

**The University of Texas at El Paso
College of Health Sciences
Clinical Laboratory Science Program**

CLSC 3365: Clinical Chemistry II

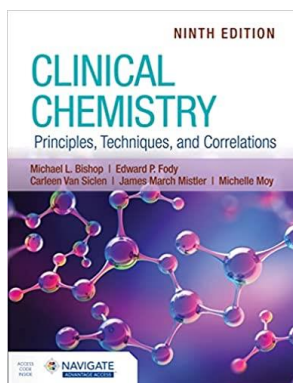
Spring 2023 Syllabus

I. Course Information

Days: Tuesday and Thursday: 12:00 – 13:20

Room: College of Health Sciences (CHS) 135

Textbook: Bishop, Michael L., Fody, Edward P., Van Sclen, Carleen, Mistler, James M., Moy, Michelle. 2023. *Clinical Chemistry. Principles, Techniques and Correlations. 9th Edition.* Jones & Bartlett Learning.



II. Instructor Information

Instructor: Nancy D. Cruz-Sanchez, MS, MLS (ASCP)^{CM}

Email: ndcruzsanch@utep.edu

Office: College of Health Sciences (CHS) 426

Office Phone Number: 915-747-7243

Office Hours: **by Appointment**

Available:

Monday: 10:00 – 13:30

Tuesday: 10:00 – 11:30

Wednesday: 10:00 – 13:30

Thursday: 10:00 – 11:30 / 13:30- 16:00

Friday: 10:00 – 12:00

- In order to better assist you, please make sure you **schedule an appointment**. If you can't schedule during these times, please contact instructor (after class/lab or via email) to schedule another time.
 - o Multiple students may be scheduled for the same office hour session.

- If it is a private matter, you wish to discuss material or have questions and prefer to have a private office hour or online session, please make sure to notify the instructor when appointment is being made.
- Online meetings may be scheduled (Zoom, Teams).
- Students **must** use their UTEP email when communicating, for appointments, questions, etc.
 - Emails received:
 - Monday through Thursday after 5:00pm will be replied to the next day.
 - Friday after 4:00pm will be replied Monday (or next business day if Monday is a holiday).
 - Saturday and/or Sunday will be replied Monday (or next business day if Monday is a holiday).
 - Holidays will be replied to the next business day.
- Instructor is also available after class/lab (unless another class is on her schedule).
- If instructor is not in her office during office hours, she may be in CHS 137 Laboratory Prep Room preparing for laboratories. Students may attend office hours in prep room with instructor.

III. Course Description

This course is designed for students in the clinical laboratory science program. It is a continuation of CLSC 3354: Clinical Chemistry I. The course intends to provide clinical chemistry theory and principles with a focus on organ system function like hypothalamic, pituitary, adrenal, gonadal, thyroid, and liver function as well as cardiac and tumor markers, and pregnancy and prenatal testing. It also discusses the analytical techniques performed to detect and/or quantify each analyte in the clinical laboratory setting.

Course co-requisite: CLSC 3164 – Clinical Chemistry II Laboratory

Course pre-requisite: CLSC 3354 and CLSC 3155 (Each with a grade of “C” or higher and department approval.)

IV. Course Goal

This course intends to provide the student with clinical chemistry foundations, principles and theory regarding analytes tested in the clinical chemistry laboratory, their physiological-biochemical purpose, pathways, the importance of each of them in organ/system function, and an understanding of the analytical techniques used to determine analyte presence and/or concentration in a specimen. Likewise, the student will learn to accurately distinguish between abnormal and normal results and will evaluate and analyze such results using patient clinical history and evidence. The student will need to:

- Apply basic understanding of clinical chemistry learned in CLSC 3354: Clinical Chemistry I toward various body systems.
- Demonstrate an understanding of the instrumentation and laboratory techniques utilized in clinical chemistry laboratory settings.
- Demonstrate a functional understanding of the analytical calculations employed in standard clinical chemistry laboratories and be able to apply them in classroom and clinical settings.
- Understand the importance of consistent method and sample evaluation in the clinical laboratory
- Identify how deviations from standard operating procedures and/or poor sample quality can affect the validity of test results and effectiveness of patient care.
- Understand the importance of quality control measures and reference values, particularly as they pertain to clinical chemistry.
- Understand the clinical significance of clinical chemistry technical data and its correlation with normal and abnormal physiologic conditions.
- Demonstrate and employ effective interpersonal, professional and group communication skills.
- Have a thorough understanding of the pre-analytical, analytical, and post-analytical issues for sample preparation, analysis and reporting.

