Medical Laboratory Technician Program

Clinical Experience Manual

Fall 2023 – Spring 2024

Georgeann Laughman, MBA, MT (ASCP), SM, HEM
Associate Professor & Program Director
Medical Laboratory Technician
Harrisburg Area Community College
One HACC Drive, Blocker 101 H
Harrisburg, PA 17110
Phone: 717-780-1953
Cell Phone: 717-609-5657
Fax: 717-780-2615
Email: glaughma@hacc.edu
Web: www.hacc.edu

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Additional Sections of this Document:

Additional Enrichment Activities

Individual Clinical Rotation Packets including the Rotation Objectives, Competency Checklist, and Student Clinical Evaluation follow in this order:

Chemistry
Urinalysis
Hematology
Coagulation
Immunohematology
Microbiology
Phlebotomy

NOTE: The *Student Information Handbook & Clinical Manual* is to be used in conjunction with the course objectives *and* the college *student handbook*. If the student has any questions related to a stated policy, contact the program director immediately for clarification. Failure to do so is *not* justification for noncompliance. STUDENTS ARE EXPECTED TO ADHERE TO OTHER RELEVANT POLICIES AND PROCEDURES GENERALLY APPLICABLE TO ALL STUDENTS OF HACC.

General Student Information for Clinical Rotations

General Information:

- The clinical site will be given an exact copy of your schedule.
- Any changes must be approved by the supervisor in charge at the clinical site and the Program Director.
- You may not come in late or leave early without prior approval.
- The Program Director must be informed by the student concerning any changes in scheduled days.
- The clinical experience will be your best reference. It establishes your professional reputation.
- Wear your HACC scrub top and black pants to the clinical site. Lab coats are provided by the facility.
- Purchase a notebook or composition book to keep notes on the procedures and equipment!

Students will participate in a "Meet and Greet" visit with the clinical site. This visit will be coordinated by the Program Director, and will occur prior to the start of your clinical rotation. Note: students who already work at their clinical site usually will not have a "Meet and Greet" visit scheduled. Items discussed at the meeting:

- Where to park.
- Who to report to on the first day.
- Directions to the hospital/lab.
- Information concerning required orientation before the clinical rotation begins.

During the clinical experience:

- **On your first day in the department,** obtain the number for the department in case you have to call in for any reason.
- Follow your checklist to ensure that you complete ALL required assignments for each rotation.
- You may be working with a different tech each day.
- Volunteer to do extra work and do not sit around.
- Read procedure manuals and bring your HACC notes each day and study during slow periods.
- Keep a positive attitude – avoid gossip and poor attitudes.
- Remind your trainer of your objectives. YOU are responsible for your paperwork!
- Be flexible about changes – especially about the schedule.
- Keep a notebook with you during clinical time and make notes.
- Be at least 5 minutes early and leave on time or later – finish up what you are doing prior to leaving for breaks, lunch or at the end of the day.

Phlebotomy:

- You are required to complete 100 successful venipunctures as part of the clinical experience.
- You may be required to come in early to assist with morning collections.
- You may have scheduled time in outpatient phlebotomy.
- During slow times or between clinical rotations, you may want to ask to spend time in phlebotomy.
- Employment as phlebotomist will exempt you from this requirement- your clinical schedule will reflect this exemption.

Student Injury:

- If a student is injured while at the clinical site, the *Policy on Student Injury or Accidental Exposure to Infectious Agents* must be followed.
- A *Student Injury or Accidental Exposure Incident Report Form* must be completed and the Program Director must be called immediately.

- The policy and any related forms are found in the MLT 226 and MLT 228 D2L shell and are available to students.

Quizzes, Assignments, and Final Exams

- There are quizzes and a final exam for each department rotation.
- Final exams will be taken online and will be proctored. You will be provided instructions on how to schedule your final exam by the Program Director. Quizzes are taken at home.
- You should study your notes from your HACC lecture courses for the quizzes and final in each department rotation. These quizzes are on the THEORY of the specialty you are studying.
- The quizzes and final exam demonstrate that you have connected the theory and practical application for each department.
- Other assignments such as discussion posts on Google docs and articles will also be assigned.

Prior to your final day of each rotation

- Ensure all objectives are complete.
- Have the performance evaluation completed by the clinical site.
- Confirm any quizzes, and all other pertinent material are submitted to the Program Director by the clinical site.
- Thank the staff at the clinical site for their assistance during your clinical rotation.

It is the student's responsibility to ensure that all pertinent material is submitted to the Program Director by the assigned date each semester. Failure to follow this policy may delay graduation and eligibility for the registry exam.

If you have any questions: Call or email the Program Director as soon as possible!

- The Program Director will be visiting (via ZOOM meeting and/or in-person) once or twice during each 20 -25-day rotation (2-4/semester).
- Students may be required to meet via Zoom during the semester. Dates are assigned by the Program Director.
- Have your textbook for the appropriate clinical department and your clinical manual with you at all times.
- The Program Director is here to help with any problems or situations.

Certification Examination

- You are eligible to take the American Society of Clinical Pathology Board of Registry (BOR) examination immediately after satisfactorily completing all required coursework and rotations.
- All work must be turned in to the Program Director (including phlebotomy) in order to be eligible to take the BOR examination – **NO EXCEPTIONS.**

Employment at the Clinical Site – See Section 1 of this Manual.

Dress Code – See Section 1 of this Manual.

Social Media

The following applies to all students during ALL MLT Clinical Experience classes:

- No texting or receiving cell phone calls during working hours.

- Texting or cell phone calls are acceptable on breaks or meal breaks.

Clinical Schedules

Clinical schedules are provided to each student prior to the beginning of the semester. This clinical schedule has been developed by the Program Director with input from the clinical site. **Students are not permitted to change their clinical schedule.** Any changes to the clinical schedule will be approved by the Program Director after consultation with the clinical site. **Students are NOT permitted to speak to the clinical site about changes to their clinical schedule.** All such requests must be made to the Clinical Director. Any student violating this policy will be subject to immediate dismissal from the program.

Attendance Policy – Clinical Rotations

Students are expected to report to the clinical site promptly and remain there during the designated hours. If the student is going to be late, **the clinical site AND the Program Director must be notified prior to their start time.** Two incidents of tardiness for any reason will be considered one unexcused absence. The academic penalty for each unexcused absence is the subtraction of five percentage points from the final percentage grade of the course. If the student needs to leave early from clinical, it must be approved in advance by the program director.

If a student cannot be present during a clinical day, the clinical instructor AND the Program Director must be notified thirty minutes before the scheduled reporting time. The student must notify both the program director AND the clinical instructor prior to the missed clinical day or the absence will be unexcused.

Students may not miss more than one day of clinical. Each subsequent day missed from clinical will result in a reduction of the student's final clinical grade by 5%.

Each unexcused absence will result in a reduction of the student's final clinical grade by 5% and a minimum disciplinary action of program probation. Unexcused absenteeism will not be tolerated. **Two unexcused absences will result in dismissal from the program.**

A physician's excuse is required if more than one clinical day is missed due to poor health. The excuse must be provided to the program director no more than one week after the missed day.

ALL MISSED CLINICAL TIME MUST BE MADE UP IF THE SCHEDULE PERMITS.

ANY STUDENT NOT CONFORMING TO THE ATTENDANCE POLICY WILL BE SUBJECT TO DISCIPLINARY ACTION (WARNING, PROGRAM PROBATION OR DISMISSAL FROM THE PROGRAM)

Probationary Process for Deficiency in Clinical Attendance Policy

A student is in violation of the attendance policy if any of the following situations occur:

- Accruing more than one absence requiring a physician's excuse during a single six-week rotation at the clinical site
- Tardiness in excess of two instances at the clinical site
- Any other unexcused absence

Any student in violation of the clinical attendance policy of the MLT program will be placed on Program Probation, according to the following procedure:

- After the first violation, the student will receive a written warning from the Program Director. A copy of the written warning will be signed by the student and placed in the student's file in the Program Director's office.
- After a second violation, the student is placed on Program Probation and is in danger of dismissal from the MLT Program. The student will be pulled from the clinical site and will not be allowed to return until meeting with the Program Director, the Department Chair, and the Dean of the division. A record of this meeting will be placed in the student's file in the Program Director's office.
- After a third violation, the student will receive written notice of immediate dismissal from the MLT program.

