

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



CLSC 3252: Body Fluids Syllabus  
Fall 2023

**COREQUISITE:** CLSC 3153 Body Fluids Laboratory

**CLASS SCHEDULE AND LOCATION:** MW 11 - 11:50; LARTS 208

**Mandatory** Tutoring will be on a Friday 10:00 – 11:50 AM on the following Fridays:  
September 15, October 6, November 3, and December 1

These days count toward quiz grade. If you do not show up you will receive a zero for that day.

**OFFICE:** College of Health Sciences (CHS) Room 423  
Phone: 747-7282 e-mail: [lorit@utep.edu](mailto:lorit@utep.edu) FAX: 747-7207

**OFFICE HOURS:** Tuesday 3:00- 4:00 p.m. Thursday 10:00 – 11:00 p.m. Friday 10:00 – 12:00 a.m. and after class.

If for some reason you are not able to see me at this time, you are welcome to see me after class or we can arrange an appointment at another time. You can also schedule meetings with me by e-mail. I would like to invite you to use the office hours to clarify points you did not understand, to discuss subject matter according to your special interests or talk about your career goals. If you feel confused and lost, please come and see me. Please do not wait until the last minute.

NOTE: If you are sick – stay home and...  
1. Call Ms. Licerio to inform of your absence – 747-8396  
2. Notify the instructor BEFORE class if possible  
3. If you test positive for COVID inform UTEP EH&S at 915-747-7162 or [COVIDaction@utep.edu](mailto:COVIDaction@utep.edu)

## Course Description

This course is designed for students in the clinical laboratory science program. It intends to provide a basic understanding of the prime mechanisms involved in urine and other body fluid formation, function and examination. This course will prepare the student to correlate data with the acquired knowledge of basic anatomy and physiology in order to understand pathologic processes. It will present the fundamental principles of urine and other body fluid analysis and evaluation including chemical and microscopic procedures. This course will provide the student with the knowledge to accurately identify normal and abnormal components of urine and other body fluids.

## Course Goal

This course is designed to provide the student with basic theory and entry-level laboratory experience in the analysis of urine and other body fluids. The student will learn to competently perform basic procedures and correctly interpret the findings given adequate clinical data. This course will provide the student with the knowledge to accurately distinguish between normal and abnormal physical, chemical, and microscopic components of the analysis of urine and identify various testing procedures to evaluate the patient results in light of clinical evidence. The course will cover quality assessment including pre-analytical, analytical and post analytical components of body fluid analysis.

## REQUIRED TEXTBOOKS:

**Brunzel, Nancy A.** 2023. *Fundamentals of Urine & Body Fluid Analysis*. 5<sup>th</sup> Edition. Elsevier.

**Jarreau, P.** (2021). *Clinical Laboratory Science Review a Bottom Line Approach (6<sup>th</sup> ed.)*. Louisiana State University Health sciences Center foundation. New Orleans.



## EXAMINATIONS:

Four exams and a comprehensive final will be given. Exams are worth 40% of the total grade and the final is worth 40%. No make-up exams will be given. If an exam is missed (0%) the final grade will be based on the average of 4 exams. None of the test grades will be dropped.

## UNANNOUNCED QUIZZES AND ASSIGNMENTS:

Tickets to Class, unannounced quizzes and assignments will be given throughout the course and will constitute 20% of the final grade (individual and group). There are no make-up exams or quizzes. Assignments turned in late will automatically be lowered one grade level for each day it is late.



This is the “Ticket to Class” You will need one each time class meets. You will not be allowed to enter the class without a ticket unless you have a “free” day. The tickets are posted on Blackboard and you are responsible for downloading them and completing the assignment.

