

# **Clinical Internship Handbook**

**2019-2020**

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## MLS Information Page

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## **Affiliated Clinical Site**

**\*\*Please note that not all clinical sites accept Traditional MLS students\*\***

***BMACH***

***Piedmont Athens Regional Medical Center***

***Donalsonville Hospital***

***Piedmont Health Systems***

***Emanuel Medical Center***

***Pro Path Services, LLC***

***Emory Johns Creek Hospital***

***Redmond Park Hospital***

***Floyd Medical Center***

***South Georgia Medical Center***

***Grady Health System***

***Tallahassee Memorial Hospital***

***Gwinnett Medical Center***

***Tanner Medical Center East Alabama***

***John D. Archbold Medical Center***

***Taylor Regional Hospital***

***K&S Diagnostics***

***Tift Regional Medical Center***

***Laboratory Corp. of America--Dallas TX***

***Union General Hospital (Chatuge)***

***Madison County Memorial Hospital***

***Valley Health***

***Meadows Regional Medical Center***

***Wellstar Health System***

***Miller County Hospital***

## **Guidelines for Clinical Internships**

### **Outcomes**

During the clinical internship, MLS students will perform assigned tasks under the direction of a clinical site preceptor according to their established policies and procedures. Working with the preceptor, students will develop skills in the laboratory by performing patient testing, preparing and maintaining instruments for testing, reviewing lab data and patient results, and reporting accurate results.

Students will demonstrate entry level MLS competency by completing task checklists, posting a daily log summary and other assignments, and completing any testing required by clinical sites.

Students will share their knowledge in weekly discussions of what has been learned at their respective sites as well as answer questions put forth by the clinical course instructor.

Students will demonstrate professional attributes of the Medical Lab Scientist at all times. This behavior will be measured by your preceptor and submitted to the instructor.

Students are eligible for internship after successfully completing all major courses in the MLS program with a minimum score of **70%**. Although every effort is made to match students to their ideal clinical practicum site, students may be placed in an alternate site if necessary (Traditional only). The alternate site may require relocation or travel.

Traditional students MAY NOT find their own sites. If a student cannot attend the assigned site, the student will be dropped from the clinical course and possibly re-enrolled the next available semester pending availability.

### **Hours**

Specific times for arrival and departure will be determined by the clinical site and specific department practicum preceptors. Hours may be assigned during any shift at the preceptor's discretion. The student should note that the time for arrival will vary by clinical site and rotation area. Students will not count their lunch break as part of their clinical time. Breaks provided will follow the normal schedule of the clinical site but a 30-minute lunch break during an 8- hour shift must be taken.

### **Attendance**

Attendance is required for scheduled days. Students are expected to seek out opportunities to learn, to gain experience, and to assist scientists/technologists when appropriate. Attendance and logs should be kept for each day the student is in the internship. When all checklists are completed, the student is expected to continue their log and participation in all discussions and assignments throughout the remaining portion of the course.

Absences are only excused under limited circumstances. Loss of an immediate family member, serious illness, and events outside of a student's control (i.e. jury duty) are examples of excusable absences. Other circumstances will be addresses on a case by case basis as not all possibilities can be listed here. In the event of an absence, the preceptor and MLS course instructor must be notified no less than 1 hour prior to the shift in writing (email). The student should also call the preceptor as soon as possible in order to ensure their absence has been noted. Lack of notification will automatically result in an unexcused absence. Any student with more than 1 unexcused absence may be dropped from the clinical rotation. Tardiness is also unacceptable. Every arrival greater than 5 minutes past the start time of the shift will be counted as tardy. All tardy arrivals beyond 2 will be counted as an unexcused absence.

Excused and unexcused absences must be made up. The clinical site has discretion as to when this day or days will be made up. In the event that time cannot be made up by the end of the semester, the student will receive an "Incomplete" for the course and will be responsible for making up the days during the following semester at the convenience of the clinical site.

### **Personal Appearance and Professional Conduct**

The appropriate attire includes:

- Students must wear appropriate uniforms to all clinical assignments. Scrub tops and bottoms are required. Thomas University requires hunter green scrubs with the embroidered logo.
- Closed-toe, clean, leather shoes.
- Fluid-proof lab coat, which meets OSHA specifications when working in the laboratory (provided by the facility).
- Eye protection must be worn when the potential for splash of infectious materials exists (provided by the facility).
- Gloves
- Student ID badge must be worn at all times.
- Hair should be clean at all times and must be placed up and pulled off the face and the shoulders.
- Hair is a source of cross contamination and must not interfere with the delivery of patient care. Ponytails must be controlled and not drop forward when giving patient care or operating laboratory equipment. Beards and mustaches should not appear in disarray. They should be clean and neatly groomed.
- Makeup worn in moderation
- Fingernails harbor microorganisms and must be kept reasonably short. No false fingernails are allowed in the clinical area.
- A watch, wedding bands or simple rings, and simple earrings (not hanging) are permitted. No other jewelry or body ornamentation is permitted. This includes piercings! One set of conservative earrings in the lobes are allowed. Additional piercings are NOT allowed.
- Tattoos must be covered – if you have tattoos on the arms, neck, or other areas that could potentially be visible, you must wear undergarments (turtleneck, long sleeves etc.) to insure they are not exposed or visibly noted.
- Good personal hygiene is of the utmost importance when working with other people.
- Undergarments may not be visible through scrubs by pattern or design at any time.
- The student must meet any additional regulations of the clinical affiliate that are not covered in this handbook. Students are not to use cell phones or any other electronic device to receive or place phone calls, text, surf the web, listen to music, read, or check email during clinical hours except during breaks. Preceptors may provide exceptions for emergencies that may arise.

