



**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 II

**Course Number:** CLS 431

**Credit Hours:** 3 semester hours

**Prerequisites:** Completion of CLS 430

**Semesters Offered:** Semester II

**Course Coordinator:** Sandra Latshaw, MA, MT(ASCP)SM 402-423-9193  
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**Course Curriculum Planning Committee:** Julie Richards, MPA, MT(ASCP)BB Julie.Richards@nmhs.org  
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**Faculty Contact Codes:** NMH: All Nebraska Methodist Hospital students  
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)
- MWSU: Missouri Western State University – St. Joseph
- Affiliate: Creighton, Grand Island, Hastings, Kearney, Norfolk,  
North Platte, Scottsbluff
- DAO: Degree Advancement Option

**Class Days, Times, Location:** Refer to the schedule at the end of the syllabus.

**Course Description:** This course builds on CLS 430 Clinical Laboratory Management I, and includes the theory, practical application and evaluation of laboratory management principles and associated models in compliance and regulatory issues, test utilization, human resource management, written and oral communication, method evaluation, educational methodology, professionalism, cultural competency, quality control, quality improvement and financial resources management. Opportunities for building critical thinking, problem-solving, team work, communication, professionalism, management and leadership skills are provided.

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

- Course Goals:** Upon successful completion of Clinical Laboratory Management II, the Clinical Laboratory Science student will:
1. Identify components of laboratory management.
  2. Summarize the principles of laboratory management activities.
  3. Demonstrate effective written and oral communication skills.
  4. Perform various management activities, regarding regulatory and compliance issues, human and financial resources, teaching plans and presentations, test utilization, method evaluation, quality improvement, quality control and other laboratory operations.
  5. Recognize the Clinical Laboratory Scientist's responsibility in managing today's clinical laboratory.
  6. Utilize the writing process as an approach to help develop and clarify critical thinking and decision-making.
  7. Utilize laboratory management concepts from Clinical Management I and II.

**Required Textbook/Materials:** None

**Additional 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 Laboratory Training Library, University of Washington, Orientation to Patient Safety, available at <http://www.medtraining.org>.

**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.

<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

**Grading System: Unit/Assignments****Course % Due Date****Compliance and Regulatory Issues (13%)**

Test utilization exercise	4.55%	12/12
Regulatory/accrediting agencies, standard/regs exercise	2.6%	2/20
Compliance & Regulatory Issues website exercise	1.95%	2/20
Personnel evaluation tools exercise	3.9%	2/20

**Educational Methodology II (14%)**

Teaching purpose statement	1.4%	varies
Teaching plan – first submission	2.8%	varies
Teaching plan – final submission	4.9%	varies
Teaching presentation	4.9%	varies

**Human Resource Management (9%)**

Job application exercise	1.8%	12/12
Resume & cover letter	2.7%	1/9
Laboratory scheduling group exercise	4.5%	3/5

**Financial Resources Management (10%)**

Materials management exercise	2%	2/6
Laboratory cost analysis exercise	5%	2/6
Laboratory productivity exercise	3%	2/6

**Method Evaluation (18%)**

Overview of method evaluation/research exercise	2.7%	varies
Overview of statistical analysis tools exercise	2.7%	varies
Guidelines to interpret of experimental studies exercise	2.7%	varies
Insulin methods evaluation paper – first submission	3.6%	varies
Insulin methods evaluation paper – final submission	6.3%	varies

**Communication (10%)**

Oral presentation of a scientific topic	5%	varies
Critical evaluation of written resources exercise	3%	varies
Oral discussion of a current health care topic	2%	varies

**Professionalism (13%)**

Cultural competency exercise	1.95%	12/12
Cultural competency threaded group discussion	1.95%	12/15
Professional activities	3.9%	4/23
Professionalism reflective paper	2.6%	4/23
Licensure opinion paper	2.6%	4/23

**Quality Management II (13%)**

Quality Improvement (QI):		
Quality principles exercise	2%	varies
Quality tools exercise	2%	varies
Review and Evaluation Methods for QI	2%	varies
Quality Control II:		
Quality control II review exercise	2%	12/6
Quality control II applications exercise	5%	12/12

## 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).

Exceptions: The following individual assignments require a  $\geq 70\%$ :

- a. Quality Control Applications Exercise
- b. Method Evaluation Introduction Exercises (average of 3 exercises)
- c. Insulin Methods Evaluation Final Paper
- d. Final Teaching Plan
- e. Professional Activities Points

