GRAYSON COUNTY COLLEGE

MLAB 2660/2661

CLINICAL II & III

SPRING 2017

GRAYSON COUNTY COLLEGE
MEDICAL LABORATORY TECHNOLOGY
MLAB 2660/2661 – CLINICAL I & II

TEXTBOOKS:

Required: All textbooks purchased in previous MLT courses

Required:

1. Graeter, L. (2016) Elsevier's Medical Laboratory Science Examination Review (1st ed.). St. Louis: Saunders.

Recommended: In addition to the texts listed below, numerous additional texts covering this topic are available from the Instructor.

1. Ciulla, A. P. (2010) Success in Clinical Laboratory Science (4th ed.). Upper Saddle River: Pearson Education, Inc.

2. Harr, R. R. (2013) Clinical Laboratory Science Review (4th ed.). Philadelphia: F. A. Davis.

3. Tanabe, P. A. and Holladay, E. B. (2009) BOR Study Guide (5th ed.). Hong Kong: ASCP Press.

COURSE DESCRIPTION:

MLAB 2660. Clinical II. (0-18-6). On-site clinical instruction, supervision, and evaluation. Students perform laboratory procedures in assigned departments of the clinical laboratory. Departmental rotations include hematology, coagulation, advanced hematology, blood bank, serology, chemistry, and microbiology. Phlebotomy experience will be arranged. A weekly clinical conference will be scheduled. **Prerequisites: All MLT courses must be completed with a grade of "C" or better within program requirements. An overall grade of "C" (GPA 2.0) is required for graduation. Concurrent enrollment in MLAB 2661 required.** (RM)

MLAB 2661. Clinical III. (0-18-6). On-site clinical instruction, supervision, and evaluation. Students perform laboratory procedures in assigned departments of the clinical laboratory. Departmental rotations include hematology, coagulation, advanced hematology, blood bank, serology, chemistry, and microbiology. Phlebotomy experience will be arranged. A weekly clinical conference will be scheduled. **Prerequisites: All MLT courses must be completed with a grade of "C" or better within program requirements. An overall grade of "C" (GPA 2.0) is required for graduation. Concurrent enrollment in MLAB 2660 required.** (RM)

COMPETENCY STATEMENTS:

In regard to all content areas, at career entry, the Medical Laboratory Technician graduate should be competent in the following tasks.

Task *	Task Definitions
Defines and/or Identifies	*principles of basic laboratory procedures *basic procedures related to testing *fundamental biological characteristics as they pertain to laboratory testing *standard operating procedures *sources of error in laboratory testing *fundamental characteristics of laboratory operations
Selects and/or Prepares and/or Performs	*method *procedural course of action *reagents for test *instruments to perform test *controls for test
Calculates	*results from supplied data *results from obtained data
Associates	*laboratory findings and clinical data to assess test results and procedures *laboratory findings and quality control data to assess test results and procedures *laboratory findings and other laboratory date to assess test results and procedures
Analyzes	*laboratory findings to recognize common and/or procedural problems
Evaluates	*laboratory findings to recognize common technical problems *laboratory findings to take corrective action according to predetermined criteria *laboratory findings to check for common errors *laboratory findings to recognize and report the need for additional testing

*** GOALS (Entry Level Skills)**:

Upon completion of the objectives and practical experience for each clinical rotation, the student should be proficient in the following entry level skills.

a. Collecting and processing biological specimens for analysis;
b. Performing analytical tests on body fluids, cells, and products;
c. Recognizing factors that affect procedures and results, and taking appropriate actions within predetermined limits when corrections are indicated;
d. Monitoring quality control within predetermined limits;
e. Performing preventive and corrective maintenance of equipment and instruments or referring to appropriate sources of repairs;
f. Demonstrating professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and with the public;
g. Recognizing the responsibilities of other laboratory and health care personnel and interacting with them with respect for their jobs and patient care;
h. Applying basic scientific principles in learning new techniques and procedures;
i. Relating laboratory findings to common disease processes; and
j. Recognizing and acting upon individual needs for continuing education as a function of growth and maintenance of professional competence.

OBJECTIVES: TERMINAL PERFORMANCE OBJECTIVES (TPOs)

During and upon completion of the objectives for each clinical rotation, the student should be able to:

AFFECTIVE

1. Demonstrate reliability by:
   a. Arriving for clinical assignments at the scheduled time.
   b. Observing established hospital and/or facility departmental policies including safety rules and regulations.
   c. Following the proper practices as written in the laboratory procedure manuals to include use of equipment and supplies.

2. Demonstrate judgement by:
   a. Recognizing abnormal results and panic values as stated in the procedure manual.
   b. Taking action according to established criteria when abnormal results or panic values occur.
   c. Using professional discretion with patient information in accordance with the clinical facility's confidentiality policy.

3. Demonstrate communication and interpersonal relations skills by:
   a. Asking questions for clarification when instructions are not clear.

b. Being courteous when using the telephone.
c. Refraining from making critical remarks about patients, laboratory personnel, instructors, or fellow students.
d. Being courteous to patients and coworkers.
e. Documenting information required by the laboratory in accordance with laboratory policy.
f. Accepting instruction and constructive criticism in a mature manner.

4. Demonstrate initiative by:
   a. Reporting problems to the appropriate person.
   b. Assisting others with their duties if time permits.
   c. Pursuing new information.
   d. Reinforcing old information.

5. Demonstrate flexibility by:
   a. Exhibiting the ability to complete multiple tasks as assigned.
   b. Accepting changes without negative comments.
   c. Adapting to fluctuation in workload by prioritizing tasks.
   d. Recognizing that patient care takes priority over student learning activities.

6. Demonstrate ethical behavior by:
   a. Restricting release of test results to authorized persons.
   b. Refraining from making diagnostic judgements verbally or in writing.
   c. Refraining from openly criticizing members of the medical or clinical facility staff.
   d. Repeating tests which have questionable results or quality control results.

7. Demonstrate responsibility by:
   a. Being prepared for each day's activities by reading and reviewing related material in advance.
   b. Showing perseverance in completing difficult tasks.
   c. Correcting and/or reporting mistakes as soon as they are discovered.
   d. Complying with the College and clinical facility dress codes.
   e. Observing safe practice in the performance of duties according to the safety manual.
   f. Identifying patients and specimens accurately and in accordance with standard procedure.

PSYCHOMOTOR

1. Demonstrate the ability to perform laboratory tests by:
   a. Following written and verbal instructions.
   b. Developing increasing dexterity in the performance of procedures.
   c. Becoming progressively more accurate.
   d. Increasing precision and speed without sacrificing accuracy.
   e. Obtaining results within the limits set for each test.
   f. Needing minimum supervision to perform assigned tasks.
   g. Using the Laboratory Information System and/or computers to document information required for reporting and record keeping.

2. Demonstrate the ability to operate the equipment used to perform laboratory tests by:
    a. Following written and verbal instructions.
    b. Performing preventive and corrective maintenance.
    c. Recognizing problems and reporting them to the appropriate person.
    d. Performing quality control as instructed.

COGNITIVE

1. Demonstrate a knowledge of theoretical concepts involved in the tests performed in lab by:
    a. Recognizing results which do not correlate and reporting them to the instructor
    b. Associating unusual test results with the condition or diseases which might be indicated.
    c. Recognizing quality control results which should be reported to the instructor.

OBJECTIVES FOR ALL DEPARTMENTS AT ALL CLINICAL AFFILIATES

During clinical rotations the student should:

1. Observe routine tasks performed by laboratory staff members.
2. Perform routine tasks with minimum supervision according to the procedure manual and/or verbal instructions provided by clinical instructors.
3. Verify identifications of samples (blood, urine, etc.) by comparing name, room number, date, hospital number with information on request form.
4. Prepare specimens for analysis.
5. Evaluate specimens for appearance.
6. Prepare and mail samples to reference laboratories with appropriate forms.
7. Use automated instruments according to written protocol from procedure manual.
8. Detect technical problems with supervisory consultation.
9. Participate in established quality control programs.
10. Enter designated information on departmental worksheets or computers.
11. Record results on laboratory report forms or computers.
12. Experience the pace, stress and responsibility of performing tests in a clinical setting.
13. Organize tasks to facilitate their completion.
14. Assist with preventive instrument maintenance and trouble shooting.
15. Perform tests as indicated in the instructional plan for each rotation.
16. List all major instruments in routine use in each department.
17. Prepare an in-depth analysis of each instrument listed (Lists will be provided).
18. Prepare a case study in each rotation for presentation in clinical conference.

* **RESPONSIBILITIES OF STUDENT IN CLINICAL:**

1. Review clinical objectives, modules, lecture notes, etc. prior to clinical rotation.
2. Report to clinical sessions on time.
3. Phone prior to start of clinical session when going to be absent or late.
4. Complete student check list to reflect procedures performed and observed.

5. Sign and date weekly progress reports after having clinical instructors complete them. Bring the progress reports to clinical conference each week.
6. Complete clinical absence form for each absence. The student may arrange make up time with the clinical affiliate. The absence form should be completed even if time is made up.
7. Request clinical instructor to complete progress reports weekly, performance appraisals as procedures are evaluated, and evaluation forms at the end of each rotation.
8. Complete each day's objectives (See Instructional Plans).
9. Take the initiative to observe and practice procedures.
10. Take the initiative to seek clarification when needed from procedure manuals, reference material and/or the clinical instructor.
11. Laboratory results should be reported only after the clinical instructor has checked off the student as being competent to perform the procedure.
12. Comply with GC MLT-AD Program dress code. A copy of Dress Code may be found at the end of this section of the syllabus.

RESPONSIBILITIES OF CLINICAL INSTRUCTOR:

1. Orient the student to hospital and departmental protocol and procedures as well as with the location of manuals, reference materials and all safety equipment and safety issues.
2. Instruct by demonstrating clinical laboratory procedures.
3. Supervise the student as he/she gains practical experience performing clinical procedures and practicing skills by
    a. observing student performance.
    b. providing guidance and performance feedback as formative evaluation.
4. Counsel students concerning non-compliance with the policies of the MLT-AD Program and initiate disciplinary hearings if the need arises. See the MLT-AD Program Student Handbook.
5. Evaluate the student's performance in clinical by
    a. verifying the student's ability to function in a clinical laboratory by completing clinical forms listed.
        1) Weekly Progress Reports - Weekly
        2) Performance Appraisal Forms - As procedures are evaluated
        3) Evaluation Forms - At the end of the rotation
    b. checking off the student as competent to perform a task before allowing the student to report out any laboratory results.
    c. preparing an exit exam to be given at the end of each rotation. (May be written or practical or a combination of the two)
6. Participate in Program review process by recommending changes in curriculum, library holdings, textbooks, etc.
7. Recommend revision of clinical evaluation tools as necessary.
8. Attend an annual meeting to plan instruction for the coming year and evaluate the past school year.
9. Recruit students at every opportunity.

CLINICAL INSTRUCTOR

Appointed by:

Clinical Coordinator

Teaching assignments made by:

Clinical Coordinator

Responsible to:

Clinical Coordinator and MLT Faculty Coordinator of the Clinical Affiliate

Criteria for appointment:

MT/MLS or MLT certification from ASCP or equivalent educations and experience. Interest in teaching clinical laboratory procedures.

1. Years of experience as MT/MLS/MLT
2. Specialty area
3. Teaching experience
4. Need

LENGTH OF CLINICAL ROTATIONS:

Clinical experiences for MLAB 2660/2661 will be grouped in departmental rotations consisting of 8.5 hours per day, five days per week until the following clock hour requirements are met. Total clock hours at the hospitals will include a thirty minute lunch break each day (time not included in clock hours below). A two hour Clinical Conference will be held each week. Specific times for arrival and departure will vary with each clinical site and will be announced.

DEPARTMENT	**DAYS**	**CLOCK HOURS**
Blood Bank/Serology	15	120
Chemistry	15	120
Hematology/Coagulation/Urinalysis	20	160
Microbiology	20	160
Subtotal	70	560
Weekly Clinical Conferences	n/a	16
Grand Total	70	576

Hours missed, for any reason, will have to be made up until a total of 576 hours is met. Additional hours will be added for absences, when applicable. (see Absence Policy below)

PLACEMENT:

Fall or Spring Semester of the Sophomore Year

PREREQUISITES:

1. Completion of all MLT courses with a grade of "C" or better.
2. A grade of "C" or better is required in all MLT courses for graduation. An average grade of "C" (GPA 2.0) in all work is required for graduation from Grayson County College.
3. Achievement of a raw score of 70% or better on a comprehensive examination covering all knowledge areas is expected.

METHOD AND PROCEDURE OF INSTRUCTION:

Demonstration by Clinical Instructor.

The student will be allowed access to all reagents, equipment, procedure manuals, and other resources available to laboratory staff members of the clinical affiliate unless specifically stated otherwise in the objectives.

Criteria sources shall be the affiliate departmental procedure manual, instrument manufacturer's procedure manuals or instructions and textbooks.

Students will meet for two hours each week to discuss and review clinical experiences. (Clinical Conference)

Independent assignments, case studies and study projects will be utilized. The case studies will be chosen from each clinical knowledge area and will be presented during Clinical Conference.

EVALUATION:

Formative evaluation will be provided for all procedures until the time designated for summative evaluation in the Instructional Plan. Weekly Progress Reports will be completed and signed by the clinical instructor. The Performance Appraisal form will be completed as performance of each procedure is evaluated. The Evaluation Form will be completed at the end of each rotation. An exit exam will be prepared by the clinical instructor and may be written or practical or a combination of both. (The written portion of the exam may be administered by the MLT-AD faculty during Clinical Conference if the clinical instructor prefers.) A copy of the exam with a explanation of grade determination must be provided to the college to keep in the files.

Clinical skills listed in the TPOs are considered to be critical skills. Criteria such as time constraints, degree of accuracy, minimum number of times a task will be practiced before summative evaluation, maximum number of attempts allowed to perform the procedure for summative evaluation, and whether use of the procedure manual will be allowed are indicated in each Instructional Plan. The criteria will be presented to the student at the beginning of the semester.

Hints for obtaining good evaluations for clinical performance:

1. Review theory prior to starting each clinical rotation.
2. Show initiative by asking
    a. questions about procedures or techniques.
    b. to be shown procedures which are new to you.

c. for clarification if you do not understand what's expected of you.

3. Concentrate on assigned departmental tasks.
4. Avoid discussion of personal problems.
5. Accomplish assigned tasks with the goal of being able to perform with minimal or no supervision.
6. Display confidence.
7. Project your ability to perform.
8. Accept constructive criticism by using it to improve.

COURSE GRADE WILL BE DETERMINED BY THE FOLLOWING PROCESS:

Clinical		
(Average of departmental grades)		70%
Clinical Conference		30%
Automation Sheets	(5%)	
Resume	(5%)	
Case Studies / Oral Reports	(10%)	
Clinical Logs	(10%)	
		100%

COURSE REQUIREMENTS:

In order to achieve a passing grade, the following requirements must be met.

1. Satisfactory clinical performance (A grade of 70% or better in each clinical rotation). **Failure to pass any 1 rotation will result in an F (failure) for the entire clinical course (MLAB 2660/2661). Both clinical courses will have to be repeated within 1 year. Failure to pass clinical on a second attempt, or failure to register and complete the repeat attempt within the year allowed, will result in dismissal from the program. Readmission will be subject to the readmission policy found in the Student Handbook.**

2. Completion of clinical forms by the date of the course final.

3. Completion of the comprehensive course final (A raw score of 70% or better is recommended).

4. Regular attendance for clinical is required. Guidelines related to clinical absences are listed below.

CLINICAL POLICIES

Ethics

As a MLT student of Grayson County College you also represent, and are a reflection of, the MLT Program, and as such, are expected to abide by all program policies. Inherent in this expectation is the ethical behavior that includes supporting the program as a learned, mature, potential graduate. As such, it will be an explicit violation of the ethics code to in any way, at any time while a student in the MLT Program whether on campus or at clinical, engage in conversation, or other activity, with any clinical employee, college employee, patient, or fellow student that in any way involves malicious, false, defamatory or slanderous[1] remarks about the college, the program, it's employees, the affiliates or fellow students. Any concerns of this nature need to be directed to the appropriate individual, as outlined in the GC grievance policy. Violation of this aspect of the ethics code will result in probation, failure of the clinical course, and/or dismissal from the MLT Program.

Clinical Assignments

An orientation for this course will be held as soon as possible after the start of classes. Clinical assignments, if available will be distributed at that time. An orientation for the clinical site will be after site assignments are made, but before starting clinical training. Many factors are considered when making the specific assignments which include, but are not limited to:

1. Number of clinical sites and number of positions available at each site.
2. City of residence during course. All efforts will be made to place you close to your city of residence, but it is not guaranteed.
3. Employment at a preferred site. Historically, many problems have resulted if the student works at the same site as their clinical training. To help ensure the best, most focused and well-rounded educational experience available, a student may not work at the laboratory that is his/her preferred clinical site. This includes employment after the clinical assignments have been made and until the end of the semester.
4. Other objective considerations, as appropriate.

If more requests are made at one site than available positions, a drawing of names will be utilized. Dates and times of attendance are usually dependent on the site and even specific rotations at the site. They are not always the same, but usually are Monday through Friday between 6:00am – 2:30pm. Significant variations can occur to meet the requirements of the clinical site.

[1] Defamatory - damaging the good reputation of someone; Malicious - intending or intended to do harm; False - not according with truth or fact; incorrect; Slanderous - (of a spoken statement) false and malicious., http://oxforddictionaries.com/

Significance of Continued Professional Development:

Continuing Professional Development (CPD) is defined as the education of Medical Laboratory Technicians (MLT) following completion of their formal training. CPD will enhance professional strength by allowing MLTs to keep pace with rapid advances in biomedical technology in terms of knowledge, skills and practical experience. It will also ensure that MLT are competent in providing quality service in a multi-disciplinary healthcare environment.

