
    - Pre-warmed technique
4. Compare and contrast the serologic characteristics of antibodies to the following blood group systems:
    - Rh Kell
    - Kidd Duffy

- MNSs Lewis
- Lutheran I
- P_1

f. **Donor /Components/Product Disposition**

1. Describe the physical and medical criteria used in the selection of the following blood donors:
    - Allogeneic
    - Autologous
    - Directed
2. Describe the processing of a donor to include:
    - Donor history
    - Physical exam
    - Donor acceptability
    - Proper unit collection and handling
3. Identify the blood bank serologies and viral marker testing required on all allogeneic, autologous and directed units.
4. Explain the preparation of the following components from whole blood:
    - Packed red blood cells
    - Fresh frozen plasma
    - Random platelets
    - Cryoprecipitate
5. Identify the shelf life, storage requirements and therapeutic use of:
    - Packed red blood cells Fresh frozen plasma
    - Platelets (random & single donor) Cryoprecipitate
    - Frozen red blood cells Leuko-reduced red blood cells
    - Irradiated red blood cells Washed red blood cells
    - Factor VIII & IX concentrates Rh Immune globulin
6. Explain the daily inventory review and inspection of blood products.
7. Issue or observe the issue (release) of blood products for administration

g. **Automation**

1. State the principle of measurement for the automated Blood Bank system used during clinical rotation.
2. Describe the appearance of the strengths of agglutination on the automated Blood Bank system used during clinical rotation.

EVALUATION AND REQUIREMENTS FOR CLINICAL IMMUNOHEMATOLOGY

Achievement of the goals and objectives in blood bank will be measured by the following:

(1) Daily observation of student performance by staff technologists, technicians, and supervisor for mastery of objectives.

(2) Evaluation reports. The clinical supervisors will complete a technical and professional evaluation at the end of the rotation which is based on daily student observations done by area supervisor while the student completes performance on practice specimens. The practice specimens are designed to prepare the student to complete a practical examination composed of proper patient I.D., proper blood labeling, typing, crossmatching, antibody screen, and identification of known cases.

(3) Satisfactory performance on the clinical practical is necessary to complete the rotation. An unsatisfactory second practical attempt will result in a failure of the practical and the rotation.

(4) Completion of Blood Bank supplementary quizzes and computer aided instruction.

(5) A written comprehensive Clinical Immunohematology examination given by the Medical Laboratory Technology Department. A student must make a 65% on the written comprehensive final. If a 65% is not achieved, the student will be allowed to take an alternate examination. If the student fails to make a 65% on the retake examination, the student will be required to do remediation, or to repeat the clinical entire rotation as determined by the MLT Program Director in consultation with program and clinical faculty.

(6) Students must score a **minimum average of 70% on a practical examination** in order to successfully complete the blood bank rotation. In addition, the **student must obtain an overall 70% on examinations, quizzes, practicals, and competencies**. A student who fails to achieve a 70% overall in any clinical rotation area must reapply to retake the specific clinical area in which an unsatisfactory grade has been obtained. Refer to Medical Laboratory Technology readmission policy. The student may proceed with their assigned clinical rotation schedule and need only reapply to repeat the deficient area.

(7). Student will receive an interim evaluation at the middle of the rotation. This progress report will be completed by the clinical supervisor. Any deficiencies will be brought to the attention of AC faculty and be addressed by the student with the support of AC faculty and the clinical supervisor.

Activities/Exercises:

The Hospital supervisors and/or Allegany College of Maryland Medical Laboratory Faculty will give graded written quizzes. These quizzes could be written or on Brightspace.

Required Computer Tutorials/Quizzes

ACM MLT Classroom Computers and Laptop Cart

The MLT department also has a dedicated laptop cart which can be accessed using username ah244 and no password.

Computer Programs (Classroom computers only):

1) Case Studies from the Transfusion Service
2) An Overview of Blood and Blood Components

INDICATORS OF ACHIEVEMENT

Students much achieve an overall 70% to pass the rotation. Students must also achieve a passing grade on the practical to pass the rotation. Each student will be evaluated for completion of the Performance Evaluation.

30% Technical and Professional Performance Evaluation
- filled out by supervisor

20% Clinic Assignments:
- series of take-home exercises, worksheets, and computer tutorials with quizzes

30% Written Final Examination
- comprehensive
- A student must make a 65% on the written comprehensive final. If 65% is not achieved, the student may be allowed to take an alternate examination. If the student fails to get a 65% on the retake examination, the student will be required to do remediation, or repeat the clinical rotation.

