

# MEDICAL LABORATORY SCIENCE Clinical Handbook

Updated March 2023

**DISCLAIMER CLAUSE:** The faculty of the Allied Health Division at Baptist Health Sciences University reserves the rights to amend, omit, or add to the policies in the handbook at their discretion.

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# BAPTIST HEALTH SCIENCES UNIVERSITY MEDICAL LABORATORY SCIENCE MAJOR

#### **CLINICAL HANDBOOK**

This clinical handbook has been prepared to guide you during your training and education in Medical Laboratory Science. It is designed to help acquaint the student with the policies and regulations governing their participation in the Medical Laboratory Science major. The handbook also gives the Clinical Preceptor/Faculty, Clinical Supervisor, Clinical Instructor, Clinical Coordinator, and Program Chair a teaching mechanism to ensure students understand and progress at a reasonable rate. The student is responsible for all information included in this handbook, the *University Student Handbook*, and the *University Catalog*. The University Catalog and University Student Handbook are accessible on the MyCampus link. You will be expected to read carefully and adhere to these guidelines during your enrollment in the major. Any student needing clarification of the contents of this clinical handbook should notify the Clinical Coordinator or the Program Chair.

# Section I: Medical Laboratory Science Administration and Faculty

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# **Advisory Committee Members**

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#### MEDICAL LABORATORY SCIENCE MAJOR

### **Mission**

The medical laboratory science (MLS) program mission is to provide:

- Exemplary laboratory education.
- Instruction necessary to educate individuals to become skilled, caring health are practitioners who value lifelong learning.
- Scholarly activity through practice-based research.
- Positive impact on the health status of the community through service.

In accordance with the mission of the Baptist Health Sciences University, educational experiences in the MLS program reflect the importance of a strong general educational foundation and include opportunities for critical thinking, use of technology, effective communication, skills, and the ability to work effectively with others.

#### **Educational/Program Goals**

- Maintain a nationally accredited program in medical laboratory science.
- Implement and promote the rules and regulations of the State of Tennessee Medical Laboratory Board for training programs for medical laboratory personnel.
- Design and implement a curriculum whereby upon completion of the program the students demonstrate the entry-level competencies to gain employment in the MLS or related laboratory field.
- Provide a program to prepare well-trained laboratory professionals who will be eligible to sit for the national certification examinations.
- Display a commitment to the role and the development of the medical laboratory professional.
- Develop in the students the necessary interpersonal and communication skills to professionally interact with patients, patients' families, physicians, and other members of the health care team.

#### **Program Learning Outcomes**

Upon completion of their course of study, graduates of the Medical Laboratory Science program will:

- Perform the full range of clinical laboratory tests in the diagnostic areas appropriate for entry level practice.
- Demonstrate appropriate communication skills, education techniques and a commitment to professionalism.
- Evaluate validity of laboratory test results and take appropriate corrective action.
- Demonstrate an understanding of safety regulations and standard precautions.

# **Career Entry-Level Competencies**

The graduates of the MLS program will be able to:

- Perform the full range of clinical laboratory tests in hematology, immunohematology, clinical chemistry, microbiology, serology/immunology, coagulation/hemostasis, urinalysis, molecular, and other emerging diagnostics appropriate for entry-level practice.
- Determine specimen collection, processing and testing priorities, and organize workload according to laboratory priority classifications.
- Integrate patient data for evaluation of validity of laboratory test results to include: confirm abnormal test results; correlate findings to disease processes; recognize discrepancies in patient results and quality-control results and take appropriate corrective action; verify quality control procedures.
- Evaluate test systems, laboratory procedures, and equipment using basic knowledge and skills in financial, operations, marketing, and human resource management of the clinical laboratory to enable cost effective, high-quality, value-added laboratory services.
- Evaluate published laboratory studies with sufficient knowledge of research design and practice.
- Implement basic knowledge and skills in information management to enable effective, timely, accurate, and cost-effective reporting of laboratory generated information.
- Exhibit personal and professional conduct consistent with the Code of Ethics of the American Society of Clinical Laboratory Science.
- Comply with safety regulations and standard precautions and evaluate quality assurance assessments.
- Demonstrate appropriate interpersonal and communication skills to professionally interact with patients, patients' families, physicians, and other members of the health care team.
- Demonstrate education techniques and terminology sufficient to train/educate users and providers of laboratory services.
- Demonstrate a commitment to the principles and applications of professionalism to address ongoing professional career development and performance improvement.

# **Technical Standards/Essential Functions**

The following technical standards outline reasonable expectations of a student enrolled in the Medical Laboratory Science program for the performance of common clinical functions.

#### Communication

Ability to communicate with a wide variety of people and the ability to be easily understood. Reading, writing, recording, and documenting patient information is required.

### Analytical Skills/Critical Thinking

Analytical skills sufficient to process information, to transfer knowledge from one situation to another, and to prioritize tasks. Critical thinking ability sufficient for safe, clinical judgment.

#### Hearing

Auditory ability sufficient to monitor and assess patient needs, to detect and respond to alarms, emergency signals, and cries for help.

#### Vision

Visual ability sufficient for observation and assessment necessary for the care of patients and operation of equipment.

#### Tactile

Tactile ability sufficient for patient assessment and operation of equipment.

#### Mobility

Physical ability, flexibility, strength, and stamina sufficient to provide safe and effective care.

#### Fine Motor Skills

Fine motor ability sufficient to provide safe and effective care.

#### Behavioral

Emotional and mental health sufficient to establish therapeutic boundaries, to perform multiple tasks concurrently, to handle strong emotions, and to work effectively in a fast-paced environment.

\*Students who have accessibility questions or who need accommodations should contact the Section 504/ADA Coordinator, Room 101, Science Building, at 901-572-2570 or by sending an email to <u>access.services@baptistu.edu</u>

# **Professional Conduct and Ethics**

Students at Baptist Health Sciences University who are about to enter the health care profession must strive to maintain the highest personal and professional standards. An important standard as a health care professional is to serve as a role model. In addition to rendering the highest quality of care possible, the allied health student sets himself apart as a leader and advocate of public health.

Smoking is prohibited at most clinical facilities. Students at a clinical site are expected to abide by the policies of that facility. Violations of the policies will result in disciplinary action up to and including dismissal/termination. (*Refer to* Baptist Health Sciences University *Student Handbook*)

- Eating or drinking is not allowed in the hospital corridors, patient rooms, lab areas, or other restricted areas of the clinical site.
- Visitors and other non-authorized persons are not allowed in the clinical area without permission of the Clinical Preceptor.
- Safety and well-being of patients, visitors, and employees are responsibilities of the clinical staff and students. Students should be alert to foresee, report, and correct, if possible, unsafe situations and defective equipment. Often accidents are preventable by immediate use of good judgment. If an accident occurs to a patient or student, it must be reported immediately to the Clinical Supervisor, the Clinical Preceptor and the MLS Faculty
- Use of cell phones, pagers, and other electronic devices are prohibited at the clinical site.
- Students are subject to all rules and regulations of the clinical education site, both institutional and departmental, as well as rules and regulations of as published in the Baptist Health Sciences University *Student Handbook*). The clinical education sites are considered "campus" and the student must observe the same rules and regulations while in the clinical site.

# Academic Integrity

To remain in good standing at Baptist Health Sciences University, students are expected to demonstrate academic honesty, integrity, civility and respect for others. Academic integrity is defined as implicit or explicit behavior that exemplifies honesty and truthful representation of personal academic work. Cheating, lying, and plagiarism are each examples of destructive and unethical behavior that reflect deception or dishonesty. Please refer to the *University Catalog* and *Student Handbook* for additional information.

# **Clinical Performance Standards and Unsafe Events**

**Standards of Conduct/ Unsafe Events:** Students should also be familiar with the *Standards of Conduct* as published in the *Student Handbook*, as well as other rules and regulations governing professional behavior to ensure that a safe and secure learning environment exists. Students entering the Medical Laboratory Science profession must strive to maintain the highest personal and professional standards.

In addition to the *Standards of Student Conduct*, the Medical Laboratory Science faculty further expands on circumstances which are considered **unsafe events** in clinical practice.

Examples of Unsafe Events include, but not limited to:

- Failing to maintain confidentiality of agency/client information in all clinical and classroom settings.
- Falsifying personal records, academic records or clinical documents.
- Performing any lab procedure or operating any laboratory instrumentation without direct clinical instructor supervision and/or approval.
- Performing any lab procedure beyond the current clinical performance level without direct supervision.
- Failing to report critical information regarding the patient or equipment as soon as possible to the clinical instructor or clinical supervisor.
- Any act of negligence that could cause harm to a patient, visitor, or colleague during a clinical experience.
- Attempting to cover up an error or negligence during a clinical experience.
- Adversely affecting the health of patients, visitors or colleague by reporting to clinical assignments when contagious or unable to perform duties due to health related issues.
- Performing an examination in an incorrect manner that is harmful or potentially harmful to the patient.
- Failure to comply with policies (Baptist Health Sciences University, MLS, or Clinical Affiliate) or complying with mandatory safety training.

Violation of unsafe events will be handled as outlined in the Baptist University Student Handbook and Baptist University Policies.

All events considered, as Unsafe Practice will be documented on the University *Incident Report Form*. The form will be completed by MLS faculty and students. After review by the Dean of Allied Health, the original form will be filed in the office of the Director of Administrative Services and a copy to the student file located in the Division of Allied Health.

# **Drug and Alcohol Policy**

Baptist Health Sciences University clearly communicates a drug and alcohol policy based upon the philosophy of *Zero Tolerance* with the end result that all students are free of any chemical impairment. Students are prohibited from being under the influence of illegal drugs, unprescribed controlled drugs, alcohol or inhalants while in the classroom, the clinical setting, on campus, or while participating in Baptist Health Sciences University sanctioned or sponsored activities. Refer to the *Drug and Alcohol Policy* of the University for additional information. This information can be found in the *Student Handbook*.

Students taking any prescribed or over-the-counter medications that may alter the student's ability to function during clinical assignments must report their medication to the MLS Faculty/Clinical Preceptor prior to the student entering the clinical setting.

Clinical affiliates may require drugs and/or alcohol screening prior to placement at the clinical affiliate. The University's *Zero Tolerance Drug and Alcohol Policy* will be enforced during additional screening by a clinical affiliate.

# **Requirement for Criminal Background Check**

Satisfactory completion of the clinical components of courses in the major is a requirement for graduation from Baptist Health Sciences University. In order to complete clinical requirements, students must be eligible for clinical rotations at hospitals and other health care facilities. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is the accrediting body for healthcare and sets the standards that must be met. JCAHO has established a standard that requires verification of competency for all individuals who provide patient care, including students. Competency means more than clinical skills and includes a person's criminal history. In order to meet requirements for clinical placement in a health care entity, applicants must submit to and demonstrate satisfactory completion of a criminal background check as a prerequisite for admission to the University and as a prerequisite for enrollment in the clinical portion of their major. Students who refuse to submit to a background check or refuse to allow the University access to the report will be dismissed from the University and are not eligible for readmission. Those who do not pass the background check will be afforded the opportunity to explain the circumstances surrounding the situation, but if the student is ineligible for clinical placement, he/she will be dismissed from the University. Refer to the Baptist Health Sciences University Student Handbook or contact the Dean of Student Services for additional information regarding criminal background checks.

# Accreditation/Certification/Licensure

#### ACCREDITATION

Baptist Health Sciences University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the Doctor of Nursing Practice, Bachelor of Science in Nursing, the Bachelor of Health Sciences, and the Associate of Science. Contact the Southern Association of Colleges and Schools Commission on Colleges, 1866 Southern Lane, Decatur, GA 30033-4097, telephone 404-679-4500, at <u>http://www.sacscoc.org</u> for questions about the accreditation of Baptist Health Sciences University. Normal inquiries about the institution, such as admission requirements, financial aid, educational programs, etc., should be addressed directly to the institution and not to the Commission's office.

The Medical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS) Programs. NAACLS establishes, maintains, and promotes appropriate standards of quality for postsecondary educational programs in Medical Laboratory Science to provide skilled, professional services to the patients served. Educational programs, which meet or exceed minimum standards, are granted an accreditation status by the NAACLS, providing public recognition of such achievement.

To contact the NAACLS:

NAACLS 5600 North River Road, Suite 720 Rosemont, IL 60018 773-714-8880, www.naacls.org

#### **CERTIFICATION AGENCIES**

- ASCP-BOC
- AMT
- ABB

#### LICENSURE

 TENNESSEE TRAINEE PERMITS 

 Required by the Tennessee Medical Laboratory Board prior to beginning training at a clinical rotation site. Trainee Application Forms will be provided by MLS faculty to be completed by students prior to beginning the clinical rotation. Forms will then be signed by the program chair and the medical advisor and then submitted to the Medical Laboratory Board. The Tennessee Medical Laboratory Board will issue the trainee permits. Each student will be given the trainee permit and are required to have available at the clinical site.

#### • Tennessee State Licensure Requirement

All medical laboratory personnel and special analysts in Tennessee must hold current Tennessee licensure, unless specifically exempt by statute or rules promulgated by the Tennessee Medical Laboratory Board.

- The MLS program at Baptist Health Sciences University has been granted a certificate by the Tennessee Department of Health to conduct and maintain a school for training medical laboratory personnel in the specialty of medical laboratory technologist, general.
- o Additional requirements for licensure may be required by the state in which you practice.
- Medical Laboratory Board
   Metro Center Complex
   665 Mainstream Drive
   Nashville, TN 37423, www.tennessee.gov

# **Graduation Award**

#### **Dr. Thomas Chesney Award**

Information regarding additional grants and scholarships are available in the Financial Aid Office at Baptist Health Sciences University.

# **Professional Liability Insurance**

Students are required to show proof of appropriate professional liability insurance coverage before enrollment into any of the professional courses that incorporate a clinical practicum. Baptist Health Sciences University has arranged to provide professional liability coverage meeting the required coverage standards to all students who are enrolled in clinical courses through Healthcare Providers Service Organization (HPSO). All Baptist Health Sciences University students enrolled in clinical courses must obtain coverage through HPSO; other personal liability insurance notwithstanding. Refer to *University Catalog* for additional information.

# **Student Work Policy**

Students must exercise judgment in the number of hours of employment during the Medical Laboratory Science program since a quality education might be jeopardized by excessive hours of employment. A student may be

employed at a clinical affiliate as a *Student Medical Laboratory Scientist after completing the rotation and meeting all requirements for employment*. While at the clinical site, during scheduled clinical practicum hours, the student is to be considered a student of Medical Laboratory Science and should be treated as such. The clinical objectives must be always considered. The student's goal is to achieve the objectives set forth. A student should never be substituted for regular staff. The student must work under the direct supervision of a Laboratory Professional until the student has demonstrated and documented proficiency in each area. After such time the student may be permitted to undertake those defined completed competencies with appropriate indirect supervision. The assigned clinical preceptor is responsible for the student. If a student violates this policy and is paid while performing program clinical assignments, the student may be dismissed from the program.