CPD consists of any educational activity which helps to maintain, develop or increase knowledge, problem-solving, technical skills or professional performance standards all with the goal that technicians can provide better health care. CPD includes 'formal' activities, such as courses, conferences, webcasts, teleconferences and workshops, as well as self-directed activities such as journal, online and self-study CE courses. The American Society for Clinical Pathology Board of Registry requires participation in their Certification Maintenance Program (CMP) for all individuals who became newly certified on or after January 1, 2004. In addition to helping you maintain your professional certification, the CMP can help you stay current on developments in your field and provide opportunities for both professional and personal enrichment.

All medical laboratory professionals are expected to become active members of their national professional organization, the American Society for Clinical Laboratory Science (ASCLS) and the American Society of Clinical Pathology (ASCP). It is through professional organizations that laboratory personnel can control the destiny of their profession.

Students are encouraged to join both organizations. ASCP membership is free and applications are available at http://www.ascp.org. Information on becoming an ASCLS member, along with applications, can be obtained at: http://www.ascls.org . The fee for joining ASCLS is $25.00.

Attendance Policy

Regular attendance for clinical and clinical conference is required. Responsibility for work missed is placed upon the student. Guidelines related to clinical absences are listed below.

Attendance is a vital component of evaluation and will be reflected in the course grade. Clinical conference sessions may be made up only with the consent of the instructor

Regular attendance and being on time for clinical is an important part of your preparation for being a dependable employee. Each work place has attendance and tardy guidelines which employees must follow. The MLT program, in conjunction with the clinical sites, has designed the following guidelines in order to emphasize the importance of this aspect of employment. The guidelines will also assure continuity of instruction since both MLT faculty and clinical instructors believe that sporadic attendance interferes with the learning process.

Students should report to their assigned clinical sites no more than fifteen (15) minutes early and are expected to stay the entire length of the assigned session. The MLT faculty does not award recognition nor credit for attendance at clinical outside the assigned hours.

THE FOLLOWING GUIDELINES APPLY TO CLINICAL ABSENCES

1. The clinical site must be notified of each absence or each late arrival at least 15 minutes prior to the expected time of arrival.

2. The MLT faculty must be notified by email by the student by 8:00 a.m. on each day of absence.

3. An absence form must be completed for each absence and turned in to the MLT faculty at the first clinical conference following the absence.

4. Any circumstances that result in several days' absence may result in a withdrawal or a failure for the course. Alternatively, a clinical rotation may be rescheduled if rescheduling does not conflict with another student's scheduled time. Rescheduling will not be done without approval from the clinical coordinator at the clinical site.

5. Two tardies during one rotation will equal one absence.

6. Make up days must be approved by both clinical and MLT faculty. Make up days will not be scheduled on holidays or weekends. In cases of a planned absence which is necessary (e.g. elective surgery, court appearance, school related activities, etc.), days may be made up in advance on a day for day basis.

7. Make up time will be as follows:

Days Absent During Semester	Number of Days to Make Up

a.	First	One day
b.	Second	Two days
c.	Third	Three days
d.	Fourth	Failure of the course

Lunch Breaks

Students must take assigned lunch breaks. Lunch breaks will be assigned if the clinical session lasts for more than six hours. Students are expected to take a fifteen minute break sometime in the middle of each four hours of an assigned clinical session. Smoking, eating and drinking are allowed only in designated areas.

Collecting Policy

1. All students enrolled in MLAB 2660 and MLAB 2661 will participate in morning collections. (See Instructional Plans)

    a. If a patient has one IV running, the student will draw the sample from the other arm.
    b. If an IV is running in both arms, the student will not attempt a venipuncture. The student will return the request slips to the laboratory and inform his or her supervisor.
    c. The student will not perform arterial punctures.
    d. If the student is unsuccessful in obtaining a blood sample during a venipuncture, a second attempt may be made, providing the opposite arm is accessible and adequate, the patient is willing and written hospital policy allows it. The student **must** be confident that they will be successful on a second attempt. If, at any time, the student is unable to obtain an adequate sample, he/she must:

        1). immediately inform nurse of the situation and tell him/her that another phlebotomist will attempt it promptly
        2). immediately inform the laboratory supervisor

2. Students will be encouraged to collect later requests within the department assigned where collecting does not interfere with a procedure already started by the student.
3. In unusual circumstances a supervisor may ask the student to collect requests outside the assigned department. The clinical coordinator must be made aware of the request.
4. Students should record the number of venipunctures attempted each day on the Student Check List by writing a fraction to indicate the number of successfully completed venipunctures over the number attempted. The student should also write the name of any patient from whom a satisfactory specimen could not be obtained.

5. The student can be temporarily reassigned to an area other than that assigned by the MLT faculty if a richer learning experience is needed or if past learning needs to be reinforced.
6. The student will not perform venipunctures on children under the age of 7 years. Capillary puncture on children ages 2 - 6 years may be performed by a student, only after being approved to do so by appropriate laboratory staff. **No** procedures will be performed on children under the age of two years by a student without supervision.

DRESS CODE:

Policy: The Medical Laboratory Technology (MLT) Faculty at Grayson County College expects all MLT students to reflect professionalism and maintain high standards of appearance and grooming whether in class, campus lab, or a clinical setting. The faculty has final judgment on compliance of this policy and the appropriate corrective action for dress code infractions. Students not complying with this policy may not be allowed to remain in the classroom, laboratory or clinical setting.

General Guidelines

- Clothing
  - Students are to purchase one or more sets of scrubs to wear during attendance in classroom, laboratory and clinical activities.
  - Scrubs must be of the color, style and make approved at the beginning of the semester. For exceptions, see the Program Director. Scrub discounts are available at some area businesses.
  - The approved MLT logo must be embroidered on the left side of each scrub top.
  - White long or short sleeved turtleneck or crew neck T-shirts without writing, images, logos or advertisements may be worn under scrub shirts.
  - Uniforms are to be clean and not unduly wrinkled.
  - Students may purchase, for warmth, a scrub jacket of the same approved color and make as the scrubs. No jackets or sweaters with hoods may be worn with the uniform.
  - A laboratory coat will be worn over clean scrubs. Scrubs must be the approved color and style. Some clinical sites have specific colors for laboratory students; students must wear that color if attending one of those sites. Most laboratories furnish protective clothing to be worn while performing tests. The student must purchase a white laboratory coat to wear at sites which do not furnish protective clothing. See the Instructor prior to purchasing the lab coat.
  - Head coverings: Nothing shall be worn on the head (baseball caps, scarves, hats, etc.) unless it is of a required religious nature. If the head covering falls below the shoulders it must be tucked securely inside the lab coat to prevent contamination by blood and/or body fluids.
- Shoes
  - Shoes are to be close-toed, low, closed-heeled, and soft-soled, clean and in good repair.

- Shoes must be made of a material that will not absorb bio-hazardous materials and that can be cleaned. Therefore, they must be white leather or synthetic rubber-like material. They cannot be canvas or cloth.
- Clog type shoes are prohibited for safety concerns.
- White hose/socks (that come above the ankle) are required.

♦ Hair
- Hair must be clean and neatly groomed. Hair longer than shoulder length must be worn up or secured so as not to fall forward.
- Men may wear a neatly trimmed beard and/or mustache. The rest of the face must be clean shaven.
- Hair must be of a color found in nature (no pink, blue, etc.).

♦ Nails
- Nails are to be clean, groomed, and manicured.
- Artificial nails are prohibited in the clinical setting.
- Nails are to be cut to the tip of the finger and groomed. Reasonable length is defined as 1/8" above the fingertips.
- Only clear nail polish may be worn. No fingernail jewelry.

♦ Jewelry
- Watches, wedding rings only, earrings (one small stud per earlobe) may be worn.
- Necklaces are not permitted unless maintained under clothing and not visible.
- Except for one stud earring per earlobe, no other visible body piercing jewelry is permitted. Nose piercing jewelry must be removed or covered. No exceptions.
- For safety purposes, it is preferable that no jewelry be worn.

♦ Other
- Conservatively applied makeup is permitted.
- Gum chewing is not permitted.
- Personal beepers, cell phones, and other such technology shall be utilized only during breaks from patient care. Cell phones must be turned off during clinical and left in the student's purse or backpack.
- Tattoos must be covered (e.g., with clothing or Band-Aids) and not visible.
- Refrain from smoking in uniform as the smoke can cling to clothes and be an irritant to patients.
- The following suggestions are made in order to maintain appropriate body hygiene:
  - Take daily showers.
  - Wash hair daily.
  - Brush teeth.
  - Use unscented deodorant (no colognes, perfumes, scented lotions or aftershave) -- Scents sometimes make patients ill.

<u>Additions to Dress Code for the Clinical Setting:</u>

♦ Students may have site-specific variations to the above dress code requirements.

- The Grayson County College Student Picture ID is to be worn above the waist and in clear view when in uniform.
- Compliance: Students not conforming to the dress code may be sent home from clinical at the instructor's discretion. Any and all clinical time missed will need to be made-up, regardless of reason.

COURSE OBJECTIVES:

INTEGRATION OF SCANS COMPETENCIES:

* Indicates Course Goals, Objectives, and/or Activities designed to achieve SCANS Competencies.

INTEGRATION OF SCANS COMPETENCIES
WITH COURSE GOALS, OBJECTIVES, AND ACTIVITIES

COURSE NUMBER MLAB 2660/2661
COURSE NAME Clinical II & III

SCANS COMPETENCIES AND FOUNDATION SKILLS	COURSE GOALS, OBJECTIVES, AND ACTIVITIES
RESOURCES	
ALLOCATES TIME	Arrives at assigned time Begins work promptly Uses good judgement in taking breaks Organizes workload for priority and efficiency
ALLOCATES MONEY	Participates in activity to determine cost per test Completes instrument forms indicating cost
ALLOCATES MATERIAL AND FACILITY RESOURCES	Restocks supplies as needed
ALLOCATES HUMAN RESOURCES	Recognizes that patients care takes priority over student learning activities Adapts to fluctuation in workload by prioritizing tasks
INFORMATION	
ACQUIRES & EVALUATES INFORMATION	Asks questions for clarification when instructions are not clear Adheres to established procedures Checks results
ORGANIZES & MAINTAINS INFORMATION	Enters designated information Records results
INTERPRETS & COMMUNICATES INFORMATION	Recognizes erroneous data and notifies supervisor Documents information required by the laboratory Takes action according to established criteria when abnormal or panic values occur
USES COMPUTERS TO PROCESS INFORMATION	Enters designated information Uses the Laboratory Information System and/or computers to document information required for reporting and keeping records

	Reviews for certification examination
INTERPERSONAL	
PARTICIPATES AS A MEMBER OF A TEAM	Experiences the pace, stress, and responsibility of performing tests in a clinical setting Observes established policies including safety rules and regulations Accepts instruction and constructive criticism in mature manner Recognizes that patient care takes priority over student learning activities Assists others when own work load is completed
TEACHES OTHERS	Instructs patients concerning care of puncture site Prepares and presents case studies in clinical conference
SERVES CLIENTS/CUSTOMERS	Demonstrates courtesy, consideration, and tactfulness with patients and other personnel Uses professional discretion with patient information in accordance with the clinical facility's confidentiality policy Recognizes that patient care takes priority over student learning activities Restricts release of test results to authorized persons
EXERCISES LEADERSHIP	Assists others if time permits Corrects and/or reports mistakes to appropriate person as soon as they are discovered
NEGOTIATES TO ARRIVE AT DECISION	Asks questions for clarification Speaks in courteous manner on the telephone Documents information as required Accepts instruction and constructive criticism in mature manner Heeds suggestions and uses them Seeks guidance for improvement
WORKS WITH CULTURAL DIVERSITY	Refrains from making critical remarks about patients, laboratory personnel, instructors, or fellow students
SYSTEMS	

UNDERSTANDS SYSTEMS	Recognizes need for standard operating procedures, procedure manuals, safety standards, quality control, etc. Demonstrates understanding of Universal Precautions Reports to appropriate person at clinical affiliate
MONITORS & CORRECTS PERFORMANCE	Follows written and verbal instructions Corrects and/or reports mistakes as soon as they are discovered Participates in quality control Follows safety rules and regulations
IMPROVES & DESIGNS SYSTEMS	Completes evaluations of program, classroom instructors, and clinical facilities with opportunity for comments and suggestions
TECHNOLOGY	
SELECTS TECHNOLOGY	Follows proper practices as written in the laboratory procedure manuals including use of equipment and supplies to perform tasks
APPLIES TECHNOLOGY TO TASK	Follows written and verbal instructions Develops increasing dexterity in performance of tasks Becomes progressively more accurate Increases precision and speed without sacrificing accuracy Needs minimum supervision to perform assigned tasks Obtains results with set limits for each test Uses automated instruments according to written protocol from procedure manual
MAINTAINS & TROUBLESHOOTS TECHNOLOGY	Assists with preventive instrument maintenance and troubleshooting
BASIC SKILLS	
READING	Follows proper practices as written in the laboratory procedure manuals Follows written instructions Verifies identification of samples by comparing name, room number, date, hospital number with information on request form

	Prepares case studies to present in clinical conference
WRITING	Prepares case studies Prepare and mail samples with appropriate forms
ARITHMETIC	Calculates results from supplied data Calculates results from obtained data
MATHEMATICS	Calculates results from supplied data Calculates results from obtained data
LISTENING	Follows verbal instructions Seeking clarification Accepts instruction and constructive criticism Treats patients and coworkers with courtesy Practices courtesy when using the telephone
SPEAKING	Asks questions Reports problems to appropriate person Presents case studies in clinical conference
THINKING SKILLS	
CREATIVE THINKING	Prepares and presents case studies in clinical conference Exhibits ability to complete multiple tasks as assigned Organizes tasks to facilitate their completion
DECISION MAKING	Recognizes abnormal results and panic values Takes action according to established criteria when abnormal results or panic values occur
PROBLEM SOLVING	Corrects and/or reports mistakes as soon as they are discovered Repeats tests which have questionable results or quality control results Reports problems to appropriate person
SEEING THINGS IN THE MIND'S EYE	Adapts to fluctuation in workload by prioritizing tasks Recognizes results which do not correlate

	Associates unusual test results with the indicated conditions or diseases
KNOWING HOW TO LEARN	Prepares for each day's activities by reading and reviewing related material in advance Asks questions for clarification Pursues new information Reinforces old information Accepting instruction and constructive criticism
REASONING	Observes established departmental policies Takes action according to established criteria when abnormal results or panic values occur Uses professional discretion with patient information in accordance with the facility's confidentiality policy Organizes tasks to facilitate their completion
PERSONAL QUALITIES	
RESPONSIBILITY	Arrives on time Prepares for day's activities Follows instructions Identifies patients and specimens accurately and in accordance with standard procedure Experiences the pace, stress, and responsibility of performing tests in a clinical setting
SELF-ESTEEM	Complies with GC and facility dress codes Demonstrates need for minimum supervision to perform tasks
SOCIABILITY	Acts in courteous manner Assists others with their duties if time permits
SELF-MANAGEMENT	Arrives on time Observes established dept. policies Follows instructions Accepts constructive criticism in a mature manner Accepts changes without negative comments

INTEGRITY/HONESTY	Restricts release of test results to authorized persons Refrains from making diagnostic judgements verbally or in writing Repeating tests which have questionable results or quality control results Correcting and/or reporting mistakes as soon as they are discovered

DISABILITY STATEMENT

Students with special needs should contact the Disability Services Coordinator in the Learning Assistance Center no later than the first week of classes. Once appropriate documentation for the disability is received, the Disability Services Coordinator will coordinate delivery of approved accommodations with students and their instructors.

STATEMENT REQUIRED BY THE COLLEGE:

Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance and an attitude that seeks to take full advantage of the educational opportunity.

INSTRUCTOR INFORMATION:

Instructor Name: Alan Jackson

Office Phone: 903-463-8779 Email: Jacksona@grayson.edu

Office Location: STC 202 Office Hours: Posted on Canvas

By: Alan Jackson
Revised: January 2017

OVERVIEW

During this semester you will gain practical experience in assigned departments of a hospital laboratory. Make the most of opportunities to learn all you possibly can about your chosen profession. Review theory, study new material and be sincere in your determination to do your best this semester.

The following Instructional Plans are provided as a guide for each rotation. The Terminal Performance Objectives (TPOs) for each rotation include the tests which **MUST** be performed at each facility. Methods and instrumentation may differ from one facility to another, but the procedures selected are those which each facility performs. Additional procedures are listed which the student **SHOULD** observe and assist with as they are available.

Evaluation forms for each rotation are included with each Instructional Plan. Instructions for completing these forms are provided. These forms have been designed to grade each student using the objectives as criteria. The clinical instructor should mark the evaluations according to the instructions. MLT faculty will calculate the final grade for each rotation on the basis of the evaluation forms.

During Clinical Conference each week, we will review the week's experiences, review for comprehensive exams and present case studies.

Have a good semester!!!

