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WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

Clinical Chemistry

MLAB 2401.C001

Alisa J. Petree, MHSM, MLS (ASCP)^{cm}

NOTE: This is a 16-week course.

Course Description:

Introduces the principles and procedures of various tests performed in clinical chemistry. Presents the physiological basis for the test, the principle and procedures for the test, and the clinical significance of the test results, including quality control and normal values. Also includes basic chemical laboratory techniques, chemical laboratory safety, electrolytes and acid-base balance, proteins, carbohydrates, lipids, enzymes, metabolites, endocrine function, and toxicology. Utilizes a student laboratory for experiences in basic clinical chemistry procedures.

Prerequisites and/or Corequisites:

Prerequisites: Admission to the medical laboratory technician program and approval by the program director. Semester Hours 4 (3 lec/3 lab)

Course Notes and Instructor Recommendations:

- Have your textbook by the first day of class
- Estimated study time outside of class: 12-15 hours per week
- Check your student email daily
- Use computer with reliable internet access
- If you purchased a used textbook, please be sure and subscribe for the Navigate Advantage Access

Please note:

It is MCC's policy to assign all students, upon registration, an official e-mail address, which may remain in effect up to twelve months after students are no longer enrolled at MCC. MCC student e-mail addresses will be the only e-mail authorized to communicate official college information or business. A student's failure to receive or read official communications sent to the student's assigned e-mail address in a timely manner does not absolve the student from knowing and complying with the content of the official communication.

Students **must** have access to a computer with reliable Internet access to participate in this class. McLennan Community College now provides students, faculty & staff the ability to sign up for and download Microsoft Office 365, **for free!** Students should also download *Adobe Reader* to open any PDF files in the course (free download).

Instructor Information:

Instructor Name: Alisa Petree, MHSM, MLS (ASCP)^{cm}

Program Director/Professor

MCC E-mail: apetree@mclennan.edu

Office Phone Number: 254-299-8406

Office Location: SB 320

Office/Teacher Conference Hours: Monday, Wednesday 9-11:30 AM

Thursday 9-10 AM, Other times by appointment

Required Text & Materials:

Title: Clinical Chemistry Principles, Techniques, and Correlations

Author: Michael L. Bishop, MS, MLS(ASCP)

Edition: 9th edition

Publisher: Jones & Bartlett Learning

ISBN: 978-1-284-23886-0

Navigate Advantage Access needed

MCC Bookstore Website: <http://www.mclennan.edu/bookstore/>

Methods of Teaching and Learning:

MLAB 2401 students will be taught by the use of various learning methods and activities, to include lectures, case studies, demonstrations, laboratory exercises, Internet applications, streaming video, individualized projects, self-paced worksheets, web-sites and other resources will be utilized for research and projects. Course materials will be available on *D2L Brightspace* for student access during the course. Emphasis is on routine and special chemistry procedures and interpretation of test results in relationship to laboratory test results. Learning outcomes or specific course objectives are provided in each learning unit.

Course Objectives and/or Competencies:

MLAB 2401 is designed to prepare students to function at an entry-level position in a routine clinical chemistry laboratory. Lectures, demonstrations, laboratory sessions, clinical experiences, Internet exercises, and case studies will be used during the course. Emphasis will be placed on normal human physiology as it relates to clinical chemistry and disease states of the body. Emphasis will also be placed on routine clinical chemistry instrumentation and Quality Control methods. Routine chemistry procedures will be examined and abnormal chemistry results will be studied in relationship to the disorders of human physiology. The student will evaluate laboratory test outcomes and correlate test results with patient conditions and evaluate the suitability of clinical specimens. The student will demonstrate an understanding of clinical

chemistry; describe disease states associated with abnormal chemistry values; and perform basic laboratory chemical analysis by scoring a grade of 75 or better in the class.

After completion of MLAB 2401 Clinical Chemistry the student should be able to meet the following general course objectives:

Collect, process, and analyze medical clinical chemistry specimens.