20% Practical Examination
- 6 routine specimens for crossmatch, Type/Screen, and Cord Blood. An overall grade of 70% must be obtained on the blood bank practical to pass the rotation. In addition, some parameters have been identified on the format to require 100% competency to pass the practical. If a student fails to pass the practical, a second practical may be attempted with a maximum possible score of 80%. A failure to pass the second practical will result in a failure to pass the blood bank rotation.

MEDICAL LABORTORY TECHNOLOGY 210
BLOOD BANK PRACTICAL FORMAT

Directions:

1. Identify as completely as possible any atypical antibodies detected in any specimen.
2. Explain any incompatible crossmatch result.
3. Show all work performed.
4. Record results of work performed in the appropriate area.
5. You will have the entire day to complete the work given below. Work at your own pace. Don't be in a hurry!
6. Save all Specimens – Cell suspensions, original tubes, original segments, serum.
7. Practical must be completed in an 8-hour clinical rotation day.

SPECIMEN	TESTS TO BE PERFORMED
1. _____	Type and Screen
2. _____ Units: A. B. C.	Type and crossmatch (major) 3 units. The unit numbers are listed to the left. Investigate any incompatible results encountered.
3. _____ A. B.	Type and crossmatch (major) 2 units. The unit numbers are listed to the left. Investigate any incompatible crossmatch results encountered.
4. _____	Type and Screen
5. _____	Type and Screen
6. _____	Cord blood testing (Type and DAT)

Minimal Passing Requirements:

1. 100% identification of ABO grouping
2. 100% identification of Rh typing
3. Able to detect the presence of an atypical antibody
4. Correct crossmatch interpretation
5. Repeat work at any stage you might find a discrepancy
6. 100% PATIENT/DONOR IDENTIFICATION

Grading:

5-10 points will be removed for each mistake found that is not listed in the above criteria. The student must achieve a 70% on the practical in order to pass the rotation. A failure to demonstrate any of the six requirements listed above, will result in failure status.

CLINICAL BLOOD BANK PRACTICAL
GRADING RUBRIC

PART I. 100% competency is required for the following items: Any unsatisfactory item will result in a failure of the practical and rotation.

CATEGORY	Satisfactory 100% Competency	Unsatisfactory < 100% Competency
Correct ABO Interpretation	Student has met the objective successfully.	Student did not meet the objective successfully.
Correct Rh Results/Interpretation	Student has met the objective successfully.	Student did not meet the objective successfully.
Correct Patient/Unit Identification	Student has met the objective successfully.	Student did not meet the objective successfully.
Correct Unit Type is Assigned	Student has met the objective successfully.	Student did not meet the objective successfully
Correct Crossmatch Interpretation	Student has met the objective successfully.	Student did not meet the objective successfully.
Correct Antibody Screen Interpretation	Student has met the objective successfully.	Student did not meet the objective successfully.
Correct ABO Reactions	Student has met the objective successfully.	Student did not meet the objective successfully.

50 points are awarded for successful completion of Part I.

If a student fails any portion of Part I, the practical receives a failing grade. Clinical faculty will consult with Allegany College of Maryland Medical Laboratory Technology faculty to evaluate the failure as part of the student's entire body of work during the rotation.

PART II. Grading of Other Practical Elements

CATEGORY	100% of Points	75% of Points	50% of Points	0% of Points
Written or computerized report is correctly completed. (5 points)	All technical fields are correctly filled in and date/tech initials are indicated (5 points)	All technical fields are correct, but a date, tech initials or other non-technical field is absent/incorrect (3.75 points)	All technical fields are correct, but multiple non-technical fields are absent/incorrect (2.5 points)	A technical field has been incorrectly filled in or is incomplete
Antibody Panel Reactions (10 points)	All reactions are correct (10 points)	One reaction is incorrect (7.5 points)	Two reactions are incorrect (5 points)	More than 2 reactions are incorrect
Antibody Identification/ Panel (5 points)	The antibody panel interpretation is correct (5 points)	N/A	The antibody panel reactions were correct, but the student did not properly perform the rule out/rule in procedure (2.5 points)	The antibody panel reactions were not correct, and the student did not properly perform the rule out/rule in procedure (0 points)
DAT Reactions are Correct (5 points)	The DAT procedure results are correct (5 points)	N/A	N/A	The DAT procedure results are incorrect (0 points)
DAT Interpretation is Correct (5 points)	The DAT procedure interpretation is correct (5 points)	N/A	N/A	The DAT procedure interpretation is correct
Reaction Grading (10 points)	All reactions are graded appropriately. (10 points)	One reaction is graded >2+ difference (7.5 points)	Two reactions are graded with a >2+ difference (5 points)	More than two reactions are graded with a >2+ difference
Correct procedures are followed in regards to incubation times, centrifugation times, etc. (10 points)	All procedures have been correctly performed (10 points)	N/A	One procedure was incorrectly performed (5 points)	Two or more procedures were incorrectly performed (0 points)

Scoring:

Each part of the Blood Bank Clinical Practical will be worth 50 points. Part I of the Blood Bank Clinical Rotation Practical must be completed with 100% proficiency. The grade for the practical will be assessed using the appropriate Rubrics. An overall 70% must be achieved in order to pass the practical and the blood bank rotation.