The student must have release time from their employment site to complete all required rotations. Working students will be responsible for the same competencies and clinical hours as the non-working student.

Students who work outside academic hours are non-compulsory. Students are to work outside of assigned school hours. Students may be employed only in areas in which they have been trained.

# **Section II: Introduction to Clinical Practice**

This section of the *Clinical Handbook* will assist you by providing essential information as you begin your clinical rotations.

# **Health Policy**

#### Health Records

In order to participate in a clinical rotation, students are required to have health records on file that include up to date immunizations of measles, mumps, rubella, varicella, Tdap, Hepatitis B vaccines or titers, and TB skin test through the end of the current trimester. Flu vaccines must be up to date for fall and spring trimesters of the current flu season. All information must be uploaded to SentryMD. Contact Student Services at 901-572-2670 for uploading problems.

#### Flu Vaccinations-Refer to University policy

Persons who enter a Baptist facility as a clinical student or as a student worker will have to provide proof of a current influenza immunization.

#### Illness and Injury

Students should report any illness or injury while at the clinical site to the Clinical Supervisor, to the Clinical Preceptor and MLS Faculty immediately. An incident report is filled out at the clinical site. The student is encouraged to pursue proper treatment by his/her physician, if needed.

#### Infection Control

Students should follow good hygienic practices: hands should be washed before and after breaks, eating, using the restroom, etc. No eating, drinking, or smoking should be done in patient care areas.

Hand washing before procedures or after contact with patient secretions or excretions is the primary means of preventing the spread of hospital-acquired (nosocomial) infections between patients. Students should wash their hands with an anti-bacterial soap (available in dispensers above sinks) prior to and after performing laboratory tests/procedures.

Students in contact with patient secretions or excretions (sputum, urine, feces, wound drainage, etc.) should wear disposable gloves. These gloves should be removed before leaving the lab area and hands thoroughly washed. Gloves should be worn when handling blood or blood-contaminated equipment; hands should be thoroughly washed afterwards.

Students reporting to clinical with a potentially communicable skin, respiratory, or gastrointestinal infection should notify a University official for instructions on appropriate precautions. Small drainage lesions should be cleaned appropriately and covered with a Band-Aid or dressing; gloves should be worn for procedures. Masks may be indicated if a student having a communicable respiratory infection is caring for a compromised or immunosuppressed patient. Questions concerning a student's ability to continue in clinical, or return to the clinical area after an illness, should be referred to the Clinical Preceptor and/or MLS Faculty.

#### Blood and Body Fluids/Needlestick

Evaluation and follow-up will be provided to students at their request, who sustain percutaneous or mucous membrane exposure to blood or body fluids during classroom, laboratory, and clinical activities.

All students sustaining parenteral or mucosal exposure to blood or body fluids should be evaluated promptly. Post exposure prophylaxis (PEP) for Human Immunodeficiency Virus (HIV) exposure should be initiated within 1-2 hours post-exposure.

Following any exposure, the student should report the occurrence immediately to his/her clinical supervisor and clinical preceptor and MLS Faculty.

Should a needle-stick or other possible exposure occur, wash the area well with soap and water. For mucous membrane exposure, rinse the area thoroughly with water or saline.

The clinical supervisor/clinical preceptor/MLS faculty will ensure:

- 1. Completion of the agency's unusual occurrence/incident form.
- 2. that if the exposure occurs in a BMHCC Acute Care Facility, the student is encouraged to report to the emergency department (ED) with the occurrence form so that patient and student evaluation

can be initiated. If the incident occurs in a non-BMHCC facility or a non-acute BMHCC facility, the agency's Infection Control/Employee Health Nurse is to be notified so that patient evaluation can begin.

- 3. Notification of the Baptist Minor Med at 901-327-8188 on 3295 Poplar Ave, Suite 105 of the occurrence. Follow-up will be determined at that time. Baptist Minor Med will provide counseling and follow-up appropriate to the injury.
- 4. Notification of the Academic Dean of the occurrence.

Students must maintain health insurance while enrolled at the University and are responsible for out-of-pocket expenses related to exposure.

#### **Tuberculosis Control**

Students are required to have tuberculin skin test (PPD) annually. Contact Student Services to determine the Provider. The exception to this is someone who has already tested positive. That individual is required to complete a form indicating that he/she is symptom free.

If a student is exposed to tuberculosis while in the clinical, the clinical preceptor/clinical supervisor/MLS Faculty will ensure:

- 1. Completion of the agency's unusual occurrence/incident form.
- 2. Notification of the Baptist Minor Med at 901-327-8188 on 3295 Poplar Ave, Suite 105. Baptist Minor Med will provide counseling and follow-up.
- 3. Notification of the Academic Dean of the occurrence

#### Pregnancy Policy

A student may declare her pregnancy by notifying the program faculty in writing of the pregnancy. A student cannot be required by the University to make this declaration of pregnancy, and a student may withdraw her declaration of pregnancy at any time. The decision to make a declaration of pregnancy and/or withdraw the declaration of pregnancy is strictly a student's choice and is entirely voluntary. All students must successfully complete the required MLS courses to remain in progression.

#### Allied Health Division Pregnancy Policy Guideline:

The student may choose from the following options:

- Remain in the major and make up all missed clinical/ didactic course requirements by the end of the academic trimester. In collaboration with the program chair, the student will develop a plan to continue progression. If the student is unable to complete requirements by the end of the academic trimester, a grade of incomplete (I) will be assigned.
- Withdraw from the clinical / didactic courses and provide a written request for a leave of absence. (Withdrawal from a course will affect progression in the major)

Refer to the University Catalog for additional information concerning the above options.

For students who remain enrolled:

- Students are required to meet with the program chair to develop a written progression plan. This counseling record will be placed in the student's file.
- Students must provide written permission from their physician to resume their course work.

#### Clinical Courses and Didactic

**Clinical Courses:** As determined by the progression plan, the student may complete additional clinical hours on weekends, evenings, or holidays, if those opportunities are available within the major. The accrued clinical time may not exceed 40 hours (clinical and didactic) per week. It is the student's responsibility to submit records of accrued time to the MLS faculty. The make-up clinical time will be applied to any time missed relating to the pregnancy. Students are required to complete all assigned clinical hours, competencies, or assignments by the end of the academic trimester. If the student is unable to complete clinical hours, assignments, and/or competencies by the end of the academic trimester, the 'Incomplete' grade policy applies. (Refer *to* Baptist Health Sciences University catalog).

**Didactic Courses:** Once a plan for progression is in place, the student is required to meet with their instructors to create a plan relating to completion of missed assignments. If a student is unable to complete course requirements by the end of the academic trimester, the 'Incomplete' grade policy is applied. (Refer to *University Catalog*)

Students are required to communicate often and clearly about health issues which may interfere with course requirements. Any complications with the pregnancy will need to be handled on an individual basis.

#### **Gloves and Shields**

Gloves must be worn when performing venipuncture, performing lab procedures or if there is any potential of exposure to body fluids.

#### **MLS Safety Policy**

#### Laboratory Safety

- A. Refrain from horseplay in the laboratory.
- B. If a prepared slide accidently breaks please bring this to the attention of the laboratory instructor.
   Not only do they need to know that the slide is missing but they can properly dispose of the glass.
   Broken glass needs to be disposed of in cardboard containers purchased for that specific purpose.
- C. You are asked not to eat, drink, store food or apply cosmetics in the laboratory.
- D. <u>Disposable lab coats are</u> available for you to wear during lab. They serve to protect your clothes from contamination due to splashing and stain. <u>Wear safety goggles</u> and face shields when working with strong chemicals and when splashes are likely to occur. Gloves are available in several sizes. <u>Wear gloves</u>

when handling blood, biological specimens and hazardous chemicals or agents. <u>Wear closed toe shoes.</u> <u>Pin long hair</u> away from face and neck. <u>Avoid wearing chains</u>, bracelets, rings, or other loose hanging jewelry.

- E. You are asked to dispose of used **lab coats**, **gloves**, and **swabs** in the regular trash if they are not contaminated with human biological waste. Items such as **mouthpieces** and **wipes or gauze with blood** should be disposed of in garbage cans lined with red biological safety liners.
- F. Discard all contaminated materials into an appropriate, labeled biohazard container. Lancets or **sharp items** whether contaminated or not should go into a 'sharps' container.
- G. Laboratory areas are also equipped with first aid kits, chemical showers, and eyewash stations. We have safety glasses, disposable gloves, and lab coats available if needed. Be aware of what is in your laboratory area.
- H. Know the locations and read the MSDS sheets. Talk about the hazards associated with each chemical and the emergency procedures you can use if exposed.
- I. When in the lab, **store your personal items** in the designated area. Have your laboratory exercise, your book and a writing implement available.
- J. If you have an **allergic reaction**, speak to your instructor about any medical condition you might have which would affect your performance in the lab.
- K. Wash **your hands** before and after laboratory procedures, before putting on and after taking off gloves and before leaving the laboratory.
- L. Clean up spills promptly and appropriately for the type of spill. You are **REQUIRED** to clean your area with a disinfectant (bleach) after each laboratory session.
- M. Avoid tasting, smelling, or breathing the dust of any chemical or specimens.
- N. Follow the manufacturer's instructions for operating equipment. Handle equipment with care and store properly.
- O. Report any broken or frayed electrical cords, exposed electrical wires, or damaged equipment.
- P. Report any accident to the faculty or supervisor immediately.
- Q. Know the location of fire extinguishers, fire blankets, eyewashes, showers, and how to use them properly.
- R. Garbage Cans Dispose of paper trash; Broken Glass Boxes Only discard broken glass in these special boxes.
- S. Biohazard containers-for contaminated waste material. Contaminated waste such as glass, needles, etc. goes in a biohazard container.
- T. Do not invite or allow **children**, **family or individuals not registered in this class** into the laboratory area without the express permission of your instructor.

# **Clinical Practicum**

Clinical practicum courses include clinical experience in assigned clinical laboratory areas. Clinical affiliates exist in a variety of hospitals. The Clinical Coordinator, Clinical Supervisors, and Clinical Instructors/Preceptors play a vital role in developing the student into a competent, entry-level technologist.

#### Responsibilities of the MLS Program Chair/MLS Faculty

Responsible for coordinating the student's clinical experience. Roles and responsibilities include:

- 1. Coordinate supervision in the instructional facility for lab and clinical phases of the program.
- 2. Schedule clinical rotations.
- 3. Keep student clinical performance and attendance records.
- 4. Ensure sufficient representative clinical experience.
- 5. Assist in development of skills necessary for performing in the clinical laboratory.
- 6. Demonstrate a genuine interest in the student's learning process.
- 7. Serve as a professional role model and resource.
- 8. Develop and evaluate clinical performance goals.
- 9. Schedule student conferences as needed.
- 10. Submit final grade based on overall clinical performance.

#### Responsibilities of the Clinical Supervisor

The Clinical Supervisor is responsible for the clinical education, supervision, and evaluation of students assigned to the clinical affiliates. It is their responsibility to set a climate that is suitable for learning. Some of their roles and responsibilities are:

- 1. Serve as a professional role model and resource for students.
- 2. Orientate the student to the clinical affiliate.
- 3. Discuss expectation of the clinical rotation with the student.
- 4. Coordinate/supervise student instruction while at the clinical site.
- 5. Assist in developing skills necessary for performing in the clinical laboratory.
- 6. Allow hands-on experience in performing procedures.
- 7. Oversee clinical evaluation and competency check-off process.
- 8. Determine accuracy of clinical documentation submitted by students for a clinical site.
- 9. Communicate with supervising technologist and program faculty regarding the clinical rotation.

#### Responsibilities of Clinical Instructors/Preceptors

MLS Professionals are an integral part of the program and the student's learning process. It is their responsibility to maintain a climate that is suitable for learning. Some of their roles and responsibilities are:

- 1. Demonstrate to the student professional behavior while interacting with the patient and staff.
- 2. Assist in developing the skills necessary for performing laboratory procedures.
- 3. Allow hands-on experience in performing procedures.
- 4. Demonstrate a genuine interest in the student's learning.
- 5. Discuss clinical objectives relating to the procedure with the student.
- 6. Instruct the student as they perform laboratory procedures.
- 7. Evaluate the student's progress.
- 8. Become a positive role model and resource.
- 9. Communicate with clinical supervisor and program faculty regarding clinical rotation.

#### Student's Responsibilities in a Clinical Site

The success of a clinical rotation will depend on the overall team effort of the student and Clinical Preceptor. The student must be a part of that team effort and be willing to support the effort in the following ways:

- 1. Demonstrate a professional attitude while interacting with the patients and staff.
- 2. Inform instructors of expectations and specific needs.
- 3. Arrive at the clinical rotation site on time and ready to learn.
- 4. Take the initiative.
- 5. Communicate with the Clinical Coordinator, Clinical Supervisor, and supervising medical laboratory scientist.
- 6. Help maintain the cleanliness, safety, and efficiency of the lab area.
- 7. Practice safety techniques.
- 8. Process paperwork and reports as assigned.
- 9. Adhere to the clinical affiliate's policies and procedures, including safety.
- 10. Complete a student evaluation of clinical instructors and the rotation sites at the end of the rotation. Submit the completed evaluations to the MLS program faculty. Results will be shared with the clinical preceptors/instructors.

# **Clinical Affiliates**

MEDICAL LABORATORY SCIENCE PROGRAM - CLINICAL ROTATION SITES

- Program Chair-Dr. Darius Y. Wilson, Ed.D., office phone number (901) 572-2657 office-Health Science bldg.-423A, e-mail address-darius.wilson@baptistu.edu.
- MLS Faculty
  - Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg- 423B, e-mail <u>address-dana.wilson@baptistu.edu.</u>
  - Adjunct-Ms. Calisha Beauregard, e-mail <u>address-calisha.beauregard@bchs.edu</u>
- Medical Director/Advisor-Dr. Mohammed Osman, M.D., Pathologist-PathGroup

Hospitals Providing Clinical Experience –students are provided an updated list prior to beginning the clinical rotation with the name of the clinical coordinator/s. **Baptist Memorial Health Care System clinical laboratories** are the primary clinical sites for student clinical assignments. If for any reason a student is not

eligible for a clinical assignment at a hospital in the Baptist Memorial Health Care Corporation system, the student's progression, and completion of the program of study will be terminated.

