Medical Laboratory Technology Program

2023-2024

Clinical Practicum Student Handbook

This handbook was revised on 7/5/2023

CLINICAL PRACTICUM READINESS

Required Immunizations

Each student participating in the Clinical Practicum has documented immunity or vaccinated to the following communicable diseases:

- Rubella
- Rubeola
- Mumps
- Varicella (chickenpox)
- TDAP (Tetanus, Diphtheria and Pertussis) booster
- COVID-19 vaccinations.
- Influenza
- Hepatitis B (strongly recommended, must sign waiver if refused)
- TB skin testing (PPD) or evaluation by a healthcare provider must be provided

Background Checks

Background checks and drug screens are performed prior to entering the MLT program. Any student with a background check that is in violation of a BVCTC MLT Program or clinical facility policy, or requirement will not be allowed to progress in the program. Students are responsible for the fees associated with background checks and drug screens.These fees are assessed as Program Fees upon admission to the program in the summer session.

Drug Testing

BVCTC MLT Program requires drug and/or alcohol testing upon admission as follows:

Reasonable suspicion: Any student who demonstrates unusual, unexplained behaviour in the agency environment or during clinical hours. Observable signs might include, but are not limited to:

- Slurred speech
- Glassy, red eyes
- Excessive sleepiness and disorientation in class
- Odor of alcohol on breath or person
- Unsteady gait
- Disoriented or confused behaviour
- Significant changes in work habits
- Hallucinations
- Unexplained accident or injury
- Other clinical observations consistent with impairment
- Sloppy, inappropriate clothing and/or appearance
- Physically assaultive, unduly talking, exaggerated self-importance, making incoherent or irrelevant statements in the agency setting

- Excessive sick days, excessive tardiness when reporting for clinical or class
- Missed deadlines, careless mistakes, taking longer than customary to complete work.

Testing Procedure

- Informed consent will be obtained. Fees associated with testing will be the responsibility of the student.
- The collection site will be in a standard collection area laboratory, or emergency department.
- The collection shall be performed by qualified medical personnel specifically trained in the collection procedure. Collection procedures will adhere to the required “chain of custody” protocol.
- The student will be escorted to the collection site with the appropriate BVCTC representative and will remain at the collection site until the required specimens are obtained.
- All consented tests results will be reviewed with the student by a health care provider designated by the agency.
- The student’s confidentiality will be strictly maintained. These results will be communicated only to the student, the Vice-President for Student Services, the physician reviewing the results with the student, and the Program Chair of the BVCTC MLT program.
- Records will be maintained in a separate file by the MLT program in a secure area. Requests for information will require a court order or may be released by the student through written consent and liability waiver.
- The drugs to be tested may include, but not limited to:
    1. Cannabinoids
    2. Barbiturates
    3. Alcohol
    4. Amphetamines
    5. Cocaine
    6. Propoxyphene
    7. Benzodiazepines
    8. Opiates
    9. Phencyclidine
    10. Methaqualone
- Students who refuse drug testing for any reason will be dismissed from the MLT program. Positive results without a current prescription will result in dismissal from the MLT program.

Professional Dress Code

Professional standards of appearance are important to the overall quality of patient care. A high level of cleanliness is maintained as a standard for hospital employment. Poor oral hygiene, body odors, unkept hair and other signs of poor personal hygiene will not be tolerated. Failure to ad

As representatives of BVCTC, students are required to maintain a well-groomed, professional appearance consistent with medical asepsis and the policies of the clinical facilities. Failure to adhere to the specified guidelines may result in students not being permitted to participate in the clinical experience.

The following are required by the students:

- Adhere to the dress code of the assigned laboratory.
- Wear the approved BVCTC scrubs/uniform; these must be free from wrinkles, pants do not drag, and be appropriately fitted.
- Wear appropriate footwear, shoes must be closed toe and low heeled
- Hair must be well groomed. If hair extends below the collar, it must be secured in such a way it does not come in contact with patients or interfere with student clinical tasks. Beards must neat and well groomed
- Keep jewelry at a minimum. No dangly earrings or necklaces.
- Do not wear perfume, cologne or lotions with strong scents
- Keep fingernails clean and well-trimmed.
- Piercings should be reserved for the ear areas and tattoos should be kept at a minimum. Adhere to the clinical site regulations on piercings and tattoos.
- BVCTC MLT approved uniform:
    1. Short sleeved scrub top (color to be determined)
    2. Charcoal gray uniform scrub pants
    3. Athletic shoes without mesh/holes; minimal logos or colors
    4. BVCTC student ID must be worn at all times during clinical rotation
    5. Students are required to purchase a polo bearing the school logo to be worn during certain on-site laboratory experiences and various off-site activities, other than clinical rotation.

Malpractice/Liability Insurance

For the protection of the student, malpractice insurance is required for the entire period of enrolment in clinical laboratory courses. This insurance will be provided by a group policy for the State of West Virginia when you are registered in a clinical laboratory course.

This policy covers MLT students regardless of setting, so long as the student is functioning within the student's role. Therefore, this malpractice/liability insurance policy does not cover individuals' employment by the facility.

Incident Reports

An incident is any event that is inconsistent with the routine operation of the health care institution or with quality patient care. An incident report must be completed when an event occurred that jeopardizes a patient's care or could result in damage to a patient, employee or visitor. It may be an accident or situation which might result in an accident. An incident may result in legal action against the institution, student, or faculty member, and adequate reporting is essential. Incident reports must be completed by the student/faculty involved in the incident. The following procedures should be followed in reporting incidents:

- The procedure of the agency where the incident occurs should be followed in filing the report in that agency.
- Documentation of the incident should be done on the student advising form.
- Documentation of the incident should include:
    1. A summary of the incident, excluding patient and agency identification
    2. Description of actions taken because of the incident
    3. Description of the remedial instruction interventions taken with the student
- The documentation of the incident becomes a part of the advising record which is kept on file in the MLT Program Director's office.

Latex Allergies

When working in the clinical setting or student laboratory, students may be exposed to latex and other allergens.

GOAL: To identify students who are allergic to latex, or at a high risk to develop a latex allergy; and to educate them of risk factors and ways to prevent negative outcomes.

POLICY: Latex-sensitive students will use only non-latex supplies. Latex-free gloves will be made available to students.

Prior to admission to the MLT student Lab and clinical rotations, all students that know they are latex-sensitive must have a letter from a physician stating the treatment that will be required in the event of an adverse reaction. The student must always keep emergency medications with them when involved with school-related functions/activities.

- Procedure:
    1. Identification of known or suspected latex-sensitive students becomes part of the student's permanent record.
    2. All students will be provided information regarding the health risk associated with latex including the prevalence of latex sensitization, risk factors for sensitization, mechanisms to report potential problems with latex and basic management for latex-sensitive students. .
    3. All students with evidence of latex sensitivity by medical history or physical examination will be directed to a physician.
    4. All students with evidence of latex sensitivity will be responsible for obtaining and wearing a medical alert bracelet, carry non-latex gloves and emergency medical instructions to

include medications if applicable; this will be required prior to admission to the MLT student laboratory and clinical activities.

5. Latex-free gloves will be available to latex-sensitive students. It is the responsibility of all students and faculty to ensure compliance with this policy.

In case of life-threatening reaction, (anaphylaxis) in the MLT Student lab, an ambulance will be summoned. Any faculty or member may dial 911 from the nearest phone, stating that you have a life-threatening "latex emergency" and need an ambulance. Epinephrine will be needed. Do not handle the victim with any latex products.

CLINICAL POLICIES AND PROCEDURES

Journaling Clinical Experience

Students are required to complete a journal assignment at the end of each week to summarize the weeks' activities including personal reflection and accomplishments. The assignments will then be uploaded in Brightspace D2L by the appropriate due date. A rubric will be used to grade submissions which can be found on D2L. Students will use the attached Log Sheet for documentation of activities.

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Rubric	3 – Meets all requirements	2 – Satisfactory	1 – Needs Improvement
1. Recording of Activities Performed	Written documentation of activities, procedures, testing, maintenance, and QC procedures. Records the majority of names and function of instruments.	Records activities adequately, needs more detail, discussion and/or explanation .	Lacking documentation of lab activities, needs more identification.
2. Description of lab processes	Discussion processes are clear and addresses all requirements. Processes details of the journal are clearly articulated.	Discussion is adequate and addresses the requirements.	Lacking in documentation of lab processes. Needs to have more processes addressed and discussed.
3. Describes any out of normal events	Describes actual abnormal events or abnormal test results with details. Has clear documentation of the learning experience.	Describes actual abnormal events or abnormal test results. Does not document learning experience	Fails to identify any out of normal events or abnormal results.
4. Documentation of likes and dislikes of experiences	Documents BOTH likes and dislikes with detail AND explanation	Documents likes and dislikes.	No documentation of likes or dislikes or only one or the other documented.
5. Relate classroom lecture to lab clinical rotation	More than one example of relating classroom lecture to clinical lab experience	One example of relating classroom lecture to lab procedures.	No examples of relating classroom lecture to lab procedures.
6. Describe interpersonal relationships with personnel	Several examples documented of different personal relationships in laboratory	Few examples of documentation of personal relationships	No examples
7. Mechanics	Rules of grammar, usage, and punctuation are followed. Spelling is correct. Language is clear and precise. Uses details in descriptions of subject matter. Approved format is used.	Few or no spelling errors and minor punctuation errors. Documentation sufficient and uses approved format.	Several spelling and punctuation errors. Poor sentence structure. Subject documentation not clearly communicated. No detail of subject matter.