## **ASCLS Code of Ethics**

Students will adhere to the code of Ethics put forth by ASCLS during their clinical internships:

### 1. Duty to the Patient:

- i. 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.
- ii. Clinical laboratory professionals maintain high standards of practice. They exercise sound judgment in establishing, performing and evaluating laboratory testing.
- iii. 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:

- i. 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.

- ii. Clinical laboratory professionals actively strive to establish cooperative and respectful working relationships with other health care professionals with the primary objective of ensuring a high standard of care for the patients they serve.

### 3. Duty to Society:

- i. 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.
- ii. 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 standards of care and practice to which the profession is committed.

#### **Pledge to the Profession:**

As a clinical laboratory professional, I strive to:

- Maintain and promote standards of excellence in performing and advancing the art and science of my profession.
- Preserve the dignity and privacy of others.
- Uphold and maintain the dignity and respect of our profession.
- Seek to establish cooperative and respectful working relationships with other health professionals.
- Contribute to the general well-being of the community.

**I will actively demonstrate my commitment to these responsibilities throughout my professional life.**

#### **Confidentiality and HIPAA**

All patient and institutional information will be kept strictly confidential. The discussion of any patient information outside of the classroom or internship setting is not permissible. Confidential information concerning the institution is not to be discussed with any unauthorized individuals. Students may be required to sign a confidentiality statement or complete additional HIPAA training at the hospitals. Violation of this policy and/or of other hospital or laboratory policies will result in the dismissal of the student from the hospital and the MLS program.

#### **Accidents and Exposure**

The clinical sites do not provide for health coverage. If an exposure or accident does occur, notify the internship preceptor immediately. Follow the facility's established policies and protocols and submit a completed incident form to the MLS instructor immediately.

#### **Communication**

Students are responsible for attaining and submitting current contact information of their preceptor to their instructor. This contact information will only be used in rare event that a student is failing to communicate with their preceptor(s). Students and preceptors should communicate directly with each other and should only involve lab managers/program directors if a professional conduct violation has occurred.

#### **Background Checks and Drug Testing**

Some clinical affiliates of the MLS program may require criminal background checks and/or drug testing prior to acceptance of the student into clinical facilities. Students who do not pass the criminal background check and/or drug test may be unable to attend clinical courses and therefore may be unable to complete their program of study. Any fees or cost associated with background checks and/or drug testing are the responsibility of the student.

## **Severe Weather**

Severe weather that causes a shutdown of all classes and campus operations will also result in cancelation of clinical internships for the identical duration of the campus closure. If the student is at a clinical site not in the affected area, then they will continue their scheduled internship. Weather affecting sites distant from the campus will be measured against the closest public or private university. If the closest university closes all operations for inclement weather, the surrounding affected areas will also have canceled internships for the identical duration of school closures. Any days missed due to inclement weather will be excused and rescheduled as make up days.

## **Safety**

Occupational Safety and Health Administration (OSHA) requirements must be observed at all times for your safety and the safety of your peers and patients. Students will follow these requirements in the student and clinical laboratory. Students who fail to follow safety and policy regulations will be asked to leave the classroom or clinical site. Students who fail to follow safety and policy regulations for a second time will be dismissed from the program at the discretion of the program director.

## **Immunizations**

All students must meet the immunization requirements of their clinical internship sites. Any expense incurred in meeting these requirements is the responsibility of each individual student.

## **Acceptable Internship Progression**

At the request of clinical sites; students may be removed if they are failing to progress in a satisfactory manner due to lack of skill, knowledge, or professionalism.

Depending on the severity and validation of the clinical site's request, one of two actions will occur. Either an attempt will be made to find another site for the student or the student will be dismissed from the program. If a second practicum site is obtained and the student is asked to be removed from the second site, the student will be dismissed from the program.

## **Service work**

Service (or paid) hours and practicum rotation hours must be separated by the employer and student. No student may engage in service hours while completing clinical internship rotation hours. Service hours may be completed prior to or after practicum rotation hours.