NAME	ADDRESS	Phone number
Baptist Memorial Hospital (BMH)- Memphis	6019 Walnut Grove Rd.,	901-226-5600
	Memphis, TN 38120	901-226-5614-BB-front desk
Baptist Memorial Hospital (BMH)-Huntingdon	631 RB Wilson Dr.	731-986-7363
	Huntingdon, TN 38344	
Baptist Memorial Hospital (BMH)-Desoto	7601 Southcrest Pkwy	662-772-3140
	Southaven, MS 38671	
Baptist Memorial Hospital (BMH)-Golden	2520 5 <sup>th</sup> Street N., Columbus,	662-244-1532
Triangle	MS 39705	
Baptist Memorial Hospital (BMH)- Memphis	6225 Humphreys Blvd.,	901-227-9140
for Women	Memphis, TN 38120	901-227-9141
NEA Baptist (Baptist Memorial Hospital	3024 Stadium,	870-972-7240
(BMH)Jonesboro)	Jonesboro, AR 72401	
Baptist Memorial Hospital (BMH)-Booneville	100 Hospital Street,	662-720-5096
	Booneville, MS 38829	
Baptist Memorial Hospital (BMH)-Tipton	1995 Hwy 51 South,	901-475-2621
	Covington, TN 38019	
Baptist Memorial Hospital (BMH)-Union City	1201 Bishop Street,	731-884-8540
	Union City, TN 38261	
Baptist Memorial Hospital (BMH)-Union	200 Hwy 30 West,	662-538-2170
County	New Albany, MS 38652	
Baptist Memorial Hospital (BMH)-North	1100 Belk Blvd.	662-636-1253
Mississippi	Oxford, MS 38655	
Baptist Memorial Hospital (BMH)-Collierville	1500 West Poplar Ave.,	901-861-8875
	Collierville, TN	
American Exoteric Lab (AEL)	1701 Century Blvd.,	901-405-8200
	Memphis, TN 38134	Ext. 8820
Lebonheur Children's Hospital	50 North Dunlap Street	901-287-6215
	Memphis, TN 38103	287-4640
NAME	ADDRESS	Phone number
St. Jude Research Hospital	262 Danny Thomas	901-595-3300
	Memphis, TN 38105	595-3149

#### **Transportation Requirement**

Reliable transportation, to and from clinical affiliate, is the responsibility of the student. To provide students a variety of clinical settings and procedures, students will be required to travel to assigned clinical affiliates, which may be up to a 100-mile radius from the University campus.

#### Teach Out Plan for Closure

Program "teach out" is a component of the Baptist Health Sciences University Substantive Change policy. Programs undergoing teach out plans are required to follow specific procedures as identified in the policy. The procedures include a detailed communication plan for all constituents including submission of a 30-day closure notification.

#### Service Work

MLS students will not be substituted for regular staff while on the clinical rotation. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work in clinical settings outside of academic hours is not compulsory.

#### Clinical assignment and available sites

Dates of applied clinical experience cannot be guaranteed. If the number of students eligible for clinical assignment exceeds the number of sites available, students will be assigned according to GPA in the MLS courses, with the highest GPA receiving priority. Any student not assigned will be guaranteed completion of the program by the end of the calendar year in which he/she was eligible for the clinical assignment.

#### **Clinical Attendance Policy**

Students are expected to spend eight hours daily, excluding breaks or lunch, in the pursuit of medical laboratory science. Most of the time will be spent in the department of the clinical laboratory, during the dates/hours listed on the clinical rotation schedule.

Daily attendance is mandatory. Absences are designated 'excused" or unexcused" by the clinical instructor and at the discretion of the clinical instructor. Absences which are generally excused result from serious illness, death of a close family member, and holidays designated by the clinical instructor. Holidays may vary among institutions and may not always be observed by Baptist University. If an absence cannot be avoided, the student must contact the clinical instructor as soon as possible and no later than 8:30 a.m. If the clinical instructor is not available, the absence should be reported to the shift supervisor or lead tech. An absence, which is not reported, will be designated "unexcused". If a student is absent more than one day, the student must contact both the clinical instructor and the Baptist University clinical faculty each day of absence. Students must attend at least 80% of each rotation area. Any student missing more than 80% of a rotation area may be required to repeat the entire rotation for that area if space is available. If space is not available, the student may not complete the clinical rotation, which will affect program completion. Tardiness is unacceptable. Tardy is defined as coming late or leaving early.

All clinical absences require proper notification prior to the start of their clinical schedule. It is important for the student to understand that compliance with this policy is directly reflected in the student's Affective/Behavioral Evaluation. As in the workplace, a "No Call/No Show" will not be tolerated and will result in disciplinary procedures. Disciplinary procedures include a written reprimand for the first offense. A second offense may result in failure of the clinical practicum course.

#### ADDITIONAL EXPECTATIONS

In the event a clinical site closes for a holiday, closes early due to lack of work, dismisses a student for the clinical day, or dismisses a student early due to other unforeseen circumstances, the student must

contact the MLS Program Chair/Faculty/Clinical Coordinator. The MLS Faculty will communicate with the clinical rotation site to determine if time must be made up.

#### MAKE UP ADDITIONAL TIME

If additional time in a rotation area is necessary, the time will be scheduled by the MLS faculty with input from the clinical instructor. Time may not be made up on evening or night shifts. All make up or additional time will be scheduled at the end of the student's complete rotation schedule, providing space exists. Students who fail to make up the rotation at the scheduled time will not complete the practicum and this will affect program completion.

#### **Inclement Weather Policy**

The decision to cancel classes and/or campus activities will be made by the President of Baptist Health Sciences University or the President's designee. Closing decisions made overnight will be distributed to all local radio and television news media. There will be no notification to remain open.

#### **Dress Code Policy**

All Allied Health students must adhere to the dress code established by the Allied Health Division.

#### OBJECTIVES

- To ensure that MLS students represent the University in a professional manner and that their dress and appearance is appropriate to the clinical site.
- To promote a safe and secure environment for students, employees, and patients

#### POLICY

• Student Responsibility: Every student has some contact with the public and therefore represents the University in his or her appearance. Students' personal appearance should reflect pride in their work and contribute to the professional atmosphere of the University. Students are expected to comply with safety regulations as set forth by the clinical site.

#### • Personal Appearance/ Hygiene

Students must be clean and neat, upholding professional standard appearance and safety.

- a. Hair, including facial hair, should be clean and neatly trimmed. No extreme styles are permitted, and all hairstyles must follow the appropriate health and safety requirements. Hair accessories should be minimal in number and conservative in design.
- b. Fingernails must be neat and clean. If worn, nail polish must be a single conservative color with no design or ornament. Fingernails of extreme length will not be permitted. Artificial fingernails are not permitted.
- c. Cosmetics should be used moderately.
- d. Use of colognes and perfumes is not acceptable since it may be offensive to some patients. An effective deodorant is required.
- e. Tobacco products are not visibly permitted on the person while on duty except in a designated area where tobacco use is permitted.

#### • Clothing/ Attire

Students are expected to use good professional judgment in his/her dress.

- a. Extremes in fashion trends, which could be offensive to patients and visitors of clinical sites, are not acceptable. If you have a question about something, ask before you purchase.
- b. Clothing and attire should be clean, neat, in good repair and of the proper size and fit.
- c. Fabric of all uniforms/clothing should be of weight and weave so that undergarments are not visible.
- d. No denim pants, tight knit stretch pants leggings/leotards or jogging/sweat suits may be worn.
- e. No shorts or skirts above the knees may be worn.
- f. No sweatshirts or tank tops may be worn. No T-shirt with bold writing or pictures. All T-shirts must be white.
- g. Socks or stockings must always be worn. Socks must be white when wearing white uniforms.
- h. Shoes worn as part of the clinical uniform must be mostly white (logo/stripe permissible) with enclosed toe; however, staff may wear open heel-type shoes as long as applicable department/position-specific safety requirements are met (i.e., clogs or vinyl constructed crocs may be worn as long as the footwear is not vented with holes).

#### Accessories / Jewelry

Jewelry and accessories worn by students should enhance the University's standards.

- a. Students in clinical areas may wear a watch, one necklace; one bracelet (per wrist). Jewelry should be worn with discretion, not large or excessive. Chains should not be long enough to touch a patient. No more than two rings per hand (wedding/engagement band combinations count as one ring).
- b. No more than 2 earrings may be worn in each ear. No large or dangling earrings. Hoops must be small (no larger than a dime in diameter). Any other areas of the body that are pierced must not have pierced jewelry that is visible. A pierced tongue is not permitted at the clinical site.
- c. Clinical Coordinator or management at a clinical site reserves the right to rule on visible tattoos.
- d. While in clinical, a University identification badge must be worn on the shoulder area of the upper torso at all times. The student's picture and name must be clearly visible to the patient, public, and clinical staff. No other identification, pins, etc. may be attached to the identification badge. Students may not be able to wear lanyards depending on the clinical site regulations.
- Medical Laboratory Science Student Uniforms
- a. A white lab coat with the university's logo properly affixed to the left sleeve **must always be available in the clinical area**. The coat should be at least hip length, able to be buttoned, and long enough to cover the bottom of the upper garment.
- b. Appropriate self-purchased galaxy blue scrub clothes may be worn. All scrub tops must have the University's logo properly affixed to the left sleeve.
- c. Clean mostly white athletic shoes with white laces may be worn (logo/stripe permissible).
- d. Each student should take the following materials to clinical rotation: white lab coat, pocket size notebook and pen, student ID badge (always worn in clinical), appropriate classroom textbook and lecture notes.

# **Clinical Education**

The mere fact that a student completes a competency exam does not indicate that the student no longer needs experience in that particular area. Only years of experience can achieve the level of expertise needed. Successful completion of a competency simply indicates that the student is capable of performing the procedure with indirect supervision.

#### **Clinical Competency Requirements and Clinical Evaluations**

Each rotation has specific clinical competency requirements which are listed on the psychomotor evaluation for each rotation area. The medical laboratory scientist (clinical instructor) will complete an affective and performance (psychomotor) evaluation at the end of each rotation on the student. The Clinical Coordinator/MLS Faculty and the student will be able to review the evaluation. Upon completion of the clinical rotation, students are required to evaluate the clinical faculty and the rotation.

The Clinical Supervisor will meet with the student to address any unacceptable behaviors in the clinical setting. Because proper behavior is foundational to professional practice, failure of an evaluation may result in failure of the clinical course. The Clinical Coordinator/MLS Program Chair will meet with the student to counsel the student concerning unacceptable behavior.

Each student will take a rotation exam in each subject area. The final grade for the clinical practicum will be calculated based on the computations on the Practicum Grade Form included in the handbook. The student should review the objectives found in the *Clinical Handbook* to know what is expected during the clinical rotation. The objectives are the knowledge, attitude, or performances that are to be achieved, demonstrated, and evaluated during the academic year.

#### Trajecsys Report System

The *Trajecsys Report System* is a way of keeping automated records of students when they visit clinical sites for training purposes. The program is designed to improve communication between faculty, clinical supervisors, and students.

Students are required to 'log-in' each clinical day to complete their time sheet and record procedures performed in the clinical setting. At the end of each clinical rotation, students will complete an evaluation of their clinical experience. Clinical supervisors will also use the program to complete an evaluation on the student. The clinical faculty will complete a psychomotor evaluation and affective evaluation on each student who rotates in the assigned rotation site/area as related to the didactic components. Additional training in the use of *Trajecsys* will be addressed in the clinical practicum courses.

#### **Trainee Permits**

Each MLS student must complete an application for a Trainee Permit with the Tennessee Medical Laboratory Board. The trainee permit must be issued prior to beginning his/her clinical assignment. The Program Chair will distribute the application forms during the first fall trimester and submit them to the Tennessee Medical Lab Board to allow sufficient time for processing prior to the clinical rotation. Each clinical rotation site will be given a copy of the student's trainee permit. The student will receive the original trainee permit to keep and present to the clinical preceptor if requested.

### **Disclaimer Clause**

The faculty of the Allied Health Division at Baptist Health Sciences University reserves the rights to amend, omit, or add to the policies in the handbook at their discretion.

# Section III: Clinical Evaluation and Grade Forms Including Cognitive, Psychomotor, and Affective Objectives

# **Baptist Health Sciences University**

MLS students will not be substituted for regular staff while on the clinical rotation. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work in clinical settings outside of academic hours is not compulsory.

# **MEDICAL LABORATORY SCIENCE PROGRAM**

# **Clinical Rotation**

# Cognitive and Psychomotor Objectives

# **PSYCHOMOTOR EVALUATION FORMS**

Dr. Darius Y. Wilson,Ed.D., MLS Program Chair, 901-572-2657 MLS Faculty-Mrs. Tameka Gooden, Assistant Professor, 901-572-2667 MLS Adjunct, Clinical Practicum, Ms. Calisha Beauregard Fax number-901-572-2750 ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS AT END OF EACH ROTATION OR DURING FINAL EXAM WEEK.

The NAACLS' standard-22C-states "Experiences at different clinical sites are comparable and appropriate to enable all students to achieve entry level competencies." This means that all students are to receive training (Hands On) at each site and in each rotation area with instrumentation and

# performing lab procedures. Students should NOT be reading or observing the majority of the time while at the site, but performing procedures.

#### ADDRESS: 1003 MONROE AVE.

#### MEMPHIS, TENNESSEE 38104

# **Clinical Immunohematology**

#### **Cognitive and Psychomotor Objectives**

Upon completion of each clinical rotation assignment, the student will choose at least 75 – 100 % of the time to:

#### Cognitive:

- 1. Evaluate, interpret, and apply theoretical knowledge to routine immunohematology procedures.
- 2. Evaluate, interpret, and apply pathophysiological principles to routine Blood Bank procedures.
- 3. Explain the importance of proper collection and transport of specimens
- 4. List criteria for evaluating specimen quality and corrective actions to resolve problems

#### Psychomotor:

- 1. Prepare a RBC cell suspension appropriate to the procedure to be performed.
- 2. Read and grade agglutination and hemolysis reactions.
- 3. Perform and interpret ABO & Rh typing with 100% accuracy.
- 4. Identify ABO discrepancies with 100% accuracy and resolve the discrepancy with assistance as needed..
- 5. Perform and interpret weak D typings, if applicable.
- 6. Perform and interpret direct and indirect antiglobulin tests.
- 7. Perform and interpret antibody screening procedures with 90% accuracy.
- 8. Select appropriate products for transfusion based on the patient's history and current serologic results with 90% accuracy.
- 9. Perform compatibility testing as required for each individual patient.
- 10. Identify incompatible crossmatches with 100% accuracy.
- 11. Perform and interpret antibody identification panels.
- 12. Identify situations in which antigen typing must be performed on patients and/or donor units with 90% accuracy. Perform antigen typing procedures with 100% accuracy.
- 13. Perform prenatal testing on OB patients.
- 14. Perform cord blood testing.
- 15. Determine eligibility for RhIg for prenatal and post-delivery women and determine RhIg dosage indicated.
- 16. Perform transfusion reaction workups.
- 17. Determine the need to perform an elution on patient's based on previous history and current serologic results. Perform elutions with 80% accuracy.
- 18. Order, receive and ship blood and blood components.
- 19. Label and issue blood, blood components, and RhIG.
- 20. Prepare FFP and platelet concentrates for transfusion, including selection of product, determination of expiration time and component labeling.

- 21. Perform routine maintenance on blood bank equipment.
- 22. Perform blood bank quality control.
- 23. Enter data into laboratory information systems.
- 24. Record or transcribe test results legibly.
- 25. Keep instruments and work area clean and organized.
- 26. Follow laboratory's safety policies.
- 27. Inform supervisor or lead technologist when critical results are obtained.
- 28. Operate instruments properly.