If a score or 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 exam score.
2. Assignments not turned in by the due date/time (central time zone) and/or not submitted in correct format following CLS Writing Guidelines 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 individual exercises listed in #1. (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
11/28 to 5/4 as assigned per clinical rotation	<b>Method Evaluation:</b> Overview to Method Evaluation/Research handout and exercise Overview to Statistical Analysis Tools handout and exercise Guidelines to the Interpretation of Experimental Studies handout & exercise Insulin Methods Evaluation paper with revision process
11/28 to 5/4 as assigned per clinical rotation	<b>Educational Methodology II:</b> Written Teaching Plan with revision process Practice Teaching activity
11/28 to 5/4 as assigned per clinical rotation	<b>Communication:</b> Critical Evaluation of Written Resources Exercise
11/28 to 5/4 as assigned per clinical rotation	<b>Quality Management II: Quality Improvement</b> Benchmarking reading assignment Orientation to Patient Safety online assignment at the University of Washington MTS Lab Training Site Quality Initiatives PowerPoint assignment / Quality Principles exercise Quality Toolbook website assignment / Quality Improvement Tools exercise CDC Laboratory Medicine Best Practices Initiative Review and Evaluation Methods for Quality Improvement online tutorial and exercise
11/28 to 4/23 ongoing activity	<b>Professionalism:</b> Professional Activities record & reflective paper due online 4/23 by 8:00 a.m. central time (CT)
11/28-11/29 11/29 1300 – 1350 SEC 2018	<b>Compliance and Regulatory Issues:</b> Test Utilization reading assignment prior to 11/29 lecture Laboratory Billing, Coding and Reimbursement lecture – M. Sander Test Utilization exercise due online 12/12 by 8:00 a.m. CT
11/29 1400 - 1450 SEC 2018	<b>Human Resource Management:</b> Job Application Process lecture- J. Richards Job Application Process exercise due online 12/12 by 8:00 a.m. CT
12/1 1300 – 1450 SEC 2018	<b>Professionalism:</b> Cultural Competency lecture– J. Tompkins Cultural Competency exercise due online 12/12 by 8:00 a.m. CT Cultural Competency threaded group discussion due online 12/15 by 8:00 a.m. CT
12/1-12/6 12/6 1300-1450 SEC 2018	<b>Quality Management II: Quality Control II</b> Quality Control II Review exercise due online 12/6 by 8:00 a.m. CT Quality Control II lecture – R. Otten Quality Control Applications II exercise due online 12/12 by 8:00 a.m. CT

Date/Time/Location	Unit/Activity
12/13 1300-1450 SEC 2018	<b>Communication:</b> Oral Presentation of a Scientific Topic–Group 1 (NMH, NMC & Creighton) (UMC/UI/Affiliates/KS/UCCS/DAO dates/times individually arranged)
12/15 1300-1450 SEC 2018	<b>Communication:</b> Oral Presentation of a Scientific Topic– Group 2 (NMH, NMC & Creighton)
11/29 to 1/9	<b>Human Resource Management:</b> Resume & Cover Letter due 1/9 by 8:00 a.m. CT
1/23 to 2/6	<b>Financial Resources Management:</b> Materials Management reading assignment Materials Management exercise due online 2/6 at 8:00 a.m. CT Laboratory Cost Analysis reading assignment Laboratory Cost Analysis exercise due online 2/6 at 8:00 a.m. CT Laboratory Productivity reading assignment Laboratory Productivity exercise due online 2/6 at 8:00 a.m. CT
2/6 to 2/20	<b>Compliance &amp; Regulatory Issues:</b> Regulatory/Accrediting Agencies, Standards and Regulations reading assignment Regulatory/Accrediting Agencies, Standards and Regulations exercise due online 2/20 by 8:00 a.m. CT Compliance and Regulatory Issues Website and Inspection exercise (due online 2/20 by 8:00 a.m. CT Personnel Evaluation Tools: Proficiency testing, Competency testing, and Performance appraisal reading assignment Personnel Evaluation Tools exercise due online 2/20 by 8:00 a.m. CT
2/20 to 3/5	<b>Human Resource Management:</b> Lab Scheduling group exercise due online 3/5 by 8:00 a.m. CT
3/1 to 3/5	<b>Communication:</b> Select a current healthcare issue from the choices listed on Blackboard (topic selected is discussed with faculty contact by 3/5)
3/5 to 3/30	<b>Communication:</b> Prepare to discuss the selected current healthcare issue Coordinate a date/time to discuss the issue with the designated program official (discussions are to be completed by 3/30)
3/30 to 4/23	<b>Professionalism:</b> Credentialing for Laboratory Professionals PowerPoint assignment Professional Society licensure position website exploration Licensure Exploratory/Opinion paper due online 4/23 by 8:00 a.m. CT <b>Professionalism:</b> Cultivating Professionalism in the Laboratory PowerPoint assignment Professional Activities Record, with required documentation, due online 4/23 by 8:00 a.m. CT Professionalism reflective paper due online 4/23 by 8:00 a.m. CT
4/30	CLS 431 course evaluation due

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

## 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.