## **Methods of Evaluation**

The student's knowledge, skills, and affective behavior will be assessed by written examinations/exercises, task performance, and observation by practicum preceptors during all practicums. The final grade for a course will be determined by the scores earned in the categories as described below:

## **Checklist**

These are the laboratory tasks and skills that are detailed for each section of the internship. The student must demonstrate acceptable progress and performance for these tasks in order to receive a satisfactory grade in the course. Additional tasks may be included as determined by the clinical affiliate. Entry level competency is expected for each task and students will be evaluated by preceptors as either competent or not competent. These will be submitted through Trajecsys by the clinical preceptor or designee.

## **Performance and Professionalism**

A student's performance in the practicum area comprises their technical skills and professional behavior. Both will be evaluated by their practicum preceptor(s) for each rotation area. Practicum preceptor(s) will complete one



evaluation at the end of the student’s rotation. Some areas of the evaluation have been marked as high importance. Any unsatisfactory assessment in any of these areas may be grounds for probation or dismissal from the program. Students will be evaluated using the following: Unsatisfactory, Satisfactory and Outstanding. These forms will be submitted through Trajecsys by your preceptor or designee.

### Daily Logs and Other Documents

Each student must record their daily activities. This includes documentation of instrumentation utilized, test names, abnormal results seen and approximate number either performed or observed and brief description of problem solving and trouble shooting incidents. Time of arrival and departure, special incidents, concerns, problems, instrumentation, and other pertinent items should also be recorded. The log must be submitted in Trajecsys on a daily basis. In addition to daily logs, the course instructor may pose a question or assignment each week.

### Definition of evaluation terms

#### Unsatisfactory

This applies to tasks, skills, and behaviors in which the student does not meet the minimum criteria. In the judgment of the practicum preceptor and/or coordinator, the student’s progress or behavior is unacceptable because of inferior quality (accuracy, precision, and organization), quantity of work, performance, and professional conduct. The student needs improvement.

#### Satisfactory

This applies to tasks, skills, and behaviors in which the student demonstrates acceptable progress and performance. The expected work is normally performed in an accurate, precise and organized manner within a reasonable amount of time, and with adherence to general and laboratory policies and professional conduct.

#### Outstanding

This applies to tasks, skills, and behaviors in which the student consistently performs above the expected criteria. The student exceeds expectations in quality, quantity, organization of work, and professional conduct.

### Grading

	Brief Description	% of Total
<b>Competency Task Lists:</b>	<i>Competency Evaluations will be completed by the assigned clinical site. It will cover all areas listed on individual checklists for each area on a scale of 1-5.</i>	<b>40%</b>
<b>Professional Evaluations/Clinical Site Evaluations</b>	<i>Professional Evaluation will be completed by the assigned clinical site. It will cover how students perform in the clinical site on a scale of 1-5. The student will complete evaluations on each clinical site and department</i>	<b>40%</b>
<b>Daily/Weekly Logs/Assignments</b>	<i>Weekly log entries will be posted on Discussion in CANVAS. Daily logs journals and automation reports are completed in Trajecsys.</i>	<b>20%</b>
	<b>Total</b>	<b>100%</b>

#### Grade Scale:

A 90 – 100 %                      B 80 – 89 %                      C 70 – 79 %                      D 60 – 69 %                      F Below 60 %

\*\*A grade of C or above must be achieved in order for the internship to be applied to the MLS degree. \*\*

### Submissions

#### Daily Logs and Questions

The student will submit a daily log of their experience based on information recorded during clinicals. Weekly logs will be posted in Canvas. Other questions may be posed by the instructor in Canvas as well.

### **Technical Performance and Affective Behavior**

Students are responsible for providing the instructor with the email addresses of their preceptors. The forms are posted on Canvas and submitted in Trajecsyst as indicated.

### **Internship Checklists**

Each rotation area has a specified list of skills and tasks. The student is responsible for providing the clinical faculty with these forms during the rotation if the site chooses to not use Trajecsyst for documentation and to ensure their completion. Completed checklists will be submitted via Trajecsyst.

### **Clinical Site Evaluations**

Students are required to evaluate each internship rotation in order to ensure best and effective practicum experiences. Students will evaluate practicum rotations using an online form and submit in Trajecsyst.

### **Assignments**

The Instructor may post assignments pertaining to the student's clinical site. Automation reports for each and every instrument are also required to be posted in Trajecsyst.