# IMUNOHEMATOLOGY CLINICAL EVALUATION FORM

### INSTRUCTION TO THE EVALUATOR:

The attached checklist is to be used as a guide for clinical experience and as an evaluation tool. The student's grade will be partially derived from this evaluation.

Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

### 1. Discussion:

Principle and sample requirements reviewed

### 2. Demonstrated:

Test has been demonstrated by the instructor.

#### 3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure.

a. Student is able to perform the procedure with help.

b. QC results are sometimes unacceptable.

# 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

# 5. Acceptable Performance with Minimum Supervision:

- a. Performs tests or operates instruments independently seeking assistance in unusual situations
- b. QC results are consistently acceptable and student identifies appropriate solution to problems.

# 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision: a. Works independently, identifying sources of error and taking appropriate action.

- b. Handles routine maintenance or minor troubleshooting with minimal assistance.
- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

Immunohematology-Rotation dates:	Discussed	Demonstrated	Practices	Mod. Sup.	Min. Sup	Mastery

STUDENT'S NAME	Minimum Pass Level	1	2	3	4	5	6
Procedure:							
Determines specimen acceptability prior to performing tests	6						
Correctly prepares RBC suspensions	6						
Correctly reads and grades serologic reactions	6						
Correctly performs and interprets ABO & Rh typing	6						
Accurately identifies and resolves ABO discrepancies	4						
Correctly types and interprets weak D typings as required by institutional protocols	5						
Accurately performs and interprets direct and indirect antiglobulin tests	6						
Performs and interprets antibody screening procedures	6						
Selects appropriate blood components	5						
Performs and interprets compatibility testing according to institutional protocols	5						
Performs and interprets antibody identification procedures according to institutional protocols	4						
Performs and interprets antigen typings	4						
Accurately performs prenatal testing on OB patients	5						
Performs RhIg workups and determines appropriate dosage of RhIg	5						
Performs transfusion reaction workups	4						
Performs elutions as required by institutional protocol	3						
Orders, receives and ships blood components as needed	4						
Selects and prepares plasma and platelet components	4						
Labels and issues blood components according to institutional protocol	4						

Performs routine quality control and maintenance procedures	5						
Keeps instruments and work area clean and organized	6						
Follows laboratory's safety policies	6						
Informs supervisor or lead technologist when critical results are obtained	6						
Operates instruments properly	6						
Completes all procedures in a timely	6						
manner							
Accurately and legibly records or transcribes test results	6						
Understands QA principles and FDA error reporting requirements	1						
		Discussed	Demonstrated	Practices	Mod. Sup.	Min. Sup	Mastery
Miscellaneous Procedures:	Minimum Pass Level						
This student has satisfactorily completed this rotation. Yes No							
If, no please indicate specific deficiencies	which need	to be corr	rected				

Comments		
Prepared by:	_ Date	

# **Baptist Health Sciences University**

Student's Signature: \_\_\_\_\_\_Date \_\_\_\_\_Date \_\_\_\_\_Date \_\_\_\_\_

MLS students will not be substituted for regular staff while on the clinical rotation. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work in clinical settings outside of academic hours is not compulsory.

# **MEDICAL LABORATORY SCIENCE PROGRAM**

# **Clinical Rotation**

# Cognitive and Psychomotor Objectives

# **PSYCHOMOTOR EVALUATION FORMS**

Dr. Darius Y. Wilson,Ed.D., MLS Program Chair, 901-572-2657 Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg-423B, e-mail <u>address-dana.wilson@baptistu.edu.</u> Adjunct-Ms. Calisha Beauregard, e-mail <u>address-calisha.beauregard@bchs.edu</u> Fax number-901-572-2750 ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS AT THE END OF EACH ROTATION OR DURING FINAL EXAM WEEK

The NAACLS' standard-22C-states "Experiences at different clinical sites are comparable and appropriate to enable all students to achieve entry level competencies." This means that all students are to receive training (Hands On) at each site and in each rotation area with instrumentation and performing lab procedures. Students should NOT be reading or observing the majority of the time while at the site, but performing procedures.

ADDRESS: 1003 MONROE AVE.

MEMPHIS, TENNESSEE 38104

# **Baptist Health Sciences University**

# MEDICAL LABORATORY SCIENCE PROGRAM

# Clinical Rotation PSYCHOMOTOR EVALUATION FORMS

Dr. Darius Y. Wilson,Ed.D., MLS Program Chair, 901-572-2657 Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg-423B, e-mail address-dana.wilson@baptistu.edu. Adjunct-Ms. Calisha Beauregard, e-mail address-calisha.beauregard@bchs.edu Fax number-901-572-2750 ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS DURING FINAL EXAM WEEK

### ADDRESS: 1003 MONROE AVE. MEMPHIS, TENNESSEE 38104

# **Clinical Chemistry**

### **Cognitive and Psychomotor Objectives**

Upon completion of each clinical rotation assignment, the student will at least 75–100 % of the time to:

- 1. Perform clerical work including data entry, recording and reporting laboratory results with accuracy.
- 2. Prepare reagents, standards and controls for use in the laboratory.
  - a. Prepare and reconstitute according to directions
  - b. Use correct pipettes or other measuring devices
  - c. Observe for contamination or color change
  - d. Storing and labeling according to protocol
- 3. Perform laboratory calculations using appropriate techniques.
  - a. Compute test results based on obtained data
  - b. Utilize statistical data to evaluate methods, reagents and instrumentation
  - c. Determine normal or reference ranges in a population
  - d. Convert one system of measurement or units to another
  - e. Perform calculations involving molarity, normality, percentage, specific gravity, and dilutions
- 4. Prepare specimens for chemical analysis evaluating specimen suitability and verifying labeling and patient preparation for specialized tests:
  - a. Separate serum and cells in an acceptable manner correctly labeling any tubes
  - b. Assess adequacy of collection, processing and storage
  - c. Suitability of anticoagulant
  - d. Effect of hemolysis or lipemia
- 5. Prepare specimens for shipment to reference laboratories.
- 6. Identify emergency or stat requests and take appropriate action.
- 7. Perform daily set up, calibration and routine maintenance on chemistry instruments.
  - a. Document malfunctions if present
  - b. Take appropriate corrective action
  - c. Document corrective procedures taken

- 8. Operate automated and semi-automated analyzers utilizing appropriate quality control and obtaining reportable results.
  - a. Assemble reagents, standards and controls
  - b. Prepare instrument for use
  - c. Verify that equipment is functioning properly
  - d. Analyze control and patient results for acceptability
  - e. Take appropriate action when unacceptable results are identified
- 9. Perform non-automated procedures maintaining controls within ±2 standard deviations.
  - a. Correctly following written instructions
  - b. Determining concentration of unknowns and controls
- 10. Utilize appropriate controls recording and documenting the results
- 11. Evaluate and act upon control test results.
- 12. Evaluate quality control systems to ensure that they meet regulatory guidelines.
- 13. Evaluate new procedures
  - a. Perform comparison studies using established criteria: precision, accuracy, linearity, cost
  - b. Technical considerations
  - c. Document results
  - d. Reject/select procedure
  - e. Verify/establish normal reference range
- 14. Differentiate between external and internal quality control and identify their appropriate uses.
- 15. Analyze results from patient testing:
  - a. Verify accuracy of results
  - b. Identify any necessary additional tests
  - c. Take appropriate action including notification of other personnel if necessary
- 16. Differentiate normal from abnormal results and correlate the results with patient information including; history, medication, tentative diagnosis and other laboratory results.
- 17. Perform blood gas analysis including; start-up calibration, quality control procedures, inspecting specimen for air bubbles and clots, and proper storage and transport procedures.
- 18. Explain the principle of electrophoresis according to the standard laboratory procedures: a. Identify suitable buffers and stains
  - b. Determine need for any preliminary specimen preparation
  - c. Differentiate normal from abnormal results

- d. Identify factors which might affect electrophoresis procedures.
- 19. Perform immunoassay procedures according to written laboratory procedures.
- 20. Identify emergency lab requests and take appropriate action.
- 21. Identify panic or risk values and notify appropriate individuals
- 22. Utilize internal and external quality control data to monitor laboratory performance.
- 23. Explain the principle of the following chemistry instruments:
  - a. Ion selective electrode analyzer
  - b. Densitometer
  - c. Fluorometer
  - d. Spectrophotometer
  - e. Osmometer
  - f. Blood gas analyzer
  - g. Coulometric/amperometeric analyzers
  - h. Fluorescent polarizarion anaylzers
  - i. Reflectance meters
- 24. Discuss the basic principles of automated chemistry analyzers.
- 25. Correlate electrophoresis patterns for CK, protein and hemoglobin with disease states and conditions.
- 26. Describe the principle, clinical significance, interfering substances and specimen requirements for the primary clinical chemistry analyzer used at the affiliate's site.
- 27. Compare and contrast alternate methodologies for chemistry tests including disadvantages and advantages of each.
- 28. Relate human physiology to chemistry analytes.
- 29. Explain appropriate patient preparation and procedural requirements for special tests such as glucose tolerance tests and sweat chloride.
- 30. Describe requirements for therapeutic drug monitoring and toxicology testing.
- 31. Perform therapeutic drug testing and toxicology screens using appropriate techniques.

32. Analyze a set of laboratory test results for abnormal values and determine what type of disease state would most likely cause such values.

#### **INSTRUCTION TO THE EVALUATOR:**

The attached checklist is to be used as a guide for clinical experience and as an evaluation tool. The student's grade will be partially derived from this evaluation.

Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

#### 1. Discussion:

Principle and sample requirements reviewed

#### 2. Demonstrated:

Test has been demonstrated by the instructor.

#### 3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure.

a. Student is able to perform the procedure with help.

b. QC results are sometimes unacceptable.

#### 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

#### 5. Acceptable Performance with Minimum Supervision:

a. Performs tests or operates instruments independently seeking assistance in unusual situations

b. QC results are consistently acceptable and student identifies appropriate solution to problems.

#### 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision:

- a. Works independently, identifying sources of error and taking appropriate action.
- b. Handles routine maintenance or minor troubleshooting with minimal assistance.

- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

#### **Clinical Chemistry**

		Discussed	Demonstrated	Practices	Mod. Sup	Min. Sup	Mastery
Procedure	Minimum Pass level	1	2	3	4	5	6
Performs accurately laboratory clerical work including data entry & recording & reporting of laboratory results.	5						
Performs laboratory calculations including dilutions	5						
Performs daily set up, calibration & routine maintenance on chemistry instruments. a (analyzer) b (analyzer)	3						
Operates automated chemistry analyzers obtaining reportable results,including standardization & quality control. a(analyzer) b(analyzer)	4						
Properly prepares specimens for use in chemistry procedures	5						
Recognizes and acts upon outof- control tests results.	4						
Recognizes and properly acts upon emergency laboratory requests.	4						
Recognizes and acts upon panic values	5						
Properly prepares specimens for shipments to reference laboratories	3						

Performs osmolality determinations.	3			
Performs electrolytes to include Na, K, Cl.	5			
Prepares control sera and reagents for use.	5			
Performs blood gas analysis.	2			
Performs automated immunoassay determinations.	5			

#### Clinical Chemistry (continued)

		Discussed	Demonstrate d	Practices	Mod. Sup	Min. Sup	Mastery
Procedure	Minimum Pass level	1	2	3	4	5	6
Performs electrophoresis	3						
Handles expected work load for entry level technologist	5						
Performs special chemistry procedures	3						

This student has satisfactorily completed this rotation. Yes \_\_\_\_ No\_\_\_\_

If, no please indicate specific deficiencies which need to be corrected

Comments		
Prepared by:	Date	
. ,		
Student's Signature:	Date	

### **Baptist Health Sciences University**

MLS students will not be substituted for regular staff while on the clinical rotation.

After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work in clinical settings outside of academic hours is not compulsory.

### MEDICAL LABORATORY SCIENCE PROGRAM

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## <u>Clinical Rotation</u>

Cognitive and Psychomotor Objectives

### **PSYCHOMOTOR EVALUATION FORMS**

Dr. Darius Y. Wilson, Ed.D., MLS Program Chair, 901-572-2657

Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg-423B, e-mail address-dana.wilson@baptistu.edu.

Adjunct-Ms. Calisha Beauregard, e-mail address-calisha.beauregard@bchs.eduFax number-901-572-2750

#### ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS AT THE END OF EACH ROTATION OR DURING FINAL EXAM WEEK

#### ADDRESS: 1003 MONROE AVE. COAGULATION BAPTIST HEALTH SCIENCES UNIVERSITY CLINICAL EVALUATION FORM PSYCHOMOTOR

#### INSTRUCTION TO THE EVALUATOR:

The attached checklist is to be used as a guide for clinical experience and as an evaluation tool. The student's grade will be partially derived from this evaluation.

Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

1. Discussion:

Principle and sample requirements reviewed

2. Demonstrated:

Test has been demonstrated by the instructor.

3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure.

- a. Student is able to perform the procedure with help.
- b. QC results are sometimes unacceptable.

#### 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

#### 5. Acceptable Performance with Minimum Supervision:

- a. Performs tests or operates instruments independently seeking assistance in unusual situations
- b. QC results are consistently acceptable and student identifies appropriate solution to problems.

#### 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision: a. Works independently, identifying sources of error and taking appropriate action.

- b. Handles routine maintenance or minor troubleshooting with minimal assistance.
- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

#### **Clinical Coagulation**

#### **Cognitive and Psychomotor Objectives**

Upon completion of each clinical rotation assignment, the student will choose at least 75 – 100 % of the time to:

#### Cognitive:

- 1. Discuss the principles of the procedures, the reagents used, and the pathophysiological significance of coagulation tests.
- 2. Explain the operating principles of instruments used in coagulation testing and discuss troubleshooting and quality control protocols.
- 3. Interpret coagulation instrument printouts and respond appropriately to instrument flagging algorithms.
- 4. Explain the importance of proper collection and transport of specimens.
- 5. List criteria for evaluating specimen quality and corrective actions to resolve problems.
- 6. Comply with timed, routine, and stat test requests.
- 7. Evaluate, interpret, and apply coagulation policies, principles, and testing protocols.

#### Psychomotor:

- 1. Perform clerical tasks including data entry, recording and reporting results accurately.
- 2. Perform and follow established quality control procedures.
- 3. Perform daily maintenance on instruments and equipment.
- 4. Operate automated equipment properly.
- 5. Identify, call, and properly document critical values.

- 6. Process and document laboratory findings correctly that meet the criteria for pathology and supervisor review.
- 7. Correlate morphologic findings with other laboratory data, patient history or disease status.
- 8. Review printouts from automated analyzers to determine validity of results.
- 9. Differentiate normal from abnormal values from automated analyzer printouts and manual test results.
- 10. Maintain equipment and supplies utilized in the coagulation laboratory.
- 11. Differentiate acceptable from unacceptable specimens for coagulation procedures.
- 12. Accurately perform the routine hemostasis tests and evaluate quality control and patient results.
- 13. Describe the intrinsic, extrinsic and common coagulation pathways.
- 14. Predict the effect of anticoagulants and other therapeutic agents on the coagulation system.
- 15. Correctly perform the bleeding time test selecting an appropriate site and accurately assessing the cessation of bleeding.
- 16. Correlate disease processes to alterations in laboratory tests of the coagulation system.