BVCTC MLT STUDENT CLINICAL EXPERIENCE JOURNAL LOG SHEET

Student:_____ Hospital_____ Department_____

1. **Recording of activities performed during week** • Number of procedures or tests. • Name of instrument(s), manual procedures • slide reviews • QC procedures, • Maintenance procedures • Any other work performed	
2. **Description of lab processes to include:** • Both positive and negative situations or events. • observations in the laboratory of processes • Describe the workflow, fast, normal or slow paced • What you did in your downtime situations?	
3. **Describe any out of normal events**, EXAMPLES: • abnormal patient results; calling critical results • issues involving specimens or integrity of specimens, • unique patient results • New experience for you **Most Importantly :Describe the knowledge you gained from this experience(**	
4. Describe what you liked best and what you liked least from this week's experiences	
5. Relate classroom lecture to your clinical lab rotation experiences, be specific and identify subject matter from lecture relating it to clinical experience	
6. Describe your relationship with preceptors, supervisors, other lab techs, phlebotomists, etc.	

Case Studies and Discussion

The student will complete five case studies and one discussion forum relevant to their departmental rotation during their practicum. The student will answer questions completely and post them on D2L Brightspace.

Unavailability of Clinical Sites

If for some unforeseen reason, a clinical site is not available for a student during a previously scheduled rotation, the MLT Program Director and/or the MLT Clinical Coordinator will attempt to change the schedule and place the student in another clinical site. If that is not possible, the student will be required to complete the rotation during different dates/times/shifts, etc. such as spring breaks, weekends and/or after the completion of the school semester. At this point, the student may have to receive an “incomplete” for the class until the rotation is complete.

Scheduling and Hours of Rotation

Students are scheduled for 14 week rotation in the following disciplines: Tuesday-Friday of each week. Students will also have 1 week for Spring Break.

- 3 weeks in Microbiology,which includes Parasitology, Virology, Mycology and Bacteriology, Immunology, and Serology
- 3 weeks in Hematology
- 3 weeks in Chemistry
- 3 weeks in Immunohematology
- 1 week in Urinalysis
- 1 week in Coagulation

Hours for laboratory training may vary somewhat with each hospital and clinical area. The MLT Program Director will inform students of any such variances prior to the start of the clinical rotations. The typical time is 7:00 AM - 3:00 PM. Clinical instructors may ask students to arrive at other times on selected days so that the student may experience certain procedures which would otherwise be missed.

Communication

Communication should be through BVCTC email account. Private email accounts are not used. Students are expected to check their college email frequently.Faculty send student and program information to students by this primary mode of communication. Unofficially, communication is also provided by a private MLT group on Facebook for quick updates.

Behavioral Conduct

While a student is representing BridgeValley Community & Technical College as a Medical Laboratory Technology student, he/she will be expected to conduct him/herself in such a manner to reflect favourably on him/herself and on the MLT program. If a student acts in such a manner as to reflect immature judgment or disrespect for others, the student will be called before the MLT Program Director for determination of his/her status in the MLT program. Inappropriate conduct is grounds for dismissal from the MLT program.

Confidentiality

Students must always remember that the information obtained in a clinical laboratory or hospital pertaining to a patient is strictly CONFIDENTIAL. This means that all lab results are to be directed ONLY to physicians or those designated within the organization to receive such information. Students shall not discuss with patients, parents, friends, relatives or other non-designated hospital personnel the results of tests or the nature of any illness. This information is given to the patient only by the physician. Failure to comply with patient confidentiality is cause for immediate dismissal from the MLT Program.

Weather and Emergency Issues

See Student Handbook for Weather/Emergency Issues.

In the case of inclement weather, check the main internet page for BridgeValley Community & Technical College, and/or tune in to local radio stations to determine if campus-wide classes have been cancelled. However, your personal safety should always be taken into consideration when traveling to and from regular class meetings as well as clinical assignments- notify the instructor in these circumstances.

If BridgeValley classes are cancelled or campus is closed due to weather or other emergency issues, MLT students should not report to the BVCTC campus for any scheduled “onsite” classes. If an MLT student is scheduled for “offsite” clinical rotations and BVCTC classes are cancelled or campus is closed, MLT students have the option to attend their clinical rotation sites if they can do so safely. If a student is unable to safely attend the rotation, no penalties will arise for the student. The student will, however, be expected to meet all applicable objectives for whatever rotation they are in.

The amount of time to be “made up” for missed rotation times will be at the discretion of the BVCTC MLT Program Director and BVCTC Clinical Coordinator in consultation with the clinical site preceptors. The decision as to the amount of “make-up” time will be relayed to the student and scheduled with the clinical site.

If BridgeValley is closed after a student has already arrived at his/her clinical rotation site the student will have the option to remain at the site or to return home, using safety and common sense as guidelines. Likewise, if BVCTC is closed early in the day, the student should use his/her best judgment as to whether it is safer to leave or remain at the site.

This policy pertains only to the closing of BridgeValley Community and Technical College in some type of emergency situation. All clinical rotations that are missed due to illness or personal reasons must be made up and will be scheduled between the student and the clinical site with approval from the MLT Program Director.

Attendance and Tardy

- One hundred percent attendance is expected, as well as punctual attendance on all clinical days.
- Absences from clinical rotations for reasons other than health or emergencies will not be tolerated and the student may be subject to withdrawal from the MLT program.
- It is recommended that all missed clinical days be made-up when possible. Missed days will be handled on an individual basis by the MLT Program Director. Should a student miss more than three clinical days during the clinical practicum, an incomplete may be given until such time is made-up. Each case will be handled on an individual basis.
- Three days tardy by 15 minutes or more will result in the student being placed on probation. Should the behaviour continue, the student may be withdrawn from the MLT program at the discretion of the MLT Program Director.
- It is the student's responsibility to have a clinical instructor sign his/her attendance sheet each clinical day which serves as a record of their attendance.
- The student must notify the clinical coordinator or instructor, and the MLT Program Director of any absence or tardy by 10:00 AM the same day (ASAP preferred). Failure to do so will result in a 5% reduction from the student's final clinical grade for each offense.
- Students can contact the MLT Program Director at 304-205-6654 or 304-444-1625. Leave a message on voice mail when the MLT Program Director is not available. If messages are left with other college personnel, students must get the name of the person with which the message is left.

Performance of Service Work

Service work, in relation to the MLT program, is work or procedures performed by laboratory staff which directly or indirectly relate to patient care. MLT students perform unpaid service work only when it is a necessary part of their clinical training and only under supervision.

MLT students are not expected to perform work or procedures in place of a laboratory staff member. MLT students do perform service work when it relates to the achievement of their clinical objectives or to become more proficient at a procedure relating to the present clinical area of study. However, students are not to be used in place of laboratory employees.

Student Employment

BVCTC neither approves or disapproves of student paid employment outside of scheduled class or laboratory training times. BVCTC assumes no liability for health care work, or any work performed by its students because of this employment, or any work not related directly to the student's approved clinical training.

It is the student's responsibility to prevent outside employment from interfering with their college studies. In addition, the MLT program is not required to make any accommodation in the program regarding a student's employment.

Transportation

All transportation to and from the clinical sites is the responsibility of the student.

Student Laboratory Testing

MLT students are only to perform laboratory tests approved and supervised by their clinical instructors. Students are to perform laboratory tests with minimum supervision only when they have proved proficiency through previous performance and with their clinical instructor's approval. Any laboratory work performed by a MLT student must be signed/approved by the clinical instructor supervising them before being reported.

Teaching Resources at Clinical Sites

All hospitals have indicated that students can utilize their medical libraries, as well as those resources available within the laboratories. Students are to ask for assistance when locating these resources, permission to use them in case someone else is presently using them and are not allowed to remove them from their locations (lab or library) unless given permission to do so by a person authorized to do so.

Teaching resources such as hematology/microbiology slides, digital pictures, computer programs, internet, old proficiency testing materials, and various specimens should use the same procedure as above.

Visit from BVCTC Program Director

The MLT Program Director will visit the students at their clinical sites at least once a semester. The number of visits will be determined by the number of MLT students and the distance of the clinical site and the need to visit. The facility will be informed at least one week prior to the site visit. More visits can be requested by the clinical site. E-mail will be used to keep in contact with the clinical site and student at all times during the clinical rotation.

Student Complaint

Follow the Chain of Command at the clinical site. It is important for the student to know the formal and informal reporting structures within the hospital's organization. Once you understand them, follow them! The unspoken rule is this: do not go around, behind or over anyone. Follow the chain of command in all your communication and actions. That means go to your site supervisor first. The student is encouraged to communicate feelings in a tactful way through the chain of command and to resolve your own work-related problems. However, if you believe that you have done all you can and you are still not satisfied, contact the MLT Program Director.