1. Recognize and apply principles related to the use of laboratory information systems used in the clinical chemistry department.
2. Perform analytical tests on body fluids, serum, plasma, and other substances tested in the department.
3. Recognize factors that affect methods and test results and take appropriate actions within established guidelines using the skills of critical thinking and problem solving.
4. Recognize the clinical significance of laboratory procedures in the diagnosis and treatment of disease.
5. Perform and monitor routine departmental quality control within established guidelines by applying the principles of critical thinking and problem solving.
6. Perform preventive and corrective maintenance of equipment and instruments and refer to appropriate sources as necessary.
7. Apply and encourage the use of the principles of laboratory safety, including Standard Precautions.
8. Demonstrate professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and with the public.
9. Recognize the responsibilities of other laboratory and health care personnel and interact appropriately with them for quality patient care.
10. Apply basic scientific principles in learning new techniques and procedures.
11. Relate laboratory test results to common disease processes by recognizing the principles and methodologies practiced in the department.
12. Establish and maintain continuing education as a function of growth and maintenance of personal and professional competence.

All cognitive, psychomotor and affective domain objectives reflect these competencies. The affective domain objectives help the student understand the importance of professionalism, responsibility, and other "soft skills" associated with job competency.

Course Attendance/Participation Guidelines:

If a student is not in attendance in accordance with the policies/guidelines of the class as outlined in the course syllabus as of the course census date, faculty are required to drop students from their class roster prior to certifying the respective class roster. A student's financial aid will be

re-evaluated accordingly and the student will only receive funding for those courses attended as of the course census date.

Class participation is defined as completion of online assignments/preparation for student labs on time and participation in student laboratory testing with timely completion of required lab reports. Students missing more than 4 class periods involving student labs will be subject to possible dismissal for lack of attendance.

Course Outline or Schedule:

Part 1: Basic Principles and Practices of Clinical Chemistry

Part 2: Analytic Procedures and Clinical Correlation

Part 3: Endocrinology and Clinical Correlation

Part 4: Organ Systems and Clinical Correlation

Part 5: Speciality Areas of Clinical Chemistry

Course Grading Information:

Grade	Percentage Points
A	90-100%
B	80-89%
C	75-79%
D	70-74%
F	69% and below

Final grades are rounded. For example, if you achieve a final score of 79.5%, you will receive a B in the course. If you achieve a 79.4%, you will receive a C. Any student earning a grade of less than 75% on an assignment is required to schedule a conference time with the Program Director.

	<u>Breakdown</u>
Assignments	20%
Lab Exercises	20%
Examinations	45%
Final Exam	15%
Total Course Percentage	100%

Assignments

Your assignment grade may include work such as quizzes, projects, worksheets, and/or homework. All assignments must be turned in Sunday by midnight or the student will receive a zero for the assignment.

Lab Exercises

Being competent in the laboratory is critical for the MLT. Therefore, it is crucial that each student be present and able to complete his/her lab assignments. Practical lab exams may be given to determine competency. Many lab exercises/assignments may not be available to makeup. All labs must be turned in Sunday by midnight or the student will receive a zero for the lab.

Examinations

There are five major examinations which may be comprehensive.

If a student misses a major exam and provides a doctor's note or proof of a death in the immediate family, the final exam grade will be used in place of the missing exam grade. No more than one missed exam grade will be allowed. ALL tests will be proctored.

Final Exam

The Final Exam will be a comprehensive, testing your knowledge of the material for the entire course.

Late Work, Attendance, and Make Up Work Policies:

If a student is not in attendance in accordance with the policies/guidelines of the class as outlined in the course syllabus as of the course census date, faculty are required to drop students from their class roster prior to certifying the respective class roster. A student's financial aid will be re-evaluated accordingly and the student will only receive funding for those courses attended as of the course census date.

Regular and punctual attendance is expected of all students, and each instructor will maintain a complete record of attendance for the entire length of each course. Students will be counted absent from class meetings missed, beginning with the first official day of classes. Students, whether present or absent, are responsible for all material presented or assigned for a course and will be held accountable for such materials in the determination of course grades.

Health Professions Division Policy:

Purpose: "McLennan Community College expects regular and punctual class attendance from all students. In Health Professions programs, regular class attendance is expected as a

demonstration of professional workplace behavior and late arrival and/or early departure is considered as absenteeism. Students, whether present or absent, are ultimately responsible for all material presented or assigned in the classroom and will be held accountable for these materials in determination of their grade. Absences from didactic classes prevent the Health Professions student from receiving full benefit of the course, diminish the quality of group interaction in the classroom setting and may interrupt progression in the program.

Policy: A McLennan Health Professions student in a didactic course missing a cumulative of 15 percent of the class meetings due to unexcused absences will be dropped.