CLINICAL INSTRUCTIONAL PLAN
IMMUNOHEMATOLOGY
BLOOD BANK
MLAB 2660/2661

TERMINAL PERFORMANCE OBJECTIVES:

The student will gain practical experience performing the following procedures:

1. Verify identification of blood sample by comparing name, room number, date, hospital number with information on the request form.
2. Enter designated information on the blood bank worksheet or computer.
3. Prepare cell suspensions.
4. ABO group - tube method
   a. Forward
   b. Reverse
5. Rh typing - tube method
   a. Rh_0
   b. D^u
6. Antiglobulin test
   a. Direct
   b. Indirect
      1) Crossmatch
      2) Antibody screen
      3) Antibody identification
7. Cord Blood
   a. ABO group
   b. Rh type
   c. Direct antiglobulin test
8. Select appropriate ABO group and Rh type for crossmatch.
9. Determine eligibility for Rh_0 Immune Globulin.
10. Complete forms and labels.
11. Prepare an in depth analysis of instruments used in the blood bank.

The student will observe and assist with the following procedures as they are available:

1. Antibody elution
2. Neonatal exchange transfusion
3. Investigation of transfusion reaction
4. Rh-hr typing other than Rh_0
5. A subgrouping
6. Crossmatch
   a. LISS
   b. Frozen Donor Cell Sample
7. Platelet transfusion

DAILY READING ASSIGNMENTS:

During this rotation the student should read (or review) related material in the AABB Technical Manual. Reading assignments may be made by the clinical instructor.

DAILY OBJECTIVES

Day 1 - Orientation and Observation

The student will:

1. Observe a laboratory staff member demonstrating safety equipment and safety issues specific to the Immunohematology department.

2. Become familiar with the departmental procedure manual.

3. Observe a laboratory staff member demonstrating the role of a clinical immunohematologist specifically to include quality control procedures.

4. Read the explanation and principles of the quality control program.

5. Review, observe and perform the following procedures on previously determined samples with close instructor guidance and involvement in decision making processes.
   a. Verify identification of blood samples
   b. ABO grouping - forward and reverse
   c. Rh typing - D(Rh_0) and D^u
   d. Enter designated information on worksheet or computer.

Begin Evaluation

Evaluation will be a continuous process for the two tasks below throughout the clinical rotation.

1. Verify identification of blood samples.
   Time constraints: Immediately before testing
   Degree of accuracy: 100%
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 1

2. Enters designated information on worksheet or computer.
   Time constraints: Name - immediately before testing begins
   Results: immediately after testing complete
   Degree of accuracy: 100% agreement with instructor and obtained results
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 1

Day 2

The student will:

1. Perform ABO and Rh_0 (D) typing.
2. Perform instrument quality control.
3. Observe a laboratory staff member performing the role of immunohematologist to specifically include reagent quality control and cord blood work-up.

Continue Evaluation

1. Prepare cell suspensions.
   Time constraints: 5 minutes/sample
   Degree of accuracy:+ of prepared standard
   Minimum number of times task practiced before evaluation: 2
   Maximum number of attempts allowed to perform procedure for evaluation: 2
2. ABO Grouping and Rh_0 typing on previously prepared cell suspension.
   Time constraints: 10 minutes/sample (1 hour if D^u necessary)
   Degree of accuracy: 100% agreement with predetermined results
   Minimum number of times task practiced before evaluation: 2
   Maximum number of attempts allowed to perform procedure for evaluation: 3
   Includes forward and reverse grouping by the tube method.

Day 3

The student will:

1. Perform all quality control procedures.
2. Perform cord blood work-up.
3. Review the principle of indirect antiglobulin test, antibody screen and Rh_0IG.
4. Given test results of two mothers and their respective baby's cord blood work-up.
   a. Demonstrate a knowledge of criteria for giving Rh_0IG.
   b. Determine whether the two mothers are candidates for Rh_0IG injection.

Day 4

The student will:

1. Perform all quality control procedures.
2. Perform cord blood work-up.
3. Perform Rh_0IG work-up on mother.
4. Determine the mother's candidacy for Rh_0IG injection using the results of the student's own testing.

Optional: Discrepancies in typing

Continue Evaluation:

1. Direct antiglobulin test - cord blood
   Time constraints: 15 minutes
   Degree of accuracy: 100% agreement with predetermined results
   Minimum number of times task practiced before evaluation: 2
   Maximum number of attempts allowed to perform procedure for evaluation: 2

2. Determine eligibility for Rh_0IG injection.
   Time constraints: 1 1/2 hours
   Degree of accuracy: 100% agreement with predetermined results
   Minimum number of times task practiced before evaluation: 2
   Maximum number of attempts allowed to perform procedure for evaluation: 2

Day 5

The student will:

1. Observe a laboratory staff member performing the role of immunohematologist to specifically include the crossmatch procedure-routine and LISS.
2. Perform a routine crossmatch on blood selected by instructor.

Day 6

The student will:

1. Observe a laboratory staff member performing the role of immunohematologist to specifically include a complete crossmatch procedure.
   a. Drawing blood
   b. Patient identification
   c. Performance of ABO and Rh types
   d. Selection of blood for compatibility testing
   e. Performance of crossmatch and antibody screen
2. Practice performing a complete crossmatch as above.

Day 7

The student will:

1. Practice performing a routine crossmatch on blood selected by the student.
2. Observe a laboratory staff member performing the role of immunohematologist to specifically include the procedure for frozen erythrocyte crossmatch.

Day 8

The student will:

1. Practice performing a routine crossmatch of blood selected by the instructor.
2. Practice performing an antibody identification.

Continue Evaluation

1. Antibody identification
   Time constraints: 1 1/2 hours
   Degree of accuracy: 100% agreement with predetermined results
   Minimum number of times task performed before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 2

Day 9

The student will:

1. Read and be prepared to discuss elution and absorption techniques.
2. Read criteria for exchange transfusion.
3. Demonstrate an ability to choose appropriate ABO group and Rh type for neonatal transfusion.
4. Practice performing a routine crossmatch on blood selected by the instructor.

Day 10

The student will:

1. Read and be prepared to discuss transfusion reaction work-up.
2. Practice performing crossmatch on blood selected by the instructor.
3. Perform other blood banking techniques as assigned by the clinical instructor (antibody ID, cord blood, etc.).

Day 11

The student will:

1. Perform blood banking techniques as assigned by the clinical instructor.

Complete Evaluation

1. Crossmatch (routine) - one tube method without LISS
   Conditions: Without assistance or reference to criteria sources
   Time constraints: 1 1/2 hours
   Degree of accuracy: 100% with predetermined results
   Minimum number of times task performed before evaluation: 5
   Maximum number of attempts allowed to perform procedure for evaluation: 2

Day 12

The student will:

1. Perform techniques as assigned by the clinical instructor.
2. Complete evaluation as needed.
3. Take exit exam. (May be taken on Day 13-15.)
4. Complete clinical forms and receive final evaluation from clinical instructor.

Day 13 through 15

In most facilities, the Blood Bank rotation runs concurrently with the Serology Rotation which adds three days to the total time. The additional time may be used to reinforce knowledge of procedures learned during the first twelve days of the rotation. Serology procedures may be performed at any time during the fifteen day rotation.

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - STUDENT CHECK LIST/WEEKLY PROGRESS REPORT

AFFILIATE _____ DEPARTMENT: IMMUNOHEMATOLOGY (BLOOD BANK)

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Place a check mark beneath the appropriate day for each procedure observed. Place a number beneath the appropriate day for each procedure performed (1 if you performed the procedure once; 10 if you performed the procedure ten times; etc.). Have your clinical instructor fill out the Weekly Progress Report on the last day of each week. Bring these to Clinical Conference.

PROCEDURES **DAY→**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Verifies ID of blood samples															
Enters designated information															
Prepares cell suspensions															
Determines ABO group a. Forward															
b. Reverse															
Determines Rh type a. Rh_o (D)															
b. D^u															
Performs antiglobulin test a. Direct															
b. Indirect 1) Crossmatch															
2) Antibody screen															
3) Antibody id															
Performs cord blood work-up a. ABO															
b. Rh															
c. Direct antiglobulin test															

PROCEDURES DAY→	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Selects appropriate ABO group & Rh type for crossmatch															
Determines eligibility for Rh_oIG															
Completes forms & labels															
Performs QC procedures															
Performs elution															
Assists in preparation for neonatal exchange transfusion															
Investigates possible transfusion reaction															
Performs Rh-hr typing other than Rh_o															
Determines subgroups of A															
Performs LISS crossmatch															
Performs crossmatch on frozen donor cell sample															
Assists with platelet transfusion															
Other (specify)															

WEEKLY PROGRESS REPORTS

INSTRUCTIONS: Clinical instructors; please indicate the student's performance to date in the following areas by circling the appropriate letter code.

CODE: S = satisfactory NI = needs improvement

	Week # 1		Week # 2		Week # 3		COMMENTS:
ARRIVES & LEAVES ON TIME	S	NI	S	NI	S	NI	
ATTITUDE/CONDUCT	S	NI	S	NI	S	NI	
ADJUSTMENT TO CLINICAL SITUATION	S	NI	S	NI	S	NI	
PROGRESS OF PROCEDURES PERFORMED:							
QUANTITY	S	NI	S	NI	S	NI	
QUALITY	S	NI	S	NI	S	NI	
COMPLETION OF OUTSIDE ASSIGNMENTS	S	NI	S	NI	S	NI	

CLINICAL INSTRUCTOR INITIALS / DATE _____ _____ _____

STUDENT INITIALS / DATE _____ _____ _____

MLT FACULTY INITIALS / DATE _____ _____ _____

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - PERFORMANCE APPRAISAL

AFFILIATE _____ DEPARTMENT: IMMUNOHEMATOLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Observe the student's performance of the skills/procedures listed below. Using the Scale Key given below, indicate your evaluation of the student's performance in the column labeled IE. Columns labeled GC and LC are explained in the Performance Code. Comments may be made on an additional sheet of paper.

PERFORMANCE CODE:
- GC * = performed/discussed in Campus Lab
- LC = level of competence upon completion of rotation as follows:
  - P = performed with minimal or no supervision
  - D = demonstration only
  - O = optional - perform at least once if available
- IE = instructor's evaluation of student's level of achievement

SCALE KEY

5 = Performed independently within time limit and standard of performance stated in Instructional Plan and/or Procedure Manual (IP and/or PM)
4 = Required minimum guidance to perform within time limit and standard of performance stated in IP and/or PM
3 = Required moderate guidance to perform within time limit and standard of performance stated in IP and/or PM
2 = Required intensive guidance to perform within time limit and standard of performance stated/exhibited potential to improve
1 = Required constant guidance/was unable to perform/potential questionable
NA = Procedure not available

			IE					
PROCEDURES	**GC**	**LC**	**5**	**4**	**3**	**2**	**1**	**NA**
Verifies id of blood samples	*	P						
Enters designated information	*	P						
Prepares cell suspensions	*	P						
Determines ABO group a. Forward	*	P						
b. Reverse	*	P						
Determines Rh type a. Rh_o (D)	*	P						
b. D^u	*	P						
Performs antiglobulin test a. Direct	*	P						
b. Indirect	*	P						
1) Crossmatch	*	P						
2) Antibody screen	*	P						
3) Antibody id	*	P						

PROCEDURES	GC	LC	5	4	3	2	1	NA
Performs cord blood work-up a. ABO	*	P						
b. RH	*	P						
c. Direct antiglobulin test	*	P						
Selects appropriate ABO group & Rh type for crossmatch	*	P						
Determines eligibility for Rh_oIG	*	P						
Completes forms & labels	*	P						
Performs QC procedures	*	P						
Performs elution	*	O						
Assists in preparation for neonatal exchange transfusion	*	O/D						
Investigates possible transfusion reaction	*	O						
Performs Rh-hr typing other than Rh_o	*	O						
Determines subgroups of A	*	O						
Performs LISS crossmatch	*	O						
Performs crossmatch on frozen donor cell sample		O						
Assists with platelet transfusion		O						
Other (specify)								

COMMENTS:

Evaluator's Overall Rating = _____
(Based on a Letter Grade System)

TOTAL POINTS = _____
(To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____
_____ Student Date: _____
_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM
MLAB 2660/2661 CLINICAL II/III - EVALUATION FORM

AFFILIATE _____ DEPARTMENT: IMMUNOHEMATOLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: The MLT student exhibits the following characteristics regarding his/her performance in the laboratory. Please rank these characteristics according to the following scale:

0 = never (0%)
1 = occasionally (10 - 49%)
2 = part of the time (50 - 69%)
3 = majority of the time (70 - 89%)
4 = all of the time (90 - 100%)
NA = not observed

RANK: →	0	1	2	3	4	NA
ATTENDANCE: Arrives at the assigned time						
Begins work promptly						
Notifies laboratory staff of absences or tardies						
Uses good judgment in taking break-time						
Arranges make-up time for absences						
PERSONAL APPEARANCE: Maintains good personal hygiene						
Adheres to the GC MLT-AD Program Dress Code						
PROFESSIONAL ATTITUDES: Accepts constructive criticism						
Heeds suggestions and uses them						
Seeks guidance for improvement						
Displays interest and enthusiasm for work						
Displays interest in learning new procedures						
Demonstrates the following interpersonal relationships with patients and other hospital personnel: 1. Courtesy						
2. Consideration						
3. Tactfulness						
PROFESSIONAL INTEGRITY: Practices professional confidentiality						
Admits own errors						
Assists others when own work load is completed						
Informs instructor when leaving assigned area						
Accepts responsibility & performs tasks with minimum supervision						
Shows initiative in pursuing new & reinforcing old information						

RANK: →	0	1	2	3	4	NA
WORK HABITS AND TECHNICAL SKILLS: (Weighted x 3) Adheres to established procedures to confirm identity of patient and/or label specimens						
Organizes work load for priority and efficiency						
Performs each task with reasonable speed						
Performs the following with respect to each test: 1. Checks results						
2. Recognizes erroneous data and notifies supervisor						
3. Checks daily quality controls						
Performs previously learned procedures without additional instruction						
Performs the following with respect to instruments: 1. Operates, after instruction, with minimum supervision						
2. Uses logic in trouble-shooting a problem						
3. Leaves instrument in proper standby state						
4. Transposes data accurately						
Keeps work area neat, clean and orderly						

NARRATIVE: Keeping in mind that this individual is involved in a learning experience, please evaluate his/her performance as a future employee (include strong and weak aspects).

EVALUATOR'S OVERALL RATING = _____ TOTAL POINTS:= _____

(Based on a letter Grade System) (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____

_____ Student Date: _____

_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE
MLT-AD PROGRAM

Student Evaluation of Clinical Instructor and Clinical Internship Rotation

Affiliate: _____

Department: IMMUNOHEMATOLOGY (BLOOD BANK)

Clinical Instructor: _____

Student: This evaluation will be confidential. Mark an X in one box on each line. Fill out an evaluation for each instructor. Write ***NA*** if the item is not applicable. Complete front and back.

	Never	Rarely	Sometimes	Often	Always
I. The Clinical Instructor					
Encouraged student questions and comments					
Answered questions					
Was available to discuss issues related to the rotation					
Presented material relevant to the rotation					
Presented topics clearly					
Communicated effectively (speech, mannerisms, delivery)					
Provided useful feedback on performance					
Showed respect for students					
II. Instruction Methods					
Assignment of tasks was appropriate.					
Department policies and procedures stated at the beginning of the rotation were clarified throughout the rotation.					
Additional study aids were provided to support the rotation (e.g., unknowns, slides, case studies, lectures).					
Feedback from exit examination was timely.					
Feedback from professional evaluation was timely.					
This rotation increased my interest in further study of this area.					
The personnel in this department hold a positive attitude toward students and teaching.					

III. Comment on the strengths of this rotation.

IV. Suggestions for improving this rotation.

V. Comment on the strengths of your academic preparation for this rotation.

VI. Suggestions for improving your academic preparation for this rotation.

VII. Additional comments

Would you recommend this rotation to a fellow student? _____ Yes _____ No

CLINICAL INSTRUCTIONAL PLAN
SEROLOGY
MLAB 2660/2661

TERMINAL PERFORMANCE OBJECTIVES:

The student will gain practical experience performing the following procedures:

1. Rapid Plasma Reagin (RPR) or VDRL
2. Test for Rheumatoid Arthritis
3. Screening test for Infectious Mononucleosis
4. Prepare an in-depth analysis of instruments used in the serology lab

The student will observe and assist with the following as they are available:

1. Prepare and mail samples to reference lab with appropriate forms
2. VDRL - qualitative and quantitative
    a. serum
    b. spinal fluid
3. Febrile agglutinations
4. LE Latex Flocculation
5. CRP Latex Flocculation
6. Cold Agglutinin Titer
7. Streptococcal enzymes

A Performance Appraisal and a Student Check List will be completed. The Time Record for the department with which Serology is included will be utilized for the entire rotation. The Weekly Progress Report for that department should also include Serology.

DAILY OBJECTIVES

Serology objectives may be accomplished concurrently with Blood Bank objectives.

Day 1 through 15

The student will:

1. Observe a laboratory staff member demonstrating safety equipment and safety issues specific to the Serology department.
2. Observe a laboratory staff member demonstrating the role of a clinical immunologist to specifically include at least the following:
    a. Verifying identification of patient samples
    b. Entering information on serology worksheet or computer
    c. Performing serology Quality Control procedures
    d. Performing serology procedures to specifically include at least the following:

1) RPR card test
2) RA latex test
3) Screening test for Infectious Mononucleosis

3. After observing the above procedures, perform above procedures as assigned by clinical instructor with close instructor guidance and supervision.
4. Observe and assist with additional serology tests as listed in the TPOs.

Begin Evaluation

Evaluation will be a continuous process for the two tasks below.