A student has the right to seek a remedy for a dispute or disagreement through a designated complaint or grievance procedure. The objective of the procedure is to resolve problems as quickly and efficiently as possible at the level closest to the student so that student's educational progress can continue. The student(s) with a complaint may either go to the MLT Program Director or complete the Student Complaint Form below. The program director will attempt to work with the student and any other persons who are involved to resolve the problem within seven (7) working days. If the matter is not resolved to the student's satisfaction, the student may follow the student complaint/grievance procedure as stated in the Student Handbook

Clinical Practicum

Student Complaint/Inquiry Form

Student Name: _____ Date: _____

Clinical Site Involved: _____

Nature of the Complaint or Inquiry (Be as specific as possible - for example: time, department, person, etc.):

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Student's suggestions related to how they perceive this situation might be rectified if applicable:

_____

_____

_____

_____

Student Signature: _____ Date_____

Program Director follow up:

_____

_____

_____

_____

_____

_____

Clinical Sites Contact Numbers

AFFLIATION	CONTACT NUMBERS			
CAMC Charleston Area Medical Center	Memorial Hospital	Clinical Coordinator (all hospitals)	Cindy Bullard	304-388-9002
		Microbiology	Lisa Brown	304-388-9353
		Virology	Becky Ashley	304-388-4308
		Automated Procedures Laboratory (APL)	Megan Peaytt.	304-388-8246
		Blood Bank	Susie Halstead	304-388-4236
	General Hospital	All sections	Tammy Nelson	304-388-6244
	Women and Children's	All sections	Kim Ewers	304-388-2381
	Teays Valley	All sections	Angela Warner	304-757-1770
Thomas Health System	Thomas Hospital	Clinical Coordinator	TBD	304-766-5955
		All sections	Susan Risinger	304-766-5955
Mountain Health Network	Cabell Huntington Hospital	Clinical Coordinator	Veronica Mayes Main Laboratory	304-526-2152 304-526-2145
	St. Mary's Hospital	Clinical Coordinator	Gary (Doug) Middleton Main Laboratory	304-526-1424 304-526-1060

Clinical Sites Information

Charleston Area Medical Center

- **Required In-services**

Orientation Completed by Student/Resident Prior to Arriving on Campus:

To register as a visiting student/resident please visit the CAMC Education website – utilize the following directions:

- **Please Note: If you are a current CAMC Employee, you will NOT need to complete the Clinical Rotation Education Modules if your current yearly employee education has been completed in the InFor System.**

1) Go to https://camc.certpointsystems.com/portal/login.aspx?showloginpage=1
2) New Students need to complete "New User Registration"
3) Once you create your profile, click on the blue link to go back to login page.
4) Login with your credentials you just created and select Log In.
5) Once you are logged in, you will see the Dashboard main page. Select the Learning Plans tab from the left side menu.
6) For all students on a **Clinical Rotation**, select **Student Clinical Rotation: Mandatory Education.** For those on a **Non-Clinical Rotation,** select **Internship/Shadowing-Non-Clinical Education.**
7) Select Register to be enrolled into course.
8) You will now see the list of modules to complete for the Clinical Rotation Mandatory Education-Annual program. Click on the blue arrow to begin the course.
9) **Do not perform CERNER education.**

- **Please reference the Clinical Education Enrollment Guide PDF for detailed instructions**

1. For first time users, you will need to create a New User Registration profile. Follow the link below and click the New User Registration button. https://camc.certpointsystems.com/portal/login.aspx?showloginpage=1
2. Fill out the New User Registration form and click Submit.
3. Once you create your profile, click on the highlighted blue link to go back to login page
4. From there, enter your login credentials you just created and select Log In.
5. Once you are logged in, you will see the Dashboard main page. There will be a menu list of Learning Plans to enroll into. For Clinical Rotation, click the Student Clinical Rotation-Mandatory Education
6. Click the link to open the Program Structure. Click on the Register button to enroll into the Plan
7. You will now see the list of modules to complete for the enrolled program. Click on the blue arrow to begin the course.
    a. Advance Medical Directives
    b. Corporate Compliance
    c. Early Heart Attack Care
    d. HIPPA Privacy, Security and More
    e. Infection Prevention

f. Patient Safety
g. Physical Environment, Safety
h. Reporting Workplace Violence
i. Security Awareness and Privacy Principles
j. TCT: 8 types of waste

8. To view completed courses, select the Transcript tab from the left menu. This will display the course credits you have completed, and allow you to view/print certificates of completion

- **Parking at the Sites**
  - General – use the Employee Parking Garage located on the hospital campus. Go to Security at the Information Desk in lobby will issue free parking vouchers to students who present their student ID
  - Memorial – Memorial – before 1:30 pm – students park at the CHERI building across MacCorkle. After 1:30 pm you can use the Employee parking garage located on 31st Street. Please press the help button on the gate in this area and identify yourself as a student and security will remotely lift the gate for you to enter. Parking is also available at the corner of MacCorkle Ave and 31 Street near Chesterfield Ave.
  - Women and Children's – park in Employee Parking located on Pennsylvania Avenue on the right just past the hospital and the WV Lottery building. Please press the help button on the gate in this area and identify yourself as a student and security will remotely lift the gate for you to enter.
  - Teays Valley Hospital- park in Employee parking next to hospital
  - Lab Works – park in employee parking (phlebotomy only clinicals)

Mountain Health Network (Cabell-Huntington and St. Mary's Hospitals) To Be Determined

2. Parking

1. Both hospitals have parking garages for student parking

Thomas Health System

1. Required In-service

1. School representative to contact Ray Shackleford at Carelearning to sign students and instructor up for Passport Courses:

   Ray Shackleford
   Passport Coordinator/Course Center Specialist

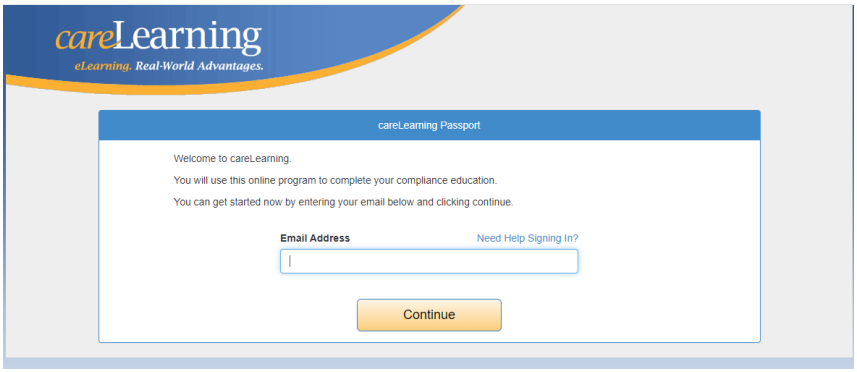
   866-617-3904

   support@carelearning.com

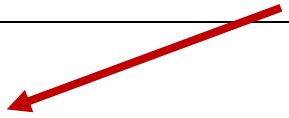
2. Once students are signed up, each student must go to link in email or to this website below:

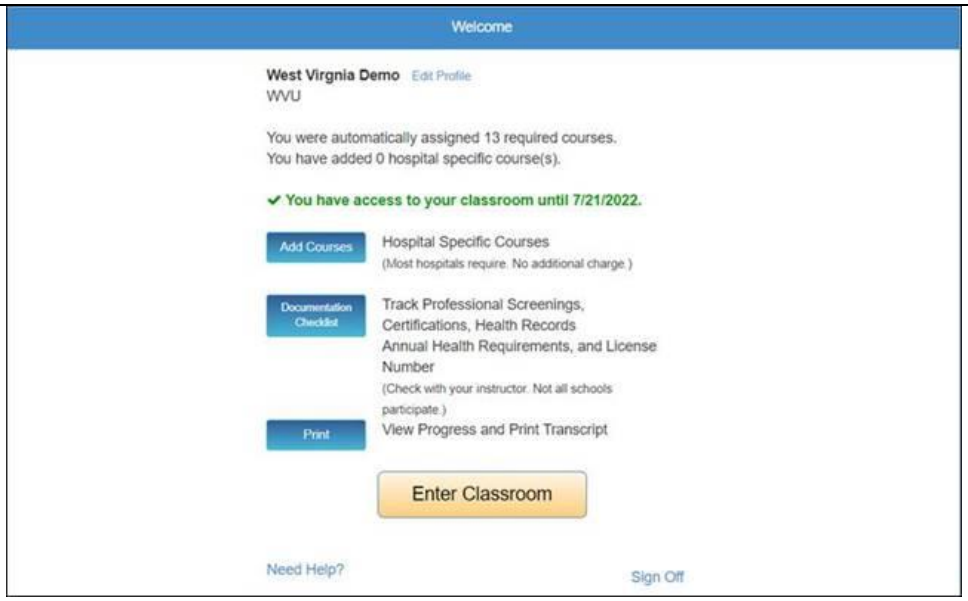
   https://passport.carelearning.com

3. Sign into the program:

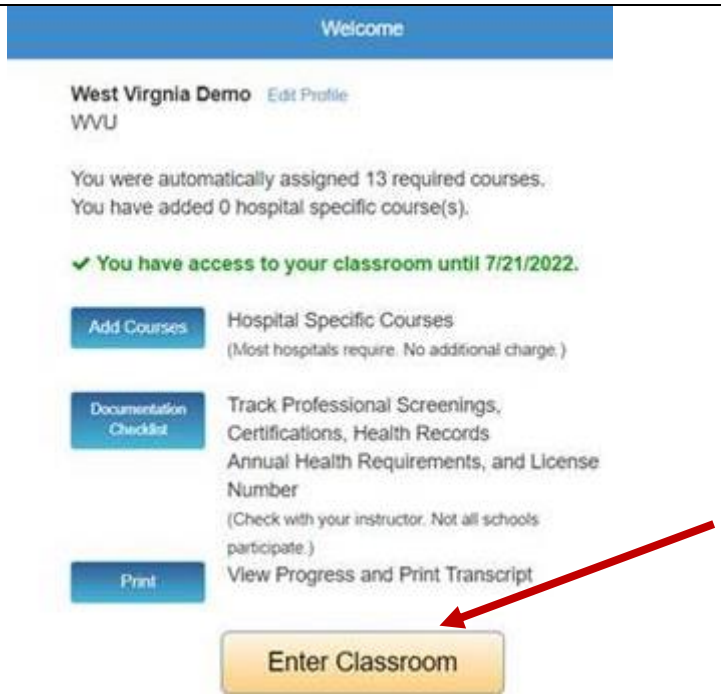


4. Click Add Courses (Hospital Specific Courses):

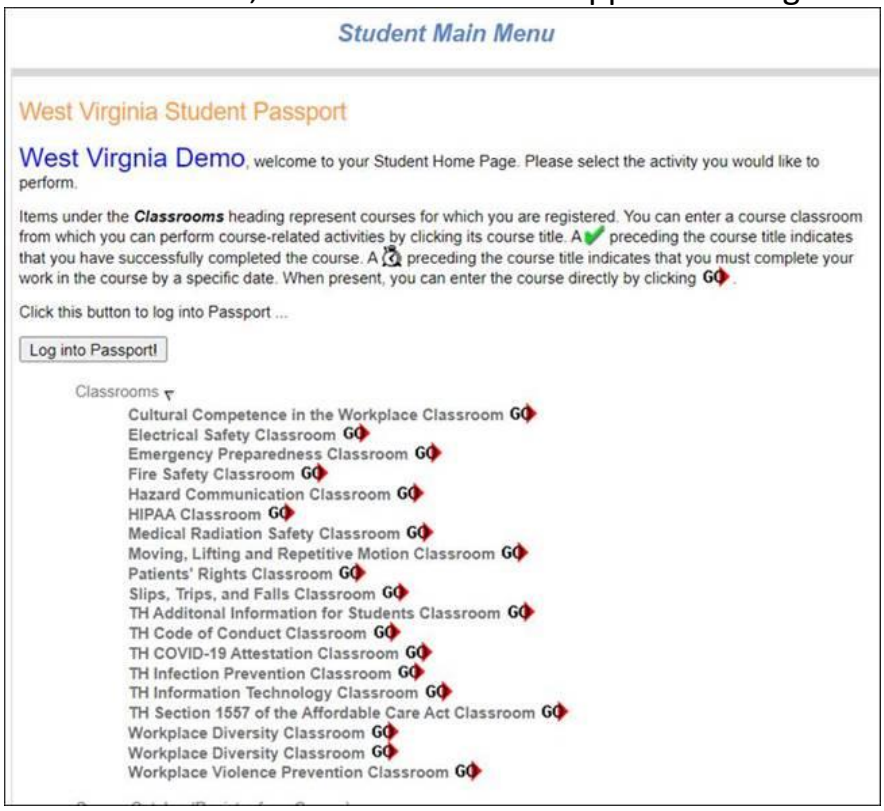



Welcome
West Virgnia Demo Edit Profile
WVU
You were automatically assigned 13 required courses.
You have added 0 hospital specific course(s).
✔ You have access to your classroom until 7/21/2022.
Add Courses
Hospital Specific Courses
(Most hospitals require. No additional charge.)
Documentation Checklist
Track Professional Screenings, Certifications, Health Records Annual Health Requirements, and License Number
(Check with your instructor. Not all schools participate.)
Print
View Progress and Print Transcript
Enter Classroom
Need Help?
Sign Off


Add Courses
Select from the following hospital-specific courses (as applicable) and click save below.
TH Additonal Information for Students
TH Code of Conduct
TH COVID-19 Attestation
TH Infection Prevention
TH Information Technology
TH Section 1557 of the Affordable Care Act
Save



5. Complete each course, main screen should appear as image below:



6. Once all courses are complete (as indicated by a green check mark beside the course, notify instructor so transcript can be printed and presented to Thomas Health.

Parking: Parking building adjacent to the hospital

LEARNING OBJECTIVES AND COMPETENCY EVALUATIONS

The learning objectives/competency forms are included for each student to take to each clinical rotation and share with their preceptors. The clinical preceptors should refer to these objectives to assure that all requirements are being met. Each objective should be covered according to the competency evaluation form. Preceptors may add objective/competency task as appropriate. The will preceptor will check off each objective as it is completed. It is the student's responsibility to make certain that the form is completed and signed by the preceptor/supervisor.

All forms must be completed and given to MLT Program Director as soon as rotation is completed . The following section forms MUST be signed by the student and preceptor. Failure to complete in a timely manner may result in deduction of points.

1. Attendance form
2. Objectives/Competency Form
3. Affective Domain form (same for all sections)
4. Student Evaluation of Preceptor/Site (do not sign)

The following pages contain all forms required during the clinical practicum.

CLINICAL DEPARTMENTS FORMS/EVALUATIONS

BridgeValley Community and Technical MLT Program
Student Time Sheet

Student:_____Section_____

	Date	Time IN	Time OUT	Comments
Sun				
Mon				
Tues				
Wed				
Thurs				
Fri				
Sat				
Sun				
Mon				
Tues				
Wed				
Thurs				
Fri				
Sat				
Sun				
Mon				
Tues				
Wed				
Thurs				
Fri				
Sat				
Sun				

The instructor must validate student's time by signing below.

Instructor's Signature_____ Date _____

Student's Signature_____ Date_____

CLINICAL IMMUNOHEMATOLOGY (BLOOD BANK)

COGNITIVE OBJECTIVES

After successfully completing the objective for MLAB 202 (Clinical Immunohematology, lecture, and laboratory), after reviewing Blood Bank study questions, and after a period of learning and practical experience in the blood bank section of a clinical laboratory, the successful student will be able to provide correct responses regarding the following on a written multiple-choice quiz, earning a grade of 70% or better. The student will be able to correctly:

- Describe an acceptable specimen that is to be used for a patient in Blood Bank including in your answer how long the sample may be used and stored.
- Discuss the genetics, biochemistry, and immunology of the following blood groups: ABO, Rh, Hh, MNSs, Lewis, Duffy, Kell, Kidd, Lutheran, P and I.
- Translate the Rh system between the Fisher-Race and Wiener nomenclatures.
- Explain why the various phases are used for the detection of alloantibodies and autoantibodies.
- Discuss the use of enhancement media for the detection of alloantibodies and autoantibodies.
- Discuss the importance of compatibility testing.
- Explain the direct and indirect antiglobulin techniques and discuss when each would be used.
- Discuss the various types of transfusion reactions including the symptoms that the person might have and what the results of the transfusion reaction work-up would be.
- Explain how the blood bank evaluates transfusion reactions.
- Discuss the preparation, shelf life and storage conditions for the following components: packed cells, leuko-reduced packed cells, frozen packed cells, random platelets, apheresis platelets, fresh frozen plasma, washed RBCs, irradiated components, and cryoprecipitate.
- Describe what type of patient or condition would receive the above components.
- Discuss the tests that are performed on donor units at the donor center and at the hospital transfusion center. Explain why each is necessary.
- Discuss the criteria for donating blood including in your answer whether an exclusion is for the protection of the donor or the recipient.
- Describe the pre- and post- natal testing that is done for the detection of hemolytic disease of the fetus and/or newborn (HDFN)
- List the antibodies that can cause HDFN including the severity of each.
- Discuss the treatments that may be used for HDFN.
- Explain the use of Rho-Immune Globulin including the criteria that are used for postnatal delivery.
- Discuss the fetal stain used to determine the amount of fetal bleed including the principle of the procedure and why the test is done.
- Discuss the following problem-solving techniques and explain when each would be used: antibody identification, elution, adsorption, pre-warming technique, and titration of antibodies.
- Describe Ag-Ab interactions in Blood Bank and the role of complement in these reactions
- Describe Blood Bank’s role in transplant patients’ treatments.

BVCTC Blood Bank Laboratory Rotation MLT
Objectives/Competency Form

Name_____ Location_____ Date_____

A competent student should be able to:

1. Apply Blood Banking theory to Blood Banking procedures
2. Perform Blood Banking procedures with moderate supervision.
3. Identify abnormal results, instrument problems, and resolve situation or seek appropriate assistance.

At the end of the section rotation, the student should successfully perform the following as appropriate to that section's procedures. Rate the student with the following scale:

(5) Student demonstrates competency in the stated objective
(4) Student usually demonstrates competency with some instruction
(3) Student demonstrates competency only after repeated instruction.

