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Online Clinical Competency Checklist - MLS 2214 Principles of Clinical Microbiology II

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**LABORATORY CLINICAL EXPERIENCE OBJECTIVES**

The MLS 2214 student has studied the following items in class this semester to prepare them for this laboratory skills competency practical experience:

- Antimicrobials
- Aerobic Gram Positive Rods
- Spirochetes
- Anaerobes
- Mycobacteria
- Obligate Intracellular Parasites & Cell Wall Deficient Bacteria
- Parasites
- Fungi

It is understood that the student will process specimens in the categories listed above to the extent available at the clinical facility. If specimens are sent to a reference facility for testing, the student will participate in preparation of the samples for sending them to the referring facility. Students may also participate in plate reading, Gram staining, antimicrobial testing, and other areas that were covered in MLS 2212 (part one of this Microbiology course) as time allows.

The student should perform the following tasks (as deemed appropriate for students by the clinical facility):

- Participate in culture set up procedures from labeling through incubation
- Perform and interpret Gram stains on both specimens and direct colonies
- Become familiar with automated instruments used in the Microbiology laboratory, including maintenance, Quality Control measures, operation and troubleshooting.
- Participate in plate reading under direct supervision
- Participate in setup and interpretation of antimicrobial susceptibility testing
- Become familiar with processes for reviewing and reporting results, including STATs and critical values
- Perform all procedures using the teaching institution's methodology and SOPs.

Students should work with their respective mentors to complete the listed objectives. Accuracy, precision, timely reporting of results and demeanor must comply with the laboratory's acceptable standards. While working in the laboratory, the student must meet laboratory standards for work habit skills in patient confidentiality, communication skills, laboratory safety, universal precautions, waste disposal, equipment, and work area maintenance. It is requested that the student's laboratory competency evaluation be completed by the clinical mentor ***in the presence of the student***, so as to allow verbal feedback to the student regarding the student's progress and performance.

**Note:** As part of the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) accreditation regulations, no student may engage in **service work** during his/her clinical experience. All laboratory test results generated by students during their clinical hours must be directly supervised by clinical laboratory staff. While the student is performing their clinical hours, they must be performing duties as a student, and not an employee. **Definition of Service Work:** Providing or generating results of clinical tests on patient samples without direct supervision of clinical staff or supervisor managers which exceeds the expected component required for the educational process.

Student: \_\_\_\_\_ Wildcat ID # \_\_\_\_\_

**LEVELS OF ACHIEVEMENT/SCORING KEY**

- 1: Discussed: Process was discussed, principle explained, student acknowledges an understanding of the process or principle.
- 2: Demonstrated: Process has been performed and demonstrated by the practicum instructor. Student has observed demonstration and has been allowed to ask questions as needed. The student acknowledges an understanding of the process or principle by verbally explaining the process or principle back to the practicum instructor.
- 3: Practiced: Student has **practiced** the process under the direction and maximum supervision of the practicum instructor. The student demonstrates knowledge of how to perform the process or task by actual performance under direct, maximum supervision, but without having to demonstrate any particular competency at that task or process.
- 4: Maximum Supervision: The student has performed the process under the direct, maximum supervision of the practicum instructor, and with the level of competency required by the laboratory for that task or process.
- 5: Minimum Supervision: The student can perform the process satisfactorily with only minimum or non-direct supervision by the practicum instructor, and the performance meets the level of competency required by the laboratory for that task or process.
- N/A: Not Available: The nature of the laboratory does not allow the student access to the equipment/test method.

Note: The competencies will be graded for a total of 100 pts. Points will be deducted for competency categories that are not met. If an item is not available at the lab, please N/A that area so the student does not lose points. If something is not available, but was discussed with the student, please write, "1 – N/A". Students must achieve a minimum of 80% on their competency checklist in order to pass.

Please note that the goal of the lab competencies is for your mentor to feel comfortable with your ability in the micro lab. If your mentor does not feel that the minimum required time is adequate, you should work out a schedule with them to spend more time in the microbiology lab. Mandatory items are denoted as "M" on the checklist, if a mandatory item cannot be completed, it must be cleared with the instructor.