  Any student dismissed from the MLT program may apply for readmission to the program, according to the policy for ***Readmission to the MLT Program*** (see MLT Student handbook). **Any student dismissed from the Clinical Experience based on the Policy for Immediate Dismissal** (see MLT Student Handbook) **will immediately be dismissed from the MLT program and will not be eligible to reapply.**

Delayed Opening Schedule for Weather-Related or Other Incidents

ALL students are expected to register for the e2Campus alert system. Please see the course syllabus for additional information. All students are expected to check their text messages PRIOR to reporting to clinical sites when weather is an issue…the Program Director will notify students of HACC closures.

Grading Policy

Each semester (if possible), the Clinical Experience is composed of two (2) 20 - 25-day rotations in two (or more) separate departments within the clinical laboratory. **The following breakdown for grading applies to all rotations EXCEPT microbiology which has its own grading breakdown posted in D2L.**

A minimum grade of 75% must be obtained for each clinical rotation in order for the student to continue to advancing through the program.

Students must achieve the minimum acceptable score (75%) for ALL four sections of the grading system for the following courses: Chemistry/Urinalysis, Hematology/Coagulation, Microbiology – Bacteria/Other Organisms, Immunohematology/Immunology. Failure to achieve the minimum score in any area will result in a grade of "D" for the clinical rotation, unless the final percentage is 65 or less, which will result in the grade of "F".

Competency Evaluation:
Pass/Fail: Evaluation of the student based on the Competency Checklist prepared by the Department Supervisor or designated technologist.

Student Clinical Evaluation:
Pass/Fail: Clinical performance evaluation of the student prepared by the Department Supervisor or designated technologist.

Online Quizzes and Other Assignments:
25% of Grade: Score of lab quizzes and assignments, created and administered online by HACC. These activities will be topical and will cover theory learned in lecture/lab at HACC. All quizzes and assignments MUST be completed before the final exam is taken for the rotation. Failure to complete the quizzes will result in a "0" for this part of the grade which could result in the student not successfully completing the rotation.

Quiz Assignments may include case studies, articles with review quizzes, or other activities to test the student's knowledge of the topic.

NOTE: The clinical site may also provide quizzes and unknowns or practical exams for the student which must be successfully completed. These evaluations will help the clinical site when completing the Competency and Evaluation portions of the student's grade. These evaluations are not part of the final grade.

Lab CE Assignments:
20% of Grade: LabCE case studies and BOC practice exams will be assigned. If assignments are missed, the student will receive a 0 for this part of the grade which could result in the student not successfully completing the rotation.

Discussion Posts via Google Docs:
20% of Grade: This grade content consists of a weekly Google doc post on what you learned this week AND at the end of the semester, a post on what you WISH you knew before attending that rotation. If ANY entries are missed, the student will receive a 0 for this ENTIRE part of the grade which could result in the student not successfully completing the rotation. A google doc entry may include the following:

- Procedures observed and tasks performed.
- Unusual patient encounters.
- Observations of the lab.
- Observations of other departments of the hospital.
- Relating lecture to the rotation.
- Relationships with other phlebotomists, lab techs, supervisors.
- Positive or negative situations which occurred.
- Experience the student has learned from concepts not taught in the classroom.
- Knowledge gained from the rotation.

Student Lab Assistant for First Year MLT Courses:
5% of Grade: Each student will pick a topic area to create a study tool to be shared with other students.

Final Exam:
30% of Grade: Final exam provided by and administered by HACC. To be successful on the exam, it will be necessary to study didactic notes and textbook while attending clinical.

Notes: Phlebotomy is pass/fail. Immunology grades will be based on HACC online quizzes, assignments, and exams since not all facilities have an Immunology department.

Grading is as follows:

Rotation: Chemistry/Urinalysis	Chemistry = 75% of grade; Urinalysis = 25% of grade
Rotation: Hematology/Coagulation	Hematology = 75% of grade; Coagulation = 25% of grade
Rotation: Microbiology	Microbiology/Bacteria = 75% of grade; Micro/Other = 25% of grade
Rotation: Immunohematology	Immunohematology = 75% of grade; Immunology = 25% of grade

Desire2Learn Information:

Ways to access D2L:

1. Through the myHACC portal…and select Desire2Learn. https://myhacc.hacc.edu
2. Go directly to D2L. https://ehacc.hacc.edu

Where do you go for more help?

1. HACC HelpDesk at 717-780-2570 for issues accessing myHACC portal.
2. D2L HelpDesk at 1-877-325-7778 or helpdesk@desire2learn.com for any unresolved technical issues within D2L

EEOC/PHRC Syllabus Requirement:

EEOC POLICY 005: It is the policy of Harrisburg Area Community College, in full accordance with the law, not to discriminate in employment, student admissions, and student services on the basis of race, color, religion, age, political affiliation or belief, gender, national origin, ancestry, disability, place of birth, General Education Development Certification (GED), marital status, sexual orientation, gender identity or expression, veteran status, genetic history/information, or any legally protected classification. HACC recognizes its responsibility to promote the principles of equal opportunity for employment, student admissions, and student services taking active steps to recruit minorities and women.

The Pennsylvania Human Relations Act ("PHRAct') prohibits discrimination against prospective and current students because of race, color, sex, religious creed, ancestry, national origin, handicap or disability, record of a handicap or disability, perceived handicap or disability, relationship or association with an individual with a handicap or disability, use of a guide or support animal, and/or handling or training of support or guide animals.

The Pennsylvania Fair Educational Opportunities Act ("PFEOAct") prohibits discrimination against prospective and current students because of race, religion, color, ancestry, national origin, sex, handicap or disability, record of a handicap or disability, perceived handicap or disability, and a relationship or association with an individual with a handicap or disability. Information about these laws may be obtained by visiting the Pennsylvania Human Relations Commission website at www.phrc.state.pa.us.

If an accommodation is needed, please contact the disability coordinator for your campus:
http://www.hacc.edu/StudentServices/DisabilityServices/Contact-Us.cfm

HACC Harrisburg Campus: Carole Kerper (clkerper@hacc.edu)
One HACC Drive - Cooper 133
Harrisburg PA 17110
Phone: 717-780-2614
Fax: 717-780-1165

HACC Medical Laboratory Technician Program
MLT 226 Clinical Experience Schedule for Fall 2023

Student Name: Email:

Clinical Site	Clinical Site Contact Person	Phone Number	Email

Assignments will open on 8/28/23. Due dates and the first ZOOM class will be on Friday, 9/8/23.

Department	Dates	Number of Clinical Days
Chemistry, Blood Bank, Hematology & Coag Review assignments that will be due throughout the semester.	August 28 – September 1	5 – ONLINE Instruction
Holiday	**September 4**	**Holiday**
Chemistry, Blood Bank, Hematology & Coag Review assignments that will be due throughout the semester.	September 5 – September 7	3 – ONLINE Instruction
MLT 236 Mandatory Class	**September 8**	**ZOOM 9 AM – 11:05 AM**
Week 1: Microbiology – All times for Microbiology are 0900 to 1400 hours	September 11 - ZOOM September 13 - CAMPUS	5
Week 2: Microbiology – All times for Microbiology are 0900 to 1400 hours	September 18 – ZOOM September 20 - CAMPUS	4
MLT 236 Mandatory Class **MLT 226 Orientation**	**September 22**	**ZOOM – 9 AM – 11:05 AM** **ZOOM 12 PM – 2 PM**
Week 3: Microbiology – All times for Microbiology are 0900 to 1400 hours	September 25 - CAMPUS September 27 - CAMPUS	5
Week 4: Microbiology– All times for Microbiology are 0900 to 1400 hours **Hemocytomer Hands-On Practice and Calculations**	October 2 - ZOOM October 4 – CAMPUS **October 5 – ON CAMPUS**	4 **Campus at 9 AM – 2 PM**
Week 5: Microbiology– All times for Microbiology are 0900 to 1400 hours	October 9 - CAMPUS October 11 - CAMPUS	5
Week 6: Microbiology– All times for Microbiology are 0900 to 1400 hours	October 16 - CAMPUS October 18 - CAMPUS	5
Second Clinical Rotation (20 - 24 days) - HOSPITAL	October 23 – October 26	4
MLT 236 Mandatory Class	**October 27**	**Remote – 9 AM – 11:05 AM**
Second Clinical Rotation (20 - 24 days)	October 30 - November 2	4
Second Clinical Rotation (20 - 24 days)	November 6 – November 9	4
Second Clinical Rotation (20 - 24 Days)	November 13– November 16	4
MLT 236 Mandatory Class	**November 17**	**Remote – 9 AM – 11:05 AM**
Second Clinical Rotation (20 - 24 Days)	November 20 – November 22	3
Holiday - HACC Closed Thursday & Friday	November 23 - November 24	**Thanksgiving Holiday**
Second Clinical Rotation (20 - 24 Days)	November 27 – November 30	4
Phlebotomy (4 - 5 days) OR Rotation Make Up Days OR Students are Off or Third Rotation	December 4 - December 7	4
MLT 236 Mandatory Class	**December 8**	**Remote – 9 AM – 12:20 PM**
Phlebotomy (4 - 5 days) OR Rotation Make Up Days OR Students are Off OR Third Rotation	December 11 – December 14	4
SECOND CLINICAL ENDS	Semester ends – December 15	
Winter Break - HACC Closed	**December 18 – January 5**	**Winter Break**
Open Option for Students and Clinical Sites	January 8 - January 12	Winter Semester
Martin Luther King, Jr. Day - HACC Closed	**January 15**	**Holiday**
Spring Semester Begins	January 16	