(2) Student occasionally demonstrates competency only after repeated instruction
(1) Student rarely successful in performing task without direct supervision.
(0) Student cannot successfully perform task

	Blood Bank	**5**	**4**	**3**	**2**	**1**	**0**	**N/A**
(1)	The student can process specimens for blood bank properly while demonstrating knowledge of proper specimen requirements, handling and problem solving throughout the process.							
(2)	The student will observe the clinical laboratory information system.							
(3)	The student can perform the quality control procedures utilized in the blood bank department properly.							
(4)	The student demonstrates proper recording of blood bank results which includes results being complete and legible.							
(5)	The student maintains a safe, clean laboratory bench when performing analyses and completion of tasks							
(6)	The student follows safety guidelines which includes proper use of personal protective equipment when needed.							
(7)	The student grades agglutination reactions properly.							
(8)	The student performs the following procedures and exhibits familiarity and understanding of each (as determined by the clinical instructor): (1) ABO and Rh Typing (minimum 5) (2) Crossmatch procedure (minimum 4) (3) Weak D procedure (minimum 3) (4) Antibody screen (minimum 5) (5) Antibody ID (minimum 3) (6) Direct antiglobulin (Coombs) test (adult and cord blood) (minimum 2) (7) Elution procedure (minimum 2) (8) Absorption procedure (demonstration and/or discussion acceptable)							
(9}The student can determine Rh immune globulin candidacy and perform related tests.								
(10)The student has a basic understanding of the transfusion reaction work-up process. (Discussion acceptable)								

(11) The student understands and performs the fetal screen (fetal blood screen) procedure. (Discussion acceptable)							
(12)The student understands and/or performs the Kleihauer-Betke acid elution stain. (Demonstration and/or discussion acceptable)							
(13) The student understands and performs Rh phenotyping. (Minimum of 2)							
(14) student understands the purpose for antigen typing donor units and can perform such testing.							
(15) The student demonstrates an understanding of antigens and reactivity of the antibodies of common blood group systems such as ABO, Rh, Kell, Lewis, etc.							
(16) The student can correctly interpret patient results as normal or abnormal and alerts clinical instructor of abnormal results.							
(17) The student can correlate commonly encountered results with possible causes or disease states with limited assistance from the clinical instructor.							
(18) The student performs/observes routine maintenance and troubleshooting procedures for instruments.							

Additional Procedures/Comments:

Student demonstrates competency sufficient for entry level professional. Yes_____ No_____
Comments:

Student needs to improve on items listed below:

Preceptor/Supervising Tech: _____Date_____
Student Signature_____ _Date_____

BVCTC MLT Faculty_____Date_____

CLINICAL CHEMISTRY COGNITIVE OBJECTIVES

After successfully completing the objectives for MLAB 201 (Clinical Biochemistry, lecture, and laboratory), after reviewing Clinical Chemistry study questions, and after a period of learning and practical experience in the chemistry section of a clinical laboratory, the successful student will be able to provide correct responses regarding the following on written exams, earning a grade of 75% or better. The student will be able to correctly:

- List and describe safety procedures and precautions employed in collecting, accessioning, and testing specimens in the chemistry section.
- List and describe all test procedures performed in the chemistry rotation.
- List and describe the proper specimen collection procedure for all tests performed in the chemistry rotation including any special handling procedures and preparations including troubleshooting and interfering substances.
- List and describe the quality assurance procedures and technical quality control limits on all tests performed by the student in the chemistry section.
- List expected values and reporting units for each chemical test performed by the student. Indicate approximate variations expected due to patient's sex, age, illness, and therapy.
- Recall and list common disease conditions associated with abnormally high or low results for each biochemical test performed.
- Describe the principles of instrumental assays performed by the student in the chemistry section.
- Describes quality control procedures and evaluates quality control results using Westgard rules.
- List and describe routine maintenance requirements for instruments used in the chemistry section.
- List the tests and describe the main chemical reactions and methods of analyses involved with each assay on the complete chemistry profile.
- Recognize problems caused by technical or instrument problems as well as the physiological causes of problems or unexplained test results for the following analyses for all tests performed on the complete chemistry profile and blood gas analyzer.
- Discuss the physiological significance of the tests performed in the chemistry rotation.

BVCTC Clinical Chemistry Laboratory Rotation MLT Objectives/Competency

Name_____ Location: _____ Date_____

A competent student should be able to:

1. Apply clinical chemistry theory to clinical chemistry procedures
2. Perform clinical chemistry procedures after each week level with moderate supervision.
3. Identify abnormal results, instrument problems, and resolve situation or seek appropriate assistance.

At the end of the section rotation, the student should successfully perform the following as appropriate to that section's procedures. Rate the student with the following scale:

(5) Student demonstrates competency in the stated objective
(4) Student usually demonstrates competency with some instruction
(3) Student demonstrates competency only after repeated instruction.

(2) Student occasionally demonstrates competency only after repeated instruction
(1) Student rarely successful in performing task without direct supervision.
(0) Student cannot successfully perform task

	General Chemistry	**5**	**4**	**3**	**2**	**1**	**0**	**N/A**		
1.	Identify, handle, and process specimens properly.									
2.	Recognize specimen characteristics such as hemolysis, icteria, and lipemia that may produce interferences and take appropriate action.									
3.	Analyze and evaluate quality control or perform corrective action to obtain acceptable results.									
4.	Recognize alert values, abnormal results, delta limits, reportable ranges, and reference ranges.									
5.	Maintains a clean and safe environment by utilizing proper PPE and disinfection procedures.									
6.	Performs required calculations.									
7.	Performs manual procedures or pre-treatment steps for analysis if appropriate.									
8.	Performs manual dilutions.									
9.	Recognizes and correlates test interpretation with disease states									
	Automated Chemistry Analyzers									
1.	Identifies automated instrument and analytes being performed ; discusses methodologies									
2.	Performs/observes preventive maintenance, calibration, and function checks as appropriate.									
3.	Performs routine chemistry/immunoassay analysis on patient specimens.									
4.	The student will observe the clinical laboratory information system.									
5.	Performs endocrine, TDM, Toxicology, Vitamin, and other special assays as appropriate									

Student demonstrates competency sufficient for entry level professional. Yes_____ No_____
Comments:

Student needs to improve on items listed below:

Preceptor/Supervising Tech: _____Date_____
Student Signature_____ _Date_____

BVCTC MLT Faculty_____Date_____

Rev 4/15/2023

CLINICAL COAGULATION COGNITIVE OBJECTIVES

After successfully completing the objectives for MLAB 200 (Clinical Hematology which included Coagulation) lecture and laboratory, after reviewing answers to coagulation study questions, and after a period of learning and practical experience in the coagulation section of a clinical laboratory, the successful student will be able to provide correct responses regarding the following on a written multiple-choice quiz, earning a grade of 70% or better. The student will be able to:

- Determine the requirements for an acceptable sample for coagulation testing.
- Discuss the principle of the prothrombin time, partial thromboplastin time, fibrinogen, and thrombin time assays.
- Discuss some diseases that are associated with abnormal results in the above-mentioned tests.
- Explain what is occurring in Disseminated Intravascular Coagulation (DIC)
- Discuss the tests that would be used to determine if DIC were present including the principles of these tests.
- Explain the principle of the mixing study test and when it would be used.
- Discuss the sources of errors in all procedures performed in the coagulation/hemostasis sections of the laboratory.
- Discuss the hemostasis process, including primary, secondary, processes fibrinolytic pathways, and coagulation inhibition.
- Discuss implications of coagulation factor deficiencies and associated disease state.

BVCTC Coagulation Laboratory Rotation MLT
Objectives/Competency Form

Name_____Location_____ Date_____

A competent student should be able to:

1. Apply clinical coagulation theory to clinical coagulation procedures
2. Perform clinical coagulation procedures level with moderate supervision after appropriate instruction.
3. Identify abnormal results, instrument problems, and resolve situation or seek appropriate assistance.

At the end of the section rotation, the student should successfully perform the following as appropriate to that section's procedures. Rate the student with the following scale:

(5) Student demonstrates competency in the stated objective
(4) Student usually demonstrates competency with some instruction
(3) Student demonstrates competency only after repeated instruction.

(2) Student occasionally demonstrates competency only after repeated instruction
(1) Student rarely successful in performing task without direct supervision.
(0) Student cannot successfully perform task

Coagulation	**5**	**4**	**3**	**2**	**1**	**0**	**N/A**	
1. The student can process specimens for coagulation properly while demonstrating knowledge related to proper specimen requirements, handling and problem-solving throughout the process.								
2.The student can organize and utilize reagents and materials in coagulation procedures properly.								
3.The student will observe the clinical laboratory information system.								
4.The student will correctly perform procedures related to quality control in the coagulation lab. These are to include but not limited to : (1) Control selection and preparation (2) Analyzing controls (3) Evaluating results for run acceptability								
5. The student demonstrates proper recording and reporting of coagulation results.								
6. The student maintains a safe, clean laboratory bench when performing analyses and upon completion of tasks								
7. The student can operate automated coagulation instruments to achieve PT and PTT results and any other applicable results								
8. Specify any specialized tests that student performs or observes and rate the performance for each one: (1) D-dimers (2) FDP or FSP (3) Fibrinogen level (4) Factor assay (5) Thrombin time (6) Others (List any others performed/observed by student								
9.The student can correctly interpret patient results as normal or abnormal and alerts clinical instructor of abnormal results.								
10. The student can correlate commonly encountered results with possible disease or therapy states with limited assistance from the clinical instructor.								
11. The student performs routine maintenance and troubleshoots instruments used.								