1. Verification of patients' blood samples
   Time constraints: Immediately before testing
   Degree of accuracy: 100%
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 1

2. Enters designated information on worksheet
   Time constraints: Name - Immediately before testing
   Results - Immediately after testing
   Degree of accuracy: 100% agreement with instructor and obtained results
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 1

Continue Evaluation

1. Qualitative RPR card test (18mm circle)
   Time constraints: 30 minutes (to include sample preparation and paperwork)
   Degree of accuracy: 100% agreement with predetermined samples and known controls
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 2
   Standard of performance: As stated in procedure manual and package inserts

2. RA Latex
   Time constraints: 20 minutes (to include sample preparation and paperwork)
   Degree of accuracy: 100% agreement with predetermined samples and known controls
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 2
   Standard of performance: As stated in procedure manual and package inserts

3. Infectious Mononucleosis screening tests
   Time constraints: 20 minutes (to include sample preparation and paperwork)

Degree of accuracy: 100% agreement with predetermined samples and known controls
Minimum number of times task practiced before evaluation: 1
Maximum number of attempts allowed to perform procedure for evaluation: 2
Standard of performance: As stated in procedure manual and package inserts

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - STUDENT CHECK LIST/WEEKLY PROGRESS REPORT

AFFILIATE _____ DEPARTMENT: SEROLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Place a check mark beneath the appropriate day for each procedure observed. Place a number beneath the appropriate day for each procedure performed (1 if you performed the procedure once; 10 if you performed the procedure ten times; etc.). Progress Reports for the department in which serology tests are performed are to include the weekly progress for the Serology rotation.

PROCEDURES **DAY→**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Performs RPR (includes QC) a. Qualitative															
b. Quantitative															
Verifies ID of blood samples															
Enters designated information															
Performs the following tests (specify) (includes QC) a. RA test															
b. IM test															
c. CRP															
d. LE test															
e. Cold agglutinins															
f. Streptococcal enzymes															
g. Febrile Agglutination															
Performs VDRL (includes QC) a. Serum															
b. Spinal Fluid															
Prepares & mails samples															
Other															

WEEKLY PROGRESS REPORTS

INSTRUCTIONS: Clinical instructors; please indicate the student's performance to date in the following areas by circling the appropriate letter code.

CODE: S = satisfactory NI = needs improvement

	Week # 1		Week # 2		Week # 3		COMMENTS:
ARRIVES & LEAVES ON TIME	S	NI	S	NI	S	NI	
ATTITUDE/CONDUCT	S	NI	S	NI	S	NI	
ADJUSTMENT TO CLINICAL SITUATION	S	NI	S	NI	S	NI	
PROGRESS OF PROCEDURES PERFORMED:							
QUANTITY	S	NI	S	NI	S	NI	
QUALITY	S	NI	S	NI	S	NI	
COMPLETION OF OUTSIDE ASSIGNMENTS	S	NI	S	NI	S	NI	
CLINICAL INSTRUCTOR INITIALS / DATE	_____		_____		_____		
STUDENT INITIALS / DATE	_____		_____		_____		
MLT FACULTY INITIALS / DATE	_____		_____		_____		

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - PERFORMANCE APPRAISAL

AFFILIATE _____ DEPARTMENT: SEROLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Observe the student's performance of the skills/procedures listed below. Using the Scale Key given below, indicate your evaluation of the student's performance in the column labeled IE. Columns labeled GC and LC are explained in the Performance Code. Comments may be made on an additional sheet of paper.

PERFORMANCE CODE:
- GC * = performed/discussed in Campus Lab
- LC = level of competence upon completion of rotation as follows:
  - P = performed with minimal or no supervision
  - D = demonstration only
  - O = optional - perform at least once if available
- IE = instructor's evaluation of student's level of achievement

SCALE KEY
- 5 = Performed independently within time limit and standard of performance stated in Instructional Plan and/or Procedure Manual (IP and/or PM)
- 4 = Required minimum guidance to perform within time limit and standard of performance stated in IP and/or PM
- 3 = Required moderate guidance to perform within time limit and standard of performance stated in IP and/or PM
- 2 = Required intensive guidance to perform within time limit and standard of performance stated/exhibited potential to improve
- 1 = Required constant guidance/was unable to perform/potential questionable
- NA = Procedure not available

			IE					
PROCEDURES	**GC**	**LC**	**5**	**4**	**3**	**2**	**1**	**NA**
Performs RPR (includes QC) a. Qualitative	*	P						
b. Quantitative	*	O						
Verifies ID of blood samples	*	P						
Enters designated information	*	P						
Performs the following tests (specify) (includes QC) a. RA test	*	P						
b. Infectious mononucleosis	*	P						
c. LE test	*	O						
d. CRP	*	O						
e. Cold agglutinin titer	*	O						
f. Streptococcal enzymes	*	O						
g. Febrile agglutination	*	O						
Performs VDRL (includes QC)	*	O						
a. Serum	*	O						
b. Spinal fluid	*	O						
Prepares & mails samples	*	O						
Other								

COMMENTS:

Evaluator's Overall Rating = _____ TOTAL POINTS = _____
(Based on a Letter Grade System) (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____
_____ Student Date: _____
_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation	50%
Performance Appraisal	50%

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM
MLAB 2660/2661 CLINICAL II/III - EVALUATION FORM

AFFILIATE _____ DEPARTMENT: SEROLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: The MLT student exhibits the following characteristics regarding his/her performance in the laboratory. Please rank these characteristics according to the following scale:

0 = never (0%)
1 = occasionally (10 - 49%)
2 = part of the time (50 - 69%)
3 = majority of the time (70 - 89%)
4 = all of the time (90 - 100%)
NA = not observed

RANK: →	0	1	2	3	4	NA
ATTENDANCE: Arrives at the assigned time						
Begins work promptly						
Notifies laboratory staff of absences or tardies						
Uses good judgment in taking break-time						
Arranges make-up time for absences						
PERSONAL APPEARANCE: Maintains good personal hygiene						
Adheres to the GC MLT-AD Program Dress Code						
PROFESSIONAL ATTITUDES: Accepts constructive criticism						
Heeds suggestions and uses them						
Seeks guidance for improvement						
Displays interest and enthusiasm for work						
Displays interest in learning new procedures						
Demonstrates the following interpersonal relationships with patients and other hospital personnel: 1. Courtesy						
2. Consideration						
3. Tactfulness						
PROFESSIONAL INTEGRITY: Practices professional confidentiality						
Admits own errors						
Assists others when own work load is completed						
Informs instructor when leaving assigned area						
Accepts responsibility & performs tasks with minimum supervision						
Shows initiative in pursuing new & reinforcing old information						

RANK: →	0	1	2	3	4	NA
WORK HABITS AND TECHNICAL SKILLS: (Weighted x 3) Adheres to established procedures to confirm identity of patient and/or label specimens						
Organizes work load for priority and efficiency						
Performs each task with reasonable speed						
Performs the following with respect to each test: 1. Checks results						
2. Recognizes erroneous data and notifies supervisor						
3. Checks daily quality controls						
Performs previously learned procedures without additional instruction						
Performs the following with respect to instruments: 1. Operates, after instruction, with minimum supervision						
2. Uses logic in trouble-shooting a problem						
3. Leaves instrument in proper standby state						
4. Transposes data accurately						
Keeps work area neat, clean and orderly						

NARRATIVE: Keeping in mind that this individual is involved in a learning experience, please evaluate his/her performance as a future employee (include strong and weak aspects).

EVALUATOR'S OVERALL RATING = _____ TOTAL POINTS:= _____

(Based on a letter Grade System) (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____

_____ Student Date: _____

_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE
MLT-AD PROGRAM

Student Evaluation of Clinical Instructor and Clinical Internship Rotation

Affiliate: _____

Department: SEROLOGY

Clinical Instructor: _____

Student: This evaluation will be confidential. Mark an X in one box on each line. Fill out an evaluation for each instructor. Write ***NA*** if the item is not applicable. Complete front and back.

	Never	Rarely	Sometimes	Often	Always
I. The Clinical Instructor					
Encouraged student questions and comments					
Answered questions					
Was available to discuss issues related to the rotation					
Presented material relevant to the rotation					
Presented topics clearly					
Communicated effectively (speech, mannerisms, delivery)					
Provided useful feedback on performance					
Showed respect for students					
II. Instruction Methods					
Assignment of tasks was appropriate.					
Department policies and procedures stated at the beginning of the rotation were clarified throughout the rotation.					
Additional study aids were provided to support the rotation (e.g., unknowns, slides, case studies, lectures).					
Feedback from exit examination was timely.					
Feedback from professional evaluation was timely.					
This rotation increased my interest in further study of this area.					
The personnel in this department hold a positive attitude toward students and teaching.					

III. Comment on the strengths of this rotation.

IV. Suggestions for improving this rotation.

V. Comment on the strengths of your academic preparation for this rotation.

VI. Suggestions for improving your academic preparation for this rotation.

VII. Additional comments

Would you recommend this rotation to a fellow student? _____ Yes _____ No

CLINICAL INSTRUCTIONAL PLAN
CHEMISTRY
MLAB 2660/2661

TERMINAL PERFORMANCE OBJECTIVES:

The student will gain practical experience performing the following procedures:

1. Use (semi) automated instruments according to written protocol from procedure manual.
2. Prepare specimens for analysis.
3. Evaluate specimens for appearance (e.g., hemolysis, lipemia, icteria).
4. Record results on laboratory report forms or computers.
5. Measure volume with
   a. Pipets
   b. Micropipettors
   c. Graduated cylinders
   d. Reagent dispensers
6. Prepare an in-depth analysis of each instrument used in the chemistry department.

The student will observe and assist with the following procedures as they are available:

1. Other chemical analyses (e.g., electrophoresis, thyroid function test, drug assays, and blood gases -- **THE STUDENT WILL NOT PERFORM ARTERIAL PUNCTURES**
2. Preventive instrument maintenance and troubleshooting
3. Participate in quality control program

The staff members of the chemistry department of the clinical affiliate should determine in what order the instruments will be demonstrated to the student. The clinical instructor shall determine to what extent the student will be allowed to operate a given instrument (e.g., supervised, unsupervised).

DAILY OBJECTIVES

Day 1 - Orientation and Observation

The student will:
1. Observe a laboratory staff member demonstrating safety equipment and safety issues specific to the Chemistry department.
2. Observe a laboratory staff member demonstrating the role of a clinical chemist to specifically include at least the following:
   a. Verifying identification of patient samples.
   b. Preparing specimens for analysis.
   c. Evaluating specimens for appearance.

d. Entering information on chemistry worksheet or computer.
e. Recording results on laboratory report forms or computers.
f. Operating automated instruments.
g. Performing quality control procedures.

3. Study procedure manuals as instructed by clinical instructor.

Day 2 through 15

The student will:

1. Continue as for Day 1.
2. Operate automated instruments after observation and with close supervision as allowed by clinical instructor.
3. Observe and assist with preventive instrument maintenance and troubleshooting.
4. Measure volume with various measuring devices.

Begin Evaluation

Evaluation will be a continuous process for the tasks below throughout the clinical experience.

1. Verify identification of patients' blood samples.
   Time constraints: Immediately before testing
   Degree of accuracy: 100%
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 1

2. Prepare/evaluate specimens for analysis/appearance.
   Time constraints: None
   Degree of accuracy: 100% agreement with instructor as to amount and condition of specimen adequate for analysis.
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 1

3. Enters designated information on worksheet or computer.
   Time constraints: As demonstrated
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 1

4. *Operates automated instruments.
   Time constraints: As stated in the Procedure Manual
   Degree of accuracy: 100% agreement with instructor
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 2

*Instruments should be listed on the Student Check List and on the Performance Appraisal Form.

Day 15

The student will:

1. Complete evaluation as needed.
2. Take exit exam.
3. Complete clinical forms and receive final evaluation from clinical instructor.

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - STUDENT CHECK LIST/WEEKLY PROGRESS REPORT

AFFILIATE _____ DEPARTMENT: CHEMISTRY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Place a check mark beneath the appropriate day for each procedure observed. Place a number beneath the appropriate day for each procedure performed (1 if you performed the procedure once; 10 if you performed the procedure ten times; etc.). Have your clinical instructor fill out the Weekly Progress Report on the last day of each week. Bring these to Clinical Conference.

PROCEDURE **DAY→**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Verifies ID of samples															
Prepares/evaluates specimens															
Enters designated information															
Records results															
Performs QC procedures															
Prepares reagents															
Prepares controls															
Assists with Glucose tolerance															
Calculations: a. Creatinine clearance															
b. Urea clearance															
c. A Gap (anion/cation balance)															
d. A/G Ratio															
Uses various measuring devices															
Calibrates micropipettors															
Operates instruments according to written protocol (includes QC)															

PROCEDURES DAY →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PLEASE SPECIFY INSTRUMENTS AT THIS CLINICAL SITE															

WEEKLY PROGRESS REPORTS

INSTRUCTIONS: Clinical instructors; please indicate the student's performance to date in the following areas by circling the appropriate letter code.

CODE: S = satisfactory NI = needs improvement

	Week # 1		Week # 2		Week # 3		COMMENTS:
ARRIVES & LEAVES ON TIME	S	NI	S	NI	S	NI	
ATTITUDE/CONDUCT	S	NI	S	NI	S	NI	
ADJUSTMENT TO CLINICAL SITUATION	S	NI	S	NI	S	NI	
PROGRESS OF PROCEDURES PERFORMED:							
QUANTITY	S	NI	S	NI	S	NI	
QUALITY	S	NI	S	NI	S	NI	
COMPLETION OF OUTSIDE ASSIGNMENTS	S	NI	S	NI	S	NI	

CLINICAL INSTRUCTOR INITIALS / DATE _____ _____ _____

STUDENT INITIALS / DATE _____ _____ _____

MLT FACULTY INITIALS / DATE _____ _____ _____

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - PERFORMANCE APPRAISAL

AFFILIATE _____ DEPARTMENT: CHEMISTRY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Observe the student's performance of the skills/procedures listed below. Using the Scale Key given below, indicate your evaluation of the student's performance in the column labeled IE. Columns labeled GC and LC are explained in the Performance Code. Comments may be made on an additional sheet of paper.

PERFORMANCE CODE:
- GC * = performed/discussed in Campus Lab
- LC = level of competence upon completion of rotation as follows:
  - P = performed with minimal or no supervision
  - D = demonstration only
  - O = optional - perform at least once if available
- IE = instructor's evaluation of student's level of achievement

SCALE KEY

5 = Performed independently within time limit and standard of performance stated in Instructional Plan and/or Procedure Manual (IP and/or PM)
4 = Required minimum guidance to perform within time limit and standard of performance stated in IP and/or PM
3 = Required moderate guidance to perform within time limit and standard of performance stated in IP and/or PM
2 = Required intensive guidance to perform within time limit and standard of performance stated/exhibited potential to improve
1 = Required constant guidance/was unable to perform/potential questionable
NA = Procedure not available

			IE					
PROCEDURES	**GC**	**LC**	**5**	**4**	**3**	**2**	**1**	**NA**
Verifies ID of samples	*	P						
Prepares/evaluate specimens	*	P						
Enters designated information	*	P						
Records results	*	P						
Performs QC procedures	*	P						
Prepares reagents	*	P						
Prepares controls	*	P						
Assists with Glucose tolerance	*	O						
Calculations: a. Creatinine clearance	*	O						
b. Urea clearance	*	O						
c. Anion Gap (anion/cation balance)	*	O						
d. A/G Ratio	*	O						
Uses various measuring devices	*	O						
Operates instruments according to written protocol (includes QC)		P						

			IE					
PROCEDURES	**GC**	**LC**	**5**	**4**	**3**	**2**	**1**	**NA**
PLEASE SPECIFY INSTRUMENTS AT THIS CLINICAL SITE								

COMMENTS:

Evaluator's Overall Rating = _____
(Based on a Letter Grade System)

TOTAL POINTS = _____
(To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____
_____ Student Date: _____
_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM
MLAB 2660/2661 CLINICAL II/III - EVALUATION FORM

AFFILIATE _____ DEPARTMENT: CHEMISTRY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: The MLT student exhibits the following characteristics regarding his/her performance in the laboratory. Please rank these characteristics according to the following scale:

0 = never (0%)
1 = occasionally (10 - 49%)
2 = part of the time (50 - 69%)
3 = majority of the time (70 - 89%)
4 = all of the time (90 - 100%)
NA = not observed

RANK: →	0	1	2	3	4	NA
ATTENDANCE: Arrives at the assigned time						
Begins work promptly						
Notifies laboratory staff of absences or tardies						
Uses good judgment in taking break-time						
Arranges make-up time for absences						
PERSONAL APPEARANCE: Maintains good personal hygiene						
Adheres to the GC MLT-AD Program Dress Code						
PROFESSIONAL ATTITUDES: Accepts constructive criticism						
Heeds suggestions and uses them						
Seeks guidance for improvement						
Displays interest and enthusiasm for work						
Displays interest in learning new procedures						
Demonstrates the following interpersonal relationships with patients and other hospital personnel: 1. Courtesy						
2. Consideration						
3. Tactfulness						
PROFESSIONAL INTEGRITY: Practices professional confidentiality						
Admits own errors						
Assists others when own work load is completed						
Informs instructor when leaving assigned area						
Accepts responsibility & performs tasks with minimum supervision						
Shows initiative in pursuing new & reinforcing old information						

RANK: →	0	1	2	3	4	NA
WORK HABITS AND TECHNICAL SKILLS: (Weighted x 3) Adheres to established procedures to confirm identity of patient and/or label specimens						
Organizes work load for priority and efficiency						
Performs each task with reasonable speed						
Performs the following with respect to each test: 1. Checks results						
2. Recognizes erroneous data and notifies supervisor						
3. Checks daily quality controls						
Performs previously learned procedures without additional instruction						
Performs the following with respect to instruments: 1. Operates, after instruction, with minimum supervision						
2. Uses logic in trouble-shooting a problem						
3. Leaves instrument in proper standby state						
4. Transposes data accurately						
Keeps work area neat, clean and orderly						

NARRATIVE: Keeping in mind that this individual is involved in a learning experience, please evaluate his/her performance as a future employee (include strong and weak aspects).