V. Course Objectives

A. Cognitive

Upon completion of this course the student will be able to do the following accordingly to each chapter:

1. Chapter 13: Basic Endocrinology
 - a. Define basic terms in endocrinology.
 - b. Outline hormone classifications and basic structures.
 - c. Discuss hormone biosynthesis, metabolism, catabolism, transport, and elimination.
 - d. Sketch positive and negative feedback mechanisms and provide examples.
 - e. Correlate laboratory results with disease states and endocrine disorders.
 - f. Explain the most common screening and diagnostic tests for endocrine disorders.
 - g. Interpret patient results with awareness of common factors that affect hormone levels.
 - h. Describe classification, source, effect, and mechanism of action of each hormone.
 - i. Apply endocrinology knowledge to case studies throughout the chapter.
 - j. Investigate discrepant endocrinology laboratory results.

2. Chapter 14: Thyroid Function
 - a. Discuss the biosynthesis, secretion, transport, and action of the thyroid hormones.
 - b. Define terms associated with thyroid disorders.
 - c. Sketch and label the hypothalamic–pituitary–thyroid axis.
 - d. Summarize the hypothalamic–pituitary–thyroid axis feedback loops regulating thyroid hormone production.
 - e. Specify the recommended diagnostic test to screen for thyroid dysfunction.
 - f. Explain the principle of each thyroid function test discussed in this chapter.
 - g. Correlate findings with suspected thyroid disorders given thyroid test results.
 - h. Differentiate between primary, secondary, and tertiary thyroid disorders.
 - i. Describe the appropriate laboratory thyroid function testing protocol to use to effectively evaluate or monitor patients with suspected thyroid disease.
 - j. Apply theoretical knowledge of thyroid function to resolve chapter case studies.

3. Chapter 15: Hypothalamic and Pituitary Function
 - a. Describe the functions of and list the hormones secreted by hypothalamus and the anterior and posterior pituitary glands.
 - b. Diagram the anatomic relationship between the pituitary and hypothalamus.
 - c. Explain the feedback loops of the hypothalamic and pituitary hormones.
 - d. Differentiate the effects of pulsatility and diurnal variation on the results of hormone measurements discussed in this chapter.
 - e. Examine the regulation of prolactin secretion.
 - f. State the causes of prolactin elevation.
 - g. Correlate the clinical features, diagnostic testing, and laboratory results for the hormones discussed in this chapter.

4. Chapter 16: Adrenal Function
 - a. Define catecholamines and specify the recommended specimen(s) needed to quantify each.
 - b. Explain how the adrenal gland functions to maintain blood pressure, potassium, and glucose homeostasis.
 - c. Describe steroid biosynthesis, regulation, and actions according to anatomic location within the adrenal gland.
 - d. Discuss the pathophysiology of adrenal cortex disorders, namely, Cushing’s syndrome, and Addison’s disease.

- e. Interpret laboratory tests to differentially diagnose primary and secondary Cushing's syndrome and Addison's disease.
 - f. Differentiate the adrenal enzyme deficiencies and their blocking pathways in establishing a diagnosis.
 - g. Sketch the biosynthesis, storage, and metabolism of catecholamines.
 - h. State the most useful measurements in supporting the diagnosis of pheochromocytoma.
 - i. List the clinical findings associated with hypertension that suggest an underlying adrenal etiology is causing high blood pressure.
 - j. Apply knowledge of adrenal function to address case studies.
5. Chapter 17: Gonadal Function
- a. State the principal androgen and its function.
 - b. Name three hormones produced by the ovaries and their function.
 - c. Diagram the menstrual cycle including the follicular phase and luteal phase.
 - d. Discuss the biosynthesis, secretion, transport, and action of the sex steroids and gonadotropins discussed in this chapter.
 - e. Identify the location of the pituitary gland, ovaries, and testes.
 - f. Differentiate the hypothalamic-pituitary-ovarian and hypothalamic-pituitary-testicular axes and how they regulate sex steroid and gonadotropin hormone production.
 - g. Explain the principles of each diagnostic test for pituitary-gonadal axes dysfunction discussed in this chapter.
 - h. Interpret laboratory results with regard to suspected gonadal disorders, given a patient's presentation and clinical data.
 - i. Select appropriate laboratory tests to effectively evaluate or monitor patients with suspected gonadal disease.
 - j. Summarize causes of infertility in both males and females.
6. Chapter 18: Parathyroid Function
- a. Identify the biologically active form of vitamin D and describe its production in the body.
 - b. Describe the endocrine function and physiology of the parathyroid gland.
 - c. Discuss the laboratory tools used to evaluate the function of the parathyroid gland.
 - d. Correlate laboratory results to clinical disease states involving the parathyroid gland.
 - e. Apply theoretical knowledge of parathyroid function to answer case study questions.