Additional Procedures/Comments:

Student demonstrates competency sufficient for entry level professional. Yes_____ No_____
Comments:

Student needs to improve on items listed below:

Preceptor/Supervising Tech: _____Date_____
Student Signature_____ _Date_____

BVCTC MLT Faculty_____Date_____

CLINICAL HEMATOLOGY COGNITIVE OBJECTIVES

After successfully completing the objectives for MLAB 200 (Clinical Hematology, lecture, and laboratory), after reviewing answers to hematology study questions, and after a period of learning and practical experience in the hematology section of a clinical laboratory, the successful student will be able to provide correct responses regarding the following on a written multiple-choice quiz, earning a grade of 70% or better at the end of their rotation. The student will demonstrate the ability to complete the following:

- Discuss the requirements for an acceptable sample for hematology testing.
- Discuss the principles of all the procedures/parameters performed on the hematology analyzer.
- Discuss what is seen on the scatter gram or other automated analyzers reporting systems.
- Discuss the functions of red cells, white cells, and platelets.
- List the normal reference ranges for all parameters on the hematology analyzer.
- Discuss some conditions that would cause variations from the normal values.
- Discuss supravital stains and when they would be used in the hematology laboratory.
- Explain how cell counts are estimated from a peripheral blood smear.
- Describe the maturation of red cells and white cells.
- Explain how the nucleated red cells may affect the white cell count.
- Describe the inclusions that may occur in red and white blood cells.
- Explain how a manual white cell count is performed.
- Explain how a reticulocyte stain and count is performed.
- Discuss the use of the sedimentation rate.
- Explain the principle of the osmotic fragility test and when this test would be used.
- Discuss sources of error in all procedures performed in the hematology section of the laboratory.
- Correlate the counts obtained on the hematology analyzer with results obtained on a manual WBC differential count.
- For the following diseases, explain the appearance of cells on the blood smear:
    - Vitamin B12 deficiency
    - Folic acid deficiency
    - Aplastic anemia
    - Sickle cell anemia
    - Beta thalassemia
    - Iron deficiency
    - Lead poisoning
    - Severe infection
    - Infectious mononucleosis
    - AML
    - CML
    - ALL
    - CLL
    - Multiple myeloma
- Describe a synovial fluid cell count, differential and chemistry, specimen collection, storage, physiological theory, and principles of method of analysis.
- Describe the specimen collection, storage, physiological theory, and principles of method for serous fluid cell count, differential, and chemical analysis.

- Describe the specimen collection, storage, cell count, differential, and chemical testing, physiological theory, and principles of methods for CSF specimens.
- Describe the appropriate specimen collection, physiological theory, and principle of methods for semen analysis.
- Differentiate between myeloid and lymphocyte cell line, both normal and leukemic states.
- Discuss qualitative and quantitative abnormalities of platelets.
- Discuss flow cytometry and how it is used in the Hematology laboratory.
- Discuss molecular and cytogenic testing in the Hematology laboratory.

BVCTC Hematology Laboratory Rotation MLT
Objectives/Competency Form

Name_____Location_____ Date_____

A competent student should be able to:

1. Apply clinical hematology theory to clinical chemistry procedures
2. Perform clinical hematology procedures with moderate supervision after appropriate instruction.
3. Identify abnormal results, instrument problems, and resolve situation or seek appropriate assistance.

At the end of the section rotation, the student should successfully perform the following as appropriate to that section's procedures. Rate the student with the following scale:

(5) Student demonstrates competency in the stated objective
(4) Student usually demonstrates competency with some instruction
(3) Student demonstrates competency only after repeated instruction.

(2) Student occasionally demonstrates competency only after repeated instruction
(1) Student rarely successful in performing task without direct supervision.
(0) Student cannot successfully perform task

Hematology	**5**	**4**	**3**	**2**	**1**	**0**	**N/A**	
1.Identify, handle, and process specimens properly, including microtainer specimens								
2.Student understands procedures for handling problem specimens such as cold agglutinins, and leukemias (ex., warming and diluting)								
3.The student can organize and utilize reagents and materials in hematology procedures properly.								
4.The student will observe the clinical laboratory information system.								
5.The student will correctly perform procedures related to quality control in the hematology lab. These are to include: (1) Control selection and preparation (2) Running controls (3) Evaluating results for run acceptability								
6.The student demonstrates proper recording and reporting of hematology results.								
7.The student maintains a safe, clean laboratory bench when performing analyses and upon completion of tasks.								
8.The student can properly operate automated hematology instruments to achieve CBC results that include the following parameters: RBC, WBC, Hemoglobin, Hematocrit, RBC indices, Platelets, Automated differentials, RDW and MPV.								
9.The student can prepare at least 10 blood smears which exhibit the thick and thin areas necessary for the random distribution of cells on slides.								
10. The student can stain blood smears properly.								
11.The student correctly evaluates at least 10 manual WBC differentials to include RBC and PLT morphology as determined by the clinical instructor.								
12.The student performs differentials on abnormal patients or resource slides and can recognize morphological abnormalities of RBC's, WBC's and Plt's with assistance from the clinical instructor.								
13.The student performs at least 5 erythrocyte sedimentation rates properly.								
14.The student performs, observes, or reviews procedures for hemoglobin S screening test. (Discusses further testing)								

15.The student calculates RBC indices (MCV, MCH, and MCHC) for at least 5 different blood specimens given the hemoglobin, hematocrit, and RBC count.							
16.The student calculates the corrected WBC count for at least 5 specimens or instructor-generated examples given the uncorrected WBC and #NRBC/100 WBC's.							
17.The student calculates the absolute leukocyte count for at least 5 specimens given the WBC count and % of each cell type from the differential.							
18.The student correctly performs at least 3 reticulocyte counts on whole blood specimens with accuracy determined by the clinical instructor.							
19.The student performs at least 3 manual WBC counts using the hemacytometer method on whole blood specimens within + or – 10% accuracy.							
20.The student performs at least 3 platelet counts using the hemacytometer method on whole blood specimens within + or – 20% accuracy.							
21.The student can correctly interpret patient results as normal or abnormal and alerts clinical instructor of abnormal results.							
22.The student can correlate commonly encountered results with possible disease or therapy states with limited assistance from the clinical instructor.							
23.The student performs/observes routine maintenance and troubleshoots instruments used.							
24.The student performs at least 2 body fluid examinations within + or – 20% accuracy. (can be actual body fluids, simulated fluids, survey fluids, etc.)							

Additional Procedures/ Comments:

Student demonstrates competency sufficient for entry level professional. Yes_____ No_____
Comments:

Student needs to improve on items listed below:

Preceptor/Supervising Tech: _____Date_____
Student Signature_____ _Date_____

BVCTC MLT Faculty_____Date_____

Rev 4/15/2023

CLINICAL IMMUNOLOGY/SEROLOGY/VIROLOGY

COGNITIVE OBJECTIVES

After successfully completing the objectives for MLAB 202 (Clinical Immunohematology which included serology—lecture and lab), after reviewing answers to serology study questions, and after a period of learning and practical experience in the serology section of a clinical laboratory, the successful student will be able to provide correct responses regarding the following on a written multiple-choice quiz, earning a grade of 70% or better. The student will be able to correctly:

- Discuss the classes of immunoglobulins found in the body including serum concentration, functions, etc.
- Discuss the types of hypersensitivity reactions.
- Explain what complement is and discuss the functions of complement.
- Discuss how complement may interfere in serology reactions and what should be done to eliminate this interference.
- Describe the various types of immunological procedures that are used in the laboratory including precipitation (including nephelometry and electrophoresis procedures), agglutination and labelled reactions. For each type of procedure, the principle of the procedure and sources of error should be included.
- Discuss the antibody detection for the following infectious diseases: syphilis, infectious mononucleosis, Lyme's disease, HIV, hepatitis, rubella, streptococcal infections, Mycoplasma and TORCH.
- Explain what is occurring in autoimmune disorders.
- Discuss the immunologic diagnosis of the following auto immune diseases: rheumatoid arthritis, systemic lupus erythematosus, and thyroid auto antibodies.
- Discuss inflammation and acute phase proteins.
- Discuss C-reactive protein and explain how it is measured (not high sensitivity)
- Explain the qualitative determination of Beta-Human Chorionic Gonadotropin testing.
- Define the following terms: prozone, antibody titer, diagnostic titer, biological false positive and cross-reacting antibody.
- Discuss the cells that are important in the immune system and explain what might happen when these cells are decreased in number or defective in function.
- Describe an acceptable specimen that is to be used for testing in the immunology laboratory.
- Describe immunoproliferative diseases and name at least two (2).
- Describe how to interpret immunology tests results- assessing confirmatory testing and correlation with disease states.

BVCTC Immunology/Serology/ Virology Laboratory Rotation MLT Objectives/Competency Form

Name_____Location_____ Date_____

A competent student should be able to:

1. Apply clinical microbiology theory to clinical microbiology procedures
2. Perform clinical microbiology procedures with moderate supervision after appropriate instruction.
3. Identify abnormal results, instrument problems, and resolve situation or seek appropriate assistance.

At the end of the section rotation, the student should successfully perform the following as appropriate to that section's procedures. Rate the student with the following scale:

(5) Student demonstrates competency in the stated objective
(4) Student usually demonstrates competency with some instruction
(3) Student demonstrates competency only after repeated instruction.