### GRADING SCALE:

- A 100 - 90%
- B 89 - 80%
- C 79 - 75 %
- D 74.9 – 70%
- F 69 or below

### FINAL GRADE CALCULATION:

Exams	40%
Quizzes/ homework	20%
Final	40%

## The Flipped or Active Laboratory / Classroom

Most of our laboratories and some lecture courses follow the “Flipped or Active Classroom” model. Students prepare for the in-person sessions by reviewing course materials and content in advance. When they arrive in class, they typically have a “quiz” and may work in groups to apply their background knowledge to problem solving case studies or situations. In this model, the faculty member acts as their guide and can provide instruction and corrective action as the students go through the work problems. Instead of sitting in a classroom while the instructor tells them how to do the work, the students are actually practicing the problems solving work with the faculty member’s help. Although this is often a significant adjustment for students who have not taken courses like this before, they quickly realize the value of the guided practice sessions.

## Your Role in This Course

In order for you to be ready for this class (active classroom, flipped, TBL), it will be important for you to read and prepare outside of class time. Your primary knowledge and understanding of readings will be essential for success with in-class activities and assignments, many of which will take place in collaboration with your team.

### **Orientation to Team Based learning (TBL)**

In this class you will be placed in **permanent** teams to help team mates learn from each other and the instructor. Passively listening to lecture and memorizing information will not prepare you for your profession role as a medical laboratory scientist where you will be required to solve problems on a daily basis. Discussion, debate and problem solving with others will serve you much better than listening to an instructor talk.

### **The Study Guide (SG): A tool to Help You Study for In-Class Assignments and Exams**

The SG is a tool to help you focus your studying and prepare effectively and efficiently for each class session. The questions in the SG are questions you should be able to answer as a medical laboratory Scientist. The SG also serves as your preparation tool for the exams. In other words, the questions that are on the SG are directly related to the questions on the exams. The SG can also serve as your notebook (if you take notes) and review tool to prepare for the midterm and final exam.

### **Technology Requirements**

Course content is delivered via the Internet through the Blackboard learning management system (LMS). Ensure your UTEP e-mail account is working and that you have access to the Web. You may use any of the primary Web browsers—Explorer, Google Chrome, Firefox, Safari, etc. When having technical difficulties, try switching to another browser.

You will need to have or have access to a computer/laptop, printer, scanner, a webcam, and a microphone. You will need to purchase a USB (flash drive). You will need to download or update the following software: Microsoft Office, Adobe, Flashplayer, Windows Media Player, QuickTime, and Java. Check that your computer hardware and software are up-to-date and able to access all parts of the course. You will need **LockDown Browser + Webcam installed on your computer**. If you encounter technical difficulties of any kind, contact the [Help Desk](#).

### **COURSE OBJECTIVES:**

**Affective Objectives:** To demonstrate professional behavior, the student will:

1. Arrive on time to lecture and promptly prepare for class lecture and group work (ATTENDANCE/PUNCTUALITY)
2. Demonstrate a positive attitude by being prepared for lecture, completing assigned tasks on time and displaying self-motivation and initiative in group work. (ATTITUDE)
3. Follow directions, pursue accuracy diligently, and work on your own after being given instructions. (DEPENDABILITY)
4. Use advance planning, establish priorities, utilize extra time efficiently and keep work area neat and clean. (ORGANIZATION)

5. Attend to detail by documenting data accurately and legibly, meeting deadlines and following all standard operating procedures. (ATTENTION TO DETAIL)
6. Cooperate and communicate effectively with peers and instructors, and display courteous, considerate behavior towards peers, instructors and patients. (INTERPERSONAL SKILLS)
7. Explain the purpose of each step in instrument operation, perceive most procedural errors and instrument failure appropriately and arrive at appropriate solutions using sound logic and analytical reasoning. (PROBLEM-SOLVING)
8. Abide by all rules and regulations governing the CLS program and those stated in the syllabus. (POLICY COMPLIANCE)
9. Ethical behavior and integrity 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 institution (ETHICAL BEHAVIOR)

### **Specific Cognitive Objectives are found after the Course Schedule as per ASCLS Body of Knowledge**

**Cognitive Objectives:** Upon completion of this course, the student should be able to:

1. Apply principles of safety, quality assurance and quality control;
2. Describe the composition, formation, and function of selected body fluids.
3. Explain the collection procedure for urine and other selected body fluids.
4. Evaluate the suitability of the body fluid specimens collected.
5. Exhibit an understanding of the anatomy and function of the renal system.
6. Communicate how a routine urinalysis is performed and explain the principles of each test including confirmatory tests and preanalytical, analytical and post analytical aspects of body fluid analysis.
7. Evaluate laboratory test outcomes and correlate test results with patient condition(s).
8. Correlate normal & pathological states associated with the various chemicals, physical and microscopic findings of various body fluids.
9. Compare & contrast the sensitivity and specificity of the respective screening and confirmatory methods for chemical testing of the urine, including sources of false positive as well as false negative reactions.