EVALUATOR'S OVERALL RATING = _____ TOTAL POINTS:= _____

(Based on a letter Grade System) (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____

_____ Student Date: _____

_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE
MLT-AD PROGRAM

Student Evaluation of Clinical Instructor and Clinical Internship Rotation

Affiliate: _____

Department: CHEMISTRY

Clinical Instructor: _____

Student: This evaluation will be confidential. Mark an X in one box on each line. Fill out an evaluation for each instructor. Write ***NA*** if the item is not applicable. Complete front and back.

	Never	Rarely	Sometimes	Often	Always
I. The Clinical Instructor					
Encouraged student questions and comments					
Answered questions					
Was available to discuss issues related to the rotation					
Presented material relevant to the rotation					
Presented topics clearly					
Communicated effectively (speech, mannerisms, delivery)					
Provided useful feedback on performance					
Showed respect for students					
II. Instruction Methods					
Assignment of tasks was appropriate.					
Department policies and procedures stated at the beginning of the rotation were clarified throughout the rotation.					
Additional study aids were provided to support the rotation (e.g., unknowns, slides, case studies, lectures).					
Feedback from exit examination was timely.					
Feedback from professional evaluation was timely.					
This rotation increased my interest in further study of this area.					
The personnel in this department hold a positive attitude toward students and teaching.					

III. Comment on the strengths of this rotation.

IV. Suggestions for improving this rotation.

V. Comment on the strengths of your academic preparation for this rotation.

VI. Suggestions for improving your academic preparation for this rotation.

VII. Additional comments

Would you recommend this rotation to a fellow student? _____ Yes _____ No

CLINICAL INSTRUCTIONAL PLAN
HEMATOLOGY
MLAB 2660/2661

TERMINAL PERFORMANCE OBJECTIVES:

The student will gain practical experience performing the following procedures:

1. Use automated instruments according to written protocol from procedure manuals.
    a. Complete blood count
    b. Platelet count
    c. Slide staining
2. Sedimentation rate
3. Reticulocyte count
4. Leukocyte differential
    a. Recognize and count "normal" leukocytes.
    b. Estimate number of platelets.
    c. Estimate total white cell count.
    d. Evaluate erythrocyte morphology.
    e. Refer unusual slides to clinical instructor.
5. Enter designated information on hematology worksheet or computer.
6. Review results in computer.
7. Experience the pace, stress and responsibility of performing tests in a hospital laboratory setting.

The student will observe, assist and practice (when available) identifying blood smear slides as consistent with diseases to include at least the following:

1. Pernicious anemia (e.g., macrocytes, hypersegmented WBCs, decreased platelets)
2. Iron deficiency anemia
3. Acute and chronic leukemia
4. Infectious mononucleosis
5. Sickle cell anemia
7. Malaria
8. Recognize, review and/or report (when allowed)
    a. Platelets: Increase/decrease as well as large forms
    b. Nucleated erythrocytes
    c. Plasma cells

The student will observe and assist with the following procedures as they are available:

1. Dilution of small samples
2. Solubility test for HbS
3. Test for LE
4. RBC fragility
5. Quality Control
6. Routine preventive instrument maintenance
7. Eosinophil count
8. Body fluid counts
9. Bone marrow
10. Special stains

DAILY OBJECTIVES

Coagulation and Urinalysis rotations will be concurrent with Hematology.

Day 1 - Orientation and Observation

The student will:

1. Observe a laboratory staff member demonstrating safety equipment and safety issues specific to the Hematology department.
2. Observe a laboratory staff member demonstrating the role of a clinical hematologist to specifically include at least the following:
   a. Verifying identification of patient samples
   b. Entering information on hematology worksheet or computer
   c. Performing hematology procedures including quality control
   d. Operating slide stainer
   e. Completing report forms
2. Become familiar with the location of reference material, hematology departmental manual and equipment manuals
3. Read the manuals in #2 above
4. Review, observe and practice slide preparation
5. After observing the operation of the slide stainer, operate the slide stainer with close instructor guidance and supervision

Begin Evaluation

Evaluation will be a continuous process for the two tasks below throughout the clinical experience.

1. Verify identification of patients' blood samples.
   Time constraints: Immediately before testing
   Degree of accuracy: 100%
   Minimum number of times task practiced before evaluation: 1

Maximum number of attempts allowed to perform procedure for evaluation: 1

Day 2

The student will:

1. Observe a laboratory staff member demonstrating the role of a clinical hematologist specifically to include at least the following:

a. Operation of the automated cell counter (e.g. morning set-up, run, shut-down, etc.)
b. Platelet count
c. Sedimentation rate (ESR)
d. Reticulocyte count

2. Review and practice setting up cell counts, ESRs, reticulocyte counts and operating the slide stainer with close instructor guidance and supervision.
3. Be prepared to discuss quality control and "panic" values in hematology.
4. Review first day's clinical instruction.

Day 3

The student will:

1. Observe a laboratory staff member demonstrating the role of a clinical hematologist.
2. Review and practice with close instructor guidance and supervision.
   a. Operation of the automated cell counter (See 1a above under Day 2)
   b. Platelet count
   c. ESR
   d. Reticulocyte count
   e. "Normal" slide differentials
3. Prepare blood slides and operate slide stainer with need for minimal instructor guidance and involvement in decision making processes.

<u>Continue Evaluation</u>

1. Slide staining using automated stainer
   Time constraints: None
   Degree of accuracy: 100%
   Minimum number of times task practiced before evaluation:

Slides available in two clinical sessions
Maximum number of attempts allowed to perform procedure for evaluation: 2
Use of the procedure manuals will not be allowed.

Day 4

The student will:

1. Observe a laboratory staff member demonstrating the role of a clinical hematologist specifically to include at least the performance of cerebrospinal fluid counting.
2. Perform the following procedures with minimal instructor guidance and involvement in decision making processes:
   a. Operation of the automated cell counter
   b. Slide preparation and staining
   c. Platelet count
   d. ESR
   e. Reticulocyte count
   f. Normal slide differentials
3. Practice cerebrospinal fluid count.
4. Review previous days' instruction as time allows.

Day 5

The student will:

1. Continue to observe laboratory staff members performing hematology testing.
2. Perform routine hematology procedures with minimal instructor guidance and involvement in decision making processes.
3. Practice abnormal slide differentials.
4. Review previous days' instruction as time allows.

<u>Continue Evaluation</u>

1. Automated cell counts - CBC & Platelets
   Time constraints: None
   Degree of accuracy: +/-2s agreement with predetermined results
   Minimum number of times task practiced before evaluation: Counts available in four clinical sessions or a minimum of 50 counts
   Maximum number of attempts allowed to perform procedure for evaluation: 2
   Use of the procedure manual will not be allowed

2. Sedimentation rate
   Time constraints: 5 minutes to set up; 1 minute to read
   Degree of accuracy: +/-2mm of predetermined results
   Minimum number of times task practiced before evaluation: 5

Maximum number of attempts allowed to perform procedure for evaluation: 2
Use of the procedure manual will not be allowed.

Evaluation will be a continuous process for the task below throughout the remainder of the clinical rotation.

3. Reviews results in computer.
   Time constraints: Immediately after completing all tests in a "run"
   Degree of accuracy: 100% agreement with obtained results recorded in computer
   External criteria source: Laboratory staff members
   Minimum number of times task practiced before evaluation:
   Results available in four clinical sessions
   Maximum number of attempts allowed to perform procedure: 2

Days 6 through 20

The student will:

1. Continue to observe laboratory staff members performing the role of clinical hematologists.
2. Perform routine hematology procedures with minimal instructor guidance and involvement in decision making processes.
3. Practice abnormal slide differentials.
4. Review previous days' instruction as time allows.

In addition to the objectives outlined above, the following daily objectives will apply:

Day 7

Observe a laboratory staff member performing preventive maintenance on the automated cell counter.

Day 8

1. Discuss special hematology tests.
   a. Tests for LE
   b. Leukocyte alkaline phosphatase and other special stains
   c. Osmotic fragility
   d. Total eosinophil count
   e. Bone marrow
2. Observe and assist with special tests as they are available.

Day 9
1. Practice performing preventive maintenance with supervision.

2. Observe and assist with special tests as they are available.

Continue Evaluation

1. Leukocyte differential
   Provided: A set of 5 stained slides with previously determined results
   Time constraints: 30 minutes for the set of 5 slides
   Degree of accuracy: Results within a predetermined range obtained by having 1 or more Clinical Instructors perform the differentials
   Minimum number of times task practiced before evaluation: 40
   Maximum number of attempts allowed to perform procedure for evaluation: 3
   Use of the procedure manual will not be allowed.

Day 10

1. Discuss anemias and leukemias.
2. Study case history slides and attempt to match findings with the disease state.
3. Observe and assist with special tests as they are available.

Continue Evaluation

1. Reticulocyte count - New Methylene Blue Stain
   Time constraints: 30 minutes
   Degree of accuracy: Results within a predetermined range obtained by having 5 or more Clinical Instructors perform the retic count
   Provided: Stained slides with previously determined results
   Minimum number of times task practiced before evaluation: 5
   Maximum number of attempts allowed to perform procedure for evaluation: 2

Day 11

Discuss back-up procedures

Day 12-20

Continue as before

Day 20

1. Complete evaluation as needed.
2. Take exit exam.
3. Complete clinical forms.
4. Complete heading on Student Evaluation and Performance Appraisal, give to appropriate staff, and ensure completed evaluations are returned, in a timely manner, to GC staff.

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - STUDENT CHECK LIST/WEEKLY PROGRESS REPORT

AFFILIATE _____ DEPARTMENT: HEMATOLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Place a check mark beneath the appropriate day for each procedure observed. Place a number beneath the appropriate day for each procedure performed (1 if you performed the procedure once: 10 if you performed the procedure ten times; etc.). Have your clinical instructor fill out the Weekly Progress Report on the last day of each week. Bring these to Clinical Conference.

PROCEDURES DAY →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Verifies ID of specimens																				
Enters designated information																				
Records results																				
Operates slide stainer																				
Operates automated cell counter RBC Hgb Indices																				
WBC Hct Platelet QC																				
Performs differential (Normal)																				
Prepares smears																				
Evaluates smears morphology																				
Evaluates Platelets																				
Correction of WBC for NRBC																				
Performs following tests: Sedimentation rate																				
Reticulocyte count																				
Sickle cell prep																				
Special stains (specify)																				
Tests for LE																				
Osmotic fragility																				
Body fluid cell counts (specify)																				
Eosinophil count																				
Observes bone marrow collection																				

PROCEDURES DAY →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Stains bone marrow smears																				
Identifies blood smears as consistent with the following diseases: Pernicious anemia																				
Iron deficiency anemia																				
Leukemia: Acute & Chronic Lymphocytic & Granulocytic																				
Infectious mononucleosis																				
Sickle cell anemia																				
Tests for LE																				
Malaria																				
Recognizes & reports: Platelets: Increase/ decrease/large forms																				
NRBCs																				
Plasma cells																				
Participate in QC for department																				
Other tests:																				

WEEKLY PROGRESS REPORTS

INSTRUCTIONS: Clinical instructors; please indicate the student's performance to date in the following areas by circling the appropriate letter code.

CODE: S = satisfactory NI = needs improvement

	Week # 1		Week # 2		Week # 3		Week # 4		COMMENTS:
ARRIVES & LEAVES ON TIME	S	NI	S	NI	S	NI	S	NI	
ATTITUDE/CONDUCT	S	NI	S	NI	S	NI	S	NI	
ADJUSTMENT TO CLINICAL SITUATION	S	NI	S	NI	S	NI	S	NI	
PROGRESS OF PROCEDURES PERFORMED:									
QUANTITY	S	NI	S	NI	S	NI	S	NI	
QUALITY	S	NI	S	NI	S	NI	S	NI	
COMPLETION OF OUTSIDE ASSIGNMENTS	S	NI	S	NI	S	NI	S	NI	

CLINICAL INSTRUCTOR INITIALS / DATE _____ _____ _____ _____

STUDENT INITIALS / DATE _____ _____ _____ _____

MLT FACULTY INITIALS / DATE _____ _____ _____ _____

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - PERFORMANCE APPRAISAL

AFFILIATE _____ DEPARTMENT: HEMATOLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Observe the student's performance of the skills/procedures listed below. Using the Scale Key given below, indicate your evaluation of the student's performance in the column labeled IE. Columns labeled GC and LC are explained in the Performance Code. Comments may be made on an additional sheet of paper.

PERFORMANCE CODE:
- GC * = performed/discussed in Campus Lab
- LC = level of competence upon completion
  - P = performed with minimal or no supervision
  - D = demonstration only
  - O = optional - perform at least once if available
- IE = instructor's evaluation of student's level of achievement

SCALE KEY
- 5 = Performed independently within time limit and standard of performance stated in Instructional Plan and/or Procedure Manual (IP and/or PM)
- 4 = Required minimum guidance to perform within time limit and standard of performance stated in IP and/or PM
- 3 = Required moderate guidance to perform within time limit and standard of performance stated in IP and/or PM
- 2 = Required intensive guidance to perform within time limit and standard of performance stated/exhibited potential to improve
- 1 = Required constant guidance/was unable to perform/potential questionable
- NA = Procedure not available

			IE					
PROCEDURES	**GC**	**LC**	5	4	3	2	1	NA
Verifies ID of specimens	*	P						
Enters designated information	*	P						
Records results	*	P						
Operates slide stainer	*	P						
Operates automated cell counter RBC Hgb Indices	*	P						
WBC Hct Platelet	*	P						
Performs differential (Normal)	*	P						
Prepares smear	*	P						
Evaluates RBC morphology	*	P						
Evaluates Platelet numbers & morphology	*	P						
Correction of WBC for NRBC	*	P						
Performs following tests: Sedimentation rate	*	P						
Reticulocyte count	*	P						
Sickle cell prep	*	O						
Special stains (specify)	*	O						

IE

PROCEDURES	GC	LC	5	4	3	2	1	NA
Tests for LE	*	O						
Osmotic fragility	*	O						
Body fluid cell counts: (specify) CSF, Semen, Pleural, Synovial	*	O						
Eosinophil count	*	O						
Observes bone marrow collection		D						
Stains bone marrow smears	*	O						
Identifies blood smears as consistent with the following diseases: Pernicious anemia	*	O						
Iron deficiency anemia	*	O						
Leukemia: Acute & Chronic Lymphocytic & Granulocytic	*	O						
Infectious mononucleosis	*	O						
Sickle cell anemia	*	O						
Tests for LE	*	O						
Malaria	*	O						
Recognizes & reports: Platelets: Increase/decrease/largeforms	*	O						
NRBC's	*	O						
Plasma cells	*	O						
Participates in QC for department	*	O						
Other tests:								

COMMENTS:

Evaluator's Overall Rating = _____ (Based on a Letter Grade System)

Exit Exam Grade = _____ (Numerical Grade)

TOTAL POINTS = _____ (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____
_____ Student Date: _____
_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM
MLAB 2660/2661 CLINICAL II/III - EVALUATION FORM

AFFILIATE _____ DEPARTMENT: HEMATOLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: The MLT student exhibits the following characteristics regarding his/her performance in the laboratory. Please rank these characteristics according to the following scale:

0 = never (0%)
1 = occasionally (10 - 49%)
2 = part of the time (50 - 69%)
3 = majority of the time (70 - 89%)
4 = all of the time (90 - 100%)
NA = not observed

RANK: →	0	1	2	3	4	NA
ATTENDANCE: Arrives at the assigned time						
Begins work promptly						
Notifies laboratory staff of absences or tardies						
Uses good judgment in taking break-time						
Arranges make-up time for absences						
PERSONAL APPEARANCE: Maintains good personal hygiene						
Adheres to the GC MLT-AD Program Dress Code						
PROFESSIONAL ATTITUDES: Accepts constructive criticism						
Heeds suggestions and uses them						
Seeks guidance for improvement						
Displays interest and enthusiasm for work						
Displays interest in learning new procedures						
Demonstrates the following interpersonal relationships with patients and other hospital personnel: 1. Courtesy						
2. Consideration						
3. Tactfulness						
PROFESSIONAL INTEGRITY: Practices professional confidentiality						
Admits own errors						
Assists others when own work load is completed						
Informs instructor when leaving assigned area						
Accepts responsibility & performs tasks with minimum supervision						
Shows initiative in pursuing new & reinforcing old information						

RANK: →	0	1	2	3	4	NA
WORK HABITS AND TECHNICAL SKILLS: (Weighted x 3) Adheres to established procedures to confirm identity of patient and/or label specimens						
Organizes work load for priority and efficiency						
Performs each task with reasonable speed						
Performs the following with respect to each test: 1. Checks results						
2. Recognizes erroneous data and notifies supervisor						
3. Checks daily quality controls						
Performs previously learned procedures without additional instruction						
Performs the following with respect to instruments: 1. Operates, after instruction, with minimum supervision						
2. Uses logic in trouble-shooting a problem						
3. Leaves instrument in proper standby state						
4. Transposes data accurately						
Keeps work area neat, clean and orderly						

NARRATIVE: Keeping in mind that this individual is involved in a learning experience, please evaluate his/her performance as a future employee (include strong and weak aspects).