(2) Student occasionally demonstrates competency only after repeated instruction
(1) Student rarely successful in performing task without direct supervision.
(0) Student cannot successfully perform task

	Immunology Serology Virology	**5**	**4**	**3**	**2**	**1**	**0**	**N/A**

Student demonstrates competency sufficient for entry level professional. Yes_____ No_____
Comments:

Student needs to improve on items listed below:

Preceptor/Supervising Tech: _____Date_____
Student Signature_____ _Date_____

BVCTC MLT Faculty_____Date_____

Rev 4/15/2023

CLINICAL MICROBIOLOGY COGNITIVE OBJECTIVES

After successfully completing the objectives for MLAB 203 (Clinical Microbiology, lecture, and laboratory), after reviewing Microbiology study questions, and after a period of learning and practical experience in the microbiology section of a clinical laboratory, the successful student will be able to provide correct responses regarding the following on a written exam, earning a grade of 70% or better. The student will be able correctly:

- Procedures and precautions employed for processing specimens for culture from each of the following specimen types:
    - CSF, blood, deep tissue aspirates, biopsy
    - Eye, ear
    - Genital
    - Stool
    - Throat, nasopharynx, sputum, bronchial
    - Urine, Wounds, abscesses
- Procedures and precautions for processing specimens from each of the above anatomical sites so that likely pathogens may be isolated and identified.
- Principle and procedure for Gram staining.
- Recognizing and recording microscopic features of Gram-stained preparations.
- Safety precautions to be employed in the Microbiology lab.
- Names and descriptions of pathogens, commensals, and contaminants most likely found in each anatomical site, by genus and occasionally by species.
- Names and purposes of plating and broth media, including knowledge of supplements that make the medium nutrient, selective, or differential.
- Correct application of incubation conditions for isolating frequently isolated pathogens on various media from typical anatomical sites.
    - Aerobic at 35 degrees C
    - Microaerophilic at 42 degrees C
    - Capnophilic at 35 degrees C
    - Anaerobic at 35 degrees C
- Differential identification schemes for genera, groups, and some species of bacteria commonly isolated from clinical specimens.
- Colony morphology helpful in identifying common bacterial genera, groups, and some species on isolation media by differential growth, colony size, pigmentation, hemolysis type, satellitism, and carbohydrate fermentation.
- Appropriate application of classic biochemical tests performed in presumptive testing of bacteria, and names of reagents used in each.
- Procedures for maintaining quality results in organism identification and susceptibility testing, including use of standard procedures, QC of media, antimicrobials, and differential tests.
- Presumptive identification of common pathogens to genus and sometimes species level, given case histories, specimen, Gram stain information, colony morphology, and results of differential testing.
- Theory and procedures for setup and reporting of in vitro antimicrobial susceptibility tests by both agar diffusion and broth dilution methods.
- Priority for working up and reporting stain and culture results for blood and CSF.
- Association between one or more bacteria and diseases and conditions in which they occur.

BVCTC Microbiology Laboratory Rotation MLT
Objectives/Competency Form

Name_____Location_____ Date_____

A competent student should be able to:

1. Apply clinical microbiology theory to clinical microbiology procedures
2. Perform clinical microbiology procedures with moderate supervision after appropriate instruction.
3. Identify abnormal results, instrument problems, and resolve situation or seek appropriate assistance.

At the end of the section rotation, the student should successfully perform the following as appropriate to that section's procedures. Rate the student with the following scale:

(5) Student demonstrates competency in the stated objective
(4) Student usually demonstrates competency with some instruction
(3) Student demonstrates competency only after repeated instruction.

(2) Student occasionally demonstrates competency only after repeated instruction
(1) Student rarely successful in performing task without direct supervision.
(0) Student cannot successfully perform task

Microbiology	5	4	3	2	1	0	N/A
1.Student rigorously evaluates the suitability of clinical specimens submitted for processing in relation to procedural requirements, container, collection, identification, age, and integrity.							
2.Student observes and participates in operations of microbiology department and notes daily and weekly patterns of workload.							
3.Student properly logs microbiology results and can locate culture/Parasitology results.							
4.The student properly utilizes or observes use of clinical laboratory information system.							
5.The student inoculates cultures properly or correct media							
6.The student streaks for isolation/colony count properly.							
7.The student performs urine colony count properly.							
8.The student utilizes proper media for isolation of bacteria from the throat, wound, nose, ear, stool, CSF, urine, etc.							
9.Student can correctly perform quality control procedures in the microbiology lab.							
10.Student organizes all material necessary to perform various microbiological tests.							
11.Student performs gram stain procedure properly.							
12.Student reviews gram stains on various specimen types.							
13.Student recognizes differences between saliva and sputum on gram stains.							
14.Student recognizes colony morphology of significant and insignificant bacteria, as well as contaminants on various types of cultures.							
15.Student demonstrates understanding in the use of optochin discs.							
16.Student demonstrates understanding in the procedures and methodologies utilized to perform biochemical and anti-microbial testing methods for many cultural types.							
17.Student inoculates anaerobic cultures properly.							
18.Student understands the anaerobic incubation/identification process.							
19.Student processes blood cultures properly.							

20.Student performs Acid-Fast stain properly.							
21.Student recognizes Acid-Fast bacteria on prepared slides and culture (if applicable)							
22.Student utilizes commercial kits for the identification of organisms properly.							
23.Student follows the progress of several cultures of different specimen types through the microbiology laboratory, recording the following information for clinical instructor's review: (1) Time receipt (2) Specimen identification (3) Source (4) Colonial appearance (5) Gram stain (6) Primary culture media used. (7) Time of media inoculation (8) Subculture media used. (9) Incubation conditions (10) Key biochemical tests results (11) Organism identification							
24.The student performs/observes routine maintenance and troubleshoots instruments used.							
25.The student can recognize common problems related to the microbiology department and provide solutions when feasible.							
26. Observes MALDI-TOF procedures							
27. Performs operation of biosafety cabinet correctly							
28. Student wears appropriate PPE when performing tasks							

Parasitology	5	4	3	2	1	0	N/A
1. Student understands technique for obtaining pinworm ova.							
2. Student observes pinworm specimens for ova, when available.							
3. Student prepares and examines fresh saline and iodine slide preparations for enteric parasites.							
4.Student prepares fecal specimens by concentration methods and examines such preparations.							
5.Student recognizes trophozoites, cysts, and ova of common intestinal parasites microscopically.							

Additional Microbiology Procedures (Mycology, Virology, Etc.)	5	4	3	2	1	0	N/A

Student demonstrates competency sufficient for entry level professional. Yes_____ No_____
Comments:

Student needs to improve on items listed below:

Preceptor/Supervising Tech: _____Date_____
Student Signature_____ _Date_____

BVCTC MLT Faculty_____Date_____

Rev 4/15/2023

PHLEBOTOMY COGNITIVE OBJECTIVES

After successfully completing the objectives for MLAB 100 (Introduction to Clinical Lab Sciences and Phlebotomy, lecture, and laboratory), reviewing the answers to study questions, and after a period of learning and practical experience in the phlebotomy section of a clinical laboratory, the successful student will be able to provide correct responses regarding the following on written exams, earning a grade of 70% or better. The student will be able to correctly:

- Discuss the importance of the procedure used to identify a patient.
- Identify the supplies needed for venipuncture.
- Explain the steps in a venipuncture phlebotomy procedure.
- Discuss the acceptable veins for venipuncture.
- List the information that should appear on the label of the tube.
- Define and discuss “Standard Precautions.”
- Discuss the various tubes that are used in phlebotomy including additive solutions and for what test(s) each are used, including stopper color codes.
- Discuss the correct order in which various types of sample tubes need to be drawn (plain, blood culture, anticoagulated, coagulation, serum separator, etc.)

Grading:

1. Affective Domain = 10 points possible
2. Phlebotomy Assessment Skills = 90 points possible
3. Successful venipunctures (no minimum) student will collect as many patients as possible, which depends on the site and the number of patients. This is not scored.

Rev 4/15/2023

BVCTC PHLEBOTOMY VENIPUNCTURE SKILLS ASSESSMENT

Name_____ Hospital _____

Venipuncture	**S** 6 points	**N** 5 points	Comments
1. Greets patients, identifies self, explains procedure			
2. Properly verifies patients' name and identification with test requisition			
3. Organizes tubes and equipment for requested tests			
4. Applies tourniquet correctly			
5. Examines both arms for prominent vein and properly selects vein			
6. Cleanses site properly and anchors vein			
7. Inserts needle at appropriate angle			
8. Applies tube counteracting pushing pressure against tube holder			
9. Looses tourniquet upon successful venous access			
10. Properly handles tubes after collection and mixes tubes appropriately			
11. Cover site and remove needle			
12. Maintains pressure at site and applies bandage			
13. Properly labels tubes after blood is drawn			
14. Follows standard precautions throughout by wearing gloves and washing hands			
15. Disposes of contaminated needles appropriately			
TOTAL POINTS			

S = Satisfactory N= Needs Improvement 90 points possible

Preceptor/Supervising Phlebotomist_____ Date_____

Student Signature_____ Date_____

BVCTC MLT PROGRAM
Venipuncture/Capillary Successful Blood Collections

Goal is to perform as many patient's blood collections as possible. Must perform 10.