	COAGULATION PRACTICAL REVIEW											
	S	tudent	's name									
		Discussed	Demonstrated	Practices	Moderate Supervision	Minimum Supervision	Mastery		Comments			
PROCEDURE	Minimum Pass Level	1	2	3	4	5	6	N/A				
Accurately performs data entry work, recording and reporting functions Records and perform Calibration and quality control checks and equipment maintenance	5											
Evaluate QC values and recognize and take corrective actions needed	5											

Γ		1		1		1		1	
Maintain daily QC	5								
Recognizes and acts	5								
upon STAT lab									
requests									
Recognizes and acts	5								
upon abnormal									
coagulation results									
and documents									
critical values									
Performs routine	4								
coagulation tests									
(PTP, APTT, FIB,									
D-DIMER, AT3,									
HEPARIN)									
Perform bleeding	4								
time tests or PFA-									
100									
Performs Mixing	4								
Studies									
Handles normal	5								
daily workload for									
entry level									
technologist									
Utilize reference	5								
values to determine									
clinical significance									
of laboratory tests									
This student has satis	factorily c	ompleted	l this hemato	logy/coa	gulation pra	actical revie	ew (pleas	e chec	k one).
YES ( ) NO ( )									
If NO, please indicate	specific d	leficiencie	s which need	l to be co	rrected.				
Comments:									

Practical Review Facilitated (if performed) by: (Signature)	Date:
Facilitator Contact information	
Name (please print):	
Business Phone Number: Email:	
Student's Signature:	_ Date:

### **Baptist Health Sciences University**

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### MEDICAL LABORATORY SCIENCE PROGRAM

The NAACLS' standard-22C-states "Experiences at different clinical sites are comparable and appropriate to enable all students to achieve entry level competencies." This means that all students are to receive training (Hands On) at each site and in each rotation area with instrumentation and performing lab procedures. Students should NOT be reading or observing the majority of the time while at the site, but performing procedures.

# Clinical Rotation PSYCHOMOTOR EVALUATION FORMS

Dr. Darius Y. Wilson, Ed.D., MLS Program Chair, 901-572-2657

Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg-423B, e-mail address-dana.wilson@baptistu.edu.

Adjunct-Ms. Calisha Beauregard, e-mail address-calisha.beauregard@bchs.eduFax number-901-572-2750

ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS AT THE END OF EACH ROTATION OR DURING FINAL EXAM WEEK.

#### ADDRESS: 1003 MONROE AVE. MEMPHIS, TENNESSEE 38104

#### **Clinical Hematology**

#### **Cognitive and Psychomotor Objectives**

Upon completion of each clinical rotation assignment, the student will choose at least 75 – 100 % of the time to:

#### Cognitive:

- 1. Discuss the principles of the procedures, the reagents used, and the pathophysiological significance of hematology and coagulation tests.
- 2. Explain the operating principles of instruments used in hematology and coagulation testing and discuss troubleshooting and quality control protocols.
- 3. Interpret hematology and coagulation instrument printouts and respond appropriately to instrument flagging algorithms.
- 4. Explain the importance of proper collection and transport of specimens.
- 5. List criteria for evaluating specimen quality and corrective actions to resolve problems.

- 6. Comply with timed, routine, and stat test requests.
- 7. Evaluate, interpret, and apply hematology policies, principles, and testing protocols.
- 8. Evaluate peripheral blood smears/bone marrow slides and correlate with the automated printouts and supplemental testing to diagnosis disorders and diseases.
- 9. Calculate manual cell counts using a hemacytometer, WBC correction for NRBCs, reticulocyte indicies, and other routine hematology formulas.
- 10. Explain cytochemical staining outcomes to identify leukemia and other hematological disorders and calculate LAP scores.

#### Psychomotor:

- 1. Perform clerical tasks including data entry, recording and reporting results accurately.
- 2. Perform and follow established quality control procedures.
- 3. Perform daily maintenance on instruments and equipment.
- 4. Operate automated equipment properly.
- 5. Identify, call, and properly document critical values.
- 6. Prepare slides and perform all components of a differential smear evaluation.
- 7. Identify normal and abnormal erythrocytes, leukocytes, and thrombocytes.
- 8. Process and document laboratory findings correctly that meet the criteria for pathology and supervisor review.
- 9. Correlate morphologic findings with other laboratory data, patient history or disease status.
- 10. Review printouts from automated analyzers to determine validity of results.
- 11. Differentiate normal from abnormal values from automated analyzer printouts and manual test results.
- 12. Maintain equipment and supplies utilized in the hematology laboratory
- 13. Assist in collection of bone marrow aspirates or biopsies as instructed.
- 14. Prepare an acceptable bone marrow smear.
- 15. Stain a bone marrow smear using appropriate staining technique and method.
- 16. Perform manual cell counts and calculate results using the correct formulas.
- 17. Perform manual hematocrits demonstrating acceptable technique.
- 18. Determine the ESR and identify common technical errors and their effect on ESR results.
- 19. Perform sickle cell screening tests and correctly interpret the results.
- 20. Perform reticulocyte counts and determine the ARC, CRC, and RPI.
- 21. Calculate red blood cell indices.
- 22. Perform body fluid analysis and morphology evaluation from CSF, serous, synovial, and seminal fluid.
- 23. Given a well stained peripheral blood smear, bone marrow smear, or computer generated blood cell picture and relevant patient history, interpret the findings and identify the most probable disorder.
- 24. Perform special hematology staining techniques and correlate the findings with other laboratory data.

#### HEMATOLOGY

#### **CLINICAL EVALUATION FORM**

#### **INSTRUCTION TO THE EVALUATOR:**

The attached checklist is to be used as a guide for clinical experience and as an evaluation tool. The student's grade will be partially derived from this evaluation.

Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

#### 1. Discussion:

Principle and sample requirements reviewed

#### 2. Demonstrated:

Test has been demonstrated by the instructor.

#### 3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure. a. Student is able to perform the procedure with help.

b. QC results are sometimes unacceptable.

#### 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

#### 5. Acceptable Performance with Minimum Supervision:

a. Performs tests or operates instruments independently seeking assistance in unusual situations

b. QC results are consistently acceptable and student identifies appropriate solution to problems.

#### 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision:

- a. Works independently, identifying sources of error and taking appropriate action.
- b. Handles routine maintenance or minor troubleshooting with minimal assistance.
- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

			HEMA	TOLOG	Y REVIE	N			
STUDENT'S N	AME				ROTA	TION DATE	S		
		Discussed	Demonstrated	Practices	Moderate Supervision	Minimum Supervision	Mastery		Comments
PROCEDURE	Minimum Pass Level	1	2	3	4	5	6	N/A	
Accurately performs data entry work, recording and reporting functions	5								
Operates automated hematology cell analyzer, checking results for consistency, and obtaining accurate, reportable results	4								
Performs start-up, cleaning, and quality control procedures on automated cell analyzers	3								
Recognizes and acts upon STAT lab requests	5								
Performs manual platelet count	3								
Manual procedures for hematocrit	3								
Prepares and stains acceptable blood smears	5								
Performs WBC differentials. ID normal/abnormal cells	5								

Recognizes and acts upon abnormal hematology results and documents	5									
critical values	l									
Performs ESR	5									
Accurately performs	3									
and obtains										
reportable results										
using special										
hematology stains										
		-		_		-		-		
Performs body fluids cell counts	4									
Performs body fluids cytospin prep/staining	3									
Performs body	4									
fluids cytospin										
morphology										
Observe Bone	2									
Marrow/Fine										
needle aspiration	<u> </u>									
Student has	5									
satisfactorily										
performed 10										
CBC/Diff (manual										
differentials)	ļ									
Handles normal	5									
daily workload for										
entry level										
technologist	L									
The student has satis		•			NO()					
This student has satis	factorily c	ompleted	this hemato	logy prac	tical review	<i>i</i> , if applica	ble (plea	se che	ck one).	
YES ( ) NO ( )	YES ( ) NO ( ) NA( )									
If NO, please indicate	specific d	eficiencie	s which need	l to be co	rrected.					

Comments:		
Review Facilitated by: (Signature)	Date:	
Facilitator Contact information		
Name (please print):		
Business Phone Number:		
Email:		
Student's Signature:	Date:	

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### **MEDICAL LABORATORY SCIENCE PROGRAM**

## **Clinical Rotation**

Cognitive and Psychomotor Objectives

### **PSYCHOMOTOR EVALUATION FORMS**

Dr. Darius Y. Wilson, Ed.D., MLS Program Chair, 901-572-2657

Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg-423B, e-mail address-dana.wilson@baptistu.edu.

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#### ADDRESS: 1003 MONROE AVE.

#### MEMPHIS, TENNESSEE 38104

#### **Clinical Microbiology**

#### Cognitive and Psychomotor Objectives

Upon completion of each clinical rotation assignment, the student will at least 75–100 % of the time to:

- 1. Utilize required safety precautions.
- a. Use of barriers and ventilation
- b. Disinfect work area
- c. Disposal of specimens and contaminated materials
- 2. Perform required departmental quality control and quality assurance procedures and document as necessary.
- 3. Collect and transport specimens to the laboratory, or, when this is not within the realm of lab activity, clearly communicate appropriate procedures to other health care personnel keeping in mind the following considerations:
- a. Prevention of contamination of specimen with normal flora or environmental organisms
- b. Maintenance of viability of organisms in transit
- c. Adequate and appropriate specimen collection
- 4. Perform initial specimen processing in a timely fashion.
- a. Label and log in specimens accurately
- b. Store specimens appropriately which will not be handled immediately
- c. Communicate with appropriate person if specimen is unsuitable respond to stat requests and report results accordingly

- 4. Perform rapid-identification procedure.
- 5. Stain specimens as requested or as dictated by department protocol.
- a. Gram stain
- b. Acid fast
- c. Giemsa
- d. Iodine
- 6. Culture specimens in accordance with departmental protocol:
- a. Select appropriate media
- b. Use aseptic technique which will result in effective isolation of expected pathogens
- c. Incubate under appropriate conditions for specified time:
  - Body Fluids
  - Genital
  - Upper and Lower Respiratory
  - Urine
  - Soft Tissue
  - GI
- 7. Identify organism(s) to extent possible from initial plating and perform indicated follow-up procedures.
- a. Distinguish pathogens from non-pathogens
- b. Biochemical testing for further identification
- c. Antimicrobial sensitivity testing of pathogens
- 8. Use automated equipment.
- a. Perform preventive maintenance of routine basis
- b. Perform quality assurance procedures
- c. Operate instrument in accordance with manufacturer's instructions
- d. Recognize instrument malfunctions and corrective action
- 9. Report results accurately and in a timely fashion.
- 10. Judge the acceptability of specimens for the following types of cultures based upon the method in which it was collected, handled, and prepared:
- a. Blood
- b. Fomites
- 11. Plan an appropriate course of action necessary to identify the following organisms recovered in culture.
- a. Staphylococcus
- b. Streptococcaceae
- c. Non-spore-forming gram positive rods

- d. Aerobic gram positive bacilli
- e. Neisseria
- f. Fasitidious gram negative rods
- g. Enterobacteriaceae
- h. Curved gram negative rods
- i. Non-fermenting gram negative rods
- j. Anaerobes
- k. Spirochetes
- I. Chlamydia
- m. Mycobacteria
- n. Fungi
- o. Parasites
- p. Virus
- 12. Resolve problems with unexpected results in any of the above listed cultures.
- 13. Correlate disease/pathogenic states with organisms identified in culture.
- 14. Perform antimicrobial susceptibility tests:
- a. Evaluate antimicrobial susceptibility tests
- b. Resolve problems with unexpected results
- c. Choose effective antimicrobials for organisms identified as pathogens
- 15. Evaluate the following emergent technologies used on an understanding of essential components and principles of operation:a. Blood culture methodologies
- b. Bacterial identification/susceptibility methodologies
- c. Rapid methods of identification
- d. Molecular diagnostic techniques
- 16. Given a patient history and other pertinent laboratory findings, identify the most likely causative organism or disease state.

#### MICROBIOLOGY CLINICAL EVALUATION FORM BAPTIST HEALTH SCIENCES UNIVERSITY

#### MLS Program Chair-Dr. Darius Y. Wilson, 901-572-2657

#### INSTRUCTION TO THE EVALUATOR:

The attached checklist is to be used as a guide for clinical experience and as an evaluation tool. The student's grade will be partially derived from this evaluation.

Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

#### 1. Discussion:

Principle and sample requirements reviewed

#### 2. Demonstrated:

Test has been demonstrated by the instructor.

#### 3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure.

- a. Student is able to perform the procedure with help.
- b. QC results are sometimes unacceptable.

#### 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

#### 5. Acceptable Performance with Minimum Supervision:

- a. Performs tests or operates instruments independently seeking assistance in unusual situations
- b. QC results are consistently acceptable and student identifies appropriate solution to problems.

#### 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision:

- a. Works independently, identifying sources of error and taking appropriate action.
- b. Handles routine maintenance or minor troubleshooting with minimal assistance.
- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

Microbiology

		Discussed	Demonstrated	Practices	Mod. Sup	Min. Sup	Mastery
Procedure	Minimum Pass level	1	2	3	4	5	6
Performs accurately laboratory clerical work including data entry & recording & reporting of laboratory results.	5						
Uses appropriate method & safety precautions when handling biological hazards	6						
Properly performs & interprets media and instrument quality control procedures.	5						
Selects appropriate media based on department protocol	5						
Properly plates cultures using acceptable technique	6						
Incubates media in appropriate environment	5						
Evaluates routine cultures differentiating normal flora from possible pathogens	5						
Prepares, stain, read, and interpret smears correlating with colony morphology	5						
Properly select, use, and interpret biochemical or differential tests for the identification or microorganisms	5						
Use and interpret rapid test or automated systems for organism identification	4						
Properly performs and controls antimicrobial susceptibility testing procedures	5						

Properly handles anaerobic specimens including primary culture and identification procedures	5			
Identifies positive blood cultures and takes appropriate action	4			
Properly handles mycological cultures	5			
Prepares and scans wet preparations of stool, for ID of ova and larva	4			

#### Microbiology (continued)

		Discussed	Demonstrate d	Practices	Mod. Sup	Min Sup	Mastery
Procedure	Minimum Pass level	1	2	3	4	5	6
Properly handles and identifies specimens for mycobacteriology	4						
India Ink Prep	3						
КОН ргер	3						
Handles expected workload of entry level technologist	5						

This student has satisfactorily completed this rotation.	Yes	No
--	-----	----

If, no please indicate specific deficiencies which need to be corrected

Comments	
Propared by:	
Prepared by:	 -
Date	
Student's Signature:	 _
Date	

### **BAPTIST HEALTH SCIENCES UNIVERSITY**

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### **MEDICAL LABORATORY SCIENCE PROGRAM**

## **Clinical Rotation**

### Cognitive and Psychomotor Objectives

### **PSYCHOMOTOR EVALUATION FORMS**

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Adjunct-Ms. Calisha Beauregard, e-mail address-calisha.beauregard@bchs.eduFax number-901-572-2750

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ADDRESS: 1003 MONROE AVE.

