

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: MLT-221 Department: Clinical Lab Science

Course Title: Clinical Laboratory Seminar Semester: Spring Year: 2022

COURSE OBJECTIVES: Continuation of MLT-220. Supervised clinical experience is obtained in an affiliated laboratory under the supervision of a qualified medical technologist and pathologist. The rotation schedule provides experience in the following departments: Chemistry, Microbiology, and Immunology. Pre-requisite: MLT-220, Co-requisite- MLT-240

Course Objective		Competencies
Clinical Chemistry	Cognitive Objective	<p>Upon conclusion of the each clinical practicum rotation, the student will demonstrate a thorough knowledge of all cognitive objectives according to established laboratory protocols as outlined in procedure manuals, assigned text and materials and/or defined by verbal instruction to the attainment level identified in the MLT Clinical Course Matriculation Policy.</p> <ul style="list-style-type: none"> • Describe specimen requirements for all tests performed within the department using available reference materials. • Demonstrate an understanding of the theories and/or principles employed in the major procedures or protocols within the department. • Demonstrate an understanding and knowledge of principles and operational procedures used for instrumentation/automation in the department. • Interpret standard operating procedures for all tests performed within the department.
	Psychomotor Objectives	<p>Upon conclusion of this clinical practicum, the student will have a thorough knowledge of the department functions and be able to complete the following assigned tasks according to established laboratory protocols as outlined in procedure manuals, assigned text and materials and/or defined by verbal instruction, within the specified time of the rotation, and to the attainment level identified in the MLT Matriculation Clinical Course Policy.</p> <ul style="list-style-type: none"> • Recognize unacceptable specimens and take appropriate actions. • Process and log in acceptable blood specimens for chemical analysis • Perform the maintenance on the major instrumentation used within the department • Determine stability and outdates of departmental reagents. • Perform pipetting procedures used in this department. • Properly operate the major instrumentation within the department.

		<ul style="list-style-type: none"> • Perform and interpret appropriate quality control and quality assurance for all procedures. • Perform testing on unknown specimens using manual procedures/tests within the department and obtain test results at 95% accuracy when compared with results obtained by an experienced technologist. • Identify performance issues and institute troubleshooting procedures on the major instrumentation used within the department. • Recognize normal and abnormal results (reference intervals) according to the standards of the particular laboratory. • Recognize implausible results. • Maintain legible and accurate records.
Microbiology	Cognitive Objective	<p>Upon conclusion of the each clinical practicum rotation, the student will demonstrate a thorough knowledge of all cognitive objectives according to established laboratory protocols as outlined in procedure manuals, assigned text and materials and/or defined by verbal instruction to the attainment level identified in the MLT Clinical Course Matriculation Policy.</p> <ul style="list-style-type: none"> • Describe specimen requirements for all tests performed within the department using available reference materials. • Demonstrate an understanding of the theories and/or principles employed in the major procedures or protocols within the department. • Interpret standard operating procedures for all tests performed within the department. • Demonstrate an understanding and knowledge of principles and operational procedures used for instrumentation/automation in the department.
	Psychomotor Objectives	<p>Upon conclusion of this clinical practicum, the student will have a thorough knowledge of the department functions and be able to complete the following assigned tasks according to established laboratory protocols as outlined in procedure manuals, assigned text and materials and/or defined by verbal instruction, within the specified time of the rotation, and to the attainment level identified in the MLT Matriculation Clinical Course Policy.</p> <ul style="list-style-type: none"> • Recognize unacceptable specimens and take appropriate actions. • Log in microbiology specimens and prepare them for culture and microscopic studies. • Perform the maintenance on the major instrumentation used within the department • Determine stability and outdates of departmental reagents. • Select proper media and prepare specimens for bacteriological studies. • Perform proper techniques in inoculating and sub-culturing of microbiological specimens.

		<ul style="list-style-type: none"> • Accurately evaluate biological culture plates for normal flora and pathogens. • Perform and properly interpret all staining procedures used in this department. • Perform and interpret appropriate quality control and quality assurance for all procedures. • Perform unknown specimens on the major department procedures/tests with 95% accuracy when compared with results obtained by an experienced technologist. • Identify performance issues and institute troubleshooting procedures on the major instrumentation used within the department. • Recognize normal and abnormal results (reference intervals) according to the standards of the particular laboratory. • Recognize implausible results. • Maintain legible and accurate records.
Immunology/Serology	Cognitive Objective	<p>Upon conclusion of the each clinical practicum rotation, the student will demonstrate a thorough knowledge of all cognitive objectives according to established laboratory protocols as outlined in procedure manuals, assigned text and materials and/or defined by verbal instruction to the attainment level identified in the MLT Clinical Course Matriculation Policy.</p> <ul style="list-style-type: none"> • Describe specimen requirements for all tests performed within the department using available reference materials. • Demonstrate an understanding of the theories and/or principles employed in the major procedures or protocols within the department. • Demonstrate an understanding and knowledge of principles and operational procedures used for instrumentation/automation in the department. • Interpret standard operating procedures for all tests performed within the department.
	Psychomotor Objectives	<p>Upon conclusion of this clinical practicum, the student will have a thorough knowledge of the department functions and be able to complete the following assigned tasks according to established laboratory protocols as outlined in procedure manuals, assigned text and materials and/or defined by verbal instruction, within the specified time of the rotation, and to the attainment level identified in the MLT Matriculation Clinical Course Policy.</p> <ul style="list-style-type: none"> • Recognize unacceptable specimens and take appropriate actions. • Process and log in acceptable specimens for immunological/serological analysis. • Perform the maintenance on the major instrumentation used within the department • Determine stability and outdates of departmental reagents.

		<ul style="list-style-type: none"> • Properly operate the major instrumentation within the department. • Perform and properly interpret all staining procedures used in this department. • Perform and interpret appropriate quality control and quality assurance for all procedures. • Perform testing on unknown specimens using manual procedures/tests within the department and obtain test results at 95% accuracy when compared with results obtained by an experienced technologist. • Identify performance issues and institute troubleshooting procedures on the major instrumentation used within the department. • Recognize normal and abnormal results (reference intervals) according to the standards of the particular laboratory. • Recognize implausible results. • Maintain legible and accurate records.
Affective Behaviors		<p>Throughout the clinical practicum, students will comply with and/or perform all affective behavior objectives as outlined in this document and in the course syllabus. Assessment of compliance and/or performance of affective behaviors will be determined by ongoing, direct observations made by clinical instructors.</p> <ul style="list-style-type: none"> • Students will demonstrate proper professional appearance by being neatly groomed and adhering to departmental dress codes. • Students will maintain a rigid attendance policy in which there are only excused absences or tardiness. • Students will demonstrate dependability by notifying on campus instructor of tardiness and/or absences tardiness. • Students will demonstrate honesty by always being accountable for their actions and notifying supervisor the event of an error. • Students will demonstrate workload organization by maintaining a clean and orderly work area, properly documenting procedures and following oral and/or written directions. • Students will communicate (verbally and nonverbally) effectively and courteously in the workplace and demonstrate the ability to work in a team. • Students accept constructive criticism as a part of the learning process. • Students will show respect for authority and the hierarchy within the laboratory. • Students will demonstrate appropriate professional attitudes and behavior and perform assigned tasks with interest and enthusiasm. • Practices all safety procedures, infection control and confidentiality while working within the laboratory.