**Psychomotor Objectives:** Will be covered in the Body Fluids laboratory course, CLSC 3153  
**The information given in Body Fluids lecture and laboratory are integrated and the student will be asked in the lecture class about information that has been presented in the laboratory**

**Class Attendance:** The student is expected to attend all classes. It is the responsibility of the student to notify the instructor of any absence. In the case of an emergency or illness, the instructor should be notified as soon as possible. When, however, in the judgment of the instructor, a student has been absent to a degree as to impair his or her 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 with an **F** after the course drop deadline. If a student is 10 minutes late this will be recorded as a tardy. Two tardies make one absence.

### **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](mailto: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](http://www.sa.utep.edu/cass).

### **Test Policy:**

There will be four hourly examinations and a comprehensive final. The lecture exams may include brief essay questions and case studies. No make up exams will be offered. If you cannot attend an exam for a legitimate reason, (death, illness etc.) inform the instructor as soon as possible and the instructor will arrange a new time. If the student does not make any arrangements (s)he will receive a ZERO on the exam. **Please notice that our grade scale is different** from the main campus. In order **to pass the course you must earn a 75% average and a 74.9% does not constitute a passing grade.** Students in the CLS program cannot continue with the program with a grade of D or below.

### **Examination Policy:**

When examinations are administered, students are to place backpack, papers and other personal belongings at the front of the room or below the tables. Students will spread around the room when seating themselves. No hats, caps, or bulky clothing may be worn. **Once a student has left the room, he/she may not continue with the examination.** If a student misses an exam or a quiz, a make-up exam may be taken only if the student has informed the instructor of the absence prior to the beginning of the examination, and only if the absence is approved by the instructor. If permission is given to take an exam or a quiz, it will be scheduled at the convenience of the instructor. Make-up exams/quizzes, while they may cover the same material may differ from the exam/quiz taken by the rest of the class in organization, format, or specific item data.

### **Make up exams/quizzes**

Make up exams/quizzes will have an **automatic deduction of 7 points.** Make ups exams/quizzes, while they may cover the same material may differ from the exam/quiz taken by the rest of the class in organization, format, or specific item data.

### **Communication and or Assignment Submissions**

Students must their UTEP e-mail when communicating with the instructor. All assignments must be submitted via BlackBoard. Assignments submitted via e-mail or text messaging will NOT be accepted.

### **Academic Dishonesty:**

Any student who commits an act of academic dishonesty is subject to discipline. Academic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person without giving sufficient credit, taking an examination for another person, or any act designed to give unfair advantage to a student or the attempt to commit such acts. Students suspected of academic dishonesty will be reported to the Office of Student Conduct and Conflict Resolution (OSCCR).

### **Examples of “cheating” include:**

- Copying from the homework, in-class work or exam paper of another student, 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;
- Possession and/or use during an exam or home test of materials which are not authorized by the person giving the test, such as class notes, books, or specifically designed “crib notes”;
- Using, obtaining, or attempting to obtain by any means the whole or any part of non-administered test, test key, homework solution, or computer program; using a test that has been administered in prior classes or semesters but which will be used again either in whole or in part without permission of the instructor; or accessing a test bank without instructor permission;
- Collaborating with or seeking aid from another student for an assignment without authority;
- Substituting for another person, or permitting another person to substitute for one's self, to take a test;
- Falsifying research data, laboratory reports, and/or other records or academic work offered for credit.

“**Plagiarism**” means the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the unacknowledged submission or incorporation of it in one's own academic work offered for credit, or using work in a paper or assignment for which the student had received credit in another course without direct permission of all involved instructors. NOTE: This includes cutting-and-pasting and photocopying from on-line and other material. “**Collusion**” means the unauthorized 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.

