



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



CLSC 4275: Clinical Laboratory Management & Supervision  
Syllabus  
Spring 2021

## I. Course Information

**Asynchronous Online Course via:** Blackboard and Blackboard Collaborate Ultra

## II. Instructor Information

**Instructor:** Nancy Cruz, MS, MLS (ASCP)<sup>CM</sup>

**Email:** [ndcruzsanch@utep.edu](mailto:ndcruzsanch@utep.edu)

**Office:** College of Health Sciences (CHS) Room 426

**Office Phone Number:** 915-747-7243

**Office Hours:** via Blackboard Collaborate Ultra:

Mondays:

Tuesdays:

Wednesdays: 9:00am-10:30am

- **In order to better assist you, please make sure you schedule an appointment. If you cannot schedule during these times, please contact me (after class/lab or via email) to schedule another time.**
  - o Also available after class/lab.
- **Multiple students may be scheduled for the same office hour session. If it is a private matter or you wish to discuss material or have questions and prefer to have a private online office hour session, please make sure to notify the instructor when appointment is being made.**
- **Students must use their UTEP email when communicating, scheduling appointments, questions, etc.**

## III. Course Description

In the current shifting health care environment, the role of the clinical laboratory scientist is expanding. An augmented awareness of the business aspects of health care is expected. Therefore, the entry level clinical laboratory scientist must be acquainted of the financial, personnel, operational, and marketing issues affecting the laboratory to successfully perform and compete in this constantly changing environment. This course will cover management subject matter specific for Clinical Laboratory Science as specified by ASCLS Body of Knowledge.

This is an introductory course in the principles and techniques used in the supervision and management of the clinical laboratory in the health professions. The

course includes, but is not limited to, human-resource management, management and motivational theories, communication skills, interviewing, performance appraisals, accreditation agencies, federal and state regulations, budget and strategic planning, evaluation instruments, and the implementation of a laboratory quality improvement program. Financial management is covered including profit and loss, cost/benefit, reimbursement requirements, and materials/inventory management.

Prerequisite: Department approval.

#### **IV. Course Goal**

This course is designed to prepare the student for entry level laboratory positions by developing skills in basic laboratory administration/management practices including general management theory, personnel management, financial management, and laboratory regulations.

#### **V. Course Objectives**

##### **A. Cognitive**

Upon completion of this course the student will be able to do the following accordingly to each topic from the book Body of Knowledge: Clinical Laboratory Science, Section B (Contributor: Cheryl Caskey, MA, CLSp (NCA)):

##### **1. Health Care Reform Environment**

- a. Describe the forces affecting changes in the health care environment
- b. State changes occurring in laboratories related to health care changes.

##### **2. Federal Regulations and National Organizations**

- a. Identify, define, and correlate the functions and impact on laboratory practice.
  - Health and Human Services (HHS)
  - Center for Medicare and Medicaid Services (CMS)
  - Centers for Disease Control and Prevention (CDC)
  - Federal Drug Administration (FDA)
  - Department of Transportation (DOT)
  - Occupational Safety and Health Administration (OSHA)
  - National Committee for Clinical Laboratory Standards (NCCLS)
  - Bureau of Biologics
  - Office of the Inspector General (OIG)
- b. Identify the governmental laws and regulations that affect the laboratory and describe their impact.
  - Balanced Budget Act 1997 (BBA)
  - CLIA '88
  - HIPAA

- Federal and State Bioterrorism Statutes
  - c. Identify the following organizations and agencies and describe their roles in laboratory accreditation.
    - Joint Commission and Accreditation of Healthcare Organizations (JCAHO)
    - College of American Pathologists (CAP)
    - State Health Departments
    - Commission on Office Laboratory Accreditation (COLA)
    - Substance Abuse and Mental Health Service Administration (SAMHSA)
    - American Association of Blood Banks (AABB)
  - d. Discuss the process to prepare for a laboratory accreditation survey and inspection.
    - Utilization of survey checklists and guidelines.
3. General Management Theory
- a. Recognize the features of a good decision and explain the steps to make a sound decision.
    - Identify the role that human behavior plays and its influence in the decision-making process.
    - Identify the decision-making techniques to resolve the problems and decisions faced by the laboratory.
    - Identify the sources of conflict and resistance to change and discuss the change process and incorporation of the change process in the overall operations of the laboratory.
  - b. Define and apply leadership within the functions of management.
    - Recognize the factors that determine leadership success.
    - Compare and contrast the concepts and advantages of major leadership models.
    - Apply leadership principles to the management of organizations.
  - c. Explain the differences between management of health care organizations and other businesses.
  - d. List and explain the major managerial “functions”.
    - Financial management
    - Human resource management
    - Technical quality management