## **Student Responsibilities**

Abide by the rules and policies of the clinical sites including:

- Hours of rotation.
- Safety guidelines.
- Proper notification of absences
- Make up of any time missed due to absences
- Abide by the dress code and conduct code of clinical site
- Adhere to the rotational schedule
- Provide own lodging, transportation, food, and other necessary expenses. The clinical rotation sites do not reimburse
- Adhere to the affective guidelines outlined in the student and school
- Confirm that preceptors completed and submitted professional evaluation forms within one week after finishing the rotation
- Completion of weekly logs and questions
- Complete site evaluations of each department of practicum rotations
- Take notes as clinical preceptors do not have the time to repeat instructions numerous times

For Traditional Students only, the required number of minimum clinical hours are:

MLS 400 Clinical Practicum I

& MLS 401 Clinical Practicum II

Total of 400 hours\*

- 80 hrs. Urinalysis & Body Fluids
- 160 hrs. Microbiology
- 160 hrs. Hematology
- 160 hrs. Clinical Chemistry
- 160 hrs. Blood Bank
- 40 hrs. Pre-analytic
- 40 hrs. Serology/Immunology

\*Please note that total number of hours may vary by the specific requirements of the clinical site and student's competency assessment.

## **Clinical Supervisor/Preceptor Responsibilities**

The clinical supervisor/preceptor is responsible for the following:

- Provide in-service training in the areas where the student is assigned. This includes all employee policies, start times, break times, and lunchtime, the principle of operation for instrumentation, procedures for determining acceptable test results, and the procedures for reporting result. The student should also be instructed in what to do if the test results are not valid.

- Assure that the student is exposed to all techniques and procedures listed in the checklist provided.
  - Provide the student with feedback on his/her performance periodically throughout the rotation.
  - Counsel the student relative to a poor performance.
  - Notify the MLS clinical coordinator as soon as possible if a problem arises. The clinical coordinator and the supervisor should work together with the student to ensure success.
  - Complete and submit the evaluation forms online and fill out and return internship checklists to students.
- The clinical affiliate site reserves the right to prematurely terminate a student's clinical experience if difficulties arise and cannot be resolved after meeting with the student and the MLS Program Director/Clinical Coordinator.

### **Internship Instructor Responsibilities**

The clinical coordinator for the medical laboratory sciences practicums is responsible for the following:

- Serve as the contact person for any issues (either site related or student related) surrounding the rotation.
- If a problem arises with a rotation schedule the clinical coordinator will work with the student and site to resolve it.
- Ensure that the student has had all the orientation information for the university
- Ensure that the student has satisfactorily met the affective, knowledge, and technical objectives for the rotation.
- Assign the grade for the rotation.

## CLINICAL CHEMISTRY

Please Initial the appropriate box below for each task

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

### Automated Instrument or Manual Testing Procedure

			Performs QC on routinely used chemistry analyzers
			Evaluates Levey-Jennings charts for Westgard Rule
			Troubleshoot QC violations on all chemistry instruments
			Reviews and evaluates quality control data.
			Discuss/observe calibration procedure and protocol of different analytes
			Discuss/observe frequency and procedure for linearity studies of chemistry equipment
			Discuss the reasons and follow-up procedures for rejection of samples according to department protocol.
			Identifies preanalytical errors and/or physiological conditions which will interfere with specific tests, ie, hemolysis, lipemia, icterus, incorrect tube additive, etc.
			Validate clinical specimens including specimen I.D., proper anti-coagulation, and rejection of inappropriate samples.
			Organizes samples, specimen log, reagents, and equipment.
			Read/discuss principle of the instrument operation or test procedure reaction.
			Prepare reagents and standards as necessary. Maintains equipment in proper working order.
			Perform instrument start-up and/or shutdown.
			Performs testing procedures.
			Appropriately acts on results beyond the linearity and/or reportable range of the instrument
			Discuss and perform dilutions when necessary.
			Discuss "critical" or "panic" values and reporting protocol
			Assists in troubleshooting basic procedural problems.
			Validates results for reporting and make calculations when appropriate.
			Recognize abnormal values, correlate with other laboratory results, and explain the clinical significance.

## IMMUNOLOGY AND MOLECULAR TECHNIQUES

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

### Molecular Amplification Detection of Genetic or Infectious Disease

			Explain the purposes of each component in reactions, cycle, and methods for ensuring adequate stringency
			Perform amplification and probe assay of amplification
			Observe sequencing of amplification product
			Discuss issues of contamination
			Discuss use of controls for accurate interpretation of results
			Discuss interpretation of the results of amplification
			Compare different methods for amplifying nucleic acids
			Report approved results according to laboratory policy.
			Help perform preventive maintenance.
			Calibrate a procedure as available.
			Explain the principle of measurement of the instrument.