BLOOD BANK ROTATION PROCEDURES

Purpose and Principles of Blood Bank Procedures.

The student should understand the purpose and principles of the procedures. A complete understanding of the theory involved is necessary so that each may be performed with complete reliability.

The procedures performed in clinical rotation by manual tube, manual gel or automated system are as follows:

Routine

a. Direct Coombs (DAT) _____
   (1) polyspecific _____
   (2) IgG monospecific _____
b. ABO and Rh Typing (tube method) _____
c. Prenatal testing _____
   (1) typing (ABO and Rh) _____
   (2) antibody screening _____
d. Crossmatch _____
   (1) typing _____
   (2) antibody screening _____
   (3) major-immediate spin _____
   (4) major-IAT _____
e. RhoGAM Testing _____
   (1) typing (ABO and Rh) _____
   (2) antibody screening _____
   (3) Micro Du or Fetal screen _____
f. Cord bloods _____
   (1) direct Coombs _____
   (2) forward ABO group & RH _____
g. Processing Units - American Red Cross _____
h. Dispensing blood (observation) _____
   (1) units to Operating Room, Labor and Delivery, or Dialysis _____
   (2) units to floor _____
   (3) RhoGAM _____
i. Procedures for blood returned from OR or L & D _____

Specials

a. Panel for antibody identification _____
   (1) warm panel _____

(a) saline phase _____
(b) OAES-IAT phase _____

(2) pre-warm screening _____
(3) pre-warm panel _____
(4) autocontrol _____

b. Elution _____
(1) Rapid Acid Elution _____

c. Phenotype _____
(1) Rh system _____
(2) Anti A_1 lectin _____
(3) Other blood group systems including _____
Kell system _____
Duffy system _____
Lewis system, etc. _____

Components-JARC Dispensing

a. packed RBCs _____
b. fresh frozen plasma SD plasma (Solvent Detergent Plasma) _____
c. cryoprecipitate _____
d. platelets _____

Miscellaneous Procedures

a. releasing blood (observation) _____
b. quality control _____
c. transferring blood _____
d. emergency transfusions (observation) _____
e. previous records check _____

Working Knowledge of Instruments

The student is required to learn principles, operation, and trouble-shooting of the institution specific equipment in the blood bank areas.

The equipment used for manual procedures is as follows:
Cell Washer
Serofuge

The equipment instrumentation for the Ortho Gel Technology is specifically used at all ACM clinical affiliates.

APPENDIX

ALLEGANY COLLEGE OF MARYLAND
MEDICAL LABORATORY TECHNOLOGY

NOTIFICATION OF ABSENCE

_____
Student Name

_____
Date

_____
Date(s) of Absence

_____ _____
Class Session(s) Missed Clinical Hours Missed

Reason for Absence

I intend to make up my clinical hours on

_____

From _____ to _____.

_____ _____
Student Signature Clinical Instructor Signature

I have met with my class and/or clinical instructor and discussed the material I have missed. The following plan has been established for me to make up the coursework I missed:

_____
_____
_____
_____

_____ _____
Clinical Instructor Signature Student Signature

_____
Program Director Signature

Allegany College of Maryland
Medical Laboratory Technology Program
Behavioral Intervention/Learning Contract/Action Form

Student Name: _____ Date:_____
Instructor: _____ Facility:_____
Violation Date:_____ Violation Time (a.m./p.m.):_____

Disciplinary Action:
□ Verbal
□ Written with Reprimand (Specific Corrective Action Plan)
□ Recommendation: Remediation
□ Recommendation: Dismissed

Observations of Actual Performance/Conduct:

Performance/Conduct Expectations:

Specific Actions Required to Meet Expectations:

Additional Comments:

You are expected to improve your performance in the areas described above to fully meet your didactic/clinical expectations. It is expected that once you have achieved a level of performance that meets expectations you will continue to perform at or above that level of performance. I encourage you to speak with me if you have questions or need my support. We will have a follow-up meeting on _____ to assess your performance. Failure to meet expectations could result in failure of this course/clinical rotation. I understand that a copy of this form will be kept in my student file. **I have read and understand this document.**

_____ _____
Instructor Date Student Date

Clinical Instructor Date Program Director Date

BEHAVIORAL TERMINATION APPEAL FORM

Student Name: _____

Date: _____
(Must be filed within 30 days from date of termination.)

