



Medical Laboratory Science [MLSC]

Cycles included in this report:

Jun 1, 2024 to May 31, 2025

Program Name: Medical Laboratory Science [MLSC]

Reporting Cycle: Jun 1, 2024 to May 31, 2025

1 Is this program offered via Distance Learning?

100% Traditional or less than 50% Distance/Traditional

2 Is this program offered at an off-site location?

No

2.1 If yes to previous, provide addresses for each location where 50% or more of program credits may be earned.

3 Example of Program Improvement

2020-2021:

In an effort to improve first attempt ASAP BOC test scores, the program director has begun collaborating with a group of other program directors (sharing LabCE practice data) in an effort to predict a student's first attempt ASCP BOC pass rate. The group hopes to predict future pass rates based upon the calculated difficulty level of each student's computer adaptive practice test. This year's pilot study should reveal improved predictions for the next academic year. After experiencing a pandemic, 2 major hurricanes, and an ice storm - improved contingency plans now include students purchasing annual subscriptions to LabCE Case Study Simulators (for around \$75), allowing instructors to assign online laboratory projects without interruption.

2021-2022:

New lab renovations completed in Hardtner Hall. Student labs will now be held in the same building as lecture, instead of across campus. Students will have quicker access to study/resource labs between classes. The following purchases were made through the CARES Act, serving as both supplemental learning tools and contingency plans in the event of forced online learning: 1) program subscription to LabCE software including continuing education tools, laboratory simulators, and certification mock exams to enhance junior and senior learning, 2) funding to create medical laboratory science simulation labs and enhance/replace off-campus laboratory learning.

2022-2023:

National certification pass rates improved by 12% for 2021-2022 MLS graduates. (MLS Graduate Statistics) One hundred percent of 2021-2022 graduates passed a national certification exam within 12 months of graduating. (MLS Graduate Statistics) Program learning outcomes were measured after implementing several changes to senior level review session methods, which included but weren't limited to annual subscriptions to LabCE Exam Simulators and MediaLab Case Study Simulators.

2023-2024:

- Increased student communication efforts between Program Director and clinical students, to increase retention during the difficult clinical year. Retention rate increased by 14.9% from 2021 to 2024.
 - 2021-2022 - 13% attrition rate, 87% retention rate
 - 2022-2023 & 2023-2024 - 0% attrition rate, 100% retention rate
- Increased off-campus recruitment efforts to increase MLS enrollment. Increased off-campus recruitment efforts from 2022-2023 to 2023-2024 by 200%
 - 2022-2023: 5 off-campus visits (Cameron H.S., Sulphur H.S., Washington Marion H.S. x 2, and Sulphur H.S. Career Fair)
 - 2023-2024: 15 touch points total - Used partial EP funds and collaborated with Recruitment Department, delivered 6 simulated blood typing kits with MLS brochures and branded items (Kinder H.S., Oakdale H.S., Oberlin H.S., Elizabeth H.S., Fairview H.S., Reeves H.S.); MLS faculty delivered 5 simulated microbiology kits with brochures and branded items (Sulphur H.S. 9th grade, Washington Marion H.S., Hamilton Christian, St. Louis H.S., and Cameron H.S.); attended Sulphur H.S. Career Fair, Starks Career Fair, CPSB College & Career Fair, and Vinton Career Fair with MLS-specific brochures and branded hand-out items

2024-2025

Implementation of new Capstone Examination: In 2023, 82% of our graduates passed the national certification exam (compared to the national average of 67%), and in 2024, the pass rate was 73% (national average 68%). Although our program consistently exceeds national benchmarks, we continue to seek improvement. In 2024–2025, the MLS program implemented a new Capstone examination for graduating seniors as a summative assessment aligned with national certification exam content. This program-wide initiative was developed in response to our ongoing review of graduate performance and employer feedback emphasizing readiness for independent practice. While the program has historically maintained a certification pass rate higher than the national average, we recognized an opportunity to provide structured review and reinforce mastery of key competencies before students enter the workforce. The Capstone exam was administered in spring 2025, and we plan to compare future certification exam scores and employer feedback to prior years as a measure of its effectiveness.

4 Program Highlights from the Reporting Year

2020-2021:

MLS Program received national reaccreditation from NAACLS, with maximum 10 year award and no deficiencies. 82% of graduates employed BEFORE graduating, 14 out of 17. Of these 14 graduates, all were hired within the state of Louisiana except 1, who lives near Beaumont, TX. Please Note: Additional graduate statistics to resume with next academic year. Previous Xitracs reports submitted during summer months allowing for graduate employment and completion of statistics. This cohort has not graduated as of May 10, 2021. Program Director virtually attended CLEC 2021 (Educator's Conference) and ASCLS Annual Meeting, serving as a Louisiana Delegate. MLS faculty virtually attended International Grant Professionals Day Summit, March 2021 and National Grants Management Association Workshops, April 2021. MLS faculty to expects to receive doctorate fall 2021.

2021-2022:

100% of graduates employed within a medical laboratory, 2020-2021 Graduate Statistics 82% of graduates were employed before graduating, 2020-2021 Graduate Statistics 88% of graduates passed a national certification exam within 12 months of graduating, 2020-2021 Graduate Statistics 82% of graduates employed within the state of Louisiana, 2020-2021 Graduate Statistics Program Director and faculty virtually attended CLEC 2022 (Educator's Conference) Program Director virtually attended ASCLS Annual Meeting, serving as a Louisiana Delegate. MLS faculty: presentation at LSCLS meeting and presentation at ULS for Our Future Conference MLS faculty receiving doctorate May 2022.

