



**University of Nebraska Medical Center  
School of Allied Health Professions  
Clinical Laboratory Science Program  
Nebraska Methodist Hospital Medical Technology Program**

**Course Title:** Clinical Laboratory Management I

**Course Number:** CLS 430

**Credit Hours:** 2 semester hours

**Prerequisites:** Enrollment in the Clinical Laboratory Science Program

**Semesters Offered:** Semester I

**Course Coordinator:** Sandra Latshaw, MA, MT(ASCP)SM      402-423-9193  
sjlatsha@unmc.edu

**Course Curriculum**

**Planning Committee:** Julie Richards, MPA, MT(ASCP)BB      Julie.Richards@nmhs.org  
Karen Keller, MLS(ASCP)<sup>CM</sup>SH<sup>CM</sup>      kkeller@nebraskamed.com

**Faculty Contact**      NMH: All Nebraska Methodist Hospital students

**Codes:**      UNMC: All students except for NMH and DAO

Specific clinical/program sites:

NMH      Nebraska Methodist Hospital

NMC:      Nebraska Medical Center

UMC:      University of Missouri – Columbia (all clinical sites)

UI:      University of Iowa (all clinical sites)

KS:      Washburn University – Topeka, Kansas (all clinical sites)

UCCS:      University of Colorado – Colorado Springs (all clinical sites)

Affiliate:      Creighton, Grand Island, Hastings, Kearney, Norfolk, North Platte, Scottsbluff and Missouri Western State University-St. Jo

DAO:      Degree Advancement Option

**Class Days, Times, Location:** Established for each student at multiple clinical locations.

**Course Description:** This course introduces the theory, practical application and evaluation of laboratory management principles and associated models in healthcare and laboratory information systems, research, educational methodology, quality control, ethics, laboratory operations and scope of practice. Opportunities for building critical thinking, problem-solving, teamwork, communication, professionalism, research, management and leadership skills are provided.

**Instruction:** Instructional methods will include lectures, small and large group discussions, exercises, archived presentation sessions, online synchronous and/or asynchronous delivery, and self-assessments.

- Course Goals:** Upon successful completion of Clinical Laboratory Management I, the Clinical Laboratory Science student will:
1. Identify components of laboratory management.
  2. Summarize the principles of laboratory management activities.
  3. Perform management activities, including critical evaluations of scientific literature, educational methodology, laboratory operations, writing laboratory procedures and safety.
  4. Recognize the Clinical Laboratory Scientist's responsibility in managing today's clinical laboratory.
  5. Utilize laboratory management concepts from Clinical Management I.

**Required Textbook:** None

- Major References:**
1. Harmening DM. (2007). Laboratory Management: Principles and Processes. D.H. Publishing & Consulting, Inc.
  2. Beck SJ, LeGrys VA. (2003). Clinical Laboratory Education CD. The American Society for Clinical Laboratory Science.
  3. Varnadoe LA. (2007). Medical Laboratory Management and Supervision. 2<sup>nd</sup> Ed., F.A. Davis.
  4. MTS Lab Training Library, University of Washington, Safety topics, available at <http://www.labtraining.org>.

<b>Grading System:</b>	<b><u>Unit/Assignments</u></b>	<b><u>Course %</u></b>	<b><u>Due Date</u></b>
	<b>Laboratory Operations (25%)</b>		
	Clinical laboratory safety exercise	5%	8/22
	Laboratory information systems exercise	5%	9/6
	Healthcare systems exercise	5%	9/6
	Writing a laboratory procedure exercise	10%	11/21
	<b>Educational Methodology I (25%)</b>		
	Goals and objectives exercise	5%	10/10
	Learning activities and instructional media exercise	5%	10/10
	Test question development exercise	5%	10/10
	Educational methodology applications exercise	10%	10/31
	<b>Introduction to Laboratory Management (20%)</b>		
	Introduction to MLS professionalism exercise	6%	8/29
	Principles of laboratory management exercise	6%	9/6
	Principles of lab management group case study	4%	9/15
	Healthcare teams exercise	4%	11/21
	<b>Quality Management I (15%)</b>		
	Management of quality control I exercise	15%	10/31
	<b>Research Applications (15%)</b>		
	Research Applications exercise	15%	8/29

<b>Grading Scale:</b>	A+ = 97.00-100.00	B- = 80.00-82.99
	A = 93.00-96.99	C+ = 77.00-79.99
	A- = 90.00-92.99	C = 73.00-76.99
	B+ = 87.00-89.99	C- = 70.00-72.99
	B = 83.00-86.99	Failing = Below 70

**Grade**

**Requirements:**

Satisfactory completion of the course requires each of the following:

1. An overall average of  $\geq 70\%$  for each management unit. (Average of all assignments listed under each unit of the Grading System). If an average is  $< 70\%$ , remedial work on the failed assignments within the unit, plus additional work will be required\*.
  - a. All remedial work must be completed to the satisfaction of the course faculty. Repeated submissions of unsatisfactory remedial work will lead to a discussion with UNMC faculty and may trigger an Unprofessional Behaviors Documentation.
  - b. Successful completion of remedial work alone will not alter the original earned score.
2. Assignments not turned in by the due date/time (central time zone) and/or not submitted in the correct format will result in a 20% grade deduction of the earned score, per day beyond the due date/time. **Deadline dates and times stated in the assignment instructions will be monitored by Blackboard and strictly adhered to.** Until a paper is submitted totally completed and in the correct format it is not considered submitted. Assignments not received by one week past the due date will receive 0%. All assignments must be submitted to receive a final course grade. Required minimum scores are determined by an assignment's earned score prior to any late penalty.
3. When an exercise or paper is submitted past the due date/time, the grade earned must be at least half of the original possible score; or 70% for the Quality Management I exercise and Research Application exercise. (Student's grade will remain as previously discussed in point #2).
4. Documentation of unprofessional behavior will trigger the completion of a Professional Behaviors Evaluation and a counseling session with program administration. If a student does not improve their professional behavioral skills after counseling, the student may be placed on non-academic probation.
5. For students who are not showing satisfactory progress in the course, additional assignments may be made at the discretion of the course faculty and administration.
6. Continued enrollment in this course is contingent upon satisfactory progress in this and all other courses, with determination made on an individual basis by National Accrediting Agency for Clinical Laboratory Science (NAACLS) accredited administration.

\*Successful completion of additional work will earn an altered score or average of 70%. If the additional work is not successfully completed, the student may be put on academic probation and be required to demonstrate acceptable progress to remain in the program.

**Course Topics:** See Grading System

**Schedule:**

(All lectures will be archived and should be available online within 24 hours of the end time of the session.)

Date/Time/Location	Unit/Activity
5/23 or 5/25 8/5 or 8/10	<p><b>Introduction to Laboratory Management:</b>            Professionalism and Academic Integrity lecture (part 1)– L. Fell            Application of Ethics lecture – J. Tompkins            Academic Integrity lecture (part 2) – L. Fell</p>
8/15 - 8/22	<p><b>Laboratory Operations:</b>            View the assigned safety sections at the University of Washington MTS Lab Training Site            Clinical Laboratory Safety exercise due online 8/22 by 8:00 a.m. central time (CT)</p>
8/23 1300-1350 SEC 2018  8/23 1400-1450 SEC 2018	<p><b>Introduction to Laboratory Management:</b>            Scope of Practice lecture – K. Honeycutt            View “The Clinical Laboratory Science Professional” Power Point            Read “What Makes ASCP and ASCLS Tick” and “Write for Success”, both articles available on Blackboard.            View the Application of Ethics and Academic Integrity lectures            Introduction to MLS Professionalism exercise due online 8/29 by 8:00 a.m. CT</p> <p><b>Research Applications:</b>            Overview of Plagiarism and Searching Biomedical Literature lecture – R. Cox            Research Applications exercise due online 08/29 by 8:00 a.m. CT</p>
8/23 – 8/25	<p><b>Research Applications:</b>  <b>Prior to the “Critical Evaluation of Published Research” class session:</b>            View the “Basic Research Term Definitions” PowerPoint (on Blackboard)            Read “Comparison of Two Platelet Count Estimation Methodologies for Peripheral Blood Smears”, answering the provided focus questions to be prepared to critique the article during class time.            (Article available via Blackboard link)</p>
8/25 1300-1450 SEC 2018	<p><b>Research Applications:</b>            Critical Evaluation of Published Research lecture – D. Venema            Research Applications exercise due online 08/29 by 8:00 a.m. CT</p>
8/30 1300 -1350 SEC 2018  8/30 1400-1450 SEC 2018	<p><b>Laboratory Operations:</b>            Lab Information Systems lecture – J. Clark            LIS exercise due online 9/6 by 8:00 a.m. CT</p> <p>Healthcare Systems lecture – N. Strong            Healthcare Systems exercise due online 9/6 by 8:00 a.m. CT</p>

Date/Time/Location	Unit/Activity (cont.)
8/30 – 9/1	<b>Introduction to Laboratory Management:</b> Conflict Styles inventory due on Blackboard link prior to 9/1 lecture.
9/1 1300 – 1450 SEC 2018  9/1 – 9/15	<b>Introduction to Laboratory Management:</b> Stress Management part 1 – J. Tompkins Principles of Laboratory Management lecture– J. Tompkins Principles of Laboratory Management exercise due online 9/6 by 8:00 a.m. CT Principles of Laboratory Management case study threaded discussion with assigned small groups Principles of Laboratory Management case study due online 9/15 by 8:00 a.m. CT
9/15 to 10/10	<b>Educational Methodology I:</b> Review the “Introduction to Educational Objectives” material presented in student orientation.  View “Goals and Objectives” Power Point presentation Goals and Objectives exercise due online 10/10 by 8:00 a.m. CT  View “Learning Activities” and “Instructional Media” Power Points Learning Activities and Instruction Media exercise due online 10/10 by 8:00 a.m. CT  View “Test Question Development” Power Point presentation Test Question Development exercise due online 10/10 by 8:00 a.m. CT
10/13 1400-1450 SEC 2018	<b>Educational Methodology I:</b> Educational Methodology Applications lecture – S. Latshaw  Educational Methodology Applications exercise due online 10/31 by 8:00 a.m. CT
10/10 to 10/31	<b>Quality Management I:</b> View the “Basics of Quality Control” UNMC student lab lecture video  Read the assigned Westgard QC online lessons  Management of Quality Control exercise due online 10/31 by 8:00 a.m. CT
10/31 to 11/21	<b>Laboratory Operations:</b> Read ‘Writing a Laboratory Procedure: CLSI Guidelines’, the package insert for the QuickVue RSV Test and ‘Template for Procedure Format’  Writing a Laboratory Procedure exercise due online 11/21 by 8:00a.m.CT
11/10 1300-1400 SEC 2018	<b>Introduction to Laboratory Management</b> Stress Management part 3 – J. Tompkins Healthcare Teams lecture – J. Tompkins Healthcare Teams Exercise (due online 11/21 by 8:00 a.m. CT)