Phone Number: _____

E-mail Address: _____

Why are you appealing the decision: (check one)?

[ ] The decision was a mistake.

[ ] The decision was based on inaccurate or incomplete information, and I can provide the correct information.

[ ] The decision was correct, but I would like a second chance and can explain why.

Required for appeal form to be considered:

[ ] Attach a copy of written decision you are appealing (e.g. termination letter).

[ ] Describe the problem/situation that led to this decision. (All petitions).

[ ] Describe why **you** think the committee should grant your request. (All petitions).

I certify that all information provided in this petition and the supporting documentation are true and accurate. (Any false statements provided in writing (or at the hearing) could result in the denial of petition and disciplinary action.)

Signature of Petitioner Date

SAMPLE

INTERIM CLINICAL PRACTICUM EVALUATION

This evaluation will be utilized by the Clinical student to assess his/her mid-term progress in the Clinical practicum rotation. Please check the appropriate choice for each item. If the selected clinical Medical Laboratory Technology student needs to improve, please list area(s) in need of improvement and ways to achieve the improvement goal. The interim report will be reviewed with the appropriate Medical Laboratory Technology student by the Medical Laboratory Technology faculty.

INTERIM CLINICAL PRACTICUM EVALUATION

Student Name _____

Clinical Area _____

Date _____

Clinical Supervisor _____

	Progressing Satisfactorily	Needs Improvement
MLT GOAL #1: **Students will competently perform routine clinical laboratory tests.**		
MLT GOAL #2: **Students will possess the professional attitudes and behaviors critical to being a valued member of the healthcare/ workplace team.**		

Suggestions for ways to achieve improvement:

Failure to improve the performance as stated in the above plan may result in the student receiving an unsatisfactory clinical rotation grade.

_____

SIGNATURE

_____

DATE

ALLEGANY COLLEGE OF MARYLAND
CUMBERLAND, MD

Sample Student Evaluation Report from Trajecsys

The objectives assume the student has completed the organized classroom and associated laboratory experience.

Name_____Date: From_____to_____

Department_____

Instructor_____

Please make a qualifying statement when necessary; otherwise check

appropriate number for evaluation.

_____1. Unsatisfactory
_____2. Needs improvement
_____3. Average
_____4. Above Average
_____5. Excellent

Achievement in clinical practice courses is evaluated in areas:

(I) Technical Performance
(II) Professional Attitudes and
(III) Technical Competencies (Skills and Knowledge) and
(IV) Total Evaluation Grade
(V) Total Clinic Rotation Grade

(I) **Technical Performance Evaluation**

The technical performance evaluation is to be completed by matching the student's general performance on each item with the rating that most closely describes their performance in comparison to an entry level technical employee. It is recognized that an entry level Medical Laboratory Technician might not be assigned every procedure and that proficiency and level of judgment will increase with experience.

(II) **Professional Attitude**

The ratings and comments in this section are designed to provide information and counseling to assist the student to achieve personal and professional improvements and for employment recommendations. The individual should be described without reference to others. For the purpose of calculation, a score of a 3 for any item will be equated to a 3.5 on a 5-point scale so that this equates to a 70% (average score). An average of the professional behavior evaluation will be calculated.

(III) **Technical Competencies (Skills and Knowledge)**

The clinical supervisor will evaluate each student's technical performance using the rating scale 1-5. For the purpose of calculation, a score of a 3 for any item will be equated to a 3.5 on a 5-point scale so that this equates to a 70% (average score). An average of the technical performance will be calculated.

(IV) **Total Evaluation Grade**

The Professional and Technical Performance Evaluation will be averaged together as a single evaluation score to constitute 30% of the overall clinical grade.

(V) **Total Clinic Grade**

The evaluation total will be averaged with a percent on written examinations (30% of clinical grade), practicals (20% of clinical grade), and quizzes (20% of clinical grade) for each clinical area and a combined percentage of 70% is needed to receive a passing grade (P) in each clinical rotation area. In addition, the student must achieve a 70% on the final chemistry practical.