NOTE #1: Schedule is subject to change at the discretion of the MLT Program Director and/or the Clinical Site Coordinator.
NOTE #2: Student is required to complete 100 successful phlebotomies prior to graduation.
NOTE #3: Immunology Objectives have been added to each of the clinical department objectives.
NOTE #4: Urinalysis rotation will be included in the Chemistry rotation unless otherwise noted. Coagulation rotation will be included into the Hematology rotation unless otherwise noted.

2023 MLT122 Lab Assistants: Diann will provide further instructions

Topic	Date	Student
Week 1: Donning and Doffing PPE, sizing lab coats and labeling	Tuesday, 8/29	Nate
Week 2: Microscopy	Tuesday, 9/5	Jake
Week 3: Pipetting	Tuesday, 9/12	Sosanna
Week 4: Glassware/Labware	Tuesday, 9/19	Dan
Week 5: ABO Slide Testing, Mono Testing	Tuesday, 9/26	Wee
Week 6: Zombie ELISA	Tuesday, 10/3	Leslie
Week 7: Lab Practical #1	Tuesday, 10/10	Phily and Naomi
Week 8 – First Year Students on Fall Break		
Week 9: Serial Dilutions, Pipetting and Dilutions	Tuesday, 10/24	Corry
Week 10 – No lab assistant required		
Week 11: ABO Tube Testing	Tuesday, 11/7	Sam
Week 12: PCR	Tuesday, 11/14	Nikki
Week 13: SPE	Tuesday, 11/21	Ryan
Week 14 – No lab assistant required		
Week 15: Lab Practical #2	Tuesday, 12/5	Donna and Shelby

Medical Laboratory Technician Program

Additional Enrichment Activities

The following are additional enrichment activities that MAY be added into the student's schedule at the discretion of the clinical site. These additional activities CANNOT take the place of clinical time needed to complete rotation objectives.

- Point of Care Testing (POCT)
- Histology/Pathology
- Emergency Department
- Infection Prevention
- Laboratory Information Systems
- Other Clinical Phlebotomy sites within the Health System
- Other Hospital sites within the Health System

Medical Laboratory Technician Program

Clinical Experience Manual

Chemistry

Clinical Rotation Objectives
Competency Checklists
Student Clinical Evaluation

Updated Fall 2021

Chemistry Rotation Objectives

After completing the rotation in Clinical Chemistry, the student should be able to:

Specimen Collection/Processing:

1. Describe the proper specimen collection, handling, and processing procedures for each test.
2. Describe how to identify improperly collected specimens, and the appropriate actions to take.

General Testing:

3. Discuss the principle of each test performed in the department.
4. Perform dilutions of specimens and describe how to calculate results.
5. For manual, semi-automated, and automated test procedures that are performed in the department, complete the following:
    a. Accurately prepare reagents.
    b. Perform the test procedure.
    c. Observe and/or perform the calibration procedure.
    d. State the principle of the reaction.
    e. Perform daily maintenance of the analyzer used.
    f. Perform quality control for the test procedure and discuss appropriate actions to take if quality control is out of range.
    g. Recognize, evaluate, and interpret normal and abnormal results, and take actions for panic values.
    h. Recognize possible sources of error.
    i. Troubleshooting of testing and results.
6. Perform the following tests:
    a. Osmolarity
    b. Direct/indirect bilirubin
    c. Therapeudic drug monitoring
    d. Lithium
    e. Qualitative and quantitative HCG

Quality Control and Quality Assurance:

7. Perform and record quality control and quality assurance for the department.
8. Describe appropriate actions to take if quality control is out of range.
9. Discuss how patient results are verified and/or reported in the department.
10. Discuss how STAT testing is handled in the department and perform STAT testing.
11. Discuss the importance of quality control and quality assurance procedures in the department.

Immunology Principles and Techniques (if applicable):

1. Perform serial dilutions on specimens and interpret results.
2. Review a package insert for serological testing and note the following areas:
    a. Specimen requirements and stability
    b. Procedure
    c. Quality control
    d. Result interpretation
    e. Limitations
    f. Principle
3. Recognize the importance of following the guidelines from the package insert for specimens, procedure and quality control.

Enrichment Objectives: The following testing procedures are considered an enrichment experience, and should be performed if available:

1. Serum electrophoresis procedures, including quantitation of each fraction.
2. Blood gas analysis to obtain the pH and blood gas parameters. Calculate those values not provided by the instrument.
3. Toxicology testing. Describe when confirmation testing is warranted.
4. Use of clinical site LIS for result reporting/documentation/QC, etc.
5. HBA1C testing.
6. Enrichment Immunology Testing by PCR or other testing methods:
    a. Hepatitis testing
    b. HIV testing
    c. ANA testing
    d. RPR screen and titer
    e. Mono screen
    f. Rubella screen and titer
    g. HPV testing
    h. RSV testing
    i. Directigen testing
    j. Cryptococcus Antigen testing
    k. Giardia antigen testing
    l. Shiga toxin
    m. C. difficile toxin
    n. Rapid Influenza
    o. Fecal Lactoferrin
    p. Hpfast/Clotest

Clinical Chemistry Competency Checklist
Rotation: 25 days including Urinalysis (See specific UA Section for objectives and checklists.)

This form is used to monitor the performance level of the student in Clinical Chemistry. Students must meet the minimum level of performance for each procedure listed. This competency is pass/fail.

NAME: _____

Level of Expected Performance	
5	**Student Exceeded Expectations for this objective**
4	**Performed with minimal supervision**
3	**Performed with maximum supervision**
2	**Observed**
1	**Discussed**

Procedure	**Min Level**	**Level Reached (circle one)**					**Instructor Initial/Date**
Specimen processing	**4**	5	4	3	2	1	
Multi-channel analyzer: (type):							
a. Prepare reagents	**4**	5	4	3	2	1	
b. Perform testing	**4**	5	4	3	2	1	
c. Observe and/or perform calibration	**2**	5	4	3	2	1	
d. Describe principle	**1**	5	4	3	2	1	
e. Operate analyzer	**4**	5	4	3	2	1	
f. Perform maintenance	**3**	5	4	3	2	1	
g. Recognize normal/abnormal results	**4**	5	4	3	2	1	
h. Perform quality control	**4**	5	4	3	2	1	
i. Record results	**3**	5	4	3	2	1	
Multi-channel analyzer: (type):							
a. Prepare reagents	**4**	5	4	3	2	1	
b. Perform testing	**4**	5	4	3	2	1	
c. Observe and/or perform calibration	**2**	5	4	3	2	1	
d. Describe principle	**1**	5	4	3	2	1	
e. Operate analyzer	**4**	5	4	3	2	1	
f. Perform maintenance	**3**	5	4	3	2	1	
g. Recognize normal/abnormal results	**4**	5	4	3	2	1	
h. Perform quality control	**4**	5	4	3	2	1	
i. Record results	**3**	5	4	3	2	1	
Manual test procedure: (type):							
a. Prepare reagents	**4**	5	4	3	2	1	
b. Perform testing	**4**	5	4	3	2	1	
c. Describe principle	**1**	5	4	3	2	1	
d. Recognize normal/abnormal results	**4**	5	4	3	2	1	
e. Perform quality control	**4**	5	4	3	2	1	
f. Record results	**3**	5	4	3	2	1	
Immunoassay: (type):							
a. Prepare reagents	**4**	5	4	3	2	1	
b. Perform testing	**4**	5	4	3	2	1	
c. Observe and/or perform calibration	**2**	5	4	3	2	1	
d. Describe principle	**1**	5	4	3	2	1	
e. Operate analyzer	**4**	5	4	3	2	1	
f. Perform maintenance	**3**	5	4	3	2	1	
g. Recognize normal/abnormal results	**4**	5	4	3	2	1	
h. Perform quality control	**4**	5	4	3	2	1	
i. Record results	**3**	5	4	3	2	1	
STAT testing and recording results	**3**	5	4	3	2	1	
Dilutions of specimens	**4**	5	4	3	2	1	