**Please have all mentors print their name, initial, sign and date below.**

Facility: \_\_\_\_\_

Mentor Printed Name \_\_\_\_\_ Initials \_\_\_\_\_

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

Mentor Printed Name \_\_\_\_\_ Initials \_\_\_\_\_

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

Mentor Printed Name \_\_\_\_\_ Initials \_\_\_\_\_

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

**Comments:**

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Student: \_\_\_\_\_ Wildcat ID # \_\_\_\_\_

<b>Orientation and Lab Safety</b>	<b>Mandatory</b>	<b>Expected Score</b>	<b>Student Score</b>	<b>Date complete</b>	<b>Mentor initial</b>
Review the laboratory's fire safety plan.	M	4			
Locate Personal Protective equipment and MSDS.	M	4			
Discuss Universal Precautions for microbiology.	M	4			
<b>Labeling &amp; Specimen ID</b>					
Label specimens according to institutional policies.	M	5			
<b>Specimen set up &amp; incubation</b>					
Select proper primary media including anaerobic and fungal media if available.	M	5			
Understand specimen collection & rejection criteria.	M	5			
Incubate specimens properly including anaerobic and fungal cultures.	M	5			
<b>Inoculation</b>					
Demonstrate plate streaking for isolation & quantitative streaking for urines.	M	5			
<b>Quality Control</b>					
Perform quality control for new media, reagents, and stock culture organisms.		4			
Understand documentation & actions taken when results are not acceptable.	M	4			
<b>Gram Staining</b>					
Practice performing Gram stains until proficient.	M	5			
Evaluate Grams stains, including sputum samples, wounds, genital samples, and positive blood cultures until proficient.		5			
Evaluate direct Gram stains of anaerobic isolates if available.		5			
<b>Evaluation of primary cultures</b>					
Evaluate cultures to recognize what is normal flora and what is significant.	M	4			
<b>Antimicrobials</b>					
Select appropriate pathogens to perform antimicrobial testing. Setup and Interpret antimicrobial tests i.e. Kirby bauer, automated systems (Microscan, Vitek), etc.	M	4			
Discuss guidelines for MIC and breakpoint ranges.	M	1			
Discuss antimicrobial resistance: VRE, MRSA, VRSA.		1			
<b>Gram positive bacilli</b>					
Recognize and identify Gram-positive bacilli in cultures.		4			
<b>Mycobacteria</b>					
Process mycobacteria specimens to the extent available at your facility.		3			
<b>Viruses</b>					
Process specimens for viral procedures (include culture if applicable at facility).		3			
Perform RSV and Influenza testing (if performed at your facility).		4			
<b>Parasites</b>					
Identify the proper specimens for O & P examinations.		4			
Discuss the proper terminology for reporting positive O & P specimens.		1			
Process specimens for O & P exams (wet mount or iodine stain).		3			
Demonstrate proper procedure for permanent staining of O & P specimens.		3			
Evaluate iodine or wet mount O & P slides to identify parasites present.		3			

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Parasites (Continued)	Mandatory	Expected Score	Student Score	Date complete	Mentor initial
Evaluate Trichrome O & P slides to identify parasites present.		3			
Perform Acid fast stain to identify parasites.		3			
Perform testing for Giardia antigen, <i>C. difficile</i> toxins, & other stool pathogen testing.		3			
<b>Anaerobic Bacteria</b>					
Select the proper anaerobic media for plating of specimens for anaerobic culture.		4			
Discuss proper specimen handling & transport conditions for anaerobic bacteria.		1			
Demonstrate how to obtain anaerobic conditions pertaining to bacteria.		4			
Identify anaerobes in clinical specimens to the extent performed at your facility.		3			
Discuss antimicrobial therapy for anaerobic infections.		1			
<b>Mycology</b>					
Discuss proper specimen collection and transport issues related to Mycology.		1			
Process specimens for fungal culture to the extent performed at this facility		3			
<b>Student demonstrates honesty by:</b>					
Maintaining strict patient confidentiality	M	5			
Accepting control values only when within acceptable limits	M	5			
Performing and documenting daily & weekly maintenance procedures, preventative maintenance, temperature checks, etc.	M	5			
Completing all procedures in adherence to laboratory SOPs, taking no shortcuts or unauthorized modifications of procedure	M	5			
<b>Student demonstrates personal interactive skills and proper professional behavior by:</b>					
Working with co-workers in a positive manner, promoting productive workflow.	M	5			
Refraining from making statements or actions that represent sexual, ethnic, racial, or homophobic harassment.	M	5			
Willingly and consistently using appropriate personal safety devices when handling caustic, infectious, or hazardous materials.	M	5			
Completing all required tasks and remaining in the work area when scheduled.	M	5			
Being punctual whenever scheduled.	M	5			
Adhering to current dress and appearance in the laboratory setting.	M	5			
Cleaning the work area when leaving the laboratory, returning supplies to appropriate storage location, & disinfecting all work areas used by the student.	M	5			
<b>Student demonstrates professional responsibility by:</b>					
Correctly reporting all patient test values, as well as recognizing and correctly reporting all patient critical test values.	M	5			
Resolving discrepancies in specimen labeling, handling, or collection before reporting results.	M	5			
<b>Hours completed by student:</b>					
Minimum time required for this lab competency is 80 hours. Mentors are encouraged to increase the number of hours dependent on individual student need. Please verify the number of hours your student spent:	M	80 hours			
Based on performance is this the type of person you would consider for potential employment? <span style="float:right">Y <input type="checkbox"/> N <input type="checkbox"/></span>					