I. TECHNICAL PERFORMANCE EVALUATION

	1	2	3	4	5
MLT GOAL #1: **Students will competently perform routine clinical laboratory tests.** *(Does the student possess the attributes associated with this MLT goal? Please evaluate the student performance related to the main goal and each of the more specific criteria attributing to the goal rating.)* **Student was able to:**					
1. Perform the routine laboratory tests associated with the department accurately and efficiently.					
a. Demonstrate competence in performing test procedures.					
Comments:					
b. Consistently use good techniques when performing laboratory tests.					
Comments:					
c. Handle equipment appropriately with necessary precautions.					
Comments:					
d. Make progress in organization and speed from first to last part of the rotation.					
Comments:					
e. Exhibit evidence of procedural review and preparation for daily assignments.					
Comments:					
f. Demonstrate the ability to retain instruction on where to find materials and how to perform techniques.					
Comments:					

g. Accurately record results; write legible reports.					
Comments:					
h. Express an understanding of testing principles.					
Comments:					
i. Complete assignments.					
Comments:					
j. Demonstrate appropriate safety practices.					
Comments:					
k. Demonstrate entry level knowledge and understanding related to this subject area.					
Comments:					
l. Adjust to change in work flow and procedures.					
Comments:					
m. Demonstrate the ability to multitask in order to progress through daily assignments.					
Comments:					
n. Verify patient identification throughout all phases of analysis.					
Comments:					
o. Comply with all HIPAA regulations.					
Comments:					
2. Analyze diverse types of information to choose an appropriate course of action in order to perform laboratory tests and solve problems accurately and efficiently.					
a. Recognize discrepancies in quality of results.					
Comments:					
b. Recognize expected results/normal values for the testing methods.					

Comments:					
c. Recognize abnormal and critical values and explain the procedures for verifying and reporting these results.					
Comments:					
d. Correlate abnormal results with patient conditions.					
Comments:					
e. Identify the acceptability of patient results based on the evaluation of quality control data.					
Comments:					

II. PROFESSIONAL ATTITUDES EVALUATION

	1	2	3	4	5
MLT GOAL #2: **Students will possess the professional attitudes and behaviors critical to being a valued member of the healthcare/ workplace team.** *(In your opinion, does the student possess the attributes associated with this MLT goal? Please evaluate the student performance related to the main goal and each of the more specific behaviors attributing to the goal rating.)*					
RELATIONSHIPS/COMMUNICATION **Student was able to:**					
1. Communicate effectively using professional interpersonal skills resulting in successful interactions with colleagues and patients.					
Comments:					
a. Work well and communicate appropriately with co-workers.					
Comments:					
b. Work well and communicate appropriately with supervisors.					
Comments:					
c. Respects the knowledge of the trainers.					
Comments:					
d. Student exhibits acceptable customer service skills.					
Comments:					
2. MLT students will behave in a manner consistent with standards of the laboratory profession. **Student was able to:**					

a. Dress appropriately for the clinical laboratory and adhere to laboratory protocol for the use of PPE.					
Comments:					
b. Follow established policies and procedures.					
Comments:					
c. Is punctual and at work station when required or directed to be there.					
Comments:					
d. Complete all required rotation days.					
Comments:					
e. Demonstrate ethical behavior.					
Comments:					
f. Demonstrate accountability (acknowledges mistakes and corrects when possible) and responsibility (completion of assigned tasks, no need of reminders).					
Comments:					
g. Show initiative to improve technical skills and exhibits interest in assigned tasks.					
Comments:					
h. Evaluate own actions critically.					
Comments:					
i. Ask advice of technologists and supervisors when needed.					
Comments:					
j. Demonstrate confidence of MLT knowledge and skills.					
Comments:					

k. When work is completed asks supervisor for something to do.					
Comments:					
l. Maintain clean work benches.					
Comments:					
m. Volunteer to help in lab if workload permits (i.e. answer phones)					
Comments:					

III. COMPETENCIES (SKILLS AND KNOWLEDGE)

		Score	% of Final Grade
1.	Evaluation (Technical and Professional Performance Evaluation)	_____	30%
2.	Examinations, quizzes, and practicals derived in the following manner:	_____	70%
	20% - Quiz Average		_____
	20% - Final Practical (student must make a 70% on practical)		_____
	30% - Final Written Examination		_____
	A student must make a 65% on the written comprehensive final. If a 65% is not achieved, the student may be allowed to take an alternate examination. If the student fails to make a 65% on the retake examination, the student will be required to do remediation, or repeat the clinical rotation.		_____ (Total Score)

OPEN RESPONSE

1. Brief Evaluation - Give main strengths, weaknesses or problems encountered during clinical experience.

2. Suggestions for improving individual's performance.

Summary

The student must achieve a minimum of 70% on the criteria for section 1 and 2 under competencies. A student who fails to achieve a 70% overall in any clinical rotation area must reapply to retake the specific clinical area in which the unsatisfactory grade has been obtained (refer to Medical Laboratory Technology readmission policy). The student may proceed with their assigned clinical rotation schedules and need only reapply to repeat the deficient area.