## **TIME NEEDED TO STUDY! How to be successful in this course**

The typical rule is for each hour you spend in class, you should spend 2-3 hours outside of class studying. On average, you need to read a minimum of one chapter per day and complete the individual assignments.

### **Try to follow these steps:**

1. DO THIS FIRST!!! Look at the TENTATIVE course schedule and read the assigned chapter to be covered that day before reviewing the power points
2. Open PowerPoint lecture and have textbook open and take notes alongside the power point. DO NOT BE AFRAID TO MARK UP YOUR BOOK.
3. After reviewing the lecture and taking notes, RE-READ THE CHAPTER.
4. Come prepared to class by completing your group and or individual assignment BEFORE class. Answer the objective in the beginning of the chapter, review case studies, and answer questions in the back of the chapter.
5. Bring questions or ask for clarifications with you when you come to the lab.
6. Make copies of your completed Study Guides as you will have to leave a copy of the study guide in the team folder.

### **Major Mistakes Students Make that Negatively Affect Their Grades:**

- 1) Not getting enough sleep. If you are not getting enough sleep and pulling all-nighters, you are damaging your ability to think if you try to study or work through the night. While it might feel like getting ahead in the moment, you will most likely only set yourself back.
- 2) Skipping the reading. Do not assume you will get all the information by attending lecture and looking at power points.
- 3) Skipping class: Being absent from even one class session will hurt your understanding and performance in the class. You are also likely to miss graded quizzes or in-class assignments that make up 20% of your grade. If you are not present, you cannot get the points.
- 4) Procrastinating, not working in advance of a deadline and missing it.
- 5) Having poor time management skills and strategies leading to not putting in the necessary work and time outside of class.
- 6) Working too much and then having to do “all-nighters” or “cramming”.
- 7) Studying in a distracting environment. Everyone has different preferences on where to study. Identifying your distractors and minimizing them will help you focus on your work. Experiment with background sounds and locations until you find the golden combination that works for you.
- 8) Memorizing without understanding. You need to understand the relevance, context and inner workings of a subject—not just the figures, names and dates.
- 9) Procrastinating until crunch time. It is important to pace your course work.
- 10) Scholastic Dishonesty
- 11) Not taking advantage of tutoring



## BODY FLUIDS TENTATIVE COURSE SCHEDULE

<b>DATE</b>	<b>Topic to be covered</b>
Aug 28	Teams, Safety
Aug 30	Renal Function
<b>Sep 4</b>	<b>Labor Day NO CLASS</b>
Sep 6	Renal Function Tests
Sep 11	Intro to UA
Sep 13	Physical Exam of Urine
<b>Sep 18</b>	<b>Exam 1 (chapters 1 – 4)</b>
Sep 20	Chemical Examination of Urine
Sept 25	Chemical Examination of Urine
Sept 27	Microscopic Exam of Urine
Oct 2	Microscopic Exam of Urine
Oct 4	Microscopic Exam of Urine
Oct 9	Quality Assessment of Management of UA Lab
<b>Oct 11</b>	<b>Mini Break</b>
<b>Oct 16</b>	<b>Exam 2 (chapters 5 – 7)</b>
Oct 18	Renal Disease
Oct 23	Renal Disease
Oct 25	Metabolic Disorders
Oct 30	Metabolic Disorders
Nov 1	CSF
Nov 6	CSF
<b>Nov 8</b>	<b>Exam 3 (chapters 8 – 10) NOTE you have 2 scheduled exams this day</b>
Nov 13	Semen analysis
Nov 15	Synovial Fluid analysis
Nov 20	Serous Fluid analysis
Nov 22	Serous Fluid analysis
Nov 27	Amniotic Fluid analysis
Nov 29	Fecal analysis
Dec 4	Fecal analysis
<b>Dec 6</b>	<b>Exam 4 (chapters 11 – 15) NOTE you have 2 scheduled exams this day</b>
<b>DEC 15</b>	<b>Comprehensive final Time and Room TBD</b>