Procedure	Min Level	Level Reached (circle one)					Instructor Initial/Date
Specimen processing	**4**	5	4	3	2	1	
Multi-channel analyzer: (type):							
a. Prepare reagents	**4**	5	4	3	2	1	
b. Perform testing	**4**	5	4	3	2	1	
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b. Perform testing	**4**	5	4	3	2	1	
c. Describe principle	**1**	5	4	3	2	1	
d. Recognize normal/abnormal results	**4**	5	4	3	2	1	
e. Perform quality control	**4**	5	4	3	2	1	
f. Record results	**3**	5	4	3	2	1	
Immunoassay: (type):							
a. Prepare reagents	**4**	5	4	3	2	1	
b. Perform testing	**4**	5	4	3	2	1	
c. Observe and/or perform calibration	**2**	5	4	3	2	1	
d. Describe principle	**1**	5	4	3	2	1	
e. Operate analyzer	**4**	5	4	3	2	1	
f. Perform maintenance	**3**	5	4	3	2	1	
g. Recognize normal/abnormal results	**4**	5	4	3	2	1	
h. Perform quality control	**4**	5	4	3	2	1	
i. Record results	**3**	5	4	3	2	1	

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Student Clinical Evaluation

Student Name: _____ Department: Chemistry

Following is a description of the Clinical Performance Evaluation criteria, intended to provide a clear explanation for each of the numerical criteria. Please photocopy this page and distribute to all evaluators who are responsible for evaluating the student on clinical performance. This evaluation is pass/fail.

5 – Exceptional; Exceeds Expectation: Student performs assigned tasks within the allotted amount of time with no supervision and routinely asks to assist department with workload as able.

4 – Above Average; Performance Exceptional: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with no supervision.*

3 – Average: Performance Satisfactory: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with minimum supervision.*

2 – Below Average; Needs Improvement: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *only with maximum supervision.*

1 – Deficient; Performance Unacceptable: Student is *not* able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *even with maximum supervision.*

Comments must be given for any grade of 2 or lower in any category

	Section 1					
1	Is polite and tactful when dealing with patients and personnel.	5	4	3	2	1
2	Interacts and communicates well with coworkers, medical personnel and patients.	5	4	3	2	1
3	Considers the effect of inappropriate specimens and interfering substances such as lipemia, hemolysis, and fibrin on results.	5	4	3	2	1
4	Pressure of time does not affect accuracy.	5	4	3	2	1
5	Recognizes errors in analysis and results.	5	4	3	2	1
6	Checks implausible results for accuracy.	5	4	3	2	1
7	Calculates, transcribes, and records accurately and legibly.	5	4	3	2	1
8	Recognizes normal and abnormal results.	5	4	3	2	1
9	Adheres to laboratory safety practices.	5	4	3	2	1
10	Selects appropriate quality control measures.	5	4	3	2	1
11	Assumes responsibility for errors.	5	4	3	2	1
Comments:						

	Section 2					
1	Recognizes limitations and seeks advice when needed.	5	4	3	2	1
2	Adheres to procedure for reagent preparation, labeling, and selection.	5	4	3	2	1
3	Adheres to procedure for equipment selection, set-up, and use.	5	4	3	2	1
4	Coordinates work with consideration of priority.	5	4	3	2	1
5	Correlates test results with pathological conditions.	5	4	3	2	1
6	Correlates test results with other laboratory findings.	5	4	3	2	1
7	After instruction is given, is able to work with minimal supervision.	5	4	3	2	1
8	During performance of procedures, work area is organized.	5	4	3	2	1
9	Leaves work area neat and clean.	5	4	3	2	1
10	Demonstrates a basic knowledge of the principles and techniques of procedures performed.	5	4	3	2	1
11	Is able to coordinate several tasks at the same time.	5	4	3	2	1
12	Assigned tasks are completed.	5	4	3	2	1

Comments:

	Section 3					
1	Assumes primary responsibility for own education, and voluntarily seeks additional information.	5	4	3	2	1
2	Performs tasks as verbally directed.	5	4	3	2	1
3	Recognizes tasks that need to be done without being told.	5	4	3	2	1
4	Completes a single procedure within a reasonable amount of time.	5	4	3	2	1
5	Is able to adjust to changes.	5	4	3	2	1
6	Performs responsibilities without unnecessary diversions.	5	4	3	2	1
7	Accepts constructive criticisms.	5	4	3	2	1
8	Questions asked are appropriate.	5	4	3	2	1
9	Informs department when leaving assigned area.	5	4	3	2	1
10	Complies with laboratory rules concerning personal appearance.	5	4	3	2	1
11	Works well with others.	5	4	3	2	1
12	Attentive when instructors are given.	5	4	3	2	1
13	Works hours as scheduled (arrives on time, doesn't leave early).	5	4	3	2	1
14	Has minimal absenteeism.	5	4	3	2	1
15	Is flexible with work schedule.	5	4	3	2	1

Comments:

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Medical Laboratory Technician Program

Clinical Experience Manual

Urinalysis

Clinical Rotation Objectives
Competency Checklists
Student Clinical Evaluation

Updated Fall 2021

Urinalysis Rotation Objectives

After completing the rotation in Clinical Urinalysis, the student should be able to:

Specimen Collection/Processing:

1. Describe the proper specimen collection, handling, and processing procedures for each test.
2. Describe how to identify improperly collected specimens, and the appropriate actions to take.

General Testing:

3. Perform routine urine dipstick testing using both the manual and automated methods.
4. Recognize interferences with results caused by certain specimens and take appropriate actions to correct.
5. Perform confirmatory procedure for various urine testing.
6. Prepare a specimen for microscopic exam.
7. Perform the microscopic analysis on urine specimens.
8. Identify or discuss all possible findings in microscopic exam and urine sediment.
9. Recognize abnormal findings in urine sediment.
10. For the automated instrument used to perform urine dipstick analysis, complete the following:
    a. Observe and/or perform the calibration procedure.
    b. State the principle of the reactions.
    c. Perform daily maintenance.
    d. Perform quality control for test procedures and discuss appropriate actions to take if quality control is out of range.
    e. Recognize normal and abnormal results, and take actions for abnormal values.
11. Perform testing for occult blood.
12. Recognize possible sources of error.
13. Troubleshooting of testing and results.

Quality Control and Quality Assurance:

14. Perform and record quality control and quality assurance for the department.
15. Describe appropriate actions to take if quality control is out of range.
16. Discuss how patient results are verified and/or reported in the department.
17. Discuss how STAT testing is handled in the department and perform STAT testing.
18. Discuss the importance of quality control and quality assurance procedures in the department.

Enrichment Objectives: The following testing procedures are considered an enrichment experience, and should be performed if available:

1. Stool for reducing substances.
2. Crystal analysis using the polarizing scope.
3. Fecal WBC microscopic examination.
4. Perform gastroccult testing.
5. Discussion or performance of automated microscropy.
6. Use of clinical site LIS for result reporting/documentation/QC/etc.

Clinical Urinalysis Competency Checklist
Rotation: 4 – 5 days as part of the Chemistry Rotation.

This form is used to monitor the performance level of the student in Clinical Urinalysis. Students must meet the minimum level of performance for each procedure listed. This competency is pass/fail.