Students will be permitted to make up class work and assignments missed as outlined in the course syllabus due to absences caused by (1) authorized participation in official College functions, (2) personal illness, (3) an illness or a death in the immediate family, (4) Pregnant or Parenting Protections under Title IX and/or Texas State Education Code Chapter 51, Subchapter Z, Section 51.982 or (5) any excused absences as outlined in College policy B-II. In all other cases, the instructor has the prerogative of determining whether a student may make up work missed.

Students are responsible for any work missed regardless for the cause of absence, as indicated in the institutional attendance policy. The student must initiate conversation with the instructor in a timely fashion, as defined by the program, and complete work according to timelines established with each course instructor.”

In MLAB 2401 there are 31 M/W classes scheduled in the semester (15% of 31 is 4.65). Students missing 4 or more class periods will exceed the allowable absences set by health professions and will be subject to dismissal from the class.

Student Absences on Religious Holy Days - please see MCC catalog regarding absences for religious Holy Days.

Student Behavioral Expectations or Conduct Policy:

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

Dress Code

The student classroom/laboratory is a level 2 biohazard lab. Therefore, it is recommended that students wear the MLT scrubs and closed toe shoes to class and lab. We are representing our profession and our program. Please see the MLT Student Handbook for more information.

Plagiarism and Cheating

Any reported incidents of plagiarism or cheating will be investigated and documented with proper disciplinary action taken as necessary including possible dismissal from the program.

“Cheating” includes, but is not limited to: (1) use of any unauthorized assistance in taking quizzes, tests or examinations; (2) dependence upon the aid of sources beyond those authorized by the professor in writing papers, preparing reports, solving problems or carrying out other assignments; or (3) the acquisition, without permission, of tests or other academic material belonging to a member of the MCC faculty or staff.

“Plagiarism” includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

Cellular Telephones, Personal Telephone Calls, and Electronic Devices

Students may use laptop computers during lectures as directed by the instructor. Students are NOT to receive or place telephone calls or text messages during class, labs, or clinical hours. Cellular telephones and other electronic devices should be turned off or silenced before entering the classroom, student laboratory, or the clinical site. Inappropriate use of any electronic device may result in disciplinary action.

[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)

(<https://www.mclennan.edu/highlander-guide/policies.html>)

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

10/09/2023



ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu (254)299-8122
Room 319, Student Services Center

Title IX:

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling, Dr. Claudette Jackson, (Accommodations/Title IX) at (254) 299-8465. MCC employees are mandatory reporters and must report incidents immediately to the Title IX Coordinator. Individuals may also contact the MCC Police Department at (254) 299-8911 or the MCC Student Counseling Center at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>

Additionally, Title IX provides rights and protections for pregnant and newly parenting students. Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

Academic Support and Tutoring is here to help students with all their course-related needs. Specializing in one-on-one tutoring, developing study skills, and effectively writing essays. Academic Support and Tutoring can be found in the Library and main floor of the Learning Commons. This service is available to students in person or through Zoom. You can contact the Academic Support and Tutoring team via Zoom or email (ast@mclennan.edu) by going to our website (<https://www.mclennan.edu/academic-support-and-tutoring/>)

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact either MCC CREW – Campus Resources Education Web by calling (254) 299-8561 or by emailing crew@mclennan.edu or a Success Coach by calling (254) 299-8226 or emailing success@mclennan.edu.

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to <https://calendly.com/paulannespantry-mcc/15min>.

The CREW, Success Coaches, and Paulanne's Pantry are all located on the second floor of the Student Services building in Success Coaching Services.

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an

emergency grant fund that may be able to assist you. Please go to <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf

MCC Academic Integrity Statement:

Please view our [Academic integrity statement](#) for more information about academic integrity, dishonesty, and cheating. The unauthorized use of artificial intelligence (AI) for classwork can be a violation of the College's General Conduct Policy. Whether AI is authorized in a course and the parameters in which AI can be used in a course will be outlined by each instructor.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-Staff-Commons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails. For more information about your student email account, go to www.mclennan.edu/studentemail.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- [Email Setup for iPhones and iPads](#)
- [Email Setup for Androids](#)

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

For more helpful information about technology at MCC, go to [MCC's Tech Support](#) or email helpdesk@mclennan.edu.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.