EVALUATOR'S OVERALL RATING = _____ TOTAL POINTS:= _____

(Based on a letter Grade System) (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____

_____ Student Date: _____

_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE
MLT-AD PROGRAM

Student Evaluation of Clinical Instructor and Clinical Internship Rotation

Affiliate: _____

Department: HEMATOLOGY

Clinical Instructor: _____

Student: This evaluation will be confidential. Mark an X in one box on each line. Fill out an evaluation for each instructor. Write ***NA*** if the item is not applicable. Complete front and back.

	Never	Rarely	Sometimes	Often	Always
I. The Clinical Instructor					
Encouraged student questions and comments					
Answered questions					
Was available to discuss issues related to the rotation					
Presented material relevant to the rotation					
Presented topics clearly					
Communicated effectively (speech, mannerisms, delivery)					
Provided useful feedback on performance					
Showed respect for students					
II. Instruction Methods					
Assignment of tasks was appropriate.					
Department policies and procedures stated at the beginning of the rotation were clarified throughout the rotation.					
Additional study aids were provided to support the rotation (e.g., unknowns, slides, case studies, lectures).					
Feedback from exit examination was timely.					
Feedback from professional evaluation was timely.					
This rotation increased my interest in further study of this area.					
The personnel in this department hold a positive attitude toward students and teaching.					

III. Comment on the strengths of this rotation.

IV. Suggestions for improving this rotation.

V. Comment on the strengths of your academic preparation for this rotation.

VI. Suggestions for improving your academic preparation for this rotation.

VII. Additional comments

Would you recommend this rotation to a fellow student? _____ Yes _____ No

CLINICAL INSTRUCTIONAL PLAN
COAGULATION
MLAB 2660/2661

TERMINAL PERFORMANCE OBJECTIVES:

The student will gain practical experience performing the following procedures:
1. Prothrombin Time (PT)
2. Activated Partial Thromboplastin Time (APTT)
3. Bleeding Time

The student will observe and assist with the following as they are available:
1. D-Dimer
2. Clotting Time (ACT)
3. Fibrinogen
4. Fibrin Degradation Products
5. Thrombin Time
6. Quality Control

DAILY OBJECTIVES

Coagulation objectives will be accomplished concurrently with Hematology and Urinalysis objectives.

Day 1

The student will:

1. Observe a laboratory staff member demonstrating safety equipment and safety issues specific to the Coagulation department.

2. Observe laboratory staff members performing coagulation procedures.

3. Perform PT and APTT tests on previously determined samples with close instructor guidance and involvement in decision making processes.

Formative evaluation will be provided on days one through seven.

Day 2 through 7

The student will:

1. Perform PT and APTT tests, enter designated information on the coagulation worksheet or computer, record results on the laboratory request form or computer. Other tests will be performed as available.

2. Should demonstrate a need for less instructor guidance and involvement in decision making processes as the clinical rotation progresses. By day three the student should perform PT and APTT tests with minimum supervision.

3. Should participate in the program of quality control.

Day 8 through 9

Begin summative evaluation:

1. By day Eight (8) of this clinical rotation, the student will enter information designated by laboratory staff member on the departmental worksheet or computer.

   Time constraints: Immediately after testing completed
   Degree of accuracy: 100% agreement with obtained results
   External criteria source: Laboratory staff members
   Minimum number of times task performed before summative evaluation: 10
   Practical performance will be checked by laboratory staff member
   Maximum number of attempts allowed for student to perform task on summative evaluation day: 2

2. By day eight (8) of this clinical rotation, the student will record results on laboratory request forms or computer.

   Time constraints: Immediately after completing all tests in a "run"
   Degree of accuracy: 100% agreement with obtained results
   External criteria source: laboratory staff members
   Minimum number of times task performed before summative evaluation: 10
   Practical performance will be checked by laboratory staff member
   Maximum number of attempts allowed for student to perform task on summative evaluation day: 2

3. The student will perform PT and APTT tests, enter designated information on the coagulation worksheet or computer, record results on the laboratory request form or computer with minimal supervision.

4. The student will perform PT and APTT tests, enter designated information on the coagulation worksheet, record results on the laboratory request form or computer without assistance.

5. By day eight (8) of this rotation, the student will perform prothrombin times without the assistance of an instructor or the procedure manual.

   Time constraints: 15 minutes per sample to include centrifugation, incubation, test performance paperwork

Degree of accuracy required: duplicate samples, results within 0.5 seconds
Unknown, + 1 second of previously determined sample
External criteria source: package insert, procedure manual
Minimum number of tests to be performed by the student before summative evaluation: 10 patients
Practical performance will be checked by laboratory staff member
Maximum number of attempts allowed for student to perform procedure on summative evaluation: 2

CLINICAL INSTRUCTION PLAN
URINALYSIS
MLAB 2660/2661

TERMINAL PERFORMANCE OBJECTIVES:

The student will gain practical experience performing the following procedures:

1. Physical examination
    a. Determine specific gravity
    b. Describe color
    c. Describe character
2. Chemical examination using reagent strips
3. Microscopic examination
    Identify and record average range per field.
    a. Erythrocytes
    b. Leukocytes
    c. Casts
        1. Hyaline
        2. Fine granular
        3. Coarse granular
    d. Mucus threads
    e. Bacteria
    f. Epithelial cells
    g. Crystals
        1. Amorphous
        2. Uric acid
        3. Calcium oxalate
        4. Triple phosphate
        5. Pregnancy test
        6. Enter designated information on urinalysis worksheet or computer.
        7. Record results on laboratory report form or computer.
        8. Experience the pace, stress and responsibility of performing tests in a hospital laboratory setting.

The student will observe and assist with the following procedures as they are available:

1. Reducing substances
2. Precipitation test for protein
3. Microscopic examination
    Identify:
    a. Trichomonas
    b. Yeast
    c. Mycelial fragments
    d. Other casts
    e. Other crystals
4. Cystine
5. Bence-Jones Protein

6. Measure volume and specific gravity of body fluids.
7. Prepare specimen containers for 12 and 24 hr. specimen collections.
8. Feces
    a. Occult blood
    b. Ova and parasite examination

DAILY OBJECTIVES

Urinalysis objectives may be accomplished concurrently with Hematology and Coagulation objectives.

Day 1-5 Practice urinalysis.
All microscopics will be checked by clinical instructor.

Day 6-12 Continue as above with minimal supervision

Day 13-20 Evaluation

URINALYSIS

Day 1 through 2

The student will:
1. Observe a laboratory staff member demonstrating safety equipment and safety issues specific to the Urinalysis department.
2. Observe a laboratory staff member demonstrating the role of a medical tech in urinalysis specifically to include:
    a. Verifying identification of patient sample
    b. Performing complete urinalysis and pregnancy testing including quality control
    c. Completing report form
    d. Entering information on worksheet or computer
3. Become familiar with location of reference manuals
4. Read the manuals in #2 above
5. After observation in #1 above
    a. Verify identification of patient sample
    b. Perform physical and chemical urine examination with close instructor guidance and supervision.
    c. Identify and record average range of formed elements as observed on microscopic examination on predetermined samples with close instructor guidance and supervision
    d. Enter information on worksheet
    e. Complete report forms
    f. Perform pregnancy testing as available.

Begin Summative Evaluation (Day 2):

Evaluation will be a continuous process for the two tasks below throughout the clinical experience:

1. Verify identification of patients' samples
   Time constraints: Immediately before testing
   Degree of accuracy: 100%
   Minimum number of times practiced before evaluation:
   urine samples available in one clinical day
   Maximum number of attempts allowed to perform procedure for evaluation: 1

2. Enters information on worksheet or computer
   Time constraints: immediately after testing complete
   Degree of accuracy: 100% agreement with instructor and obtained results
   Minimum number of times practiced before evaluation:
   Results from urine samples available in one clinical day
   Maximum number of attempts allowed to perform procedure for evaluation: 1

Day 1 through 3

The student will:

1. Perform back-up tests
   a. positive glucose - Diastix or clinitest
   b. positive protein - Kingsbury Clark SSA Precipitation
   c. positive urobilinogen - Urobilistix
   d. positive bilirubin - Ictotest

2. Include clinitest and Phenistix results on urine samples from babies (or as indicated in procedure manual)

Continue summative evaluation (Days 3 through 9):

Kingsbury - Clark SSA
Time constraints: 15 minute per sample
Degree of accuracy: within one standard tube of predetermined results
Minimum number of times task practiced before evaluation: 5
Maximum number of attempts allowed to perform procedure for evaluation: 2

Days 3 through 7

The student will:

1. Perform complete urinalysis including quality control

2. Perform pregnancy testing

3. Complete records and reports

4. Demonstrate a need for minimal instructor guidance and supervision.

Day 8 through 9

The student will without instructor assistance:

1. Enters information on worksheet or computer
   Time constraints: immediately after testing complete
   Degree of accuracy: 100% agreement with instructor and obtained results
   Minimum number of times practiced before evaluation:
   Results from urine samples available in one clinical day
   Maximum number of attempts allowed to perform procedure for evaluation: 1

2. Determine specific gravity using refractometer
   Time constraints: 1 min. per sample
   Degree of accuracy: + 0.001 of instructor's reading
   Minimum number of times practiced before evaluation:
   10 samples
   Maximum number of attempts allowed to perform procedure for evaluation: 2

3. Describe urine color
   Time constraints: 1 min. per sample
   Degree of accuracy: agreement within same color group as instructor's determination
   Minimum number of times practiced before evaluation: 10 samples
   Maximum number of attempts allowed to perform procedure for evaluation: 2

4. Describe urine character
   Time constraints: 1 min. per sample
   Degree of accuracy: 100% agreement with terms as defined in the procedure manual
   Minimum number of times practiced before evaluation:
   10 samples
   Maximum number of attempts allowed to perform procedure for evaluation: 2

5. Chemical examination using reagent strips
   Time constraints: 2 min. per sample
   Degree of accuracy:
   a. Automated instrument: recorded results within 100% agreement with displayed or printed results (within limits of instrument)
   b. Manual technique: within one color block of instructor's determination
   Minimum number of attempts allowed to perform procedure for evaluation: 10 samples

Maximum number of attempts allowed to perform procedure for evaluation: 2

6. Identify and record average range of formed elements observed on microscopic examination
   Equipment provided: Microscope, slides, stain optional, 5 urine sediments with predetermined results
   Time constraints: 5 min/specimen (25 min total)
   Degree of accuracy: Detect 100% of elements present within one descriptive term (as defined in procedure manual -rare, few, modt. etc
   Enumerate within + 2 wbc, rbc, and casts per appropriate field
   Clinical instructor will be the final authority
   Minimum number of times practiced before evaluation: 20
   Maximum number of attempts allowed to perform procedure for evaluation: 2

   Use of formed element charts and procedure manual will be allowed

7. Pregnancy test - slide or tube
   Time constraints: slide - 10 minutes
   tube - 15 minutes in addition to incubation time as defined in manufacturer's instructions
   Degree of accuracy: 100% agreement with predetermined sample control
   Minimum number of times practiced before evaluation: 2
   Maximum number of attempts allowed to perform procedure for evaluation: 2
   Use of manufacturer's instructions and procedure manual will be allowed

1. Complete summative evaluation as needed
2. Review key points
3. Complete clinical records and discuss strengths and weaknesses as identified in the Rating Scale for Evaluation of Clinical Performance

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - STUDENT CHECK LIST/WEEKLY PROGRESS REPORT

AFFILIATE _____ DEPARTMENT: COAGULATION & URINALYSIS

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Place a check mark beneath the appropriate day for each procedure observed. Place a number beneath the appropriate day for each procedure performed (1 if you performed the procedure once: 10 if you performed the procedure ten times; etc.). Have your clinical instructor fill out the Weekly Progress Report on the last day of each week. Bring these to Clinical Conference.

PROCEDURES DAY →	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
COAGULATION: Verifies ID of samples																				
Enters designated information																				
Prothrombin Time (specify instrument)																				
APTT (specify instrument)																				
Performs QC procedures																				
Bleeding Time																				
Clotting Time																				
Fibrinogen																				
Fibrin Split Products																				
Thrombin Time																				
Other																				
URINALYSIS:																				
Verifies ID of samples																				
Enters designated information																				
Records results on lab report form																				
Performs QC procedures																				

PROCEDURES DAY →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Performs Routine UA 1. Physical exam																				
2. Chemical exam																				
3. Microscopic exam																				
Performs Chemical Confirmation																				
Testing (specify procedure) 1. Bilirubin																				
2. Glucose																				
3. Ketones																				
4. Protein																				
Performs Special Procedures 1. Phenylketonuria																				
2. Other (specify)																				

WEEKLY PROGRESS REPORTS

INSTRUCTIONS:Clinical instructors; please indicate the student's performance to date in the following areas by circling the appropriate letter code.

CODE: S = satisfactory NI = needs improvement

	Week # 1		Week # 2		Week # 3		Week # 4		COMMENTS:
ARRIVES & LEAVES ON TIME	S	NI	S	NI	S	NI	S	NI	
ATTITUDE/CONDUCT	S	NI	S	NI	S	NI	S	NI	
ADJUSTMENT TO CLINICAL SITUATION	S	NI	S	NI	S	NI	S	NI	
PROGRESS OF PROCEDURES PERFORMED:									
QUANTITY	S	NI	S	NI	S	NI	S	NI	
QUALITY	S	NI	S	NI	S	NI	S	NI	
COMPLETION OF OUTSIDE ASSIGNMENTS	S	NI	S	NI	S	NI	S	NI	

CLINICAL INSTRUCTOR INITIALS / DATE _____ _____ _____ _____

STUDENT INITIALS / DATE _____ _____ _____ _____

MLT FACULTY INITIALS / DATE _____ _____ _____ _____

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM
MLAB 2660/2661 CLINICAL II/III - PERFORMANCE APPRAISAL

AFFILIATE _____ DEPARTMENT: URINALYSIS & COAGULATION

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Observe the student's performance of the skills/procedures listed below. Using the Scale Key given below, indicate your evaluation of the student's performance in the column labeled IE. Columns labeled GC and LC are explained in the Performance Code. Comments may be made on an additional sheet of paper.

PERFORMANCE CODE:
- GC * = performed/discussed in Campus Lab
- LC = level of competence upon completion of rotation as follows:
  - P = performed with minimal or no supervision
  - D = demonstration only
  - O = optional - perform at least once if available
- IE = instructor's evaluation of student's level of achievement

SCALE KEY

5 = Performed independently within time limit and standard of performance stated in Instructional Plan and/or Procedure Manual (IP and/or PM)
4 = Required minimum guidance to perform within time limit and standard of performance stated in IP and/or PM
3 = Required moderate guidance to perform within time limit and standard of performance stated in IP and/or PM
2 = Required intensive guidance to perform within time limit and standard of performance stated/exhibited potential to improve
1 = Required constant guidance/was unable to perform/potential questionable
NA = Procedure not available

			IE					
PROCEDURES	**GC**	**LC**	**5**	**4**	**3**	**2**	**1**	**NA**
COAGULATION: Verifies ID of samples	*	P						
Enters designated information	*	P						
Prothrombin time (specify instrument)	*	P						
APTT (specify instrument)	*	P						
Performs QC procedures	*	P						
Bleeding Time	*	O						
Clotting Time	*	O						
Fibrinogen	*	O						
Fibrin Split Products	*	O						
Thrombin Time	*	O						
Other (specify)	*	O						
URINALYSIS: Verifies ID of samples								
Enters designated information	*	P						
Records results on lab report form	*	P						
Performs QC procedures	*	P						
Performs Routine UA 1. Physical a. Measures specific gravity	*	P						
b. Describes color	*	P						

PROCEDURES	GC	LC	IE 5	4	3	2	1	NA
c. Describes character	*	P						
2. Chemical exam Uses reagent strips	*	P						
3. Microscopic exam - Identify the following: a. RBCs	*	P						
b. WBCs	*	P						
c. Casts 1) Hyaline	*	P						
2) Granular	*	O						
d. Mucus	*	O						
e. Bacteria	*	O						
f. Epithelial cells	*	P						
g. Crystals 1) Amorphous	*	P						
2) Uric Acid	*	P						
3) Calcium Oxalate	*	P						
4) Triple Phosphate		O						
h. Misc. structures		O						
1) Trichomonas		O						
2) Yeast		O						
3) Mycelial fragments		O						
4) Other casts		O						
5) Other crystals		O						
Performs Chemical Confirmation Testing (Specify Procedure) 1. Bilirubin	*	O						
2. Glucose	*	O						
3. Ketones	*	O						
4. Protein	*	O						
Performs Special Procedures 1. Phenylketonuria		O						
2. Other (specify)		O						

COMMENTS:

UA: Evaluator's Overall Rating = _____ TOTAL POINTS = _____
COAG: Evaluator's Overall Rating = _____ TOTAL POINTS = _____
(Based on a Letter Grade System) (Numerical Grade) (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____
_____ Student Date: _____
_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)
Evaluation = 50% Performance Appraisal = 50%

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM
MLAB 2660/2661 CLINICAL II/III - EVALUATION FORM

AFFILIATE _____ DEPARTMENT: URINALYSIS & COAGULATION

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: The MLT student exhibits the following characteristics regarding his/her performance in the laboratory. Please rank these characteristics according to the following scale:

0 = never (0%)
1 = occasionally (10 - 49%)
2 = part of the time (50 - 69%)
3 = majority of the time (70 - 89%)
4 = all of the time (90 - 100%)
NA = not observed

RANK: →	0	1	2	3	4	NA
ATTENDANCE: Arrives at the assigned time						
Begins work promptly						
Notifies laboratory staff of absences or tardies						
Uses good judgment in taking break-time						
Arranges make-up time for absences						
PERSONAL APPEARANCE: Maintains good personal hygiene						
Adheres to the GC MLT-AD Program Dress Code						
PROFESSIONAL ATTITUDES: Accepts constructive criticism						
Heeds suggestions and uses them						
Seeks guidance for improvement						
Displays interest and enthusiasm for work						
Displays interest in learning new procedures						
Demonstrates the following interpersonal relationships with patients and other hospital personnel: 1. Courtesy						
2. Consideration						
3. Tactfulness						
PROFESSIONAL INTEGRITY: Practices professional confidentiality						
Admits own errors						
Assists others when own work load is completed						
Informs instructor when leaving assigned area						
Accepts responsibility & performs tasks with minimum supervision						
Shows initiative in pursuing new & reinforcing old information						

RANK: →	0	1	2	3	4	NA
WORK HABITS AND TECHNICAL SKILLS: (Weighted x 3) Adheres to established procedures to confirm identity of patient and/or label specimens						
Organizes work load for priority and efficiency						
Performs each task with reasonable speed						
Performs the following with respect to each test: 1. Checks results						
2. Recognizes erroneous data and notifies supervisor						
3. Checks daily quality controls						
Performs previously learned procedures without additional instruction						
Performs the following with respect to instruments: 1. Operates, after instruction, with minimum supervision						
2. Uses logic in trouble-shooting a problem						
3. Leaves instrument in proper standby state						
4. Transposes data accurately						
Keeps work area neat, clean and orderly						

NARRATIVE: Keeping in mind that this individual is involved in a learning experience, please evaluate his/her performance as a future employee (include strong and weak aspects).

