Clinical Microbiology, MLAB 2434

Course Syllabus: 2019
Meets Tuesdays 1300-1550 UHS 226

"Northeast Texas Community College exists to provide responsible, exemplary learning opportunities."

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	9am-12:30pm	9am-12:30pm	by appt	9am-12:30pm	by appt	

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Catalog Course Description: Prerequisite(s): BIOL 2420 and admission to MLT program or department approval. This course is an instruction in the theory, practical application, and pathogenesis of clinical microbiology, including collection, setup, identification, susceptibility testing, and reporting procedures.

Required Textbook(s):
Tille, P.M., Bailey & Scott's Diagnostic Microbiology, 14th Edition, Mosby, 2017

Publisher: Elsevier / Mosby
ISBN Number: 978-0-323-35482-0

Recommended Reading(s):
Evolve Student Resources accompanying Tille: Bailey & Scott's Diagnostic Microbology, 14th Edition – http://evolve.elsevier.com/Tille/

Indiana Pathology Atlas (available on UHS student computer labs)

Student Learning Outcomes:
The primary goal of this course is to provide students with an understanding of what organisms are significant for specific body sites, how best to recover and identify them and when and how to perform susceptibility testing. Upon completion of this course the student should be able to do the following:

_ Describe specific media and conditions to recover significant organisms
_ Explain the principle of the Gram Stain procedure
_ Describe cell morphologies – shapes and arrangements
_ Explain the concept of normal flora and distinguish normal flora from possible pathogens based on specimen source
_ Explain the clinical significance of various organisms
_ Perform isolation and identification procedures
_ Explain the theory and principles of susceptibility testing

SCANS Skills:

Scan Competency Clinical Microbiology

Resources	Identify supplies needed for each lab and organize laboratory procedure so that all supplies and equipment are used correctly.
Interpersonal	Recognize limitations of expertise and communicate with instructor when questions arise. Show respect for instructor and peers during class time.
Information	Apply information gained from lecture, laboratory and independent study to problem-solve results provided as case studies or unknowns during laboratory.
Systems	Apply critical thinking skills to problems encountered in the laboratory and theoretical case studies.
Technology	Achieve competency in routine microbiology procedures.

Lectures & Discussions:

Quality Control-Pre-Analytical, Analytical, Post-Analytical
Microbial Taxonomy
Genetics, Metabolism, and Structure of Microbes
Host-microorganism interactions
Specimen management
Microscopy
Recovery and Identification
Nucleic Acid Based Methodologies
Immunochemistry Methods
Serological Methods
Antimicrobial actions and Resistance
Methods and Strategies for Antimicrobial Susceptibility Testing
Identification Methods
Staphylococci and Micrococci
Streptococci and Enterococci
Gram-positive bacilli and other gram-positive organisms
Enterobacteriaciae
Other Gram-negative bacilli
Neisseria
Anaerobes
Mycobacteriology
Miscellaneous bacteria
Bloodstream infections
Respiratory Tract Infections
Central Nervous System Infections
Eyes, Ears & sinus Infections
Urinary Tract Infections
Genital Tract Infections
Gastrointestinal Tract Infections
Skin, Tissue, and Wound infections
Sterile body site infections

Evaluation/Grading Policy:

Exams	65%
Quizzes/Homework	10%
Labs	25%

Course Grades:
A = 90% or above
B = 80 – 89%
C = 70 – 79%
D = 60 – 69%
F = Less than 60%

A minimum grade of "C" is required **for BOTH** the lecture and laboratory components of all Medical Laboratory Technology courses. Failure to meet the minimum passing score in each area will result in a "D" for the course and dismissal from the program.

Tests/Exams:
5 exams + Final comprehensive exam
Daily quizzes may be given periodically

Assignments:
All assignments are due on the due date. No assignments will be accepted after the due date, and a grade of zero will result on that particular assignment.

Other Course Requirements:
Students are required to wear specified scrubs every day of class and laboratory. Appropriate laboratory attire is required - close-toed shoes, lab coat and other supplied personal protective equipment if necessary. Without close-toed shoes or lab coat, no lab procedures may be performed and the grade will reflect a missed lab period.