**\*Reminder – Student’s last name must be included on ALL file names for assignments submitted on Black board!!**

**ADA Accommodations:**

It is the policy of the University of Nebraska Medical Center to provide flexible and individualized accommodation to students with documented disabilities. To receive reasonable accommodations, students must complete a Request for Services application and provide documentation to the Services for Students with Disabilities office. Information is available at the Counseling and Student Development Center website at [www.unmc.edu/stucouns/](http://www.unmc.edu/stucouns/) You may contact Ronda Stevens, MSW, Coordinator of Services for Students with Disabilities at 402-559-5553 or [rstevens@unmc.edu](mailto:rstevens@unmc.edu). The office is located in Bennett Hall, 6001 within the Counseling and Student Development Center. Meetings are by appointment. Adequate time for processing, up to four weeks, is recommended.

## Statement of Academic Integrity:

The University of Nebraska Medical Center has established a policy on academic integrity and professional conduct. This policy may be found in the UNMC Student Handbook. All students are expected to adhere scrupulously to this policy. Cheating, academic misconduct, fabrication, and plagiarism are viewed as serious matters and will lead to disciplinary action as described in the UNMC Student Handbook under Procedural rules Relating to Student Discipline. Additional materials related to Responsible Conduct in Research can be found in the UNMC Student Handbook. Selected sections from the UNMC Student Handbook follow:

**CHEATING:** A general definition of cheating is the use or attempted use of unauthorized materials or information for an academic exercise. Examples of cheating include but are not limited to:

1. using unauthorized materials such as books, notes, calculators or other aids during an examination or other academic exercises;
2. receiving unauthorized assistance from another person during an exam or exercise such as copying answers, receiving answer signals, conversation or having another person take an examination for you;
3. providing assistance to another person during an exam or exercise, such as allowing your answers to be copied, signaling answers or taking an exam for someone else;
4. obtaining answers and/or other information without authorization from someone who has previously taken an examination;
5. including all or a portion of previous work for another assignment without authorization;
6. appropriating another person's ideas, processes, result, or words without giving appropriate credit, i.e. an appropriate attribution or citation (plagiarism). For example, a student who quotes verbatim the results of a previous student's work in a required term paper, but fails to credit the individual through citation. The work is recent and thus cannot be considered common knowledge.

**ACADEMIC MISCONDUCT:** Academic misconduct is defined as the falsification of official documents and/or obtaining records, examinations or documents without authorization. Several examples of academic misconduct are:

1. the unauthorized acquisition of all or part of an unadministered test;
2. selling or otherwise distributing all or part of an unadministered test;
3. changing an answer or grade on an examination without authorization;
4. falsification of information on an official university document such as a grade report, transcript, an instructor's grade book or evaluation file or being an accessory to an act of such falsification;
5. forging the signature of an authorizing official on documents such as letters of permission, petitions, drop/add, transcripts, and/or other official documents;
6. unauthorized entry into a building, office, file or computer data base to view, alter or acquire documents.

**Research misconduct** has been defined by the Federal DHHS Office of Research Integrity (ORI) and UNMC subscribes to this definition: **"Research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results."** Research misconduct does not include honest error or differences of opinion. It is important that every student understand the meaning of **fabrication, falsification, and plagiarism.**

**Fabrication** is making up data or results and recording or reporting them. Some examples are:

1. indicating a laboratory experiment had been repeated numerous times or
2. done in a controlled environment when it had not, thus leading to an invented or uncorroborated conclusion.

**Falsification** is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research or academic performance is not accurately represented in the research or academic records.

Some examples are:

1. altering an original source document, misquoting or misrepresenting a source to support a point of view or hypothesis;
2. Using computer software to change research images so they show something different than the original data.

**Plagiarism** is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit, i.e. an appropriate attribution or citation. An example is:

1. In the methods section of a thesis, a graduate student describes a procedure used in research for the thesis. The procedure was developed by a fellow graduate student in the laboratory of their major professor; however, neither the student who developed this procedure nor the major professor was given credit in the thesis. This implies that the author had himself developed the procedure.
2. In the background section of a thesis, a graduate student quotes verbatim the results of a previous investigator's work but fails to credit the individual through citation. The work is recent and thus cannot be considered common knowledge.