MEMPHIS, TENNESSEE 38104

### BAPTIST HEALTH SCIENCES UNIVERSITY MEDICAL LABORATORY SCIENCE PROGRAM

# Clinical Rotation PSYCHOMOTOR EVALUATION FORMS

Dr. Darius Y. Wilson,Ed.D., MLS Program Chair, 901-572-2657 Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg-423B, e-mail address-dana.wilson@baptistu.edu. Adjunct-Ms. Calisha Beauregard, e-mail <u>address-calisha.beauregard@bchs.edu</u> Fax number-901-572-2750 <u>ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY</u> CAMPUS DURING FINAL EXAM WEEK

> ADDRESS: 1003 MONROE AVE. MEMPHIS, TENNESSEE 38104

**Molecular Diagnostics** 

Cognitive and Psychomotor Objectives

#### Upon completion of each clinical rotation assignment, the student will at least 75–100 % of the time to:

- 1. Perform clerical work including data entry, recording and reporting laboratory results with accuracy.
- 2. Evaluate the pre-analytic phase which includes:
  - a. Test selection
  - b. Ordering
  - c. Specimen collection
  - d. Processing handling and delivery to the testing site
  - e. Sample receiving following defined SOPs
  - f.
- 3. Prepare reagents, standards and controls for use in the laboratory.
  - a. Prepare according to directions
  - b. Use correct pipettes or other measuring devices
  - c. Observe for contamination
  - d. Storing and labeling according to protocol
  - e. Record lot numbers of reagents
- 4. Prepare specimens for analysis evaluating specimen suitability, storage, and verifying labeling and patient preparation for specialized tests:
- 5. Perform daily set up, quality control, calibration and routine maintenance on molecular diagnostics instruments, as required.
  - a. Document malfunctions if present
  - b. Take appropriate corrective action
  - c. Document corrective procedures taken
- 6. Operate analyzers utilizing appropriate quality control and obtaining reportable results.
  - a. Assemble reagents, standards and controls
  - b. Prepare instrument for use
  - c. Verify that equipment is functioning properly
  - d. Analyze control and patient results for acceptability
  - e. Take appropriate action when unacceptable results are identified
- 7. Utilize appropriate controls recording and documenting the results
- 8. Evaluate and act upon control test results.
- 9. Evaluate quality control systems to ensure that they meet regulatory guidelines.
  - a. State potential causes for quality control results which are outside of acceptable limits

- 10. Perform DNA extraction, amplification, and detection on appropriate samples.
- 11. Evaluate the post analytic phase : Analyze results from patient testing:
  - a. Assay analysis
  - b. State reasons for rejection of samples for molecular analysis
  - c. Results recording and reporting
  - d. Take appropriate action including notification of other personnel if necessary
- 12. Explain the principle involved, sources of error, and detection methods used in the following:
  - a. Direct nuclei acid testing
  - b. DNA isolation
  - c. Extraction
  - d. Nucleic Acid quantitation
  - e. Amplified nucleic acid testing
  - f. Thermal cycling
  - g. Hybridization
  - h. Polymerase chain reaction
- 13. Compare and contrast alternate methodologies for molecular diagnostic tests including disadvantages and advantages of each.

#### INSTRUCTION TO THE EVALUATOR:

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Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

#### 1. Discussion:

Principle and sample requirements reviewed

#### 2. Demonstrated:

Test has been demonstrated by the instructor.

#### 3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure.

a. Student is able to perform the procedure with help.

b. QC results are sometimes unacceptable.

#### 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

#### 5. Acceptable Performance with Minimum Supervision:

- a. Performs tests or operates instruments independently seeking assistance in unusual situations
- b. QC results are consistently acceptable and student identifies appropriate solution to problems.

#### 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision:

- a. Works independently, identifying sources of error and taking appropriate action.
- b. Handles routine maintenance or minor troubleshooting with minimal assistance.
- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

		Discussed	Demonstrated	Practices	Mod. Sup	Min. Sup	Mastery
Procedure	Minimum Pass level	1	2	3	4	5	6

Performs accurately laboratory clerical work including data entry & recording & reporting of laboratory results.	4			
Performs daily set up, calibration & routine maintenance on molecular diagnostics instruments.	3			
Operates automated analyzers obtaining reportable results, including standardization & quality control. a. (analyzer) b (analyzer)	3			
Properly prepares specimens for use in procedures	4			
Demonstrates sterile techniques				
Recognizes and acts upon out of- control tests results.	4			
Properly prepares specimens for shipments to reference laboratories	3			

	Discussed	Demonstrated	Practices	Mod. Sup	Min. Sup	Mastery

Procedure	Minimum Pass level	1	2	3	4	5	6
Prepares nucleic acid probes	1						
Selects appropriate methods	1						
Extract, purifies, quantifies, and stores DNA and RNA for analysis	1						
Performs PCR techniques	3						
Performs RT-PCR and other amplification techniques	3						
Panther(transcription mediated amplification for Ct/Gc/Trich)	3						
Cobas 4800 real time PCR for HPV	3						
Cobas 8800 real time PCR for Viral loads	3						
Biofire detection of stool pathogens	3						
Nanosphere Respiratory virus panel	3						
Discuss Southern blot analysis	1						
Discuss DNA sequencing	1						
Discuss FISH techniques	1						
Discuss electrophoresis techniques	1						
Handles expected work load for entry level technologist	2						

This student has satisfactorily completed this rotation. Yes \_\_\_\_ No\_\_\_\_

If, no please indicate specific deficiencies which need to be corrected

Comments

Prepared by: \_\_\_\_\_\_

Date \_\_\_\_\_

### **Baptist Health Sciences University**

MLS students will not be substituted for regular staff while on the clinical rotation. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work in clinical settings outside of academic hours is not compulsory.

### MEDICAL LABORATORY SCIENCE PROGRAM

The NAACLS' standard-22C-states "Experiences at different clinical sites are comparable and appropriate to enable all students to achieve entry level competencies." This means that all students are to receive training (Hands On) at each site and in each rotation area with instrumentation and performing lab procedures. Students should NOT be reading or observing the majority of the time while at the site, but performing procedures.

## **Clinical Rotation**

### Cognitive and Psychomotor Objectives

### **PSYCHOMOTOR EVALUATION FORMS**

Dr. Darius Y. Wilson,Ed.D., MLS Program Chair, 901-572-2657 Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg-423B, e-mail address-dana.wilson@baptistu.edu. Adjunct-Ms. Calisha Beauregard, e-mail <u>address-calisha.beauregard@bchs.edu</u> Fax number-901-572-2750

#### ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS AT THE END OF EACH ROTATION OR DURING FINAL EXAM WEEK

#### ADDRESS: 1003 MONROE AVE. MEMPHIS, TENNESSEE 38104

#### PHLEBOTOMY

### **Baptist Health Sciences University**

#### CLINICAL EVALUATION FORM PSYCHOMOTOR

#### **INSTRUCTION TO THE EVALUATOR:**

The attached checklist is to be used as a guide for clinical experience and as an evaluation tool. The student's grade will be partially derived from this evaluation.

Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

#### 1. Discussion:

Principle and sample requirements reviewed

#### 2. Demonstrated:

Test has been demonstrated by the instructor.

#### 3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure. a. Student is able to perform the procedure with help.

b. QC results are sometimes unacceptable.

#### 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

#### 5. Acceptable Performance with Minimum Supervision:

- a. Performs tests or operates instruments independently seeking assistance in unusual situations
- b. QC results are consistently acceptable and student identifies appropriate solution to problems.

#### 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision:

a. Works independently, identifying sources of error and taking appropriate action.

- b. Handles routine maintenance or minor troubleshooting with minimal assistance.
- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

#### **Phlebotomy**

#### **Cognitive and Psychomotor Objectives**

Upon completion of each clinical rotation assignment, the student will choose at least 75% – 100 % of the time to:

- 1. Differentiate between the major constituents of blood including cells, serum and plasma.
- 2. Describe the mode of action for the common anticoagulants and identify them by their color code.
- 3. Identify specimen collection errors that can interfere with laboratory analysis.
- 4. Assess specimens for clinical assay regarding amount, the presence of hemolysis or other interfering substances, and appropriate patient preparation.
- 5. Select and organize the appropriate equipment needed to perform a venipuncture including needle, syringe or vacutainer, collection tubes, alcohol wipe, sterile gauze, tourniquet and band-aid.
- 6. Select appropriate blood collection tubes considering the tests requested, minimum sample requirements and the needs of the patient.
- 7. Identify and select a suitable venipuncture site considering the clinical condition of the patient and specimen required.
- 8. Properly prepare a venipuncture or capillary site.
- 9. With 100% accuracy, identify the patient correctly by verifying the information on the patient identification bracelet with the patient request information.
- 10. Demonstrate proper labeling procedures on all specimens.
- 11. Demonstrate correct disposal of used needles, syringes and other collection materials.
- 12. Utilize appropriate safety precautions in performing venipuncture according to hospital policy.
- 13. Perform the necessary follow-up care on patients following a venipuncture or capillary procedure.
- 14. Identify appropriate sites for capillary puncture in infants, children and adults.
- 15. Perform capillary punctures using acceptable technique and obtaining a suitable specimen.
- 16. Identify situations where special specimen handling, preservation or transport procedures are necessary.
- 17. Identify situations where special protocols may be necessary including, nursery, pediatrics, critical care units, emergency room, surgery and other specialty areas of the hospital.

- 18. Utilize appropriate procedures in situations where the patient does not display the required identification.
- 19. Assess tray supplies and restock appropriately.
- 20. Observe appropriate precautions and procedures when collecting specimens under isolation conditions.
- 21. Inform the patient of any procedures to be performed according to protocol.
- 22. Collect 80% of assigned patients using acceptable technique and following appropriate safety procedures:
  - a. assemble and organize required equipment
  - b. apply tourniquet appropriately
  - c. locate suitable vein
  - d. cleanse area with alcohol or other disinfectant
  - e. allow the area to air dry
  - f. correctly perform puncture using syringe or vacutainer system using proper needle insertion and withdrawal techniques including direction, angle and depth
  - g. fill appropriate tubes and mix as required.
  - h. apply pressure to venipuncture site
  - i. inspect site and apply band aid if necessary
  - j. evaluate blood collection supplies for compliance with safety regulations.

#### Phlebotomy

STUDENT'S		Discussed	Demonstrated	Practices	Mod. Sup	Min Sup	Mastery
NAME							
Procedure	Minimum Pass level	1	2	3	4	5	6
Demonstrates proper organization of supplies	5						
Courteous & Professional manner with patients	6						
Correct procedures for patient I.D.	6						
Performs blood collection by venipuncture/butterfly using correct technique with minimum of 10 successful venipuncture	5						
Correct labeling	6						
Correct disposal of used equipment	6						
Performs special collection techniques: a. Tolerance tests b. Blood alcohol c. Blood culture d. Throat culture e. Bleeding time	3						
Point of care tests	3						
Finger stick/skin punctures	3						

This student has satisfactorily completed this rotation.	Yes	No

If, no please indicate specific deficiencies which need to be corrected

Comments	
Prepared by:	Date
Student's Signature:	Date

# **Baptist Health Sciences University**

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# MEDICAL LABORATORY SCIENCE PROGRAM

The NAACLS' standard-22C-states "Experiences at different clinical sites are comparable and appropriate to enable all students to achieve entry level competencies." This means that all students are to receive training (Hands On) at each site and in each rotation area with instrumentation and performing lab procedures. Students should NOT be reading or observing the majority of the time while at the site, but performing procedures.

# <u>Clinical Rotation</u>

# Cognitive and Psychomotor Objectives

# **PSYCHOMOTOR EVALUATION FORMS**

Dr. Darius Y. Wilson, Ed.D., MLS Program Chair, 901-572-2657

Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg- 423B, e-mail address-dana.wilson@baptistu.edu.

Adjunct-Ms. Calisha Beauregard, e-mail address-calisha.beauregard@bchs.eduFax number-901-572-2750 <u>ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS</u> <u>AT THE END OF EACH ROTATION OR DURING FINAL EXAM</u> WEEK

# ADDRESS: 1003 MONROE AVE. MEMPHIS, TENNESSEE 38104

# SEROLOGY/IMMUNOLOGY

# **BAPTIST HEALTH SCIENCES UNIVERSITY**

# CLINICAL EVALUATION FORM PSYCHOMOTOR

## **INSTRUCTION TO THE EVALUATOR:**

The attached checklist is to be used as a guide for clinical experience and as an evaluation tool. The student's grade will be partially derived from this evaluation.

Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

## 1. Discussion:

Principle and sample requirements reviewed

## 2. Demonstrated:

Test has been demonstrated by the instructor.

## 3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure. a. Student is able to perform the procedure with help.

b. QC results are sometimes unacceptable.

## 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

### 5. Acceptable Performance with Minimum Supervision:

- a. Performs tests of operates instruments independently seeking assistance in unusual situations.
- b. QC results are consistently acceptable and student identifies appropriate solutions to problems.

b. QC results are consistently acceptable and student identifies appropriate solution to problems.

### 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision:

a. Works independently, identifying sources of error and taking appropriate action.

- b. Handles routine maintenance or minor troubleshooting with minimal assistance.
- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

# **Clinical Serology/Immunology**

## **Cognitive and Psychomotor Objectives**

Upon completion of each clinical rotation assignment, the student will choose at least 75% – 100 % of the time to:

### Cognitive:

- 1. Evaluate, interpret, and apply theoretical knowledge to routine Serology/Immunology procedures.
- 2. Evaluate, interpret, and apply pathophysiological principles to routine Serology/Immunology procedures.
- 3. Explain the importance of proper collection and transport of specimens
- 4. List criteria for evaluating specimen quality and corrective actions to resolve problems

## **Psychomotor:**

- 1. Determines specimen acceptability prior to performing tests
- 2. Prepares specimens and reagents correctly
- 3. Performs POCT or automated testing for serology/immunology assays
- 4. Reads agglutination reactions correctly
- 5. Performs routine quality control and lot to lot testing when appropriate
- 6. Keeps instruments and work area clean and organized
- 7. Follows laboratory's safety policies
- 8. Informs supervisor or lead technologist when critical results are obtained
- 9. Operates instruments properly
- 10. Performs, observes, or discusses molecular techniques
- 11. Correctly prepares serial dilutions
- 12. Correctly interprets antibody titers
- 13. Completes all procedures in a timely manner
- 14. Accurately and legibly records or transcribes test results
- 15. Evaluate, interpret, apply proper testing protocols, policies, and procedures in the immunology laboratory.