NAME: _____

Level of Expected Performance	
5	**Student Exceeded Expectations for this objective**
4	**Performed with minimal supervision**
3	**Performed with maximum supervision**
2	**Observed**
1	**Discussed**

Procedure	**Min Level**	**Level Reached (circle one)**					**Instructor Initial/Date**
Specimen processing	**4**	5	4	3	2	1	
Urine dipstick by manual methods	**4**	5	4	3	2	1	
Automated analyzer: (type):							
a. Perform testing	**4**	5	4	3	2	1	
b. Discuss or observe calibration	**1**	5	4	3	2	1	
c. Describe principle	**4**	5	4	3	2	1	
d. Operate analyzer	**4**	5	4	3	2	1	
e. Perform maintenance	**2**	5	4	3	2	1	
f. Recognize normal/abnormal results	**4**	5	4	3	2	1	
g. Perform quality control	**4**	5	4	3	2	1	
h. Record results	**4**	5	4	3	2	1	
Confirmatory testing	**4**	5	4	3	2	1	
Microscopic examination of urine sediment	**3**	5	4	3	2	1	
STAT testing and recording results	**3**	5	4	3	2	1	
Quality control	**3**	5	4	3	2	1	

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Student Clinical Evaluation

Student Name: _____ Department: Urinalysis

Following is a description of the Clinical Performance Evaluation criteria, intended to provide a clear explanation for each of the numerical criteria. Please photocopy this page and distribute to all evaluators who are responsible for evaluating the student on clinical performance. This evaluation is pass/fail.

5 – Exceptional; Exceeds Expectation: Student performs assigned tasks within the allotted amount of time with no supervision and routinely asks to assist department with workload as able.

4 – Above Average; Performance Exceptional: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with no supervision.*

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1 – Deficient; Performance Unacceptable: Student is *not* able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *even with maximum supervision.*

Comments must be given for any grade of 2 or lower in any category

	Section 1					
1	Is polite and tactful when dealing with patients and personnel.	5	4	3	2	1
2	Interacts and communicates well with coworkers, medical personnel and patients.	5	4	3	2	1
3	Considers the effect of inappropriate specimens and interfering substances such as lipemia, hemolysis, and fibrin on results.	5	4	3	2	1
4	Pressure of time does not affect accuracy.	5	4	3	2	1
5	Recognizes errors in analysis and results.	5	4	3	2	1
6	Checks implausible results for accuracy.	5	4	3	2	1
7	Calculates, transcribes, and records accurately and legibly.	5	4	3	2	1
8	Recognizes normal and abnormal results.	5	4	3	2	1
9	Adheres to laboratory safety practices.	5	4	3	2	1
10	Selects appropriate quality control measures.	5	4	3	2	1
11	Assumes responsibility for errors.	5	4	3	2	1
Comments:						

	Section 2					
1	Recognizes limitations and seeks advice when needed.	5	4	3	2	1
2	Adheres to procedure for reagent preparation, labeling, and selection.	5	4	3	2	1
3	Adheres to procedure for equipment selection, set-up, and use.	5	4	3	2	1
4	Coordinates work with consideration of priority.	5	4	3	2	1
5	Correlates test results with pathological conditions.	5	4	3	2	1
6	Correlates test results with other laboratory findings.	5	4	3	2	1
7	After instruction is given, is able to work with minimal supervision.	5	4	3	2	1
8	During performance of procedures, work area is organized.	5	4	3	2	1
9	Leaves work area neat and clean.	5	4	3	2	1
10	Demonstrates a basic knowledge of the principles and techniques of procedures performed.	5	4	3	2	1
11	Is able to coordinate several tasks at the same time.	5	4	3	2	1
12	Assigned tasks are completed.	5	4	3	2	1

Comments:

	Section 3					
1	Assumes primary responsibility for own education, and voluntarily seeks additional information.	5	4	3	2	1
2	Performs tasks as verbally directed.	5	4	3	2	1
3	Recognizes tasks that need to be done without being told.	5	4	3	2	1
4	Completes a single procedure within a reasonable amount of time.	5	4	3	2	1
5	Is able to adjust to changes.	5	4	3	2	1
6	Performs responsibilities without unnecessary diversions.	5	4	3	2	1
7	Accepts constructive criticisms.	5	4	3	2	1
8	Questions asked are appropriate.	5	4	3	2	1
9	Informs department when leaving assigned area.	5	4	3	2	1
10	Complies with laboratory rules concerning personal appearance.	5	4	3	2	1
11	Works well with others.	5	4	3	2	1
12	Attentive when instructors are given.	5	4	3	2	1
13	Works hours as scheduled (arrives on time, doesn't leave early).	5	4	3	2	1
14	Has minimal absenteeism.	5	4	3	2	1
15	Is flexible with work schedule.	5	4	3	2	1

Comments:

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Medical Laboratory Technician Program

Clinical Experience Manual

Hematology

Clinical Rotation Objectives
Competency Checklists
Student Clinical Evaluation

Updated Fall 2021

Hematology Rotation Objectives

After completing the rotation in Clinical Hematology, the student should be able to:

Specimen Collection/Processing:

1. Describe the proper specimen/collection, handling, and processing procedures for each test.
2. Describe how to identify improperly collected specimens, and the appropriate actions to take.

General Testing:

3. Describe the principle of each test performed in the department.
4. Demonstrate proficiency in the manual preparation and staining of blood smears.
5. Demonstrate proper use and care of the microscope.
6. For automated testing procedures that are performed in the department, complete the following:
    a. Perform all testing procedures.
    b. Discuss or observe the calibration procedure.
    c. State the principle of the reactions.
    d. Perform daily maintenance.
    e. Analyzer reagent inventory and process for changing reagents
    f. Review and use of automated analyzer software.
    g. Perform quality control for test procedures and discuss appropriate actions to take if quality control is out of range.
    h. Recognize normal and abnormal results, and take actions for panic values.
7. Manually perform the dilution and counting of body fluid cells and the calculation of final results.
8. Perform 10 body fluid differentials and correlate with the known results.
9. Perform twenty-five (25) differentials on peripheral blood for normal patients of all ages, and correlate with the known results.
10. Perform differentials on the following abnormal specimens and correlate with known results:

Bacterial infection	Infectious mononucleosis	Iron deficiency anemia
Thalassemia	Sickle cell anemia	megaloblastic anemia
Malaria	Pelger-huet	CML
ALL	AML	CLL

11. Differentiate normal RBC, WBC, and PLT morphology from abnormal.
12. Identify cellular stages of maturity.
13. Identify and describe the following PLT, WBC, RBC morphological variations on blood smears, textbooks, or kodachromes:

microcytes	macrocytes	ovalocytes	target cells	acanthocytes
schistocytes	crenated RBC	poikilocytosis	stomatocytes	basophilic stippling
sickle cells	burr cells	spherocytes	rouleux	howell jolly body
Hgb C crystal	Heinz body	auer rods	dohle bodies	polychromasia
PLT clumping	giant PLTs	siderocytes	elliptocytes	tear drop cells
Reactive lymphocytes				

14. Perform WBC and PLT estimates and correlate with automated results.
15. Prepare and read specimens for erythrocyte sedimentation rate testing.
16. Calculate indices when given the RBC, Hgb, and Hct results, and correlate these results to RBC morphology.
17. Evaluate histograms for RBC, WBC, and PLT populations, and correlate with results.
18. Recognize possible sources of error.
19. Troubleshooting of testing and results.

Quality Control and Quality Assurance:

20. Perform and record quality control and quality assurance for the department.
21. Describe appropriate actions to take if quality control is out of range.
22. Discuss how patient results are verified and/or reported in the department.
23. Discuss how STAT testing is handled in the department and perform STAT testing.
24. Discuss the importance of quality control and quality assurance procedures in the department.
25. Discuss the back-up procedures in the department.

Immunology Principles and Techniques (if applicable):

1. Perform serial dilutions on specimens and interpret results.
2. Review a package insert for serological testing and note the following areas:
    a. Specimen requirements and stability
    b. Procedure
    c. Quality control
    d. Result interpretation
    e. Limitations
    f. Principle
3. Recognize the importance of following the guidelines from the package insert for specimens, procedure and quality control.