7. Chapter 19: Liver Function
 - a. Differentiate between unconjugated and conjugated bilirubin in the blood.
 - b. Explain liver function including bile secretion, synthetic activity, and detoxification.
 - c. Name two important cell types associated with the liver and state the function of each.
 - d. Define jaundice and differentiate prehepatic, hepatic, and post-hepatic jaundice.
 - e. Discuss liver disorders and appropriate laboratory tests needed for diagnosis.
 - f. Evaluate laboratory data and correlate with normal or pathological liver disorders.
 - g. Compare and contrast how total and direct bilirubin measurements are performed.
 - h. Describe the enzymes commonly used to assess hepatocellular and hepatobiliary disorders.
 - i. Identify the various types of hepatitis to include cause, transmission, occurrence, alternate name, physiology, diagnosis, and treatment.
 - j. Apply knowledge of liver function to answer case studies throughout the chapter.

8. Chapter 20: Cardiac Function
 - a. Discuss the etiology and physiologic effects of the following cardiac conditions:
 - Congenital heart disease
 - Hypertensive heart disease
 - Infectious heart diseases
 - Coronary heart disease
 - Congestive heart failure
 - Pulmonary embolism
 - b. Identify risk factors for coronary heart disease.
 - c. Explain the characteristics of an ideal cardiovascular marker.
 - d. Describe three novel markers of inflammation currently under investigation.
 - e. Compare and contrast the specificity and sensitivity of commonly used cardiac markers.
 - f. Correlate laboratory results with cardiac conditions, including myocardial infarction.
 - g. Analyze the role of the laboratory in the assessment of a patient with cardiac disease.
 - h. Calculate delta value for serial troponin measurements given patient data.

- i. Interpret laboratory results given patient data.
- j. Apply knowledge of cardiac markers to solve case study problems within the chapter.

9. Chapter 21: Renal Function

- a. Diagram and identify the major components of the nephron.
- b. Describe the physiologic role of each part of the nephron: glomerulus, proximal tubule, loop of Henle, distal tubule, and collecting duct.
- c. Describe the mechanisms by which the kidney maintains fluid and electrolyte balance in conjunction with hormones.
- d. State the usefulness of glomerular filtration rate and estimated glomerular filtration rate.
- e. Relate the clinical significance of total urine proteins, albuminuria, myoglobin clearance, serum β 2-microglobulin, and cystatin C.
- f. Explain the principle and clinical significance of each analyte in a routine urinalysis.
- g. Correlate laboratory test results with glomerulus and tubules disorders.
- h. Distinguish between acute kidney injury and chronic kidney disease.
- i. Evaluate chronic renal failure treatment options, including dialysis and transplantation.
- j. Apply knowledge of renal physiology and disease to answer case study questions throughout the chapter.

10. Chapter 22: Pancreatic Function

- a. Discuss the physiologic role of the pancreas in the digestive process.
- b. List the hormones excreted by the pancreas, together with their physiologic roles.
- c. Describe the following pancreatic disorders and list the associated laboratory tests that would aid in diagnosis: acute pancreatitis, chronic pancreatitis, pancreatic carcinoma, cystic fibrosis, and pancreatic malabsorption.
- d. List the tests used to assess intestinal function.
- e. Evaluate a patient's condition, given clinical data.

11. Chapter 23: Body Fluid Analysis

- a. Identify the source of amniotic fluid, cerebrospinal fluid, sweat, synovial fluid, pleural fluid, pericardial fluid, and peritoneal fluid.

- b. Describe the physiologic purpose of amniotic fluid, cerebrospinal fluid, sweat, synovial fluid, pleural fluid, pericardial fluid, and peritoneal fluid.
- c. Discuss the clinical utility and methods used to test amniotic fluid, cerebrospinal fluid, sweat, synovial fluid, pleural fluid, pericardial fluid, and peritoneal fluid.
- d. Correlate patient status when given appropriate laboratory results obtained from amniotic fluid, cerebrospinal fluid, sweat, synovial fluid, pleural fluid, pericardial fluid, and peritoneal fluid.
- e. Differentiate between a transudate and an exudate, both in terms of their respective causes and laboratory results associated with each.