EVALUATOR'S OVERALL UA RATING = _____ TOTAL UA POINTS:= _____

EVALUATOR'S OVERALL COAG RATING = _____ TOTAL COAG POINTS:= _____

(Based on a letter Grade System) (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____

_____ Student Date: _____

_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE
MLT-AD PROGRAM

Student Evaluation of Clinical Instructor and Clinical Internship Rotation

Affiliate: _____

Department: URINALYSIS & COAGULATION

Clinical Instructor: _____

Student: This evaluation will be confidential. Mark an X in one box on each line. Fill out an evaluation for each instructor. Write ***NA*** if the item is not applicable. Complete front and back.

	Never	Rarely	Sometimes	Often	Always
I. The Clinical Instructor					
Encouraged student questions and comments					
Answered questions					
Was available to discuss issues related to the rotation					
Presented material relevant to the rotation					
Presented topics clearly					
Communicated effectively (speech, mannerisms, delivery)					
Provided useful feedback on performance					
Showed respect for students					
II. Instruction Methods					
Assignment of tasks was appropriate.					
Department policies and procedures stated at the beginning of the rotation were clarified throughout the rotation.					
Additional study aids were provided to support the rotation (e.g., unknowns, slides, case studies, lectures).					
Feedback from exit examination was timely.					
Feedback from professional evaluation was timely.					
This rotation increased my interest in further study of this area.					
The personnel in this department hold a positive attitude toward students and teaching.					

III. Comment on the strengths of this rotation.

IV. Suggestions for improving this rotation.

V. Comment on the strengths of your academic preparation for this rotation.

VI. Suggestions for improving your academic preparation for this rotation.

VII. Additional comments

Would you recommend this rotation to a fellow student? _____ Yes _____ No

CLINICAL INSTRUCTIONAL PLAN
MICROBIOLOGY
MLAB 2660/2661

TERMINAL PERFORMANCE OBJECTIVES:

The student will gain practical experience performing the following procedures:

1. Select and inoculate primary plating media with clinical specimens from all sites of origin for routine culture
2. Examine previously inoculated plates and interpret gross colonial characteristics in order to detect potentially significant organisms and decide which tests to perform to confirm their presence and/or identification. This process shall be referred to as "reading plates." This assessment will be made by:
    a. Noting the characteristics and relative number of each type of colony recovered on agar media
    b. Determining the purity, gram reaction and morphology of the bacteria in each type of colony
    c. Observing changes in the media surrounding the colonies which reflect specific metabolic activity of the bacteria recovered, e.g., hemolysis, changes in selective and differential media
3. Perform and interpret results of confirmatory testing procedures
4. Perform susceptibility testing
5. Prepare records and transmit results
    a. Enter information on laboratory worksheet or computer
    b. Record results on laboratory report forms or computer
6. Perform quality assurance procedures
7. Experience the pace, stress and responsibility of performing tests in a hospital laboratory setting
8. Prepare an in-depth analysis of automated instruments use in microbiology

The student will observe and assist with the following as they are available:

1. Feces: ova and parasite examination and occult blood
2. Lacto-phenol cotton blue
3. KOH preparation
4. India ink preparation
5. Slide culture
6. Anaerobic technics
7. Acid-fast technics

OPERATIONAL DEFINITIONS:

1. Reading plates (See Terminal Performance Objective #2)
2. Culture (noun)
   All primary plating media inoculated from the original specimen

DAILY OBJECTIVES

Day 1 - Orientation and Observation

The student will observe laboratory staff members demonstrating the role of clinical laboratory microbiologists to include at least the following:

1. Observe a laboratory staff member demonstrating safety equipment and safety issues specific to the Microbiology department.
2. Select and inoculate primary plating media with clinical specimens from all sites of origin for routine culture
3. Read plates
4. Perform and interpret results of confirmatory tests used to identify organisms
5. Perform susceptibility testing
6. Prepare records and transmit results
   a. Enter information on laboratory worksheet or computer
   b. Record results on laboratory report forms or computer
7. Perform quality assurance procedures

Day 2 through 20

The student will continue to observe laboratory staff members demonstrating the role of clinical microbiologist.

The student will select media and set up initial inoculations of identification systems (biochemicals) and new cultures. The student will set up susceptibility tests.

Begin Evaluation

1. Enters designated information on worksheet
   Time constraints: Immediately after reading each culture/test
   Degree of accuracy: 100% agreement with instructor
   Minimum number of times task practiced before evaluation: 1
   Maximum number of attempts allowed to perform procedure for evaluation: 1
   (Evaluation is a continuous process for this task throughout the clinical rotation.)

Day 3 and 4
The student will practice performing the role of clinical microbiologist with close instructor guidance and involvement in decision making processes.

The student will read susceptibility and biochemical tests with close instructor guidance and involvement in decision making processes.

Day 5 and 6

The student will practice performing the role of a clinical microbiologist demonstrating a need for less instructor guidance and involvement in decision making processes.

Day 6

Continue Evaluation Procedure:

1. The student will be able to select and inoculate primary plating media with clinical specimens from all sites of origin
   Time constraints: 7 minutes/specimen
   Degree of accuracy: Media selected must agree 100% with posted media list
   External criteria source: Departmental procedure manual
   Minimum number of times skill practiced by student before evaluation: 2
   Maximum number of attempts allowed to perform the procedure for evaluation: 2

   Evaluation criteria: See procedure manual for specific criteria. General criteria include the following:
   a. Obtains colonial isolation by third streak on routine culture
   b. Applies gentle pressure during streaking movements so as not to tear media
2. Records results on laboratory protocol
   Time constraints: 5 minutes/report form
   Degree of accuracy:
   a. All words spelled correctly
   b. All words written legibly
   c. No abbreviations for names of organisms
   d. Uses only approved abbreviations on susceptibility reports
   e. Signs and dates all reports
   f. Denotes other results to follow
   g. Reports numbers when appropriate (e.g. urine colony count)
   External criteria source: Dictionary, microbiology textbooks, and procedure manual
   Minimum number of times task practiced before evaluation:
   Reports available in 2 clinical days
   Maximum number of attempts allowed to perform procedure for evaluation: 1

Day 7 through 9

The student will practice performing the role of clinical microbiologist with minimal supervision by clinical instructor.

Day 8

Continue Evaluation Procedure

Day 10 through 20

Continue Evaluation Procedure

1. Read routine cultures
   Time constraints: 10 cultures/hour
   Degree of accuracy: 60% agreement with instructor
   External criteria source: Procedure manual, microbiology textbooks
   Minimum number of times skill practiced by student before evaluation: 6 days of practice reading cultures available
   Maximum number of attempts allowed for student to perform the procedure for evaluation: 6 days of reading cultures available
   Evaluation criteria: See procedure manual for specific criteria

2. Sets up confirmatory (biochemical) tests and susceptibility tests
   Time constraints: 10 tests/30 minutes
   Degree of accuracy: Test results can be used to identify organisms
   External criteria source: Procedure manual, textbooks of microbiology
   Minimum number of times skill practiced before evaluation:
   Tests available in 6 days of clinical
   Maximum number of attempts allowed to perform procedure for evaluation: Tests available in 6 days of clinical

3. Interpret and record results of confirmatory (biochemical) tests and susceptibility tests
   Time constraints: 10 minutes per culture
   Degree of accuracy: 100% agreement with instructor or predetermined results
   External criteria source: Procedure manual, textbooks of microbiology, professional journals
   Minimum number of times skill practiced before evaluation:
   All routine cultures available in 6 clinical days
   Maximum number of attempts allowed to perform procedure for evaluation: Designated routine cultures available through the next 6 clinical days

Day 11 through 20

The student will practice performing the role of clinical microbiologist with minimal supervision by clinical instructor.

Continue evaluation procedures as required for individual student

Day 20

The student will:

1. Complete evaluation as needed
2. Take exit exam
3. Complete clinical forms

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - STUDENT CHECK LIST/WEEKLY PROGRESS REPORT

AFFILIATE _____ DEPARTMENT: MICROBIOLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Place a check mark beneath the appropriate day for each procedure observed. Place a number beneath the appropriate day for each procedure performed (1 if you performed the procedure once: 10 if you performed the procedure ten times; etc.). Have your clinical instructor fill out the Weekly Progress Report on the last day of each week. Bring these to Clinical Conference.

PROCEDURES DAY →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Checks in specimens																				
Records results																				
Sets up cultures Routine a. Swabs																				
b. CSF																				
c. Sputum																				
d. Stool																				
e. Urine																				
f. Bone/Tissue																				
Collects blood culture																				
Fungal																				
Anaerobic																				
Campylobacter																				
Prepares and stains direct smears a. Gram stain																				
b. Fungal (specify stain)																				
c. India Ink																				
Reads primary plates																				
Performs urine colony count																				
Examines and subs blood culture																				
Performs presumptive testing																				

PROCEDURES DAY →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
a. Coagulase																				
b. Catalase																				
c. Oxidase																				
d. Beta lactamase																				
e. Optochin (P) disk																				
f. Bacitracin (A) disk																				
Performs antisera testing (specify)																				
Performs confirmatory (biochemical) testing (specify method)																				
Performs susceptibility testing (specify method)																				
Performs yeast identification																				
Performs routine stool exam (with occult blood)																				
Performs Ova & Parasite techniques a. Wet prep																				
b. Iodine prep																				
c. Permanent stain (specify)																				
d. Concentration (specify)																				
Participates in QC procedures																				

WEEKLY PROGRESS REPORTS

INSTRUCTIONS: Clinical instructors; please indicate the student's performance to date in the following areas by circling the appropriate letter code.

CODE: S = satisfactory NI = needs improvement

	Week # 1		Week # 2		Week # 3		Week # 4		COMMENTS:
ARRIVES & LEAVES ON TIME	S	NI	S	NI	S	NI	S	NI	
ATTITUDE/CONDUCT	S	NI	S	NI	S	NI	S	NI	
ADJUSTMENT TO CLINICAL SITUATION	S	NI	S	NI	S	NI	S	NI	
PROGRESS OF PROCEDURES PERFORMED:									
QUANTITY	S	NI	S	NI	S	NI	S	NI	
QUALITY	S	NI	S	NI	S	NI	S	NI	
COMPLETION OF OUTSIDE ASSIGNMENTS	S	NI	S	NI	S	NI	S	NI	
CLINICAL INSTRUCTOR INITIALS / DATE	_____		_____		_____		_____		
STUDENT INITIALS / DATE	_____		_____		_____		_____		
MLT FACULTY INITIALS / DATE	_____		_____		_____		_____		

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - PERFORMANCE APPRAISAL

AFFILIATE _____ DEPARTMENT: MICROBIOLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Observe the student's performance of the skills/procedures listed below. Using the Scale Key given below, indicate your evaluation of the student's performance in the column labeled IE. Columns labeled GC and LC are explained in the Performance Code. Comments may be made on an additional sheet of paper.

PERFORMANCE CODE:
- GC * = performed/discussed in Campus Lab
- LC = level of competence upon completion of rotation as follows:
  - P = performed with minimal or no supervision
  - D = demonstration only
  - O = optional - perform at least once if available
- IE = instructor's evaluation of student's level of achievement

SCALE KEY

5 = Performed independently within time limit and standard of performance stated in Instructional Plan and/or Procedure Manual (IP and/or PM)
4 = Required minimum guidance to perform within time limit and standard of performance stated in IP and/or PM
3 = Required moderate guidance to perform within time limit and standard of performance stated in IP and/or PM
2 = Required intensive guidance to perform within time limit and standard of performance stated/exhibited potential to improve
1 = Required constant guidance/was unable to perform/potential questionable
NA = Procedure not available

			IE					
PROCEDURES	**GC**	**LC**	**5**	**4**	**3**	**2**	**1**	**NA**
Checks in specimens	*	P						
Record results	*	P						
Sets up the following cultures (Hosp. procedure) Routine a. Swabs	*	P						
b. CSF	*	P						
c. Sputum	*	P						
d. Stool	*	P						
e. Urine	*	P						
f. Bone/Tissue	*	D						
Blood (Collects)	*	O						
Acid Fast	*	O						
Fungal	*	O						
Anaerobic	*	O						
Campylobacter	*	O						
Prepares and stains direct smears a. Gram stain	*	P						

			IE					
PROCEDURES	**GC**	**LC**	**5**	**4**	**3**	**2**	**1**	**NA**
b. Fungal (specify stain)	*	O						
c. India Ink	*	O						
Reads primary plates	*	P						
Performs urine colony count	*	P						
Examines and subs blood cult	*	P						
Performs presumptive testing a. Coagulase	*	P						
b. Catalase	*	P						
c. Oxidase	*	P						
d. Beta-lactamase	*	O						
e. Optochin (P) disk	*	O						
f. Bacitracin (A) disk	*	O						
g. Other (specify)								
Performs antisera testing (specify)	*	O						
Performs confirmatory (biochemical)testing (specify method)	*	P						
Performs antibiotic susceptibility testing (specify method)	*	P						
Performs yeast identification	*	O						
Performs routine stool exam (with occult blood)	*	P						
Performs Ova and Parasite techniques a. Wet prep	*	O						
b. Iodine prep	*	O						
c. Permanent stain (specify)	*	O						
d. Concentration (specify method)	*	O						
Participates in QC procedures	*	O						
Other (specify)								

COMMENTS:

Evaluator's Overall Rating = _____
(Based on a Letter Grade System)

TOTAL POINTS = _____
(To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____
_____ Student Date: _____
_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)
Evaluation = 50% Performance Appraisal = 50%

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM
MLAB 2660/2661 CLINICAL II/III - EVALUATION FORM

AFFILIATE _____ DEPARTMENT: MICROBIOLOGY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: The MLT student exhibits the following characteristics regarding his/her performance in the laboratory. Please rank these characteristics according to the following scale:

0 = never (0%)
1 = occasionally (10 - 49%)
2 = part of the time (50 - 69%)
3 = majority of the time (70 - 89%)
4 = all of the time (90 - 100%)
NA = not observed

RANK: →	0	1	2	3	4	NA
ATTENDANCE: Arrives at the assigned time						
Begins work promptly						
Notifies laboratory staff of absences or tardies						
Uses good judgment in taking break-time						
Arranges make-up time for absences						
PERSONAL APPEARANCE: Maintains good personal hygiene						
Adheres to the GC MLT-AD Program Dress Code						
PROFESSIONAL ATTITUDES: Accepts constructive criticism						
Heeds suggestions and uses them						
Seeks guidance for improvement						
Displays interest and enthusiasm for work						
Displays interest in learning new procedures						
Demonstrates the following interpersonal relationships with patients and other hospital personnel: 1. Courtesy						
2. Consideration						
3. Tactfulness						
PROFESSIONAL INTEGRITY: Practices professional confidentiality						
Admits own errors						
Assists others when own work load is completed						
Informs instructor when leaving assigned area						
Accepts responsibility & performs tasks with minimum supervision						
Shows initiative in pursuing new & reinforcing old information						

RANK: →	0	1	2	3	4	NA
WORK HABITS AND TECHNICAL SKILLS: (Weighted x 3) Adheres to established procedures to confirm identity of patient and/or label specimens						
Organizes work load for priority and efficiency						
Performs each task with reasonable speed						
Performs the following with respect to each test: 1. Checks results						
2. Recognizes erroneous data and notifies supervisor						
3. Checks daily quality controls						
Performs previously learned procedures without additional instruction						
Performs the following with respect to instruments: 1. Operates, after instruction, with minimum supervision						
2. Uses logic in trouble-shooting a problem						
3. Leaves instrument in proper standby state						
4. Transposes data accurately						
Keeps work area neat, clean and orderly						

NARRATIVE: Keeping in mind that this individual is involved in a learning experience, please evaluate his/her performance as a future employee (include strong and weak aspects).

EVALUATOR'S OVERALL RATING = _____ TOTAL POINTS:= _____

(Based on a letter Grade System) (To be calculated by MLT Faculty)

SIGNATURES:

_____ Clinical Instructor Date: _____

_____ Student Date: _____

_____ MLT Faculty Date: _____

The final grade for this Clinical Departmental Rotation will consist of a combination of the following: (To be calculated by MLT Faculty)

Evaluation 50%
Performance Appraisal 50%

GRAYSON COUNTY COLLEGE
MLT-AD PROGRAM

Student Evaluation of Clinical Instructor and Clinical Internship Rotation

Affiliate: _____

Department: MICROBIOLOGY

Clinical Instructor: _____

Student: This evaluation will be confidential. Mark an X in one box on each line. Fill out an evaluation for each instructor. Write ***NA*** if the item is not applicable. Complete front and back.