Enrichment Objectives: The following testing procedures are considered and enrichment experience, and should be performed if available:

1. Perform synovial fluid analysis including viscosity and crystal analysis.
2. Perform semen analysis, both gross and microscopic.
3. Staining, screening, and identification of blood parasites.
4. Perform the sickle cell screening test.
5. Observe bone marrow biopsy and specimen processing.
6. HBA1C testing.
7. Use of clinical site LIS for result reporting/documentation/QC/etc.
8. Perform manual platelet counts and identify criteria that would warrant this test.
9. Prepare and read 5 reticulocyte smears.
10. Enrichment Immunology Testing by PCR or other testing methods:
    a. Hepatitis testing
    b. HIV testing
    c. ANA testing
    d. RPR screen and titer
    e. Mono screen
    f. Rubella screen and titer
    g. HPV testing
    h. RSV testing
    i. Directigen testing
    j. Cryptococcus Antigen testing
    k. Giardia antigen testing
    l. Shiga toxin
    m. C. difficile toxin
    n. Rapid Influenza
    o. Fecal Lactoferrin
    p. Hpfast/Clotest

Clinical Hematology Competency Check-list
Rotation: 25 days including Coagulation Rotation (See Coag section for objectives and checklists.)

This form is used to monitor the performance level of the student in Clinical Hematology. Students must meet the minimum level of performance for each procedure listed. This competency is pass/fail.

NAME: _____

Level of Expected Performance	
5	**Student Exceeded Expectations for this objective**
4	**Performed with minimal supervision**
3	**Performed with maximum supervision**
2	**Observed**
1	**Discussed**

Procedure	**Min Level**	**Level Reached (circle one)**					**Instructor Initial/Date**
Specimen processing	**4**	5	4	3	2	1	
Prepare blood smears	**4**	5	4	3	2	1	
Stain blood smears	**4**	5	4	3	2	1	
Microscope use and care	**4**	5	4	3	2	1	
Automated hematology analyzer: (type):							
a. Add reagents	**4**	5	4	3	2	1	
b. Perform testing	**4**	5	4	3	2	1	
c. Observe and/or perform calibration	**2**	5	4	3	2	1	
d. Describe principle	**1**	5	4	3	2	1	
e. Operate analyzer	**4**	5	4	3	2	1	
f. Perform maintenance	**3**	5	4	3	2	1	
g. Recognize normal/abnormal results	**4**	5	4	3	2	1	
h. Perform quality control	**4**	5	4	3	2	1	
i. Record results	**3**	5	4	3	2	1	
Body fluid cells counts and differentials	**3**	5	4	3	2	1	
Normal patient differentials	**4**	5	4	3	2	1	
Abnormal patient differentials	**3**	5	4	3	2	1	
Classify abnormal cellular morphology and Inclusions	**3**	5	4	3	2	1	
Identify all cellular stages of maturity	**3**	5	4	3	2	1	
Platelet estimates	**4**	5	4	3	2	1	
Sedimentation rate	**4**	5	4	3	2	1	
Evaluation of histograms	**4**	5	4	3	2	1	
Quality Control	**4**	5	4	3	2	1	
STAT testing and recording results	**3**	5	4	3	2	1	

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director:_____ Date: _____

Student Clinical Evaluation

Student Name: _____ Department: Hematology

Following is a description of the Clinical Performance Evaluation criteria, intended to provide a clear explanation for each of the numerical criteria. Please photocopy this page and distribute to all evaluators who are responsible for evaluating the student on clinical performance. This evaluation is pass/fail.

5 – Exceptional; Exceeds Expectation: Student performs assigned tasks within the allotted amount of time with no supervision and routinely asks to assist department with workload as able.

4 – Above Average; Performance Exceptional: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with no supervision.*

3 – Average: Performance Satisfactory: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with minimum supervision.*

2 – Below Average; Needs Improvement: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *only with maximum supervision.*

1 – Deficient; Performance Unacceptable: Student is *not* able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *even with maximum supervision.*

Comments must be given for any grade of 2 or lower in any category

	Section 1					
1	Is polite and tactful when dealing with patients and personnel.	5	4	3	2	1
2	Interacts and communicates well with coworkers, medical personnel and patients.	5	4	3	2	1
3	Considers the effect of inappropriate specimens and interfering substances such as lipemia, hemolysis, and fibrin on results.	5	4	3	2	1
4	Pressure of time does not affect accuracy.	5	4	3	2	1
5	Recognizes errors in analysis and results.	5	4	3	2	1
6	Checks implausible results for accuracy.	5	4	3	2	1
7	Calculates, transcribes, and records accurately and legibly.	5	4	3	2	1
8	Recognizes normal and abnormal results.	5	4	3	2	1
9	Adheres to laboratory safety practices.	5	4	3	2	1
10	Selects appropriate quality control measures.	5	4	3	2	1
11	Assumes responsibility for errors.	5	4	3	2	1
Comments:						

	Section 2					
1	Recognizes limitations and seeks advice when needed.	5	4	3	2	1
2	Adheres to procedure for reagent preparation, labeling, and selection.	5	4	3	2	1
3	Adheres to procedure for equipment selection, set-up, and use.	5	4	3	2	1
4	Coordinates work with consideration of priority.	5	4	3	2	1
5	Correlates test results with pathological conditions.	5	4	3	2	1
6	Correlates test results with other laboratory findings.	5	4	3	2	1
7	After instruction is given, is able to work with minimal supervision.	5	4	3	2	1
8	During performance of procedures, work area is organized.	5	4	3	2	1
9	Leaves work area neat and clean.	5	4	3	2	1
10	Demonstrates a basic knowledge of the principles and techniques of procedures performed.	5	4	3	2	1
11	Is able to coordinate several tasks at the same time.	5	4	3	2	1
12	Assigned tasks are completed.	5	4	3	2	1

Comments:

	Section 3					
1	Assumes primary responsibility for own education, and voluntarily seeks additional information.	5	4	3	2	1
2	Performs tasks as verbally directed.	5	4	3	2	1
3	Recognizes tasks that need to be done without being told.	5	4	3	2	1
4	Completes a single procedure within a reasonable amount of time.	5	4	3	2	1
5	Is able to adjust to changes.	5	4	3	2	1
6	Performs responsibilities without unnecessary diversions.	5	4	3	2	1
7	Accepts constructive criticisms.	5	4	3	2	1
8	Questions asked are appropriate.	5	4	3	2	1
9	Informs department when leaving assigned area.	5	4	3	2	1
10	Complies with laboratory rules concerning personal appearance.	5	4	3	2	1
11	Works well with others.	5	4	3	2	1
12	Attentive when instructors are given.	5	4	3	2	1
13	Works hours as scheduled (arrives on time, doesn't leave early).	5	4	3	2	1
14	Has minimal absenteeism.	5	4	3	2	1
15	Is flexible with work schedule.	5	4	3	2	1

Comments:

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Medical Laboratory Technician Program

Clinical Experience Manual

Coagulation

Clinical Rotation Objectives
Competency Checklists
Student Clinical Evaluation

Updated Fall 2021

Coagulation Rotation Objectives

After completing the rotation in Coagulation, the student should be able to:

Specimen Collection/Processing:

1. Describe the proper specimen collection, handling, and processing procedures for each test.

General Testing:

2. For manual, semi-automated, and automated test procedures that are performed in the department, complete the following:
    a. Accurately prepare reagents
    b. Perform the test procedure
    c. Discuss and/or observe the calibration procedure
    d. State the principle of the reaction
    e. Perform daily maintenance of the analyzer used
    f. Perform quality control for the test procedure and discuss appropriate actions to take if quality control is out
    g. Recognize normal and abnormal results, and take actions for panic values
3. Perform prothromin time (PT) and Activated partial-thromboplastin time (APTT) testing.
4. Perform fibrin degradation product (FDP) and/or fibrin split product (FSP) testing.
5. Perform d-dimer testing.
6. Recognize possible sources or error.
7. Troubleshooting of testing and results.

Quality Control and Quality Assurance:

8. Distinguish between normal and abnormal results for all test procedures performed in the department.
9. Perform and record quality control and quality assurance for the department. Describe appropriate actions to take if quality control is out of range.
10. Discuss how patient results are verified and/or reported in the department.
11. Discuss how STAT testing is handled in the department and perform STAT testing.
12. Discuss the importance of quality control and quality assurance procedures in the department.