- e. Describe management and motivational theories; state their author and compare them to one another.
    - Maslow's Hierarchy of Needs
    - Herzberg's Motivator-Hygiene Theory
    - McGregor's Theory X and Theory Y
    - Management By Objectives (MBO)
    - Total Quality Management (TQM)
    - Continuous Quality Improvement (CQI)
  - f. Apply the different managerial and motivational theories to individual case studies.
  - g. Analyze the positive influences as well as the major barriers to effective communications.
  - h. Write effective policies and procedures
    - NCCLS Standards for Technical Procedures
  - i. Establish and implement a laboratory safety program.
  - j. Establish and maintain an effective quality systems assessment program.
    - Describe standards for quality assessment
    - Equality control
    - Proficiency testing
    - Personnel standards and competency assessment
    - Method evaluation and validation
    - Process improvement and problem identification
  - k. Describe principles of delegation and, given criteria, determine what and to whom to delegate.
  - l. Implement various techniques to motivate employees.
  - m. Provide incentives for professional development.
4. Financial Management
- a. Use cost analysis for selection of test methods, instrumentation and/or establishing test prices.
  - b. Measure laboratory productivity, given appropriate parameters.
  - c. Establish fixed versus variable costs for analyses.
  - d. Explain basic techniques used to plan and forecast trends and developments.
  - e. Describe the principles of third-party payment using insurance coding and reimbursement parameters.
  - f. Describe medical necessity, advance beneficiary notices, and ICD-10 coding impact on laboratory reimbursement.
  - g. Describe CPT coding and laboratory chargemasters.

- h. Distinguish between operational and capital budgets.
  - Explain the steps and schedule for preparing an operational and capital budget.
  - Prepare wage and salary budget projections.
- i. Distinguish supply expenses from other budget items
  - Explain the process of material management and inventory control.
  - Establish appropriate inventory levels and ordering schedules.

## 5. Personnel Management

- a. Identify by name and function the professional organizations associated with the medical laboratory profession including but not limited to:
  - American Association of Blood Banks (AABB)
  - American Association of Clinical Chemists (AACC)
  - American Medical Technologists (AMT)
  - American Society for Clinical Laboratory Science (ASCLS)
  - American Society for Clinical Pathologists (ASCP)
  - American Society for Microbiology (ASM)
  - Clinical Laboratory Managers Association (CLMA)
- b. Describe the key elements of a performance appraisal system.
- c. Explain the role of human resource management in the operation and functions of the management process.
- d. Define, list, compare and contrast associated credentialing mechanisms
  - Certification
  - Registration
  - Licensure
  - Accreditation
- e. List and compare the certification levels offered and the appropriate initials offered for two and four year educated laboratorians and the level at which personnel in each certification level function in a clinical laboratory.
  - National Credentialing Agency for Laboratory Personnel (NCA)
  - Board of Registry (BOR)
  - American Medical Technology (AMT)
  - International Society for Clinical Laboratory Technology (ISCLT)

- f. List those items to be included in position descriptions; explain their use and purpose.
- g. Function as an interviewer in the hiring process.
  - Identify and use proper interviewing techniques
  - State legal parameters
  - Describe federal regulations
- h. Explain the use of conferences in employee evaluations.
- i. Prepare a resume or curriculum vitae.
- j. Recognize situations of unethical professional performance and take appropriate action to correct such situations.
- k. Demonstrate and explain the steps involved in performing a laboratory assay.
- l. Provide feedback to students or other health care practitioners on their abilities to perform laboratory testing.
- m. Describe CLIA Personnel Qualifications and Responsibilities.
  - Laboratory Director
  - Technical Consultant
  - Clinical Consultant
  - General Supervisor
  - Testing Personnel

#### 6. General Healthcare

- a. Explain Clinical Laboratory Science impact on other healthcare providers.
- b. Discuss use of clinical laboratory data in the diagnosis and treatment of patients.
- c. Explain model hospital/facility organization.
  - Discuss typical hierarchy
  - Discuss typical committee structure, laboratory roles
  - Discuss clinical pathway development, laboratory roles

#### B. Affective

Students will be given the opportunity to demonstrate the development of behaviors and attitudes consistent with those of the profession. During this course, the students should be mindful of these actions and should learn to:

1. Work cooperatively with fellow students and instructors interacting as a team.
2. Respect the differences of others and cooperate with individuals of different cultural and ethnic backgrounds to achieve harmony and a common goal.
3. Educational initiative and a positive attitude by being prepared for laboratory sessions, completing assigned tasks on time, and displaying self-motivation.