Date	Number of Successful Venipunctures	Signature of Preceptor	Signature of Student
TOTAL			

CLINICAL URINALYSIS COGNITIVE OBJECTIVES

After successfully completing the objectives for MLAB 207 (Clinical Urinalysis, lecture, and laboratory), after reviewing the answers to urinalysis study questions, and after a period of learning and practical experience in the urinalysis section of a clinical laboratory, the successful student will be able to provide correct responses regarding the following on a written multiple-choice quiz, earning a grade of 70% or better. The student will be able to correctly:

- Describe the physical examination of urine including the collection, storage, handling preparation, disease/clinical correlation, problem resolution.
- Describe the chemical examination of urine including the collection, storage, principles of methods, handling, prep, disease/clinical correlation, problem resolution.
- Describe the microscopic examination of urine including the collection, storage, handling prep, disease/clinical correlation, problem resolution.
- Describe the substances included in urine reducing substances.
- Describe the disease/clinical correlation associated with different reducing substances in urine.
- State the purpose, principle of method and the clinical utility of the SSA test.
- State the required collection, handling procedures, clinical significance, and methodology for the analysis of urine porphyrins.
- Describe the urine pregnancy test including the collection, storage, handling prep, clinical correlation, problem resolution.
- Describe the procedure for performing a urine pregnancy test.
- State the required collection, handling procedures, clinical significance, and methodology for the analysis of urine fats.
- Outline specimen collection, physiological theory, and principles of methods for the occult blood test.
- Outline specimen collection, physiological theory, and principle of method for fecal fat analysis.
- Outline the appropriate specimen collection for fecal reducing substances and fecal pH.
- Describe the appropriate specimen collection, physiological theory, and principle of methods for the automated dipstick method of urinalysis.

BVCTC Urinalysis Laboratory Rotation MLT
Objectives/Competency Form

Name_____ Location_____ Date_____

A competent student should be able to:

1. Apply clinical urinalysis theory to clinical urinalysis procedures
2. Perform clinical urinalysis procedures with moderate supervision after appropriate instruction.
3. Identify abnormal results, instrument problems, and resolve situation or seek appropriate assistance.

At the end of the section rotation, the student should successfully perform the following as appropriate to that section's procedures. Rate the student with the following scale:

(5) Student demonstrates competency in the stated objective
(4) Student usually demonstrates competency with some instruction
(3) Student demonstrates competency only after repeated instruction.

(2) Student occasionally demonstrates competency only after repeated instruction
(1) Student rarely successful in performing task without direct supervision.
(0) Student cannot successfully perform task

Urinalysis	**5**	**4**	**3**	**2**	**1**	**0**	**N/A**	
1.The student can process specimens for urinalysis properly while demonstrating knowledge of proper specimen requirements, handling and problem-solving throughout the process.								
2.The student organizes and utilizes reagents and equipment involved in the urinalysis process properly.								
3.The student will observe the clinical laboratory information system.								
4.The student will correctly perform procedures related to quality control in the urinalysis lab. These are to include: (1) Control selection and preparation (2) Analyzing controls (3) Evaluating results for run acceptability								
5.The student demonstrates proper recording and reporting of urinalysis results and related specialized tests.								
6.The student maintains a safe, clean laboratory bench when performing analyses and upon completion of tasks								
7.The student correctly classifies the appearance (color and degree of clarity) of urine specimens.								
8.The student can utilize and interpret the reagent-impregnated test strip properly (pH, protein, specific gravity, glucose, etc.)								
9.The student can perform and interpret urinary confirmatory tests accurately. (Copper reduction test, Icto test, acetest, protein turbidimetric, etc.)								
10.The student properly prepares urine specimens for microscopic analysis.								
11.The student properly scans urinary sediment under low and high power to determine both number estimation and identification of urinary sediment constituents.								
12.The student can routinely identify and quantitate commonly encountered urinary sediment constituents. (WBC's, RBC's, epithelial cells, common casts, common crystals, bacteria, etc.)								
13.The student can identify and quantitate less frequently encountered urinary sediment constituents with the assistance and supervision of a clinical instructor. (cellular casts, rare crystals, oval fat bodies, parasites, etc.)								
14.The student can correlate commonly encountered findings with possible disease or therapy states with limited assistance from the clinical instructor.								

15.By the end of their urinalysis rotation, the student can complete common procedures in a reasonable amount of time.							
16. The student performs routine maintenance and troubleshoots instruments used.							

Additional Procedures/Comments:

Student demonstrates competency sufficient for entry level professional. Yes_____ No_____
Comments:

Student needs to improve on items listed below:

Preceptor/Supervising Tech: _____Date_____
Student Signature_____ _Date_____

BVCTC MLT Faculty_____Date_____

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BVCTC MLT Program Evaluation of Affective Domain **HOSPITAL CLINICAL PRACTICUM** **Name:_____Date_____** **Course_____** **10 points** ***Place an "x" in appropriate box***	**1 pts** **Meets standards at least 90-100% of the time**	**0.5 pts** **Meets standard with few reminders or corrections**	**0 pts** **Needs improvement in this area** **See Comments**
1. Safety/Cleanliness			
Complies with biosafety regulations by practicing disposal of biohazard materials (red bags, sharps,etc)	Comments:		
Adheres to all safety procedures in lab			
Disinfects work area after lab procedures			
Wears appropriate PPE without being reminded			
Keeps work area/lab area neat, supplied and well organized			
Follows dress code regulations			
2. Participation in the Work Environment			
Exhibits interest in learning by asking questions	Comments:		
Volunteers and asks for extra or related tasks during rotation			
Asks pertinent questions and answers questions appropriately			
Participates willingly in training tasks without being reminded			
3. Appropriate response to feedback			
Accepts instruction and constructive criticism maturely	Comments:		
Changes behaviors upon feedback			
Responds to others and instructor positively			
4. Motivation and Initiative			
Demonstrates personal drive to achieve or improve on opportunities	Comments:		
Ability to keep going with persistence and effort to obtain goals in the face of setbacks			
Exhibits ability to work independently when appropriate			
Adapts cognitive knowledge to practical lab tasks and exercises			
5. Organization Skills /Preparedness			
Prepared for training with basic knowledge of subject	Comments:		
Keeps lab materials/notebooks organized			
Utilizes lull or downtime constructively			
Completes training lab objectives within time frames			
Exhibits good time management skills			
6. Exhibit appropriate self-confidence and independence			
Performs tasks with minimal supervision, after instruction/practice	Comments:		
Recognizes limitations			
Functions and performs well under stressful situations			
7. Integrity			
Admits and accepts responsibility for errors	Comments:		
Shows respect for instructor and other staff			
Displays ethical conduct in work area			
Displays honesty and integrity			

Exhibits professionalism			
8. Attendance/Punctuality			
Attends training regularly and alerts appropriate personnel when absent	Comments:		
Arrives at designated time and is prepared for training			
9. Communication			
Cooperates with instructor and others	Comments:		
Cooperates and communicates by helping others			
Interacts with others in a positive manner			
Communicates effectively in all situations			
10. Etiquette			
Uses cell phone appropriately	Comments:		
Does not participate in personal gossip/or disruptions			
Uses appropriate language and volume control 100% of time			
Total Points =			

Student Signature_____ Date:_____

Student signature does not mean that the student agrees or disagrees; only that he/she has reviewed the evaluation.

Students comments:

Evaluator Signature_____ Date_____

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BRIDGEVALLEY COMMUNITY AND TECHNICAL COLLEGE
MEDICAL LABORATORY TECHNICIAN
STUDENT EVALUATION OF CLINICAL EXPERIENCE

Hospital:_____ Department:_____

THE CLINICAL STAFF	Never	Rarely	Sometimes	Often	Always
Showed interest in spending time with student					
Encourage student questions and comments					
Answered questions					
Available to discuss issues related to rotation					
Maintain high standards of quality control					
Explained procedures and theories effectively					
Provided useful feedback on performance					
Was competent and knowledgeable in area of practice					
Showed respect for students					
Preceptors exhibited professionalism					
The personnel in the department hold a positive attitude towards students and teaching					
INSTRUCTION METHODS					
Followed safety rules and regulations					
Assignment of tasks were appropriate					
Gave continued feedback of student performance throughout rotation					
Departmental policies and procedures were stated at the beginning of rotation and clarified throughout the rotation					
Additional study aids were available to support the rotation (e.g., unknown slides, case studies, Medialab, procedure/policy manuals)					
Followed objectives from BVCTC					
Feedback from evaluations was timely					
The rotation increased my interest in further study in the area					
My academic courses prepared me for this rotation					
I feel confident to work in a similar laboratory after this rotation					
*Comment on the strengths of this rotation. (mandatory)					
*Comment on the weaknesses of this rotation. (mandatory)					
Use back of sheet for more space. DO NOT SIGN					

PLEDGE TO THE PROFESSION

As a clinical laboratory professional, I strive to:

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

CODE OF ETHICS OF THE AMERICAN SOCIETY FOR CLINICAL LABORATORY SCIENCE

Preamble: The Code of Ethics of the American Society for Clinical Laboratory Science (ASCLS) sets forth the principals and standards by which clinical laboratory professionals practice their profession.

1.Duty to the Patient – Clinical laboratory professionals are accountable for the quality and integrity of the laboratory services they provide. This obligation includes maintaining individual competence in judgment and performance and striving to safeguard the patient from incompetent or illegal practice by others.

Clinical laboratory professionals maintain high standards of practice. They exercise judgment in establishing, performing, and evaluating laboratory testing.

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

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

3. **Duty to Society –** As practitioners of an autonomous profession, clinical laboratory professionals have the responsibility to contribute from their sphere of professional competence to the general well-being of the community.

Clinical laboratory professionals comply with relevant laws and regulations pertaining to the practice of clinical laboratory science and actively seek, within the dictates of their consciences, to change those which do not meet the high standard of care and practice to which the profession is committed.

MLT Student Handbook Acknowledgement of Receipt and Agreement to Comply:

Bridge Valley Community and Technical College

MLT Program Student Handbook and Clinical Practicum Handbook

2023-2024

I have read, reviewed, understand, and agree to comply with the contents of the 2021-2022 MLT Student Handbook and Clinical Practicum Handbook.

Signature: _____Date_____