Enrichment Objectives: The following testing procedures are considered an enrichment experience, and should be performed if available:

1. Factor deficiency testing/Coag Inhibitor Testing.
2. Platelet aggregation testing.
3. Thrombin time (TT) testing.
4. Platelet Function Testing.
5. TEG reagent testing.
6. Use of clinical site LIS for result reporting/documentation/QC/etc.
7. Interpretation of clot curves.
8. Heparin Induced Platelet Antibody Testing (HIPA).

Clinical Coagulation Competency Check-list
Rotation: 4 - 5 days as part of Hematology Rotation

This form is used to monitor the performance level of the student in Coagulation. Students must meet the minimum level of performance for each procedure listed. This competency is pass/fail.

NAME: _____

Level of Expected Performance	
5	**Student Exceeded Expectations for this objective**
4	**Performed with minimal supervision**
3	**Performed with maximum supervision**
2	**Observed**
1	**Discussed**

Procedure	**Min Level**	**Level Reached (circle one)**					**Instructor Initial/Date**
Specimen processing	**4**	5	4	3	2	1	
Coagulation analyzer: (type):							
a. Prepare reagents	**4**	5	4	3	2	1	
b. Perform testing	**4**	5	4	3	2	1	
c. Observe and/or perform calibration	**2**	5	4	3	2	1	
d. Describe principle	**1**	5	4	3	2	1	
e. Operate analyzer	**4**	5	4	3	2	1	
f. Perform maintenance	**3**	5	4	3	2	1	
g. Recognize normal/abnormal results	**4**	5	4	3	2	1	
h. Perform quality control	**4**	5	4	3	2	1	
i. Record results	**3**	5	4	3	2	1	
Prothrombin time (PT) testing	**4**	5	4	3	2	1	
Activated partial thromboplastin time (APTT) testing	**4**	5	4	3	2	1	
FDP and/or FSP testing	**4**	5	4	3	2	1	
STAT testing and recording results	**3**	5	4	3	2	1	
Quality Control testing and recording	**4**	5	4	3	2	1	
Recognize normal/abnormal results	**4**	5	4	3	2	1	

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Student Clinical Evaluation

Student Name: _____ Department: Coagulation

Following is a description of the Clinical Performance Evaluation criteria, intended to provide a clear explanation for each of the numerical criteria. Please photocopy this page and distribute to all evaluators who are responsible for evaluating the student on clinical performance. This evaluation is pass/fail.

5 – Exceptional; Exceeds Expectation: Student performs assigned tasks within the allotted amount of time with no supervision and routinely asks to assist department with workload as able.

4 – Above Average; Performance Exceptional: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with no supervision.*

3 – Average: Performance Satisfactory: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with minimum supervision.*

2 – Below Average; Needs Improvement: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *only with maximum supervision.*

1 – Deficient; Performance Unacceptable: Student is *not* able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *even with maximum supervision.*

Comments must be given for any grade of 2 or lower in any category

	Section 1					
1	Is polite and tactful when dealing with patients and personnel.	5	4	3	2	1
2	Interacts and communicates well with coworkers, medical personnel and patients.	5	4	3	2	1
3	Considers the effect of inappropriate specimens and interfering substances such as lipemia, hemolysis, and fibrin on results.	5	4	3	2	1
4	Pressure of time does not affect accuracy.	5	4	3	2	1
5	Recognizes errors in analysis and results.	5	4	3	2	1
6	Checks implausible results for accuracy.	5	4	3	2	1
7	Calculates, transcribes, and records accurately and legibly.	5	4	3	2	1
8	Recognizes normal and abnormal results.	5	4	3	2	1
9	Adheres to laboratory safety practices.	5	4	3	2	1
10	Selects appropriate quality control measures.	5	4	3	2	1
11	Assumes responsibility for errors.	5	4	3	2	1
Comments:						

	Section 2					
1	Recognizes limitations and seeks advice when needed.	5	4	3	2	1
2	Adheres to procedure for reagent preparation, labeling, and selection.	5	4	3	2	1
3	Adheres to procedure for equipment selection, set-up, and use.	5	4	3	2	1
4	Coordinates work with consideration of priority.	5	4	3	2	1
5	Correlates test results with pathological conditions.	5	4	3	2	1
6	Correlates test results with other laboratory findings.	5	4	3	2	1
7	After instruction is given, is able to work with minimal supervision.	5	4	3	2	1
8	During performance of procedures, work area is organized.	5	4	3	2	1
9	Leaves work area neat and clean.	5	4	3	2	1
10	Demonstrates a basic knowledge of the principles and techniques of procedures performed.	5	4	3	2	1
11	Is able to coordinate several tasks at the same time.	5	4	3	2	1
12	Assigned tasks are completed.	5	4	3	2	1

Comments:

	Section 3					
1	Assumes primary responsibility for own education, and voluntarily seeks additional information.	5	4	3	2	1
2	Performs tasks as verbally directed.	5	4	3	2	1
3	Recognizes tasks that need to be done without being told.	5	4	3	2	1
4	Completes a single procedure within a reasonable amount of time.	5	4	3	2	1
5	Is able to adjust to changes.	5	4	3	2	1
6	Performs responsibilities without unnecessary diversions.	5	4	3	2	1
7	Accepts constructive criticisms.	5	4	3	2	1
8	Questions asked are appropriate.	5	4	3	2	1
9	Informs department when leaving assigned area.	5	4	3	2	1
10	Complies with laboratory rules concerning personal appearance.	5	4	3	2	1
11	Works well with others.	5	4	3	2	1
12	Attentive when instructors are given.	5	4	3	2	1
13	Works hours as scheduled (arrives on time, doesn't leave early).	5	4	3	2	1
14	Has minimal absenteeism.	5	4	3	2	1
15	Is flexible with work schedule.	5	4	3	2	1

Comments:

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Medical Laboratory Technician Program

Clinical Experience Manual

Immunohematology

Clinical Rotation Objectives
Competency Checklists
Student Clinical Evaluation

Updated Fall 2021

Immunohematology Rotation Objectives

After completing the rotation in Immunohematology, the student should be able to:

Specimen Processing:

1. Describe the proper specimen collection, handling, and processing procedures for each test performed in the department.
2. Describe how to identify improperly collected specimens, and the appropriate actions to take.

General Testing:

3. Discuss the principle of each routine test performed in the department.
4. Perform both forward and reverse ABO typing procedures and accurately interpret and record the results.
5. Perform Rh typing procedures and associated testing and accurately interpret and record the results.
6. Perform weak-D procedures and associated testing with accurate interpretation and recording of results.
7. Perform the antibody screening procedure and accurately interpret and record the results.
8. Perform at least 10 panels for identification of an antibody and accurately interpret and record the results.
9. Perform compatibility testing and accurately interpret and record results.
10. Perform direct antiglobulin testing and indirect antiglobulin testing and accurately interpret and record the results.
11. Recognize possible sources of error.
12. Troubleshooting of testing and results.

Donor Collection/Testing:

13. Observe and/or perform the collection of at least two donors.
14. Describe the collection, processing, labeling, and storage of all blood components including donor units.
15. Describe the procedures for packing blood components for shipment and blood disposal.

General Procedures:

16. Observe the sign out procedure for units of blood according to the standard procedure of the department.
17. Discuss the work-up protocol for a transfusion reaction.
18. Describe donor and patient record keeping procedures in the department.

Quality Control and Quality Assurance:

19. Perform and record quality control and quality assurance for the department.
20. Describe appropriate actions to take if quality control is out of range.
21. Discuss how patient results are verified and/or reported in the department.
22. Discuss how STAT testing is handled in the department and perform STAT testing.
23. Discuss the importance of quality control and quality assurance procedures in the department.

Immunology Principles and Techniques (if applicable):

1. Perform serial dilutions on specimens and interpret results.
2. Review a package insert for serological testing and note the following areas:
    a. Specimen requirements and stability
    b. Procedure
    c. Quality control
    d. Result interpretation

    e. Limitations
    f. Principle
3. Recognize the importance of following the guidelines from the package insert for specimens, procedure and quality control.