Serology/Immunology		Discussed	Demonstrated	Practices	Mod. Sup.	Min. Sup	Mastery
STUDENT'S NAME	Minimum Pass Level	1	2	3	4	5	6
Procedure:							
Determines specimen acceptability prior to performing tests	6						
Prepares specimens and reagents correctly	5						
Performs POCT or automated testing for the following tests:							
Mono	6						
Pregnancy	6						
RA	5						

Rapid HIV	5				
ANA	5				
RPR	5				
Other:					
Reads agglutination reactions correctly	5				
Performs routine quality control and	5				
lot to lot testing when appropriate					
Keeps instruments and work area clean	6				
and organized					
Follows laboratory's safety policies	6				
Informs supervisor or lead	6				
technologist when critical results are obtained					
Operates instruments properly	4				
Instrument type(s):					
Performs the following testing:					
Molecular Techniques (List type)	2				
Western Blot	2				
Correctly prepares serial dilutions	4				
Correctly interprets antibody titers	4				
Completes all procedures in a timely manner	6				
Accurately and legibly records or	6				
transcribes test results					
Miscellaneous Procedures:					
This student has satisfactorily completes	thic rotation	an Vac	No		
This student has satisfactorily completed		ווע. דפא	_ NU		

Comments	If, no please indicate specific deficiencies which need to be corrected	
Prepared by:	Comments	
Prepared by:		
Prepared by: Date		
Prepared by: Date		
-r	Prepared by: Date	

Student's Signature: \_\_\_\_\_\_Date \_\_\_\_\_Date \_\_\_\_\_

# **Baptist Health Sciences University**

MLS students will not be substituted for regular staff while on the clinical rotation. After demonstrating proficiency, students, with qualified supervision, may be permitted to perform procedures. Service work in clinical settings outside of academic hours is not compulsory.

# MEDICAL LABORATORY SCIENCE PROGRAM

# **Clinical Rotation**

# Cognitive and Psychomotor Objectives

# **PSYCHOMOTOR EVALUATION FORMS**

Dr. Darius Y. Wilson, Ed.D., MLS Program Chair, 901-572-2657

Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg-423B, e-mail address-dana.wilson@baptistu.edu.

Adjunct-Ms. Calisha Beauregard, e-mail address-calisha.beauregard@bchs.eduFax number-901-572-2750

ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS AT THE END OF EACH ROTATION OR DURING FINAL EXAM WEEK

The NAACLS' standard-22C-states "Experiences at different clinical sites are comparable and appropriate to enable all students to achieve entry level competencies." This means that all students are to receive training (Hands On) at each site and in each rotation area with instrumentation and performing lab procedures. Students should NOT be reading or observing the majority of the time while at the site, but performing procedures.

ADDRESS: 1003 MONROE AVE.

MEMPHIS, TENNESSEE 38104

# URINALYSIS <u>Baptist Health Sciences University</u> CLINICAL EVALUATION FORM PSYCHOMOTOR

## **INSTRUCTION TO THE EVALUATOR:**

The attached checklist is to be used as a guide for clinical experience and as an evaluation tool. The student's grade will be partially derived from this evaluation.

Place a check mark in the box that corresponds to the level of achievement attained for each behavior or procedure listed.

## 1. Discussion:

Principle and sample requirements reviewed

## 2. Demonstrated:

Test has been demonstrated by the instructor.

## 3. Practiced:

Student has performed the test under the direction of the instructor following a written procedure.

a. Student is able to perform the procedure with help.

b. Q. C. results are sometimes unacceptable.

## 4. Acceptable Performance with Moderate Supervision:

- a. Follows written procedure with minimal assistance.
- b. QC results are acceptable.

## 5. Acceptable Performance with Minimum Supervision:

a. Performs tests or operates instruments independently seeking assistance in unusual situations

b. QC results are consistently acceptable and student identifies appropriate solution to problems.

## 6. Mastery:

Student is able to perform the test or operate the instrument without immediate supervision:

a. Works independently, identifying sources of error and taking appropriate action.

- b. Handles routine maintenance or minor troubleshooting with minimal assistance.
- c. Organizes daily assignments efficiently.
- d. Evaluates and correlates results.

# Urinalysis & Body Fluids

### **Cognitive and Psychomotor Objectives**

### Cognitive:

Upon completion of each clinical rotation assignment, the student will choose at least 75 – 100 % of the time to:

- 1. Discuss the principles of the procedures, the reagents used, and the pathophysiological significance of urinalysis and other body fluid tests.
- 2. Explain the operating principles of instruments used in the urinalysis areas.
- 3. Explain the importance of proper collection and transport of specimens
- 4. List criteria for evaluating specimen quality and corrective actions to resolve problems
- 5. Comply with timed, routine, and stat test requests
- 6. Identify, document and resolve out of control results according to established laboratory procedures.
- 7. Evaluate and correlate urinalysis and body fluid results to patient disease and disorders.
- 8. Explain the correct procedure for collection and preservation of urine for routine analysis, culture and special chemical analysis.
- 9. Discuss the clinical significance of any abnormal findings.
- 10. Identify abnormal urine colors and their possible cause.
- 11. Predict the effect of temperature, protein and glucose on the refractometer
- 12. Interpret and identify any discrepancies in the urinalysis and body fluid reports and determine the appropriate course of action.
- 13. Interpret crystal analysis results from synovial fluid.
- 14. Explain the principle of chemical methods and identify possible causes of false positive or negative results.
- 15. Explain the principle and clinical significance of the following special tests:
- a. Bence Jones Protein

- b. PKU
  - d. Ferric Chloride Tube
  - e. Homogentisic Acid
  - f. DNPH
  - g. p-Nitroaniline
  - h. Cyanide-Nitroprusside
  - i. Silver Nitroprusside
  - j. CTAB
  - k. MPS
  - I. Lactose Screening
  - m. Fructose Screening

## Psychomotor:

- 1. Perform data entry tasks, clerical work recording and reporting test results according to established protocol.
- 2. Perform cleaning and preventative maintenance on instruments.
- 3. Perform quality control procedures including:
  - a. Verify acceptability of equipment, reagents and work area
  - b. Check accuracy of refractometer of automated instruments
  - c. Perform and record quality control checks on reagents and dipsticks
- 4. Perform routine macroscopic urinalysis:
  - a. Determine specimen suitability for analysis
  - b. Prepare specimen for analysis, mixing completely prior to aliquoting portions for macroscopic and microscopic testing
  - c. Note and record color and clarity of samples
  - d. Perform qualitative chemical tests using the test reagent strip according to the manufactures instruction, reading and recording results within 1 color block or unit.
- 5. Perform urine microscopics with accuracy when identifying the following:
  - a. Casts
  - b. Yeast
  - c. Spermatozoa
  - d. Mucus
  - e. Parasites
  - f. Bacteria
  - g. RBC's
  - h. WBC's
  - i. Oval fat bodies
  - j. Epithelial cells
  - k. Crystals
  - I. Artifacts

- 6. Correlate macroscopic and microscopic results, checking for clerical errors, and repeating tests with possible discrepancies for urine and other body fluids.
- 7. Perform appropriate confirmatory tests to include:
  - a. Clinitest
  - b. Acetest
  - c. Ictotest
  - d. Sulfosalicylic acid
- 8. Recognize and act upon emergency lab requests and take appropriate action.
- 9. Handle a normal daily workload for an entry-level technologist. Perform ten routine urinalysis examinations according to the established laboratory protocol within one hour.
- 10. Differentiate between abnormal and normal causes of cloudy urine.
- 11. Differentiate microscopically pathological from non-pathological urine sediment.
- 12. Perform body fluids analysis of CSF, Synovial, Serous, Semen, Amniotic fluids.
- 13. Perform cytocentrifuge preparations and staining procedures for body fluid analysis
- 14. Perform body fluid counts and morphology on stained smears.

# Urinalysis and Body Fluids

		Discussed	Demonstrated	Practices	Mod. Sup	Min .Sup	Mastery
Procedure	Minimum Pass level	1	2	3	4	5	6
Accurately performs data entry record-keeping and reporting							
Performs quality control procedures	5						
Maintains daily QC, evaluate QC values and take corrective action as needed							
Recognizes and acts on out-of control tests	4						
Performs cleaning and preventative maintenance on instruments	3						
Performs routine urinalysis	6						
Performs confirmatory tests including ictotests, clinitests, sulfosalicylic acid, specific gravity	5						
Performs CSF, Synovial, Serous	4						
Performs other body fluid routine examination (site specific)	4						
Performs urine and body fluid microscopic evaluation	6						
Performs stool/gastric tests for occult blood	5						
Confirms and correlates abnormal results	5						
Handles expected workload of entry level technologist	5						
This student has satisfactorily completed this rotation. Yes No							
If, no please indicate specific deficiencies which need to be corrected							

Comments						
Prepared by:	repared by: Date					
Student's Signature:						
	Practicum Grad	<u>e Form</u>				
Note: Course Syllabus will have the gra	ading scale to calculate	the percentag	ge for the letter grade for the course.			
<u>Bapti</u>	ist Health Scienc	es Unive	<u>rsity</u>			
Me	edical Laboratory Scie	ence Progran	n			
<u>Practi</u> End of rotation exam will be given o	icum Grade Form-to l MLS program f on the Baptist Health Scie	aculty				
Clinical Rotation area						
Student			_ Date			
Affiliate						
Psychomotor Checklist Score		x .25	5 =			
Affective Evaluation Score		x .15	5 =			
End of Rotation Exam		x .60	) =			
Total			<u> </u>			
Final Grade A B C	D F					
Instructor comments						

Clinical Coordinator Signature _	
Program Director Signature	
Student Signature	

# <u>Student Evaluation of Rotation</u> <u>Baptist Health Sciences University</u>

MEDICAL LABORATORY SCIENCE PROGRAM

PLEASE WRITE YOUR NAME ON THE BACK OF THIS SHEET

Rotation	
Location	 
Instructor's Name_	 
Dates of Rotation_	

Description	Excellent	Good	Average	Poor
Initial orientation to the lab and location of basic equipment				
Orientation to the safety policies and procedures utilized in the clinical lab				
Instruction in reporting procedures and routing of results				
Overall clarity of instructions				
Professional conduct of staff				
Interest of staff in student and instruction				
Received training on various types of equipment available in the lab				
Assigned an adequate amount of lab procedures/work to perform with supervision				
Assigned quality work to perform with supervision				
Overall quality of experience in the assigned areas				
Your preparation through student lab/lecture for this rotation				

1. Were you actively participating in training (Hands on) with the assigned staff? Yes\_\_\_\_\_ No\_\_\_\_\_

2. Were you directed to only observe procedures? Yes\_\_\_\_\_ No\_\_\_\_\_

If yes, how often did this occur while on the assigned rotation?

Daily\_\_\_\_\_ Occasionally during the day\_\_\_\_\_

How many hours during the day would you say that you observed only?

3. Were you given consistent instructions when more than one person supervised a procedure? Yes\_\_\_\_\_No\_\_\_\_\_

4.Were you properly prepared in advance for all tasks assigned to you? Yes\_\_\_\_\_ No\_\_\_\_\_ If NO, please comment specifically about areas in which you were not prepared.

- 5. List 1 or 2 strong points observed during the rotation.
- 6. List 1 or 2 weak points observed during this rotation
- 7. What content should have been covered more completely in student lab/lecture to prepare you for this rotation?
- 8. Would you like to work in this area? Yes\_\_\_\_\_ No\_\_\_\_\_ If NO, why not?

**Overall Comments** 

# Clinical Rotation AFFECTIVE EVALUATION FORMS

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The clinical faculty assigned to the student during each clinical rotation is to fill out a separate affective evaluation form. There are separate forms included for evaluation of the rotation areas.

# ROTATION EXAMS WILL BE GIVEN BY MLS FACULTY ON BAPTIST HEALTH SCIENCES UNIVERSITY CAMPUS AT THE END OF EACH ROTATION OR DURING FINAL EXAM WEEK.

Program Chair-Dr. Darius Y. Wilson, Ed.D., 901-572-2657

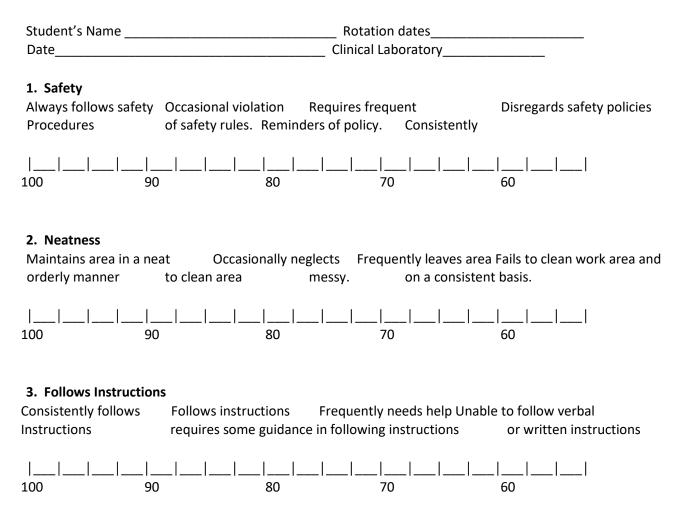
Ms. Dana M. Wiley, Assistant Professor, office phone number (901) 572-2667; office-Science Bldg- 423B, e-mail addressdana.wilson@baptistu.edu. Adjunct-Ms. Calisha Beauregard, e-mail <u>address-calisha.beauregard@bchs.edu</u> Fax number 901-572-2750

# Address:

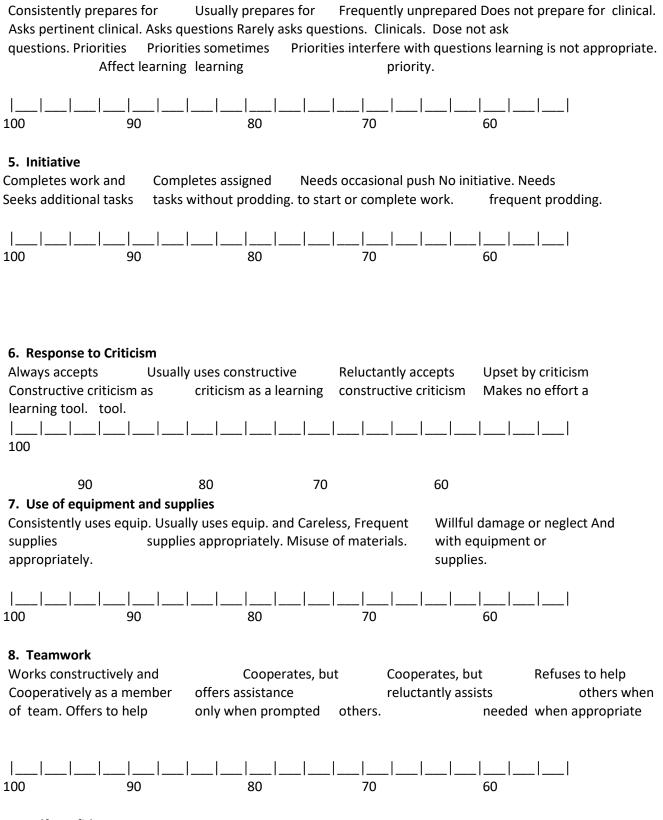
# **Baptist Health Sciences University**

1003 Monroe Ave., Memphis, Tennessee 38104

# **Clinical Affective Evaluation Form**



## 4. Responsibility for Learning



# 9. Self-Confidence

Self assured without Usually self confident Minimal self confidence Lacks self confidence

Overconfidence.Works Needs occasional re-Needs constant re-relies on instructor or Wellindependently.Enforcement or assistance. Assurance or assistance.classmates



### 10. Uses time Wisely

Well organizedCompletes assignments Sometimes fails toUsually fails to completeCompletes assignments follows through, butcomplete assignments assignments on time orOn time. Followssometimes disorganized.On time or follow up.Through as neededproblems



## 11. Integrity

Readily admits mistakes Will ad And takes corrective if con Action	dmit mistakes fronted	Admits mistakes, bu rationalizes or shift blame		
 100 90 <b>12. Ability to Handle Stress</b>	 80	 70	_    60	_
Demonstrates flexibility and adaptability. Handles	•		culty in Unable dling stress stressf	to handle stress ul situations
 100 90	 80	 70	_    60	_
13. Relationship with Peers a	and Instructors			
Friendly, courteous, and	Usually friendly	Occasionally	abrupt or Frequen	tly discourteous
Respectful at all times to Instructors and peers.	courteous and r	espectful. Disr	espectful	and/or disrespectful.