Evaluated by _____ DATE_____
Supervisor/Evaluator Signature

Students comments regarding appraisal and counseling activity.

Reviewed with student by _____DATE_____
Signature

_____ DATE_____
Student Signature

Allegany College of Maryland

Academic Grievance Procedure

A student having a concern with a faculty member of an academic nature arising from participation in a credit class should follow this process:

1. **Review the course syllabus and Academic Regulations.**

   Review the requirements and/or performance standards. Please take a few moments to make sure your concern is a valid one and is not based on inaccurate or incomplete information. Also, please understand that this policy addresses issues of an academic nature, such as grades, attendance, or other academic issues relating to a course. This procedure must be initiated within 10 working days after occurrence. For issues that are non-academic in nature, students should refer to the appropriate College policy, which may be found in the Student Handbook.

2. **Talk with the faculty member.**

   You **must** talk with the faculty member about your concerns. Schedule a meeting with the faculty member and meet with him/her. Chances are good that you can resolve a misunderstanding or other concern at this meeting. If you are unable to resolve the issue with the faculty member, contact the Program Director/Division Chair/Coordinator within 10 working days after meeting with the faculty member by following the directions in Step 3. Written documentation may be requested. The faculty member has the right to meet with involved individuals throughout each step of this process.

3. **Contact the Program Director/Division Chair/Coordinator.**

   The director/chair/coordinator will verify that a meeting was held with the faculty member and then discuss the concern with you and the faculty member, either in person at the respective campus or by conference call. If unable to resolve the issue together, you may present your grievance to the Dean of Enrollment and Educational Services within 10 working days after you receive the decision of the director, chair, or coordinator by following the directions in Step 4. If the faculty member is the Program Director/Division Chair/Coordinator, see step 4.

4. **Contact the Dean of Enrollment and Educational Services.**
   If you are dissatisfied with the Director/Chair/Coordinator's decision, you **must** take the following actions:

- Obtain the Academic Grievance Notice from the Office of the Senior Vice President of Instructional and Student Affairs,Student and Legal Affairs, your advisor, or online.
- Complete the Academic Grievance Notice. Include an explanation of why you believe the Director/Chair/Coordinator's decision was incorrect. Be specific.Schedule a meeting with the Dean of Enrollment and Educational Services.
    - The Dean will obtain signatures from the faculty member and Director/Chair/Coordinator and notify them about the meeting. In the event that the faculty and Director/Chair/Coordinator refuse to sign the form because the matter was not discussed with them, the form will be returned to the student and the student will be required to follow the procedures herein.
- Meet with the Dean of Enrollment and Educational Services.
    - The Dean will make a decision based on the information contained in the Academic Grievance Notice and meetings with involved parties.

The Dean notes his/her decision on the Notice (with copies provided to all parties, and a copy maintained in the files of the Dean). If you are dissatisfied with the
Dean's decision, you may appeal that decision to the Senior Vice President of Instructional and Student Affairs within 10 working days by following the directions in Step 5.

5. **Contact the Senior Vice President of Instructional and Student Affairs.** If you are dissatisfied with the Dean's decision, you **must** take the following actions:

    - Submit a copy of the original Academic Grievance Notice with the Dean's decision to the Senior Vice President of Instructional and Student Affairs.
    - Include an explanation of why you believe the Dean's decision was incorrect. Be specific.
    - Schedule a meeting with the Senior Vice President of Instructional and Student Affairs.
    - Meet with the Senior Vice President of Instructional and Student Affairs.
        - The Senior Vice President will make a decision based on the information contained in the

Academic Grievance Notice and meetings with involved parties.

The Senior Vice President notes his/her decision on the Notice (with a copy to the faculty member, Director/Chair/Coordinator, Dean, and a copy for the record.) If you are dissatisfied with the Senior Vice President's decision, you may appeal that decision to the President within 10 working days after receiving the decision of the Senior Vice President of Instructional and Student Affairs by following the directions in Step 6.