### Immunologic Detection of Viral and Bacterial Disease

			Validate the sample by ID number, anticoagulant, and follow criteria for rejection of an inappropriate sample
			Produce acceptable results with accuracy and demonstrate basic competence with applied techniques
			List sources of error and implement appropriate corrective actions when needed
			Perform the appropriate quality control procedures
			Interpret and/or correlate test results to associated clinical states
			Apply appropriate reference values for all tests performed

## IMMUNOLOGY AND MOLECULAR TECHNIQUES

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

### Antibody Titer

			State the principle of the test
			Validate the proper sample by ID number, anticoagulant, and follow criteria for rejections of an inappropriate sample
			Produce acceptable results within 70% accuracy and demonstrate basic competence with applied techniques
			List sources of error and implement appropriate corrective action
			Perform the appropriate quality control procedures
			Interpret and/or correlate test results to associated clinical states
			Apply appropriate reference values for all tests performed

### Antinuclear Antibodies

			State the principle of the test
			Validate the proper sample by ID number, anticoagulant, and follow criteria for rejections of an inappropriate sample
			Produce acceptable results within 70% accuracy and demonstrate basic competence with applied techniques
			List sources of error and implement appropriate corrective action
			Perform the appropriate quality control procedures
			Interpret and/or correlate test results to associated clinical states
			Apply appropriate reference values for all tests performed

## IMMUNOLOGY AND MOLECULAR TECHNIQUES

Please Initial the appropriate box below for each task

*Demonstrates*      *Does Not*              *N/A*  
*Entry Level*        *Demonstrate*  
*Competence*       *Entry Level*  
                                *Competence*

### Detection of Viral or Bacterial Disease by Fluorescent Antibody

			State the principle of the test
			Validate the proper sample by ID number, anticoagulant, and follow criteria for rejections of an inappropriate sample
			Produce acceptable results within 70% accuracy and demonstrate basic competence with applied techniques
			List sources of error and implement appropriate corrective action
			Perform the appropriate quality control procedures
			Interpret and/or correlate test results to associated clinical states
			Apply appropriate reference values for all tests performed

### Miscellaneous tests (Please list and evaluate other tests that were performed by this student in this department)


## HEMATOLOGY

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

Demonstrate proficiency in the use of automated blood cell counting devices by completing the following

			Complete start-up procedure for daily operation
			Perform daily quality control and validate results with quality assurance program
			Evaluates Levey-Jennings charts for Westgard Rule violations
			Operates instrument in daily workload within time limits set by supervisor
			Evaluates patient results for validity and acceptability
			Performs routine maintenance procedures
			Performs preliminary function checks for troubleshooting

Applies knowledge of blood cell morphology and cell differentiation

			Preparation and staining of blood smears for differential count and morphologic study of blood cells
			Performs differential counts including WBC and platelet estimates on daily workload with results within values determined by Hematology supervisor
			List the criteria for slides being reviewed by supervisor and/or pathologist
			Operates Automated Differential Cell Counter within limits set by supervisor

Perform the following procedures (manual) within limits set by Hematology supervisor

			Platelet counts/estimates
			Reticulocyte counts
			ESR
			CSF count
			Other body fluid counts
			WBC counts/estimates
			Hct (spun)



## HEMATOLOGY

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

Perform (whenever possible) the following procedures within limits set by the Hematology supervisor

			Sickle cell preparation or screening test
			Sugar water test
			Ham's test
			Osmotic fragility
			Donath-Landsteiner antibody test
			Serum Free Hemoglobin
			RBC enzyme screens
			Kleihauer-Betke stain or equivalent
			Flow cytometry
			Perform buffy coat preparation and stain.
			Leukocyte alkaline phosphates
			P.A.S.
			Chloroacetate and nonspecific esterase
			Acid phosphates (with tartrate)
			Peroxidase / Sudan black B

**Demonstrate understanding of Bone Marrow preparation and differential count**

			Explain, either orally or in writing, the procedure for collection of bone marrow specimens
			Describe handling of specimens for examination of the marrow
			Perform 1 bone marrow differential with results within range set by supervisor

## HEMATOLOGY

**Please initial the appropriate box below for each task**

*Demonstrates*   *Does Not*            *N/A*  
*Entry Level*    *Demonstrate*  
*Competence*   *Entry Level*  
                                 *Competence*

Discuss the clinical significance of abnormal results obtained, correlating patient results to possible disease states.

Demonstrate proficiency in use of automated coagulation instrument

			Prepares instrument for operation
			Performs and evaluates daily quality control
			Performs daily testing

Perform the following coagulation/hemostasis procedures

			Prothrombin time
			APTT
			Fibrinogen
			FDPs
			Antithrombin III
			PT and APTT correction studies
			Factor assay
			D-dimer
			Platelet aggregation

Miscellaneous coagulation/hemostasis tests (Please list and evaluate other tests that were performed by this student in this department)




## URINALYSIS

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

### Quality control


Performs QC on routinely used analyzers

Record and evaluate quality control data

### Performance of physical and chemical tests of routine urinalysis


Validate clinical specimens, including specimen I.D., preservatives (if necessary), and rejection of inappropriate samples

Organize samples, reagents, and equipment, utilizing cost containment

Perform routine physical and chemical tests correctly

Evaluate the need for confirmatory tests

Recall the effects of deterioration upon urine specimens

Demonstrate knowledge of the principles and theories of the various dipstick and tablet tests