### 14. Appearance

Maintains professional Adheres to dress code OccasionallyPays minimal attention toAppearance. Adheresas appropriate, Usually unprofessional grooming or appearance to dresscode asmaintains professional in appearanceappropriate.appearance

100	90	80	70	60

15. Attendance-duration of rotation. Tardies are leavin preceptor or MLS program faculty.	g early or coming late without prior approval by the
No absences/tardies 1-2 absences/tardies	more than 2 absences/tardies
 100 90 80	 70
16. Confidentiality: Protects confidentiality at all times	. Yes (100) No (0)
17. Adheres to all patient identification and verificatio	n processes. Yes(100) No(0)
Comments	
Student name	
Suggestions for Improvement:	
Total Score/17 =	
Evaluation Completed by	Date
Student Signature	Date
Grading and Evaluation	

- Grading for the clinical practicum is a letter grade and is calculated based on the results of the psychomotor and affective evaluations, and score on the rotation examinations.
- Rotation examinations are given by the MLS Faculty at the end of each rotation for each content area.
- Each student completes a rotation journal based on content given by the MLS faculty.
- Students will be evaluated at the end of each rotation by the clinical instructor/preceptor using the psychomotor evaluation checklist.
- Each completed psychomotor evaluation and affective evaluation are submitted to the MLS program faculty.
- If a student demonstrates a weakness in any clinical area, additional time may be required. If the student cannot perform effectively after additional time is spent, he/she may not complete the course, which will affect program completion.
- Students can review the evaluation and if he/she does not agree, the student can discuss with the evaluator. If no agreement is made, the student may submit his/her view, in writing, with the disputed evaluation for inclusion in the file.
- Evaluation reports may be used to recommend the student for employment.
- The minimum grade for the overall clinical practicum grade is "C".

# **Rotation Schedule Overview**

The program director will make all rotation schedules. Schedules will not be changed per the request of the student. No student may change his/her schedule. Failure to attend any scheduled rotation will affect program completion.

# Medical Laboratory Science Program Admission/Progression/ Clinical Placement/Completion

# Admission to the ACCELERATED MEDICAL LABORATORY SCIENCE (MLS) Program

The MLS program applicant must meet the following admissions requirements:

- 1. Over 60 hours of college credit earned from a regionally accredited college/university, which includes 36 hours of natural science and chemistry courses with labs.
- 2. Minimum overall grade point average of 2.7 on a 4.0 scale.
- 3. Interview required for admission into the MLS program.
- 4. All applicants whose native tongue is not English must submit a TOEFL (Test of English as a Foreign Language) score of 550 or above.
- 5. Meet all the University General Performance Standards.
- 6. Meet the MLS program Essential Functions requirements listed below.
- 7. Applicants for admission to the Medical Technology must have completed the following courses with a grade of "C" or better and have a minimum cumulative grade point average of 2.7:

# PROGRAM PROGRESSION

- 1. Students must maintain a minimum grade of "C" in all MLS courses and an overall GPA of 2.0.
- 2. Failure to maintain a minimum grade of "C" in any MLS course will result in delayed progression. A student who fails two professional courses in one academic term will be academically dismissed from the University without being placed on academic probation. Refer to Baptist Health Sciences University undergraduate catalog.
- 3. Satisfactory academic progression in a major requires that all professional courses be completed with a letter grade of at least a "C" before progressing into subsequent courses in the major degree plan. Refer to BHSU catalog.

# CLINICAL PLACEMENT

- 1. Students must successfully complete all required MLS courses to receive a clinical assignment.
- 2. Clinical assignments are determined by the Baptist Health Sciences University MLS faculty.
- 3. If for any reason a student is not eligible for a clinical assignment at a hospital in the Baptist Memorial Health Care Corporation system, the student's progression and completion of the program will be terminated.

# CRIMINAL BACKGROUND CHECK

Students in all degree programs must submit to and demonstrate satisfactory completion of a criminal background check as a prerequisite for admission to Baptist Health Sciences University. The cost of the background check will be borne by the student. A mandatory update must be

completed prior to initial placement in a clinical course in the degree plan. If the student is not eligible for clinical placement, he/she is not eligible for admission or continued enrollment in Baptist Health Sciences University. Refer to Baptist Health Sciences University catalog

# ATTENDANCE

Students are expected to be punctual and attend all planned learning experiences, both classroom and clinical. The student has professional accountability for meeting the expectation. Course-specific standards related to attendance are explained in each course syllabus in keeping with the standards and policies of Baptist Health Sciences University. Attendance may be included as a factor in calculating a student's final grade.

Regardless of the reason(s) for absence, the student is responsible for all work covered by the instructor during the absence, including timely submission of assignments. The instructor has the discretion to allow students to make up missed work in circumstances of reasonable absence.

# DRUG AND ALCOHOL POLICY

Refer to Baptist Health Sciences University Student Handbook.

Baptist Health Sciences University has a Zero Tolerance drug and Alcohol Policy. Students are prohibited from being under the influence of illegal drugs, unprescribed controlled substances, alcohol or inhalants while in the classroom, the clinical setting, on campus, orb while participating in Baptist Health Sciences University sanctioned or sponsored activities.

Students taking any prescribed or over the counter medications which may alter their ability to function in a competent manner while in the classroom or the clinical setting must report their medication use to their respective instructor(s) prior to entering the setting.

Clinical affiliates may require drugs and/or alcohol screening prior to placement at the clinical site. The Zero Tolerance policy will be enforced during additional screening by a clinical site. SELECTION OF STUDENTS FOR CLINICAL ASSIGNMENT

Dates of applied clinical experience cannot be guaranteed. In the event the number of students eligible for clinical assignment exceeds the number of sites available, students will be assigned according to GPA in the MLS courses, with the highest GPA receiving priority. Any student not assigned will be guaranteed completion of the program by the end of the calendar year in which he/she was eligible for the clinical assignment.

I have read and understand the policies related to the Admission/Progression/Clinical Placement/Completion in the Medical Laboratory Science Program. I agree to abide by these policies. Any questions that I may have had about the policies have been answered satisfactorily by the program faculty.

Signature\_\_\_\_

Date

# **Technical Standards/Essential Functions**

The following technical standards outline reasonable expectations of a student enrolled in the Medical Laboratory Science program for the performance of common clinical functions.\*

# Communication

Ability to communicate with a wide variety of people and the ability to be easily understood. Reading, writing, recording, and documenting patient information required.

# Analytical Skills/Critical Thinking

Analytical skills sufficient to process information, to transfer knowledge from one situation to another, and to prioritize tasks. Critical thinking ability sufficient for safe, clinical judgment.

# Hearing

Auditory ability sufficient to monitor and assess patient needs, to detect and respond to alarms, emergency signals, and cries for help.

# Vision

Visual ability sufficient for observation and assessment necessary for the care of patients and operation of equipment.

# Tactile

Tactile ability sufficient for patient assessment and operation of equipment.

## Mobility

Physical ability, flexibility, strength, and stamina sufficient to provide safe and effective care.

# **Fine Motor Skills**

Fine motor ability sufficient to provide safe and effective care.

## Behavioral

Emotional and mental health sufficient to establish therapeutic boundaries, to perform multiple tasks concurrently, to handle strong emotions, and to work effectively in a fast-paced environment.

\*Students who have accessibility questions or who need accommodations should contact the Section 504/ADA Coordinator at 901-572-2570 or by sending an email to <u>access.services@baptistu.edu</u> I have received the Essential Functions for the MLS Program at Baptist Health Sciences University. I have read and I understand the Essential Functions and I have determined that I am capable of performing them.

Signature	Data
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# Safety Checklist

## **General Information**

We have a very safe campus but we would still like for you to continue exercising caution. If you are new to the Health Science Building, we would like for you to take a few minutes out of your day to note specific features.

- a. An emergency phone is located at the back door and wall phones are located on the each floor
- b. **Cameras** are located in the parking lots and are monitored by security. Be careful not to leave items of value in plain sight in your car.
- c. When entering and exiting the gates, especially early, late and on the weekend, **be aware** of cars that may enter behind you or individuals that may attempt to access the lot by foot. Do not leave your car; go directly to the main campus for help.
- d. Please, <u>never let anyone into the building</u> that you do not know. If a student or employee has lost their card they should go to the front desk at the main campus for a temporary card.
- e. Emergency **procedures** are posted on every floor in the main hall. Look for a colored sheet with guidelines.

### Fire

Each floor has several fire extinguishers and several have fire blankets. Look around your lab for their location. If you <u>are in class</u> when a fire alarm rings, follow the instructors lead and quietly exit using either the East or West stairs to the ground level. In general, classes assemble at the back of the parking lot so that your instructor can be assured that everyone is safe.

If you <u>are not in class</u>, use the stairs and exit the front or rear of the building. Stand at least 30 feet away and wait for resolution if you need to return. If you are not sure that the school is aware of the situation, call the front desk at 572-2468 <u>after</u> you are at a safe distance.

You may find yourself in a situation where you need to use a fire extinguisher. If so, remember the acronym **PASS**. Pull the pin; Aim the extinguisher nozzle at the base of the fire, Squeeze or press the handle, Sweep from side to side at the base of the fire until it goes out.

### Severe Weather

If <u>you are in class</u>, follow the instructors lead down the stairs to the ground floor then down the secondary stairs (Rm 103 and CSI Rm 102) located on the North and South sides of the building to the basement. Stay away from doors and windows and please do not attempt to leave the building. Roll will be taken when you reach the basement. Once you are secure you may contact family with updates.

If <u>you are not in class</u> and hear the warning siren go off, please do not attempt to leave the building. Enter the basement using the North or South stairs. There you should be joined by others in the building. Security will check on you and give further instructions. We have emergency supplies available and means of communication handy. If alone, call the front desk using the hall phone for updates.

Baptist Security will release everyone when they determine that all is clear.

### **Other Emergencies**

Power Outages – Move cautiously to a lighted area. Emergency power should keep exits lit but we recommend that you do not leave the building if the outage was caused by bad weather. Call the main campus to report the outage.

Earthquake – We are near a fault so the possibility of an earthquake though remote is possible. Drop, cover and hold under a table or desk or against an <u>inside</u> wall away from windows or mirrors. After the shaking stops, check yourself and others for injuries and move toward the nearest exit or alternate exit. Evacuate the building. Do not leave without reporting your status to your instructor.

Bomb Scare – Security will inform the classes to leave the building. Gather your things, move to the back parking lot and then over across the street. **DO NOT USE YOUR PHONES** (they could detonate a bomb). Baptist Security will tell you when all is clear (not firemen or policemen)

### Laboratory Safety

- A. Refrain from horseplay in the laboratory.
- B. If a prepared slide accidently breaks please bring this to the attention of the laboratory instructor. Not only do they need to know that the slide is missing but they can properly dispose of the glass. Broken glass needs to be disposed of in cardboard containers purchased for that specific purpose. C. You are asked not to eat, drink, store food or apply cosmetics in the laboratory.
- D. <u>Disposable lab coats are</u> available for you to wear during lab. They serve to protect your clothes from contamination due to splashing and stain. <u>Wear safety goggles</u> and face shields when working with strong chemicals and when splashes are likely to occur. Gloves are available in several sizes. <u>Wear gloves</u> when handling blood, biological specimens and hazardous chemicals or agents. <u>Wear closed toe shoes</u>. <u>Pin long hair</u> away from face and neck. <u>Avoid wearing chains</u>, bracelets, rings or other loose hanging jewelry.
- E. You are asked to dispose of used **lab coats**, **gloves**, and **swabs** in the regular trash if they are not contaminated with human biological waste. Items such as **mouthpieces** and **wipes or gauze with blood** should be disposed of in garbage cans lined with red biological safety liners.
- F. Discard all contaminated materials into an appropriate, labeled biohazard container. Lancets or **sharp items** whether contaminated or not should go into a 'sharps' container.
- G. Laboratory areas are also equipped with first aid kits, chemical showers and eyewash stations. We have safety glasses, disposable gloves, and lab coats available if needed. Be aware of what is in your laboratory area.
- H. Know the locations and read the MSDS sheets. Talk about the hazards associated with each chemical and the emergency procedures you can use if exposed.

- I. When in the lab, **store your personal items** in the designated area. Have your laboratory exercise, your book and a writing implement available.
- J. If you have an **allergic reaction**, speak to your instructor about any medical condition you might have which would affect your performance in lab.
- K. Wash **your hands** before and after laboratory procedures, before putting on and after taking off gloves and before leaving the laboratory.
- L. Clean up spills promptly and appropriately for the type of spill. You are **REQUIRED** to clean your area with a disinfectant (bleach) after each laboratory session.
- M. Avoid tasting, smelling, or breathing the dust of any chemical or specimens.
- N. Follow the manufacturer's instructions for operating equipment. Handle equipment with care and store properly.
- O. Report any broken or frayed electrical cords, exposed electrical wires, or damaged equipment.
- P. Report any accident to the faculty or supervisor immediately.
- Q. Know the location of fire extinguishers, fire blankets, eyewashes, showers, and how to use them properly.
- R. Garbage Cans Dispose of paper trash; Broken Glass Boxes Only discard broken glass in these special boxes.
- S. Biohazard containers-for contaminated waste material. Contaminated waste such as glass, needles, etc. go in a biohazard container.
- T. Do not invite or allow **children**, **family or individuals not registered in this class** into the laboratory area without the express permission of your instructor.

Student Name (Printed) \_\_\_\_\_

Signature \_\_\_\_\_\_ Date

□ General Information

□ Fire

- □ Severe Weather
- □ Other Emergencies
- □ Laboratory Safety