12. Chapter 24: Pregnancy and Prenatal Testing

- a. Describe human development from conception to birth.
- b. Discuss the biological changes (e.g., endocrine, renal, immune) that occur within the mother's body during pregnancy.
- c. State the importance of testing the maternal serum α -fetoprotein in the second trimester of pregnancy and correlate levels with normal and disease states.
- d. Specify the methods of analysis for α -fetoprotein.
- e. Explain the purpose of testing maternal unconjugated estriol concentrations.
- f. Correlate expected laboratory results and clinical symptoms to the following fetal complications: neural tube defects, Down syndrome, trisomy 18, isoimmunization, and pre-term delivery.
- g. Interpret laboratory results and clinical symptoms to the following maternal and pregnancy complications: pre-eclampsia, hyperemesis gravidarum, and ectopic pregnancy.

13. Chapter 28: Tumor Markers

- a. Discuss the incidence of cancer in the United States for both males and females.
- b. Explain the role of tumor markers in cancer management.
- c. Identify the characteristics or properties of an ideal tumor marker.
- d. State the clinical usefulness of each tumor marker in this chapter.
- e. Name the major tumor types and their associated markers.
- f. Describe the use of enzymes and hormones as tumor markers.
- g. Specify the definitive laboratory test for making a diagnosis of cancer.

- h. Compare and contrast methods of analysis and clinical application of tumor markers.
- i. Correlate tumor marker results with associated cancers.
- j. Interpret tumor marker results.

14. Chapter 29: Point of Care Testing (POCT)

- a. Define point-of-care testing (POCT).
- b. Explain the role of the laboratory in the management of a POC program.
- c. Explain the process of implementing a new POC test.
- d. State the basic principles behind common POC applications.

15. Chapter 30: Newborn and Pediatric Clinical Chemistry

- a. Define the adaptive changes that occur in the newborn.
- b. Describe the developmental changes that occur throughout childhood.
- c. Discuss the problems associated with collecting blood from small children.
- d. Understand the role of point-of-care testing in pediatric settings.
- e. Summarize the changes that occur in children with regard to electrolyte and water balance, endocrine function, liver function, and bone metabolism.
- f. Explain how drug treatment and pharmacokinetics differ between children and adults.
- g. State the procedures and test methods used to diagnose inherited metabolic diseases.
- h. Correlate laboratory results to pediatric disorders of the immune system.
- i. Interpret laboratory test results associated with genetic diseases in pediatric patients.
- j. Apply knowledge of clinical chemistry to answer chapter case study questions.

16. Chapter 31: Geriatric Clinical Chemistry

- a. Evaluate the impact of SARS-CoV-2 (COVID-19) on the U.S. population in older adults.
- b. Define geriatrics, gerontology, menopause, and osteoporosis.
- c. Discuss the impact of geriatric patients on the clinical laboratory.
- d. Appraise the physiologic changes that occur with the aging process.
- e. Identify the age-related changes in clinical chemistry analytes.
- f. Explain the problems associated with establishing reference ranges for older adults.

- g. Describe the effects of medication on clinical chemistry results in older adults.
- h. State the effect of exercise and nutrition on chemistry results in older adults.
- i. Correlate age-related physiologic changes with laboratory results.
- j. Apply knowledge of clinical chemistry to answer case study questions throughout chapter.

B. Affective

Upon completion of this course, the student will be able to exhibit the appropriate responsible behaviors by demonstrating:

To show the appropriate responsible behaviors students will demonstrate:

1. Educational initiative and a positive attitude by being prepared for sessions, completing assigned tasks on time, and displaying self-motivation.
2. Organization by utilizing time effectively, sequencing, and prioritizing tasks for completion with time constraints.
3. Adaptability and flexibility to change and learning.
4. Good judgement and exercise emotional intelligence by accepting personal responsibility for consequences of one's own actions.
5. Problem solving ability by explaining purpose of each step in diagnosis, interpretation, procedure, recognizing discrepancies in techniques or procedures and knowing when repeating laboratory testing is necessary.
6. Dependability by following directions and working independently after being given directions.
7. Maturity, stability, and self-confidence by approaching and performing routine and stressful tasks confidently without assistance and maintaining composure, and by defining and being aware of personal limitations, seeking help when needed and pursuing continuing education independently.
8. Appropriate interpersonal skills by cooperating and communicating effectively with classmates and instructor(s) (faculty). Displaying courteous, considerate behavior and appropriate appearance.
9. Application of ethical behavior, integrity, and professionalism by respecting confidentiality of patient information, complying with professional standards and code of ethics, adhering to safety policies, and abiding by all rules and regulations of the CLS Program and the institution.
10. Commitment to organizational and professional policies regarding appearance, safety, confidentiality, and ethics by following UTEP's CLS Program Standards.