Recognize variations in results from normal and state the significance of the results

Dispose of specimens and reagents properly following established safety procedures

### Microscopic examination of urine


Prepare urine sediment for examination

Identify and enumerate clinically significant particles in the urine by use of stain or bright field, polarized, or phase microscopy

Correlate the findings of microscopic structures with chemical tests and their significance

Miscellaneous tests (Please list and evaluate other tests that were performed by this student in this department)


## SPECIMEN COLLECTION AND PROCESSING

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

### Venipuncture

			Demonstrate proper hand-washing and gowning.
			Properly identify the patient, according to the institution's policy
			Select proper equipment for tests ordered.
			Prepare venipuncture site and perform venipuncture correctly.
			Label specimen correctly, according to the institution's policy.
			Deliver specimen to correct department for testing.

### Capillary blood samples

			Demonstrate proper hand-washing and gowning.
			Identify the patient.
			Select correct equipment for tests ordered.
			Select correct site for skin puncture, cleanse it properly and collect specimen.
			Label specimen correctly, according to the institution's policy
			Deliver specimen to correct department for testing.
			Observe/Perform collection of specimen on infant.

### Demonstrate the procedure for collecting blood cultures

			Properly identify the patient.
			Prepare venipuncture site and prepare specimen containers.
			Perform venipuncture obtaining adequate sample and distributing it into bottles correctly.
			Label specimen.

**SPECIMEN COLLECTION AND PROCESSING**  
**Please initial the appropriate box below for each task**

*Demonstrates*   *Does Not*            *N/A*  
*Entry Level*     *Demonstrate*  
*Competence*    *Entry Level*  
                                 *Competence*

Demonstrate the procedures for

			Collection of blood specimens from isolation patients.
			Special handling requirements of certain tests.
			Test requests with priority (STAT, timed, routine, ASAP).
			Preparation of samples for testing in hematology, chemistry and immunohematology departments
			Preparation of samples for transport to reference laboratories
			Student performed _____ blood draws.

Miscellaneous tests (Please list and evaluate other tests that were performed by this student in this department)


## MANAGEMENT

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

			Participate in an interdisciplinary, patient care team event. Following the event, summarize health profession roles contributing to the team care of the patient and describe team efforts which lead to improved patient care.
			Review the chemical hygiene plan and describe any new information added within the last year
			Review the biological waste disposal regulations applicable to the lab and explain how to perform adequately the biological waste disposal
			Review the laboratory compliance plan and discuss with the lab manager the responsibilities of the lab manager and the delegation process applied to maintain compliance with all regulations.
			Discuss the process used to analyze the results of proficiency testing and how to generate a correction report
			Safety: Follows all clinical affiliate and OSHA safety requirements for working in a clinical laboratory Keeps working area and equipment clean and orderly without being reminded
			HIPAA: Protects patient's confidentiality at all times.
			Communication:  Completes written, oral and electronic laboratory reports accurately, using the format of the clinical affiliate Is polite and considerate and shows self-confidence in a generally pleasant and firm diplomatic manner, when dealing with patients and healthcare personnel.
			Reliability: Upon arrival in the laboratory, immediately assesses work to be done and gets started Respects the policies of the facility in regard to start and ending time of each rotation day, and lunch and break time assignments.  Respects the work flow of the facility by giving advanced notice of absences from the lab.
			Accountability: Listens to criticism and constructively acts upon suggestions to improve performance Completes assignments.  Performs logically and systematically, handling interruptions skillfully in stressful situations

## IMMUNOHEMATOLOGY

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

### Quality Control

			Performs QC on routinely used blood bank reagents
			Reviews QC and preventative maintenance procedures for cell washers, heat blocks, refrigerators and freezers
			States the reason for rejection of samples by the transfusion service.

### Routine Testing

			Successfully performs ABO/Rh and Antibody Screens (T&S)
			Successfully performs crossmatches
			Successfully performs antibody identifications
			Lists and states the antibody class, phase of reactivity, clinical significance and transfusion requirements: Rh, Jk, K, Fy, Lutheran, M, N, S, Le, P1, and I.
			Successfully performs Direct Antiglobulin Testing (DAT)
			Discuss and/or perform an elution.
			Discuss when the Rh Immune Globulin work up is performed
			Perform and/or discuss the fetal bleed screen
			Perform and/or discuss observe the Kleihauer-Betke stain.
			Perform and/or discuss the process for determining the number of vials to give

### Special Testing

			Discuss and/or observe appropriate use of enzyme- treated cells, neutralizations, elutions, auto- absorptions, etc.
--	--	--	---------------------------------------------------------------------------------------------------------------------

### Automation

			Discuss , observe and perform testing on any blood bank analyzer available.
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### Blood Components