6. **Contact the President.**
   If you are dissatisfied with the Senior Vice President's decision, you **must** take the following actions:
   - Submit the Academic Grievance Notice with the Dean's and Senior Vice President's decisions to the President.
   - Include an explanation of why you believe the Senior Vice President's decision was incorrect. Be specific.
   - Schedule a meeting with the President.
   - Meet with the President.
     - The President will make a decision based on the information contained in the Academic Grievance Notice and meetings with involved parties.

The President notes his/her decision on the original Notice (with a copy to the faculty member, Director/Chair/Coordinator, Dean, Senior Vice President, and a copy for the record.)

The President's decision is final.

Editorial Changes: 7/24/23

Allegany College of Maryland

ACADEMIC GRIEVANCE NOTICE

Read the Academic Grievance Policy before completing this form. Failure to follow directions could result in the automatic dismissal of your grievance. Please write legibly. Use additional sheets if necessary. Attach any documentation that supports your grievance.

Student Name: _____ Contact Phone # (_____) _____

Student Address: _____

Course: _____

Instructor: _____

Director/Chair/Coordinator/: _____

Date of Incident/Occurrence: _____

****

What is the nature of your grievance? (i.e., what is your complaint about the course/instructor?)
Be specific.

_____

_____

_____

_____

_____

How would you like to see this matter resolved? Be Specific.

_____

_____

_____

I have met with my instructor and the Program Director/Division Chair/Coordinator about this particular grievance but am dissatisfied with their action/decision for the following reason(s):

_____

_____

_____

_____

I certify that all information provided in this Grievance is true and accurate. Any false information will result in the denial of my Grievance and could prompt disciplinary action.

_____ ____/____/____
Student Signature Date

Once this form is submitted to the Dean of Enrollment and Educational Services, s/he will obtain the following signatures from the faculty member and the program director, division chair, or coordinator, to verify that they have discussed this issue with the student.

_____ ____/____/____
Faculty Signature Date

_____ ____/____/____
Program Director/Division Chair/Coordinator Signature Date

****

DEAN USE ONLY

____/____/____ Date Received ➔ [ ] Contact Student to schedule meeting

____/____/____ Meet w/ Student [ ] Faculty Member Present During Meeting with Student

Decision:

[ ] Original to Student & Copies to Faculty, Director/Chair/Coordinator, Senior Vice President of Instructional and Student Affairs, and file

➔ Student may accept decision or appeal

****

SENIOR VICE PRESIDENT OF INSTRUCTIONAL AFFAIRS USE ONLY

____/____/____ Date Received ➔ [ ] Contact Student to schedule meeting

____/____/____ Meet w/ Student [ ] Faculty Member Present During Meeting with Student

Decision:

[ ] Original to Student & Copies to Faculty, Director/Chair/Coordinator, Dean, President, and file

➔ Student may accept decision or appeal

****

PRESIDENT USE ONLY

____/____/____ Date Received ➔ [ ] Contact Student to schedule meeting

____/____/____ Meet w/ Student [ ] Faculty Member Present During Meeting with Student

FINAL Decision:

[ ] Original to Student & Copies to Faculty, Director/Chair/Coordinator, Dean, Senior Vice President, and file

➔ **President's decision is FINAL.**

STUDENT COMMUNICATION POLICY

Background

Allegany College of Maryland must have efficient and timely methods of communicating with students. The advancement of technology facilitates communication while simultaneously saving money. These advances permit information to be shared quickly and easily for the benefit of students and the College generally; the College is committed to promoting effective communication campus-wide.

Allegany College of Maryland recognizes importance, frequency, and ease of students' communication with fellow students, College officials, and members of the public. Allegany College of Maryland also recognizes the widespread use of the internet and electronic devices to interact with other people through text, images, and sound. While these media have numerous positive benefits for students, technology carries risks such as:

- interference with orderly academic endeavors,
- inappropriate disclosure of confidential information,
- inappropriate disclosure of personal information and/or photographs,
- inappropriate and/or unauthorized publication(s),
- dilution of professional, academic relationships,
- damage to the College's reputation in the community,
- damage to personal relationships,
- violations of the Code of Student Conduct,
- violations of local, state, and federal laws such as copyright or trademark infringement,
- civil liability for torts such as defamation,
- violations of website rules / terms of service, and
- jeopardizing future employment.

POLICY

Whenever possible, Allegany College of Maryland will communicate with students electronically. Examples include email, E-safe, college website, other internet presence, and student portal; this policy shall apply to new technological methods of communication as they are developed and adopted. The College will provide the necessary infrastructure for appropriate tools. (See Technology Resources Policy for details.) Such methods of communication shall constitute official communication by the College and may replace paper communication wherever paper communication had previously been required and/or used.