C. Psychomotor

1. Psychomotor skills will be evaluated in the laboratory: CLSC 3164: Clinical Chemistry II Laboratory.
2. Psychomotor objectives available in the CLSC 3164: Clinical Chemistry II Laboratory Syllabus.

VI. Course Policies

A. Textbook: Bishop, Michael L., Fody, Edward P., Van Siclen, Carleen, Mistler, James M., Moy, Michelle. 2023. *Clinical Chemistry. Principles, Techniques and Correlations. 9th Edition*. Jones & Bartlett Learning.

B. Instructional Policies

1. Material and resources for the class will provided using the following:
 - a. Classroom lectures
 - Power Point
 - PDF
 - b. Blackboard / Blackboard Ultra
 - c. You Tube
2. Announcements, updates, notifications, and other important messages will be posted to Blackboard announcements.
 - a. It is the student's responsibility to check Blackboard on a regular basis.
3. Students may be divided into groups randomly for different learning activities like reviews, etc.
 - a. Study groups are meant to be help and support for all students through the semester.
 - b. All members ***must*** participate in class discussion.
4. The instructor can help students create their own study guides/outlines and may upload to Blackboard outlines/study guides for each chapter/lecture when instructor understands they are necessary.
 - a. Students are ***strongly encouraged*** to (should) create/complete outlines/study guides and study (prepare) ***before*** coming to class.
 - b. Outlines/study guides may be discussed in class by students and guided by instructor.
 - c. Outline/study guide completion is strongly encouraged to be done with study group.
 - All members ***must*** participate in outline/study guide discussion in class.
5. Students are encouraged to (should) read material ahead of time (when available).

6. The student must have available or have access to the following technological resources:
 - a. Computer/laptop with camera (webcam), audio and microphone.
 - b. USB flash drive
 - c. Good internet connection
 - d. Microsoft Office (Word, Power Point, Excel)
 - e. Adobe (PDF) Flashplayer
 - f. Windows Media Player
 - g. Internet browser (i.e., Google Chrome, Mozilla Firefox, Safari)
 - h. Blackboard's Respondus LockDown Browser

7. LockDown Browser + Webcam Requirement
 - a. This course requires the use of LockDown Browser and a webcam for online quizzes and exams. The webcam can be the type that's built into your computer or one that plugs in with a USB cable. Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.
 - <https://www.respondus.com/products/lockdown-browser/student-movie.shtml>

 - b. Download Instructions
 - Download and install LockDown Browser from this link:<https://download.respondus.com/lockdown/download.php?id=586140509>
 - Once Installed:
 - ◊ Start LockDown Browser
 - ◊ Log into Blackboard Learn
 - ◊ Navigate to the test
 - ◊ Note: You won't be able to access tests with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.

 - c. Guidelines
 - When taking an online test, follow these guidelines:
 - ◊ Ensure you're in a location where you won't be interrupted
 - ◊ Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach

- ◊ Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it
 - ◊ Clear your desk or workspace of all external materials not permitted - books, papers, other devices
 - ◊ Remain at your computer for the duration of the test
 - ◊ If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam
 - ◊ To produce a good webcam video, do the following:
 - i. Avoid wearing baseball caps or hats with brims
 - ii. Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move
 - iii. If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
 - iv. Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window).
- d. Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted.
- e. Getting Help
- Several resources are available if you encounter problems with LockDown Browser:
 - The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area.
 - As applicable, insert information about your institution's help desk, including details about how to contact them. Some help desks want students to run the "System & Network Check" and the "Webcam Check"

before they are contacted - and even, to forward the results of these checks at the time of opening a ticket.

- Respondus has a Knowledge Base available from support.respondus.com. Select the "Knowledge Base" link and then select "Respondus LockDown Browser" as the product. If your problem is with a webcam, select "Respondus Monitor" as your product.
- If you're still unable to resolve a technical issue with LockDown Browser, go to support.respondus.com and select "Submit a Ticket". Provide detailed information about your problem and what steps you took to resolve it.