			Discuss appropriate utilization of cryoprecipitate, fresh frozen plasma, CMV negative RBCs, platelets, and other products.
			Discuss and/or observe component processing such as irradiation, pooling, aliquoting and concentrating
			States expiration time and storage temperature for each component.
			Discuss and or perform issuance of compatible blood components



## MICROBIOLOGY

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

### General

			Perform quality assurance (QA) procedures on equipment, media, & tests
			Discuss molecular techniques and their use and perform testing on available techniques.
			State the principle, perform & interpret operation of any automated equipment used in the specific laboratory (Example: Vitek®, various serological and molecular platforms)
			Assist and advise in proper specimen collection and handling
			Demonstrates knowledge of procedures for handling improper/inappropriate specimens
			Demonstrates knowledge of atmospheres (define ambient, anaerobic, increased CO <sub>2</sub> , and microaerophilic)
			Determine appropriate media for initial isolation for each specimen/source
			State principles of biochemical tests used in identification of bacterial isolates
			Demonstrate safe work practices such as autoclave, disposal of biohazards, universal precautions, etc.

Demonstrate proper inoculation, isolation, incubation, and quantitation techniques for the following:

			Clean catch urine
			Catheterized urine
			Swabs
			Sputum
			Stool
			Tissue
			CSF/Other sterile body fluids
			Miscellaneous

## MICROBIOLOGY

Please initial the appropriate box below for each task

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

Perform and interpret gram stain from a given source including:

			Sputum gram stain:
			Suitability for culture
			Urethral smear for GC
			Wounds
			Sterile Body Fluids

Identify colonial characteristics of normal flora and pathogens from a given source:

			Urine
			Stool
			Respiratory
			Genital
			Wound
			Sterile body site
			Other

## MICROBIOLOGY

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

Identify colonial characteristics of normal flora and pathogens from a given source:

			Staphylococcus aureus
			Coagulase-negative Staphylococci
			Beta-hemolytic Streptococci
			Enterococcus
			Alpha-hemolytic Streptococci
			Enterobacteriaceae
			Non-fermentative GNB
			Neisseria
			Haemophilus

Serotype bacteria based on serological procedures to include:

			Salmonella/Shigella/E.coli
			Beta Streptococci

State principle, perform, and interpret antimicrobial susceptibility tests:

			Kirby Bauer
			Beta lactamase test/screen
			Other methodologies

Anaerobes

			Discuss proper specimen, collection, and transport of anaerobic cultures
			Select proper media selection for anaerobic cultures
			Establish anaerobic environment for culture (GasPak, Bio-Bags, etc.)
			Recognize microscopic and colonial morphology of normal flora and potential pathogens

## MICROBIOLOGY

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

### Mycobacteriology

			Discuss safety precautions for both patients and specimens
			Process specimens including digestion and decontamination procedures
			Perform and read acid fast stains, modified acid-fast stains and fluorescent stains
			Identify isolates based on colonial and biochemical characteristics
			Perform and/or discuss anti- mycobacterial susceptibility testing and therapy
			Identify mycobacterial culture media
			Classify the Mycobacteria species according to Runyoun groups
			Examine department study slides

### Mycology

			Discuss proper specimen, collection, transport & processing
			Perform wet mounts (KOH, India Ink, or LPCB)
			Perform and read slide culture
			Identify morphological features of clinically significant fungi
			Identify and select proper fungal media for a given source
			Discuss clinical significance of fungal isolates from a given source and patient
			Identify molds and yeast following the procedures used in the lab
			Examine department study slides

### Parasitology

			Discuss proper specimen, collection, and processing
			Perform a concentration procedure
			Prepare fecal smears (direct smear, iodine prep, concentrated smears, & permanent smears)

## MICROBIOLOGY

**Please initial the appropriate box below for each task**

<i>Demonstrates</i>	<i>Does Not</i>	<i>N/A</i>
<i>Entry Level</i>	<i>Demonstrate</i>	
<i>Competence</i>	<i>Entry Level</i>	
	<i>Competence</i>	

			Prepare thick and thin blood smears for hemoflagellates
			Examine departmental study slides
			Recognize diagnostic stages of the following intestinal protozoa:
			Hemoflagellates
			Malaria
			Helminths
			Coccidian

### Virology

			Discuss proper specimen, collection, transport & processing
			Describe clinically significant viruses
			Perform and/or discuss identification methods (culture, serology, molecular methods, etc.)

## **TRAJECSYS INFORMATION**

All clinical documentation will be recorded and stored in the Trajecsys system. Both students and preceptors must register at [www.trajecsys.com](http://www.trajecsys.com) to use the system. A fee is paid for MLS 400, MLS 401, and MLS 495 for the use of this document management system. There is no charge for the clinical site. Once a student has graduated, they may still access their clinical records for up to 7 years.