4. Maintain honesty and integrity by doing your own work, not sharing personal work with others, accepting your mistakes, and assuming the consequences.
5. Demonstrate an interest in the content of the course through active participation.
6. Demonstrate a desire to promote knowledge of your profession by your interaction and enthusiasm.
7. Organization by utilizing time effectively, sequencing, and prioritizing tasks for completion with time constraints.
8. Adaptability and flexibility to change and learning.
9. Good judgement and exercise emotional intelligence by accepting personal responsibility for consequences of one's actions.
10. Dependability by following directions and working independently after being given directions.
11. 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.
12. Appropriate interpersonal skills by cooperating and communicating effectively with classmates and instructor(s) (faculty). Displaying courteous, considerate behavior and appropriate appearance.
13. 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.
14. Commitment to organizational and professional policies regarding appearance, safety, confidentiality, and ethics by following UTEP's CLS Program Standards.

## VI. Course Policies

### A. Texts

1. Ciulla, A. and Lehman, D. 2010. *Success! In Clinical Laboratory Science. 4<sup>th</sup> Edition*. Pearson.
  - a. 5<sup>th</sup> Edition – 2020
2. Harr, R. 2019. *Clinical Laboratory Science Review. 5<sup>th</sup> Edition*. F.A. Davis.
3. Hudson, J. 2004. *Principles of Clinical Laboratory Management: A Study Guide and Workbook*. Prentice Hall.
4. Tanabe, P. and Holladay, E.B., 2018. *BOC Study Guide, Clinical Laboratory Certification Examinations. 6<sup>th</sup> Edition*. ASCP.
5. Johnson, M.D., Spencer. 1998. *Who Moved My Cheese?: Available online, as audiobook.*

## B. Instructional Policies

1. This is an asynchronous course. Material and resources for the class will be provided using the following:
  - b. Blackboard
  - c. Blackboard Collaborate Ultra
  - d. Yuja Media Library
  - e. You Tube
  
2. Synchronous sessions may be scheduled throughout the semester to assess any questions students may have throughout the development of the course or discuss specific topics.
  - a. These sessions will be announced through Blackboard 1-2 weeks in advance.
  
3. 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. Adode (PDF) Flashplayer
  - f. Windows Media Player
  - g. Internet browser (i.e., Google Chrome, Mozilla Firefox)
  - h. Blackboard's Respondus LockDown Browser
  
4. 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 is 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 will not 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 are in a location where you will not 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 that you have 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) is 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 are 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. Assignment Policy

1. Students are required to submit assignments in a timely manner.
  - a. Deadlines will be announced as assignments are programmed and requested.
  - b. Failure to submit/complete an assignment in a timely manner will lead to a **2-point deduction each day the assignment is late (includes weekends and holidays)**.
    - If a legitimate reason/excuse (death, illness, etc.) prevents the student from handing the assignment on the due date, inform the instructor as soon as possible, bring the necessary documentation and considerations may be made, depending on situations, on an individual basis.
    - **NO** make-up assignments will be offered.
    - **It is suggested that the student submit the assignment before the due date.**
  - c. **Assignments are to be submitted as a pdf file, via Blackboard, in the available corresponding folder. They should be submitted with ALL calculations performed and corresponding units. Failure to do so will result in a point deduction according to the exercise values.**

#### D. Quiz and Exam Policy

1. Quizzes and Exams will be offered online using Blackboard Respondus LockDown Browser with webcam.
2. No make-up exams or quizzes will be administered.

3. 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.
4. If a student cannot take 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 responsibility of the student to notify the instructor of any absence and to provide legitimate documentation of absence as per University regulations.

#### E. Attendance and Participation Policies

1. The student is expected to access Blackboard regularly (at least twice a week) for material availability, announcements, quizzes, etc.
2. The student should spend 2-3 hours a week studying the material and resources provided by the instructor (and book).
3. The student is expected and encouraged to actively participate in office hours sessions.
  - 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 online office hour session, please make sure to notify the instructor when appointment is being made.

#### 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 online session 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.
6. Other etiquette guidelines (Netiquette) available through the following link:
  - a. [https://www.utep.edu/technologysupport/Files/docs/BB\\_Netiquette-Guide-for-Online-Courses.pdf](https://www.utep.edu/technologysupport/Files/docs/BB_Netiquette-Guide-for-Online-Courses.pdf)

#### 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's 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.

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.

## H. 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/>

## I. 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).

## J. 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](mailto:caps@utep.edu)
4. In Person: Counseling Center  
202 Union West  
El Paso, Texas 79968

## VII. Grading Policy

<b>Evaluation Technique</b>	<b>%</b>
2 Partial Exams	20% each (40% total)
Assignments	30%
Written Final Exam	30%
<b>Total</b>	<b>100%</b>
<b>Grading Scale</b>	<b>Grade</b>
90-100	A
80-89	B
75-79	C
70-74.9*	D*
69 or below*	F*
<b>* A grade of 75 or above is required to pass the course.</b>	