C. Quiz and Exam Policy

1. Quizzes and Exams will be taken **in the classroom** using Blackboard Respondus LockDown Browser + Webcam.
2. **Quizzes may be announced or unannounced.**
3. No make-up exams or quizzes will be administered.
4. If an exam or quiz is missed the grade will be 0. All grades will be used for calculating the final grade, no grades will be dropped.
5. If a student cannot attend a test, quiz, or final exam for a **university-acceptable excuse**, inform the instructor as soon as possible and a time will be arranged accordingly with the instructor's schedule. It is the responsibility of the student to notify the instructor of any absence and to provide legitimate documentation of absence as per university regulations.
 - a. Legitimate documentation needs to be provided at the time of exam/quiz rescheduling.
 - b. The re-scheduled exam/quiz will be administered on campus.
 - Instructor's office or separate reserved room close to instructor's office.
6. The instructor will assign each student a seat for the examination.
7. All personal belongings including material, documents, books, etc. must be kept in the designated area assigned by the instructor.
8. If a calculator is needed for the exam, the instructor will let you know ahead of time. Calculator lids must be kept with your personal belongings. The instructor will check the calculators (especially if a scientific or graphic calculator is being used).

D. Attendance and Participation Policies

1. The student is expected to attend **all** lecture sessions in a **timely fashion**.
2. The student is expected to participate during class sessions.
3. The student is expected to access Blackboard regularly for material availability, announcements, etc.

4. The student should spend 4-6 hours a week studying the material and resources provided by the instructor and textbook.
5. Absences: After 3 absences you will be given a written warning. If absent 4 times, you may be dropped from the course.
6. Tardiness: Students arriving after 10 minutes will be considered tardy.
7. It is the responsibility of the student to notify the instructor of any absence or tardiness, and to provide legitimate documentation of absence as per university regulations.
 - a. The student is responsible for the material discussed in class as well as announcements made in class.
8. The instructor reserves the right to drop a student due to tardiness or absenteeism, when, in the judgement of the instructor, a student has been absent to a degree as to impair their status relative to credit for the course. The instructor may drop the student from the class with a “**W**” before the course drop deadline or an “**F**” after the course drop deadline.
 - a. **Course Drop Deadline: March 30, 2023.**
9. The student is expected to participate in office hours.
 - a. Multiple students may be scheduled for the same office hour session.
 - b. If it is a private matter or you wish to discuss material or have questions and prefer to have a private office hour or online session, please make sure to notify the instructor when an appointment is being made.

E. Classroom Policies

1. The student will present to the classroom wearing appropriate clothing, i.e.:
 - a. Scrubs
 - CLS Junior Year Scrubs
 - b. If student will not be wearing scrubs, the student must dress **appropriately** for a classroom, i.e.,
 - **NO** cleavage, see through or short (crop tops) shirts or tops.
 - **NO** short shorts, short skirts, hot pants, or leggings.
2. Cell phone usage is **NOT** permitted in the classroom.
 - a. Exceptions can be made in case of an emergency. **Please talk to the instructor beforehand.**
 - b. Phone **MUST** remain in silent mode inside your backpack, purse, pocket, etc.

3. Headphones, earphones, air pods, ear plugs, or any of these personal devices are **NOT** permitted in class or during exams or quizzes.
 - a. If a student requires a quiet testing environment, the student needs to go to CASS. CASS will communicate with the instructor if the special accommodation is approved and make arrangements with the instructor for the special accommodation.

4. Video or audio recordings are **NOT** permitted in class.
 - a. If a student requires recordings of the lectures due to a disability, the student needs to go to CASS. CASS will communicate with the instructor if the special accommodation is approved and make the arrangements for the special accommodation.
 - b. If a student that is not covered under CASS special accommodations is caught recording, the instructor will ask the student to stop and erase the recording.
 - If this practice continues in the same lecture or future days, the student will be asked to leave the classroom and may be reported to the director of the program and/or Student Affairs.

5. Masks are not mandated for students, faculty, or staff in the classroom or at UTEP (per UTEP policies). However, if the student prefers to wear a mask, they can do so.
 - a. **This policy is subject to change depending on public health circumstances and UTEP policy change regarding this matter.**

6. COVID-19 PRECAUTION STATEMENT
 - a. Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms.
 - b. If you are feeling unwell, please let the instructor know as soon as possible, so that appropriate accommodation can be made.
 - c. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.
 - d. The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge

on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.