Enrichment Objectives:

1. Donor screening to include: questioning of donors, performing hematocrit or hemoglobin testing, and performing blood pressure, pulse and temperature. Describe the process to defer donors.
2. Discussion or performance of Disease testing on donor specimens.
3. Discussion or observation of the following procedures:
    a. Pooling platelets
    b. Bacterial check of platelets before transfusion
    c. Thawing and pooling cryoprecipitate
    d. Process for leukoreduced RBCs
4. Fetal Bleed Screening test performance or discussion.
5. Discussion or performance of the Elution test.
6. Use of clinical site LIS for result reporting/documentation/QC/etc.
7. Enrichment Immunology Testing by PCR or other testing methods:
    a. Hepatitis testing
    b. HIV testing
    c. ANA testing
    d. RPR screen and titer
    e. Mono screen
    f. Rubella screen and titer
    g. HPV testing
    h. RSV testing
    i. Directigen testing
    j. Cryptococcus Antigen testing
    k. Giardia antigen testing
    l. Shiga toxin
    m. C. difficile toxin
    n. Rapid Influenza
    o. Fecal Lactoferrin
    p. Hpfast/Clotest

Immunohematology Competency Checklist
Rotation: 25 days including Donor Room

This form is used to monitor the performance level of the student in Immunohematology. Students must meet the minimum level of performance for each procedure listed. This competency is pass/fail.

NAME: _____

Level of Expected Performance	
5	**Student Exceeded Expectations for this objective**
4	**Performed with minimal supervision**
3	**Performed with maximum supervision**
2	**Observed**
1	**Discussed**

Procedure	**Min Level**	**Level Reached (circle one)**					**Instructor Initial/Date**
Specimen processing	**4**	5	4	3	2	1	
ABO forward and reverse typing	**4**	5	4	3	2	1	
Rh typing	**4**	5	4	3	2	1	
Weak-D antigen typing	**4**	5	4	3	2	1	
DAT: Direct antiglobulin testing (Direct Coombs)	**4**	5	4	3	2	1	
Antibody identification	**3**	5	4	3	2	1	
Blood sign-out	**3**	5	4	3	2	1	
Compatibility testing	**4**	5	4	3	2	1	
Transfusion reaction work/up	**1**	5	4	3	2	1	
Donor collection	**2**	5	4	3	2	1	
Component preparation – Donor Center activities	**3**	5	4	3	2	1	
Component preparation – Pre-transfusion	**3**	5	4	3	2	1	
Blood labeling	**3**	5	4	3	2	1	
Component storage	**2**	5	4	3	2	1	
Blood packing for shipping	**1**	5	4	3	2	1	
Disposal of expired Blood products	**1**	5	4	3	2	1	
Record keeping	**1**	5	4	3	2	1	
QC performed	**4**	5	4	3	2	1	
Result reporting	**2**	5	4	3	2	1	

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Student Clinical Evaluation

Student Name: _____ Department: Immunohematology

Following is a description of the Clinical Performance Evaluation criteria, intended to provide a clear explanation for each of the numerical criteria. Please photocopy this page and distribute to all evaluators who are responsible for evaluating the student on clinical performance. This evaluation is pass/fail.

5 – Exceptional; Exceeds Expectation: Student performs assigned tasks within the allotted amount of time with no supervision and routinely asks to assist department with workload as able.

4 – Above Average; Performance Exceptional: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with no supervision.*

3 – Average: Performance Satisfactory: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *with minimum supervision.*

2 – Below Average; Needs Improvement: Student is able to follow verbal and/or written instructions and perform assigned tasks within the allotted amount of time *only with maximum supervision.*

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Comments must be given for any grade of 2 or lower in any category

	Section 1					
1	Is polite and tactful when dealing with patients and personnel.	5	4	3	2	1
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5	Recognizes errors in analysis and results.	5	4	3	2	1
6	Checks implausible results for accuracy.	5	4	3	2	1
7	Calculates, transcribes, and records accurately and legibly.	5	4	3	2	1
8	Recognizes normal and abnormal results.	5	4	3	2	1
9	Adheres to laboratory safety practices.	5	4	3	2	1
10	Selects appropriate quality control measures.	5	4	3	2	1
11	Assumes responsibility for errors.	5	4	3	2	1
Comments:						

	Section 2					
1	Recognizes limitations and seeks advice when needed.	5	4	3	2	1
2	Adheres to procedure for reagent preparation, labeling, and selection.	5	4	3	2	1
3	Adheres to procedure for equipment selection, set-up, and use.	5	4	3	2	1
4	Coordinates work with consideration of priority.	5	4	3	2	1
5	Correlates test results with pathological conditions.	5	4	3	2	1
6	Correlates test results with other laboratory findings.	5	4	3	2	1
7	After instruction is given, is able to work with minimal supervision.	5	4	3	2	1
8	During performance of procedures, work area is organized.	5	4	3	2	1
9	Leaves work area neat and clean.	5	4	3	2	1
10	Demonstrates a basic knowledge of the principles and techniques of procedures performed.	5	4	3	2	1
11	Is able to coordinate several tasks at the same time.	5	4	3	2	1
12	Assigned tasks are completed.	5	4	3	2	1

Comments:

	Section 3					
1	Assumes primary responsibility for own education, and voluntarily seeks additional information.	5	4	3	2	1
2	Performs tasks as verbally directed.	5	4	3	2	1
3	Recognizes tasks that need to be done without being told.	5	4	3	2	1
4	Completes a single procedure within a reasonable amount of time.	5	4	3	2	1
5	Is able to adjust to changes.	5	4	3	2	1
6	Performs responsibilities without unnecessary diversions.	5	4	3	2	1
7	Accepts constructive criticisms.	5	4	3	2	1
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14	Has minimal absenteeism.	5	4	3	2	1
15	Is flexible with work schedule.	5	4	3	2	1

Comments:

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Medical Laboratory Technician Program

Clinical Experience Manual

Phlebotomy

Clinical Rotation Objectives
Competency Checklists
Venipuncture Record Form

Phlebotomy Rotation Objectives

After completing the rotation in Phlebotomy, the student should be able to:

1. Practice Blood Borne Pathogen precautions and utilize aseptic technique at all times during blood collection procedures.
2. Describe in detail the proper venous blood collection technique.
3. Describe in detail the proper capillary blood collection technique.
4. Perform a minimum of 100 successful venipuncture procedures.
5. Perform capillary blood collection from the finger.
6. Perform blood culture collection.
7. Describe and demonstrate how to correctly identify patients.
8. Utilize proper isolation techniques suitable to the patient's condition.
9. Recognize and handle problems that occur in the course of blood collection and report problem to the appropriate person.
10. Practice appropriate customer relations with patients.
11. Demonstrate ability to access collection information from the laboratory collection manual.
12. Discuss various forms that must be completed prior to blood collection in certain circumstances.
13. Recognizes adjustments that must be made for blood collection depending on patient age, status, or department of the hospital.
14. Discuss the consequences of incorrect phlebotomy/or pre-analytic technique.
15. Describe the proper specimen collection, handling, and processing procedures for each test.
16. Describe how to identify improperly collected specimens, and the appropriate actions to take.

Clinical Phlebotomy Competency Checklist

This form is used to monitor the performance level of the student in Phlebotomy. Students must meet the minimum level of performance for each procedure listed. This competency is pass/fail.

NAME: _____

Level of Expected Performance	
5	**Student Exceeded Expectations for this objective**
4	**Performed with minimal supervision**
3	**Performed with maximum supervision**
2	**Observed**
1	**Discussed**

Procedure	**Min Level**	**Level Reached (circle one)**					**Instructor Initial/Date**
Orientation to various departments of the hospital and how phlebotomy relates to each	**4**	5	4	3	2	1	
Procedure for venous collection of blood	**4**	5	4	3	2	1	
Procedure for capillary collection of blood	**4**	5	4	3	2	1	
Procedure for blood culture collection	**4**	5	4	3	2	1	
Professionalism in phlebotomy	**4**	5	4	3	2	1	
100 successful venipuncture procedures	**4**	5	4	3	2	1	
Capillary punctures: fingerstick	**3**	5	4	3	2	1	
Properly identify patients	**4**	5	4	3	2	1	
Discuss pre-analytical errors and venipuncture errors.	**1**	5	4	3	2	1	

Signature of Hospital Representative: _____ Date: _____

Signature of Student: _____ Date: _____

Signature of Program Director: _____ Date: _____

Medical Laboratory Technician Program
Venipuncture Record Form

Instructions: Indicate number of procedures performed daily.
Phlebotomy Clinical Instructor may initial daily.

NAME: _____

Date	# Successful Venipunctures	# Unsuccessful Venipunctures	Capillary Punctures	Special Procedures	Instructor Initials
Total:					