** All College employees are strongly encouraged to use electronic means to communicate with students.

** All students are required to monitor their College electronic communication tools regularly and frequently; it is the students' responsibility to read all communications and to respond as necessary.

As members of the College and the larger community, students are expected to communicate with others using the means and manner consistent with the standards of an institution of higher education; Allegany College of Maryland is a place of learning, and activity which inhibits or interferes with learning or other College functions will not be permitted.

Students shall not use any means of communication to abuse, harass, threaten, bully, or otherwise harm any person. (See Code of Student Conduct for details.)

Students shall not use any means of communication to disrupt instruction, learning, or other College functions; likewise, priority shall be given to uses of electronic communications and/or technology which promote academics.

The personal use of the internet and/or electronic devices by students **outside the classroom or other learning sites shall** not be infringed; such **personal** use shall not constitute official College communication, and the College is not responsible for the content of students' personal communications. However, the College reserves the right to act upon personal student communications when such communication has a negative impact upon any official function of the College including instruction, health, safety, and public relations. Nothing in this policy shall be construed to restrict any person's right to avail themselves of civil remedies.

Students shall not use the College's logo(s), trademarks, letterhead, or other intellectual property without prior consent from the authorized College official. Students shall not create an internet presence or a publication that purports to be official or authorized by the College without prior consent from the authorized College official.

Related Allegany College of Maryland policies maintain their full force and purpose (eg., Technology Use Policy, First Amendment Policy, FERPA, HIPAA, career program curricula/handbooks, Code of Student Conduct, etc.).

Influenza Vaccination Acknowledgement

Based on recommendation from the Center for Disease Control, health care personnel and healthcare students should get the flu vaccine for the flu season (www.cdc.gov/flu/professionals/vaccination). The decision is sup- ported by evidence that influenza vaccination is a safe preventive health measure with potential benefit across all age groups. Our Clinical affiliates are also requiring influenza vaccination of their employees and others who provide patient care treatment and services.

Prior to attending clinical rotations, all students are required to have the flu vaccine, Documentation must include: date the vaccine was received, vaccine information, verification of the agency and person administering the vaccine.

Students who do not provide documentation of influenza vaccination for the flu season by the required date set by their health career program will not be allowed to participate in clinical and will not be able to fulfill the requirements of clinical courses. Each program will notify their students of the due date for the vaccine. Any student who is requesting an exception needs to make an appointment with the Director of the Program.

The only exceptions to the policy are the following:

5. **Medical Contraindications:**

   - Severe or health threatening reaction to a previous dose of influenza vaccine;
   - Severe documented egg allergy;
   - Severe allergy to any vaccine component; and
   - Individuals with a history of Guillain-Barre Syndrome.

6. **Religious Exemption** (if you practice religion that prohibits vaccination)

If an **exception to the policy** is requested, the following documentation will need to be submitted:

2. **Medical Contraindication**- Individuals seeking exemption by reason of medical contraindication must submit documentation from their primary care provider. Documentation must include:
   - Nature, duration and severity of the medical condition (ex- egg allergy, provide copy of allergy testing and description of the reaction)
   - Explanation as to why the medical condition prevents the individual from receiving the vaccination
   - If the reason is due to pregnancy or lactation, provide an explanation of why CDC recommendations for an annual influenza vaccination should not be followed.

3. **Religious Objection-** Individuals seeking exemption by reason of religious objection must submit documentation from their religious leader or spiritual advisor (minister or other religious leader) or a formal statement published by the religious body describing the religious belief or practice that prevents receiving the influenza vaccine. In addition, an attachment should be included that shows evidence that the individual actually practices that religion.

Review of documentation submitted for approval of an exemption will be reviewed by the individual Program Director in consultation with the appropriate clinical agency. For medical exemptions, consultation will be with Employee Health and/ or relevant clinical agency. Consultation with Human Resources of the related clinical agency will be done for religious exemptions. Individuals who are approved for medical or religious exemption are not required to be vaccinated. Other measures may be required to reduce the risk of flu transmission.

These procedures and requirements become effective with the Spring semester of 2024. The policies have been approved by the following individuals:

_____ _____

Stacey Rohrbaugh Date
Director, Medical Laboratory Technology Program

_____ _____

Dr. Kurt Hoffman Date
Senior Vice President of Instructional
and Student Affairs

_____ _____

Dr. Bill Rocks Date
Dean of Career Education

Accredited by the
National Accrediting Agency for
Clinical Laboratory Sciences
5600 N. River Road, Suite 720
Rosemont, Il 60018-5119

http://www.naacls.org