	Never	Rarely	Sometimes	Often	Always
I. The Clinical Instructor					
Encouraged student questions and comments					
Answered questions					
Was available to discuss issues related to the rotation					
Presented material relevant to the rotation					
Presented topics clearly					
Communicated effectively (speech, mannerisms, delivery)					
Provided useful feedback on performance					
Showed respect for students					
II. Instruction Methods					
Assignment of tasks was appropriate.					
Department policies and procedures stated at the beginning of the rotation were clarified throughout the rotation.					
Additional study aids were provided to support the rotation (e.g., unknowns, slides, case studies, lectures).					
Feedback from exit examination was timely.					
Feedback from professional evaluation was timely.					
This rotation increased my interest in further study of this area.					
The personnel in this department hold a positive attitude toward students and teaching.					

III. Comment on the strengths of this rotation.

IV. Suggestions for improving this rotation.

V. Comment on the strengths of your academic preparation for this rotation.

VI. Suggestions for improving your academic preparation for this rotation.

VII. Additional comments

Would you recommend this rotation to a fellow student? _____ Yes _____ No

CLINICAL INSTRUCTIONAL PLAN
PHLEBOTOMY
MLAB 2660/2661

TERMINAL PERFORMANCE OBJECTIVES:

The student will gain practical experience performing venipuncture and demonstrate the following competencies during this clinical assignment:

1. Display increasing competency in the performance of venipuncture
2. Identify each patient before performing venipuncture
3. Treat each patient with courtesy
4. Communicate purpose of venipuncture to patient (e.g. Tests ordered by patient's physician)
5. Collect sample to provide serum, plasma or whole blood in adequate amount to perform tests ordered
6. Label samples according to established procedures of laboratory
7. Distribute sample and request forms to appropriate department

Approximately one hour per day should be allowed for venipuncture practice. Each student has been checked off in the Campus Lab and during MLAB 1223 clinical rotation as being able to perform a venipuncture. Additional practical experience will be gained during this semester. If the student has mastered the TPOs listed above, he/she may be excused from venipuncture practice if the time can be better utilized to meet TPOs of a given department. This decision should be made by the clinical coordinator and the clinical instructor of the department to which the student is assigned.

DAILY OBJECTIVES

Day 1 - Orientation and Observation

1. Perform venipuncture under the supervision of a laboratory staff member.
2. Observe a laboratory staff member demonstrating safety equipment and safety issues specific to Phlebotomy.

Day 2 - Perform venipuncture under the supervision of a laboratory staff member.

Begin Evaluation

Evaluation may occur at any time after Day 1.

The Performance Appraisal form should be used to evaluate the student's competence for this skill. This is a detailed evaluation form and items which have ** are considered critical criteria. The student must do these steps correctly in order to have a satisfactory evaluation.

Time constraints: 10 minutes per patient
Degree of accuracy: Sample collected adequate to provide serum, plasma or whole blood to perform tests ordered
External criteria source: Textbooks, procedure manual
Minimum number of times skill practiced before evaluation:
At least 1 venipuncture performed under the supervision of a laboratory staff member
Maximum number of attempts allowed to perform procedure for evaluation: Two attempts per patient/two patients
Note: Patients with extremely difficult veins should not be selected for the student's evaluation.

GRAYSON COUNTY COLLEGE MLT-AD PROGRAM

MLAB 2660/2661 CLINICAL II/III - PERFORMANCE APPRAISAL

AFFILIATE _____ DEPARTMENT: PHLEBOTOMY

NAME: _____ DATE OF ROTATION: _____

INSTRUCTIONS: Observe the student's performance of the skills/procedures listed below. Using the Scale Key given below, indicate your evaluation of the student's performance in the column labeled IE. Columns labeled GC and LC are explained in the Performance Code. Comments may be made on an additional sheet of paper.

INSTRUCTIONS: Observe the student's performance of a venipuncture on a patient. Each step of the procedure is listed on this form. Items marked ** are considered critical criteria and must be done correctly in order for the student to receive a satisfactory evaluation. The student has been evaluated on this procedure in Campus lab previously. The purpose of this evaluation is to determine if the student is following the clinical affiliate's procedure.

KEY: S = Satisfactory U = Unsatisfactory

Place a check mark in the appropriate column to indicate the student's performance of each step of the procedure.

THIS CLINICAL AFFILIATE'S PROCEDURE		S	U	COMMENTS
** 1.	Wash hands/put on gloves			
2.	Assemble equipment			
** 3.	Have equipment & gauze within easy reach			
** 4.	Identify patient (Ask Pt. to say name & check arm band)			
5.	Explain procedure to Pt. & position Pt. comfortably			
** 6.	Attach needle to syringe or vacutainer holder maintaining sterility			
** 7.	Place the tourniquet around Pt's arm tight enough to restrict venous flow but not tight enough to stop arterial circulation. Do not leave tourniquet in place longer than 2 min.			
8.	Instruct Pt. to open & close fist a few times			
** 9.	Inspect bend of elbow to locate suitable vein			
10.	Palpate vein with fingertip(s)			
11.	Release tourniquet			
**12.	Cleanse puncture site with alcohol swab/allow to dry			
13.	Retie tourniquet/do not touch cleansed puncture site			
14.	Instruct Pt. to straighten arm and make a fist			
**15.	Hold syringe or vacutainer in the right hand/needle bevel up/hold skin taut with thumb or finger of other hand			
**16.	Insert needle into vein at a 30^{o} angle			
**17.	Fills syringe or vacutainer tubes with desired amount of blood			

THIS CLINICAL AFFILIATE'S PROCEDURE		S	U	COMMENTS
18.	Instruct Pt. to open fist			
**19.	Release tourniquet when desired amount of blood is obtained			
**20.	Place dry gauze/swab over puncture site and withdraw needle (Do not press down on needle)			
**21.	Instruct Pt. to press gauze/swab over wound for 3 to 5 min. with arm extended (bending arm is acceptable)			
**22.	Discard the used needle into puncture proof container (Syringe if used)			
**23.	Label tubes with Pt's name, Room Number, Date, Time, etc, as required by this laboratory			
**24.	Check Pt. to be sure bleeding has stopped			
**25.	Wash hands/discard gloves			
**26.	Distribute sample & request forms to appropriate department upon returning to lab			

COMMENTS:

SIGNATURES:

_____ Clinical Instructor Date: _____
_____ Student Date: _____
_____ MLT Faculty Date: _____

GRAYSON COUNTY COLLEGE
MLT-AD PROGRAM

Student Evaluation of Clinical Instructor and Clinical Internship Rotation

Affiliate: _____

Department: PHLEBOTOMY

Clinical Instructor: _____

Student: This evaluation will be confidential. Mark an X in one box on each line. Fill out an evaluation for each instructor. Write ***NA*** if the item is not applicable. Complete front and back.

	Never	Rarely	Sometimes	Often	Always
I. The Clinical Instructor					
Encouraged student questions and comments					
Answered questions					
Was available to discuss issues related to the rotation					
Presented material relevant to the rotation					
Presented topics clearly					
Communicated effectively (speech, mannerisms, delivery)					
Provided useful feedback on performance					
Showed respect for students					
II. Instruction Methods					
Assignment of tasks was appropriate.					
Department policies and procedures stated at the beginning of the rotation were clarified throughout the rotation.					
Additional study aids were provided to support the rotation (e.g., unknowns, slides, case studies, lectures).					
Feedback from exit examination was timely.					
Feedback from professional evaluation was timely.					
This rotation increased my interest in further study of this area.					
The personnel in this department hold a positive attitude toward students and teaching.					

III. Comment on the strengths of this rotation.

IV. Suggestions for improving this rotation.

V. Comment on the strengths of your academic preparation for this rotation.

VI. Suggestions for improving your academic preparation for this rotation.

VII. Additional comments

Would you recommend this rotation to a fellow student? _____ Yes _____ No

MLAB 2660/2661 - CLINICAL CONFERENCE

TIME: 2:00pm - 3:50pm
DAY: Mondays

OBJECTIVES:

1. The student will:

2. Attend clinical conference regularly.

3. Arrive on time.

4. Participate by sharing interesting events, cases, etc. which have occurred during the week.

5. Participate in the Campus Activities listed below.

Additional Policies Related to Clinical Conference:

1. Attendance policy for Clinical Conference will be the same as for clinical.

2. Recording of either video and/or audio by students is not allowed in clinical conference.

3. Questions during class time are always encouraged. However, all questions should be over topics relevant to the class, as determined by the instructor. For example, no questions concerning the validity of class/program policies are appropriate for classroom discussion. These may be addressed one-on-one with the instructor and/or Program Director. Also, the instructor may request that specific questions should be handled one-on-one if they cause disruption to the learning process, for example questions that will slow the entire class's learning, or questions that may result in a confrontation between fellow students or between student(s) and the instructor.

NOTE: All discussions concerning clinical experiences should be presented in a manner which will insure confidentiality for the patient.

Campus Activities

AUTOMATION

Create a document and include the following for each instrument utilized:

1. List the make and model.
2. Principle of operation.
3. List the tests performed.
4. Number of samples which can be analyzed per hour.
5. Quality control which must be performed.
6. Calibration which must be performed.
7. Preventive maintenance which must be performed.
8. Acceptable samples.
9. Limitations of use of the equipment.

Spend time in the laboratory going through the manufacturer's procedure manual. Feel free to go to the manufacturer's web site to research the instrument. Check with the instructor if you are unsure which instruments to document.

CLINICAL LOG

Keep a clinical log of everything you do daily (see Clinical Log Form). Specifically, I am looking for the following things:

1. The exact time you arrived at clinical, and actually begin working.
2. Your objective for each day's clinical experience. List what you expect to get out of your time today.
3. A narrative, complete with an approximate timeline, of all activities performed for the day.
4. A reflection of what difficulties you experienced, complete with how you handled the problem, if it was solved, or if not, how you plan to solve it.
5. A reflection of what you learned today. Was it what you outlined in your objective? What did you learn that was unexpected?
6. The exact time you quit working and left the lab.
7. An estimate of the amount of down time, when you are not performing any type of clinical activity.

Complete one form for each day of attendance. The Clinical Log Form is in a word format. Complete the form in that format and email it as an attachment at the end of each day. Send only one attachment for each email. Do not email through Blackboard, but instead, send it to jacksona@grayson.edu. Title the attachment with your name (first, last) and the date you were at clinical (e.g.: Alan Jackson, 1/22/2013). In the subject line of the email, use the following format, including your name, the date and the rotation department (e.g.,

Clinical Log for Alan Jackson, 1/22/13, Hematology). Failure to turn in the log within 24 hours of the clinical date will result in suspension of attendance to clinical.

CASE STUDIES / ORAL REPORTS

Each student will be required to design one case study for each rotation (4 total). The case study will be of a fictional patient diagnosed with an interesting ***unknown*** (to the other students, but not to you) pathology. Research a condition that you would like to present and get approval on the topic prior to beginning your presentation. You might initially have the patient present to ER with a history and physical indicative of the disease. Next, you could give the labs results (pertinent, or not) that would be ordered. Then have the class make the diagnosis. Their success depends on your presentation to this point. Be ready to answer questions they may have to help them determine the patient's diagnosis. After the class successfully determines the problem, describe the condition in more detail, with a treatment plan and the expected outcome for the patient. You should utilize a PowerPoint presentation. Pictures, and other visuals, will help your grade. Turn in copies of all your work to the instructor. Email the powerpoint.

You should be ready to present the case after 1 week in each rotation.

Be knowledgeable on your chosen topic, and ready to answer questions from the instructor and fellow students.

RÉSUMÉ

Before the end of the semester, design a résumé appropriate for a job interview. Utilize the college's resources (i.e., the GC's Career Planning Advisor and Optimal Résumé) when designing your résumé. Register for GC's College Central Network. Once registered and online, check the list of available jobs in this field. Turn in your résumé and proof of registration.

GRAYSON COUNTY COLLEGE
MLT-AD PROGRAM

CLINICAL ABSENCE FORM

INSTRUCTIONS:

1. Notify the Clinical Affiliate each day you are going to be absent. (See Student Policy)
2. Complete one form for each clinical absence.
3. Contact the MLT faculty coordinator after each absence.
4. Complete the following information:

Clinical Affiliate called _____

Date _____ and Time _____ am pm

Name of person receiving call _____

Name of person making call _____

Date of absence _____

Reason for absence _____

_____

Number of absences during this rotation _____

SIGNATURES:

MLT-AD Student _____ Date _____

MLT Faculty Coordinator _____ Date _____

PHONE NUMBERS:

Hunt Regional Medical Center .....(903) 454-2120
Medical Center of Southeastern Oklahoma .....(580) 924-3080
Medical Center of McKinney .....(972) 540-4500
Texoma Medical Center .....(903) 416-4270
Texas Health Presbyterian Hospital - WNJ .....(903) 870-4164
North Texas Medical Center .....(940) 612-8180
Mercy Memorial Health Center .....(580) 223-5400
Grayson County College .....(903) 463-8779

NOTE: Leave message on answering machine if it picks up the call.

GRAYSON COUNTY COLLEGE
HEALTH SCIENCE DIVISION

BODY FLUID EXPOSURE/

DATE _____

Name of Person Exposed	SS#
Witness(es) to Incident	Date/Time of Exposure
Exposure Location	Patient's Medical Record's Number
Patient's Diagnosis	

Is the person exposed a _____ Student? _____ Clinical Instructor?

Did exposure involve needle stick, laceration or break in the skin? ___Yes ___No

Did exposure involve mucous membrane exposure? ___Yes ___No

Were CDC Universal Precautions followed? ___Yes ___No

If exposed person was a student, was the Clinical Instructor present at time of exposure? ___Yes ___No ___NA

Exposed Person's Description of Exposure: _____

_____

_____

_____

_____
Signature

Witness(es)' Description of Exposure: _____

_____

_____

_____

_____
Signature

Post Exposure Tests	Date Drawn on Patient	Date Drawn on Exposed Person
HIV		
HbsAg		

Referred for follow-up to one of the following:

Infection Control Department _____

Private Physician _____

Grayson County Health Department (HIV Coordinator) (903) 465-2878_____

Texas Department of Health (Ron Tomlinson) (817) 460-3032_____

_____ _____
Instructor/Director Date Dean, Workforce Education Date

DISTRIBUTION: ORIGINAL-Student permanent file; COPY-Program Director; Dean, Workforce Education

POST EXPOSURE PROTOCOL FOR NEEDLE STICK OR OTHER PARENTERAL INJURY

It is important to respond in a consistent manner after a student (S) is exposed to a source patient (SP) through a needlestick, or other "sharps" induced injury. The same protocol would apply if mucous membranes (eye or mouth) are exposed (splashed) to blood or other body fluids. If the exposure occurs during a campus lab session, the S should contact his/her private physician or the Health Department within 48 hours. If the exposure occurs during a clinical experience, the protocol of the site must be followed.

After exposure, both the S and the SP should be tested for Hepatitis B and HIV. The reason both should be tested is to establish a baseline if a false negative result is obtained from the SP. All exposures should be documented using the "Grayson County College Health Science Division Body Fluid Exposure/Incident Report". Copies of incident reports from clinical sites must be submitted to the Dean of the Health Science Division and to the Director of the Health Science program in which the student is enrolled.

HIV

If the SP has AIDS, is positive for the HIV antibody or refuses the test, the S should be counseled regarding the risk of infection and evaluated clinically and serologically for evidence of HIV infection AS SOON AS POSSIBLE after the exposure. The S should be advised to report and seek medical evaluation for any acute febrile illness that occurs within 12 weeks after the exposure.

Seronegative S should be retested 6 weeks postexposure and periodically thereafter (12 weeks and 6 months after exposure) to determine if exposure has occurred. If the patient has a parenteral or mucous membrane exposure to blood or other body fluid of a S, the same procedure outlined should be followed for the source S and the exposed patient.

HEPATITIS B

It is required that all Health Science students receive the Hepatitis B vaccine before attending clinical.

PATIENT CHECK FOR HBsAG		STUDENT CHECK FOR HBsAB		
HBsAG (-)	HBsAG (+)	If the SP is positive for HBsAG, initiate the following protocol:		
		Vaccinated		Not Vaccinated
No further testing for patient. Test S for HBsAB to establish a baseline.	Refer patient to physician and check S for HBsAB	If titer is low:	Titer (-)	Titer (+)
		give 2 1cc boosters of Hepatitis B vaccine (30 days apart)	Give Hbig and the first of 3 doses of the vaccine within 7 days. Follow with a second dose of Hbig and a second vaccine at 30 days. Final dose of vaccine 6 months later.	No further treatment. If titer is low, give 2 1cc boosters.

Hbig = Hepatitis B Immune Globulin

GRAYSON COLLEGE
MLT-AD PROGRAM
Policy Acknowledgement Form

MLAB 2660/2661

DIRECTIONS:

1. Read the MLAB 2660/2661 Syllabus.

2. Sign this form indicating your understanding of and your willingness to comply with the policies.

My signature below indicates that I have read the MLAB 2660/2661 Syllabus, in full, and indicates that I understand these regulations and am willing to comply with them.

My signature below indicates that I understand that I am financially responsible for any emergency care which I might receive as a result of illness or injury while assigned to a clinical affiliate of the Grayson College MLT-AD Program.

Name (Please Print): _____

Signature: _____

Date: _____