Student Responsibilities/Expectations:
1. Attend all classes and labs, be on time and remain in class for the entire period. For every three days missed, one letter grade will be deducted from the final grade. Three episodes of tardiness or early departure will be equated with one class absence. Exams are to be taken on the scheduled date and time. Prior approval of the instructor is required for anyone missing an exam date. Makeup exams must be taken in the testing center within 2 days of returning to campus. Every day after that will have 10 points deducted from the exam grade. Missing an exam without notifying the instructor will result in a grade of "0" for the exam. Anyone more than 15 minutes late for an exam without prior approval will take the exam in the testing center after the class period and have 10 points deducted from the exam grade.
2. Complete assigned readings before the lecture over each topic.
3. Be prepared to take notes and participate in class.
4. Be respectful of instructors and classmates.
5. All cell phones will be turned off or to silent during class time.
6. Laptops/tablets may be used for note-taking but do not abuse this privilege. They are not for personal use during class time.
7. Any missed laboratory session for any reason will require an essay of no less than 250 words (2 hand-written pages) covering the topic or activity performed during that session. This essay will

be submitted before the next class period. The activity or procedure must be made up, if possible, and any assignments as part of the missed lab session will also be turned in as soon as the lab activity has been completed. It is the student's responsibility to contact the instructor for such assignments.

8. When illness or emergencies arise which necessitate a student's absence from any scheduled class or other scheduled activity, the instructor should be notified as soon as possible.

NTCC Academic Honesty Statement:

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Academic Ethics

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to arrange an appointment with a College counselor to obtain a Request for Accommodations form. . An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the NTCC website - Special Populations.

Family Educational Rights And Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

MLAB2434 TENTATIVE COURSE SCHEDULE 2019

WK#	DATE	LECTURE ONLINE WEB	LAB (Tues 1300-1550pm) UHS226	ASSIGNMENTS
1	*8/27*	***Syllabus review and general course information*** Ch 1 – Microbial Taxonomy Ch 2 – Bacterial Genetics, Metabolism, & Structure Ch 3 – Host-microorganism interactions Ch 5 – Specimen management	Ch 4 – Safety Ch 6 – Stains and microscopy Ch 7 – Media Ch 77- Quality	**Homework Chapter 1-9 & 77due 9/10** --- Be prepared for ***quiz***
2	*9/3*	Ch 7 – Cultivation & Identification Ch 8 – Nucleic Acid Based Methods Ch 9 – Immunochemical Methods	Gram stains Set up blood culture	
3	*9/10*	Ch 10- Antimicrobial Actions & Resistance	Gram stains Homework review Read blood culture; set up Throat culture	**HW Ch 10-11 due 9/24** --- Be prepared for ***quiz***
4	***9/17***	Ch 11 – Methods & Strategies for AST	**EXAM 1 (Ch. 1-9& 77)** AST (A disc) Read throat culture Set up Genital	
5	*9/24*	Ch 12 – Identification Methods Ch 13 – Staph, Micrococcus,etc.	Homework review AST (Novobiocin) Wet Prep Read Genital Culture Set up Wound Culture	
6	***10/1***	Ch 14 – Strep,Enterococcus,etc. Ch 15-18 – Gram-pos rods & other GP organisms	**Exam 2 (Ch. 10-11)** Read Wound Culture Set up Urine	**HW Ch 12-18 due 10/08** --- Be prepared for ***quiz***
7	*10/8*	Ch 19 – Enterobacteriaciae	Homework review Read Urine Rapid ID 20E Set up stool	
8	***10/15***	Ch 20-38 – Other GNR Ch 39 – Neisseria and Moraxella	***EXAM 3 (Ch. 12-18)*** Stool WBC Read stool Pinworm prep Wellcolex kit Set up Ear	**HW Ch 19-39 due 10/22** --- Be prepared for ***quiz***
9	*10/22*	Ch 40-41 – Anaerobes	Homework Review Read Ear Culture	

			Microscan Set up Synovial	
10	***10/29***	Ch 42 – Mycobacteriology Ch 43-45 – Miscellaneous bacteria	***EXAM 4 (Ch. 19-39)*** Read Synovial culture Rapid NH system Set up Sputum	**HW Ch 40-45 due 11/5**
11	*11/5*	Ch 67 – Bloodstream Infections Ch 68 – Lower Respiratory Tract Infections Ch 69 – Upper Respiratory Tract Infections	Homework review Q Score Read Sputum P disc	
12	***11/12***	Ch 70 – CNS Ch 71 – Eyes, Ears, & Sinuses	***EXAM 5 (Ch 40-45)*** ***Lab Practical*** 5 unknown gram stains Set up CSF	**HW Ch 67-76 due 11/26** --- Be prepared for ***quiz***
13	*11/19*	Ch 72 – Urinary Tract Ch 73 – Genital Tract Ch 74 – Gastrointestinal Tract	Read CSF	
14	*11/26*	Ch 75 – Skin, Tissue, Wounds Ch 76 – Sterile body sites	Homework review Set up unknown	 ***Thanksgiving Holiday (11/27 – 11/29)***
15	*12/3*	Study week	***LAB practical (Ch67-76)*** Read unknown	
16	***12/10***	***FINAL Exam Tuesday, 12/10/19 @ 1300 (Comprehensive Ch1-45&77)***		