F. Etiquette guidelines

1. Treat instructor and classmates with respect.
2. Address instructor and classmates properly and accordingly.
3. Use clear and appropriate language.
4. Vulgar/obscene language, discrimination for race, color, ethnicity, gender, political or religious views, and inappropriate conduct is ***prohibited*** in class.
5. The instructor reserves the right to ban the student from the classroom if vulgar language is being used, if student is being disrespectful toward the instructor or classmates or exhibiting inappropriate conduct. This will be considered an absence. The student will be reported to the CLS program director, Student Affairs and OSCCR.
 - a. If behavior exhibits sexual misconduct, the student will also be reported to Title IX.

G. Academic Integrity

There is a **zero-tolerance level** for academic dishonesty. Honesty and integrity are a critical aspect of your chosen profession, as well as patient confidentiality. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but it is not limited to:

1. Cheating

This means:

- a. Copying from the homework, in-class work, or exam paper of another student.
- b. Engaging in written, oral, or any other means of communication with another student during an exam or homework assignment or giving aid to or seeking aid from another student during a test.
- c. Possession and/or use of test material (class notes, books, reviews, outlines, or any other material) not authorized by the instructor or exam proctor during an exam or quiz.
- d. Using, obtaining, or attempting to obtain, by any means, a part of the whole test, test key, homework solution, computer program, and tests administered during past semesters.
- e. Substituting for another person or another person substituting one's self to take a test/quiz.
- f. Falsifying data, laboratory reports and/or other records or academic work offered for credit.

2. Plagiarism

This means:

- a. The appropriation, buying, receiving as a gift, or obtaining by any means another's work, ideas, processes, results, or words without giving appropriate credit. This includes intentionally, knowingly or carelessly, presenting the work of another as one's own; failing to credit sources used in a work product; attempting to receive credit for work performed by another; failing to cite the World Wide Web, databases and other electronic resources.
- b. The submission for credit of any work or material that is attributable (whole or in part) to another person (i.e., copying from another student).

3. Collusion

This means the unauthorized (secret or illegal) collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on scholastic dishonesty.

H. Other prohibited conduct:

1. Health or Safety

- a. Any student who engages in conduct that endangers the health or safety of any person may be subject to discipline.

2. Disruptions

- a. Any student who, acting singly or in concert with others, obstructs, disrupts, or interferes with any teaching, educational, research, administrative, disciplinary, public service, or other activity or public performance authorized to be held or conducted on campus or on property or in a building or facility owned or controlled by the U. T. System or institution is subject to discipline. Obstruction or disruption includes but is not limited to any act that interrupts, modifies, or damages utility service or equipment, communication service or equipment, university computers, computer programs, computer records or computer networks accessible through the university's computer resources.

3. Harassment

- a. Any student who engages in harassment of a University community member, as defined under Section II-Chapter 2, Section 2.2.4, is subject to discipline.

4. Retaliation
 - a. Any student who retaliates in any way against an individual who has brought a complaint under this Policy (or other University policy) or participated in an investigation or disciplinary process of such complaint.
5. Unauthorized Use of Property
 - a. Any student who engages in the unauthorized use of property, equipment, supplies, buildings, or facilities owned or controlled by the U. T. System or institution is subject to discipline.
6. Vandalism
 - a. Any student who defaces, mutilates, destroys, or takes unauthorized possession of any property, equipment, supplies, buildings, or facilities owned or controlled by an institution or the U. T. System is subject to discipline.
7. Use of Explosives, Weapons or Hazardous Chemicals
 - a. Unless authorized by federal, state, or local laws, a student who possesses or uses any type of explosive, firearm, imitation firearm, ammunition, hazardous chemical, or weapon as defined by state or federal law, while on campus or on any property or in any building or facility owned or controlled by the U. T. System or institution, is subject to discipline. The University has a Campus Carry Policy and any violation of that Policy by a student will be handled according to the procedures in this Policy unless that Policy explicitly states otherwise.
8. Theft
 - a. Any student who commits theft, steals, or takes unauthorized possession of any personal property of any community member or University property within the buildings or facilities owned or controlled by the University or the U.T. System is subject to discipline.
9. Sale or Use of Alcoholic Beverages
 - a. The University enforces all state and federal laws or regulations which regulate and control the sale or use of alcohol on campus, including those pertaining to the possession of alcohol by minors. University regulations prohibit the possession and/or consumption of alcoholic beverages on University property without prior written authorization by appropriate administrative officials.