### **Trajecsys: Registration**

If you have not already registered with Trajecsys, go to the Trajecsys website: <https://www.trajecsys.com> and then follow these directions:

- In the upper right-hand corner, click on Register
- Enter Thomas University as the Educational Institution
- Enter your name
- Click on New Student
- Choose MLS (your course name). You will not pay for this--the school will submit payment.
- Choose Georgia as the area
- Create your Username and Password

### **Trajecsys: Clocking In and Out**

You MUST clock into your clinical site in order for your clinical preceptors to be able to complete your competencies and evaluations.

Once you log on Trajecsys, you are on the "Clock In" page. Simply choose your site from the drop-down menu and then click clock IN. Note that you are immediately logged out of the Trajecsys system. That is because you should not be on the computer or phone while you are in clinicals. You should make note of the procedures you complete and who you worked with each day and enter that information into the Trajecsys system later. This will be graded.

### **Trajecsys: Daily Logs**

You are required to complete a Daily Log documenting whatever you do in clinicals and the preceptor that you worked with EACH DAY.

- Log into Trajecsys
- Click on Logs
- Click on Add Logsheet
- Click on the department where you worked.
- Click on the skill that you worked on. For example, if you worked in Blood Bank and did Type and Screens, you will choose Immunohematology and then Routine Testing. If you watched a tech, then first enter Observed. You can then go back and enter the ones that you Performed.
- Choose the preceptor that you worked with. If the name is not listed, click on New Supervising Employee and enter the name.
- Enter the time that you spent on this skill in hours and minutes and then click NEXT.
- In the comment box, list the number of skills or procedures that you completed. Using the example above, you would enter "Completed 25 type and screens using the tube method."
- Click NEXT to complete your entry.

## **Trajecsys: Daily Log Journal**

You will also need to document a short summary of what you did each day in clinicals.

- Log into Trajecsys
- Click on Evaluations
- Click on Daily Log Journal
- Type a 5-7 sentence summary of what you did in clinicals. Here is an example: "Today I worked in the Hematology department. I was able to run QC in the morning on the LH 780 analyzer. I ran level 1 and 3 as is the procedure for the morning shift. After that, I helped complete the morning run and made slides for the ones that needed manual diffs. Then I read the manual diff slides after the tech reported them out and compared my results with hers."
- Click Submit
- Click on the little X on the right side of the box to exit

## **Trajecsys: Automation Report**

You will need to complete an Automation Report on any analyzer that you work with and/or are trained on. You may wait until you have finished your department rotation or complete this as you go along.

- Log into Trajecsys
- Click on Evaluations
- Click on Automation Report
- Click on the department
- Fill out the information for each question/item. -  
Click Submit
- 

## **Trajecsys: End of Rotation Evaluations**

Once you have completed your clinical rotation, you will need to complete 2 different evaluations on the site and department. You will complete them for EACH department.

- Log into Trajecsys
- Click on Evaluations
- Click on Clinical Affiliate Orientation Checklist (You can complete this one when you begin your rotation)
- Fill out the evaluation
- Click on Submit Then:
- Click on Clinical Rotation Student Evaluation (Completed at the end of your department rotation)
- Fill out the evaluation--put the department in comments -Click on Submit

## Instructions for Clinical Preceptors

Choose the Area as Georgia

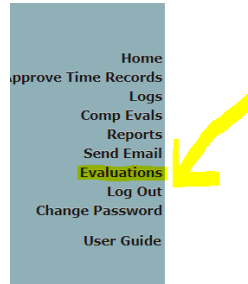
Choose your Site

To submit Competency Evaluations, choose Comp Evals from the menu on the left.



Choose the Site, Student, and department (Major Study) you are evaluating. You can then choose the procedures the student has completed/competent.

Next, you will need to complete the Professional Evaluation. Choose the highlighted tab



Choose Clinical Rotation Professional Evaluation –enter department. Enter the student name in the Subject line and then the site from the pull down menus. Click on the department. An evaluation should be completed for each department. Click on the department you are completing competencies.

- Clinical Chemistry
- Heme / Coag
- Immunohematology
- Immunology and Molecular Techniques
- Microbiology
- Urinalysis
- Management / Work Ethic
- Specimen Collection and Processing

Select the number that you are awarding as the grade, any comments, and then select “submit” at the bottom.



## SIGNATURE SHEET



### **MEDICAL LABORATORY SCIENCE PROGRAM CLINICAL INTERNSHIP HANDBOOK 2019-2020**

I, \_\_\_\_\_, certify that I have a copy of the MLS Program Clinical Internship Handbook 2019-2020. I have reviewed the information carefully and understand that I am accountable for all of the information in the Handbook. I further understand that I am responsible for clarifying with the MLS Program Director any areas that I do not understand.

I have been given the opportunity to ask any questions that I have about the Clinical Internship Handbook.

I have read, understand, and agree to perform the duties of my clinical internship as described in the handbook.

I have been advised that the information in the MLS Program Clinical Internship Handbook is valid for the period beginning August 2019 and ending August 2020.

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date