Customers of legal age under state law may purchase and consume alcoholic beverages in areas on the campus specifically designated for the public sale and consumption of beer and wine, and residents of University Housing are authorized to possess and consume beer and wine in the privacy of their living quarters, if they are of legal age under state law.

- b. The University, however, in accordance with the Texas Alcoholic Beverage Commission's amnesty policy, affords amnesty to a minor seeking aid in a medical emergency if the minor (1) requested emergency medical assistance in response to the possible alcohol overdose of the minor or another person; (2) was the first person to make a request for medical assistance under Subdivision (1); and (3) if the minor requested emergency medical assistance for the possible alcohol overdose of another person: (A) remained on the scene until the medical assistance arrived; and (B) cooperated with medical assistance and law enforcement personnel, if applicable.

10. Drugs

- a. Any student who is found responsible for the illegal use, possession and/or sale of a drug or narcotic is subject to discipline.

Students practicing any of these behaviors will be reported to the program director, Student Affairs, and OSCCR. Students participating in sexual misconduct/harassment behavior will also be reported to Title IX, in addition to the offices mentioned previously.

Proven violations of the detailed regulations, as printed in the *Handbook of Operating Procedures (HOP)* (available in the Office of the Dean of Students), may result in sanctions ranging from disciplinary probation, failing grades on the work in question, failing grade in the course, suspension, or dismissal, among others.

I. Student Support

In case of needed assistance:

1. Helpdesk
 - a. <https://www.utep.edu/irp/technologysupport/>
2. Miner Learning Center
 - a. <https://www.utep.edu/mlc/>

3. University Library
 - a. <https://www.utep.edu/library/>
4. Counseling and Psychological Services
 - a. <https://www.utep.edu/student-affairs/counsel/>
5. Student Support Services Program
 - a. <https://www.utep.edu/student-affairs/student-support-services-program/>

J. Classroom Accommodations

If you have a disability and need special accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148, by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.

K. University Counseling Center

If you have personal issues and feel like you need assistance, the university offers counseling services and resources. They are available online and in person through the Division of Student Affairs. You can access these services:

1. Online: <https://www.utep.edu/student-affairs/counsel/index.html>
2. By phone: 915-747-5302
3. Email: caps@utep.edu
4. In Person: Counseling Center
202 Union West
El Paso, Texas 79968

VII. Grading Policy

Evaluation Technique	%
Quizzes	10%
5 Partial Exams	14% each (70% total)
Final	20%
Total	100%

Grading Scale	Grade
90-100	A
80-89	B
75-79	C
70-74.9*	D*
69 or below*	F*
* A grade of 75 or above is required to continue in the CLS program.	

VIII. Spring 2023 Lecture Schedule*

Week	Date	Topic/Chapter
1	January 17	Syllabus Discussion / Chapter 13: Basic Endocrinology
	January 19	Chapter 13: Basic Endocrinology / Chapter 15: Hypothalamic and Pituitary Function
2	January 24 January 26	Chapter 15: Hypothalamic and Pituitary Function
3	January 31 February 2	Chapter 16: Adrenal Function
4	February 7 February 9	Chapter 16: Adrenal Function
5	February 14 February 16	Quiz #1 / Exam Review Exam #1: Chapters 13, 15 & 16
6	February 21	Chapter 14: Thyroid Function
	February 23	Chapter 17: Gonadal Function
7	February 28	Chapter 18: Parathyroid Function
	March 2	Quiz #2 / Exam Review
8	March 7	Exam #2: Chapters 14, 17 & 18
	March 9	Chapter 19: Liver Function
9	March 13-17	Spring Break 🌟
10	March 21	Chapter 20: Cardiac Function
	March 23	Chapter 21: Renal Function
11	March 28	Quiz #3 / Exam Review
	March 30	Exam #3: Chapters 19, 20 & 21
12	April 4	Chapter 22: Pancreatic Function
	April 6	Chapter 23: Body Fluid Analysis
13	April 11	Chapter 24: Pregnancy and Prenatal Testing
	April 13	Chapter 28: Tumor Markers
14	April 18	Quiz #4 / Exam Review
	April 20	Exam #4: Chapters 22, 23, 24 & 28
15	April 25	Chapter 29: Point of Care Testing (POCT)
	April 27	Chapter 30: Newborn and Pediatric Clinical Chemistry
16	May 2	Chapter 31: Geriatric Clinical Chemistry
	May 4	Exam #5: Chapters 29, 30 & 31
17	May ____	Final Exam: TBD

*Schedule subject to change