2022-2023: 100% of graduates passed a national certification exam within 12 months of graduating, 2021-2022 Graduate Statistics 100% of graduates employed within a medical laboratory, 2021-2022 Graduate Statistics 77% (10/13) of graduates were employed BEFORE graduating, 2021-2022 Graduate Statistics 85% (11/13) of graduates employed within the state of Louisiana, 2021-2022 Graduate Statistics Program director attended CLEC 2023 (Educator's Conference) MLS faculty and program director both attended and presented at LA and MS Bi-state meeting. Program director received 20 year membership award. Faculty member received Omicron Sigma award. MLS students attended LA and MS Bi-state meeting. Two students won awards for papers and the quiz bowl team ranked 4th out of 15 MLS teams.

2023-2024:

- 91% of graduates passed a national certification exam within 12 months of graduating, *2022-2023 Graduate Statistics*
- 100% of graduates employed within a medical laboratory, *2022-2023 Graduate Statistics*
- 100% (11/11) of graduates were employed BEFORE graduating, *2022-2023 Graduate Statistics*
- 91% (10/11) of graduates employed within the state of Louisiana, *2022-2023 Graduate Statistics*
- New Program Director and MLS faculty member attended CLEC 2024 (National Educator's Conference)
- Program Director and MLS faculty member attended and presented at LA/MS Bi-state meeting.
 - Program director received 10 year membership award and Omicron Sigma award.
- Successfully on-boarded new MLS faculty member who taught full-time load starting fall 2023
- Program is hosting its first ever MLS Graduate Pinning and Award Ceremony, spring 2024
 - Aiming to keep our graduates engaged as alumni
 - Increasing external stakeholder engagement through awarding of inaugural 'Outstanding Preceptor' award at this event and each year after

2024-2025

Undergraduate Research: While the MLS program's primary goals center on student competency and certification readiness, 2024–2025 saw notable successes beyond those formal measures. Most significantly, the program expanded into undergraduate research—an uncommon endeavor within MLS (and CONHP) education. Students participated in two structured research projects: one involving blood bank serology using expired reagents to evaluate accuracy and error rates, and another exploring the integration of virtual reality (VR) simulations into MLS instruction. These efforts culminated in student-led presentations, symposium participation, and plans for future publication. These achievements reflect both pedagogical innovation and a growing culture of scholarly inquiry within the MLS program.

Professional Development and Awards: MLS faculty member Brame attended the national Clinical Laboratory Educators Conference (CLEC), and both Brame and Hidalgo participated in the Louisiana Society for Clinical Laboratory Science (LSCLS) state meeting. Both were honored with the Omicron Sigma award for exceptional service to the profession. Additionally, Brame was recognized as the LSCLS MLS Educator of the Year for 2024–2025.

Stakeholder Impacts: Beyond hosting the annual MLS Advisory Council meeting, program faculty also contributed to the Lake Charles Memorial Hospital MLS Program Advisory Council. These meetings provided valuable opportunities for stakeholder input, including feedback from employers, preceptors, and clinical partners. The program also held its annual MLS Pinning and Award Ceremony on May 5th in Stokes Auditorium, where Daniel Fruge, MLS, received a Lifetime Achievement Award for his lasting contributions to the field and the McNeese MLS Program.

Curricular Innovation: The MLS Program continues to use Kahoot and other external study software to enhance student learning and exam preparation. The program also piloted the use of recorded audio lecture summaries (“podcasts”) in one course to support flexible, self-paced review—particularly beneficial to clinical students with irregular schedules.

5 Program Mission

The mission of the Medical Laboratory Science (MLS) program is to prepare high-quality MLS professionals to provide accurate complex testing while communicating with other health professionals concerning ethical medical care for patients.

6 Institutional Mission Reference

The foundation for student success begins with faculty commitment to excellence in teaching, research and scholarly activity. At McNeese State University, a member of the University of Louisiana System, the stated mission is "to change the lives of students through quality education and to provide services to the employers and communities in its region". The MLS Program's Mission correlates with the institutional mission in our service to students and our community.

7 Assessment and Benchmark MLS 210 Test 3

Assessment: MLS 450 - Clinical Lab I, Test 1 and the student evaluation of laboratory skills.

Test 1 topics include, but are not limited to: personal protective equipment, infection control, governmental agencies, fire safety, radiation safety, mechanical safety, NFPA chemical rating system, chemical spill cleanup, electrical safety, and hazard symbols. Student evaluation of lab skills are performed by clinical instructors at each medical laboratory.

Benchmark: 90% of MLS 450 - Clinical Lab I students will score 85% (B) or better on Test 1 and the student evaluation of laboratory skills.

7.1 Data

Academic Year	Students with score for Test 1 of 85% or higher		Students with student evaluation score of 85% or higher	
	#	%	#	%
2020-2021	9/11	82%	11/11	100%
2021-2022	9/9	100%	9/9	100%
2022-2023	10/10	100%	10/10	100%
2023-2024	7/9	78%	9/9	100%
2024-2025	5/5	100%	5/5	100%

7.1.1 Analysis of Data and Plan for Continuous Improvement

2021-2022:

Both benchmarks met. Professionally created online medical laboratory assignments (LabCE /Media Lab) were added to junior and senior courses improving overall performance.

2022-2023:

Both benchmarks met. Professionally created online medical laboratory assignments (LabCE /Media Lab) continue to be a useful tool for improving junior and senior outcomes.

2023-2024:

Testing benchmark not met. Evaluation of students benchmark met. The retired program director taught this class last summer and I am unsure why the testing benchmark was not met. Since this material covers safety practices for our students entering their clinical rotations, not meeting this benchmark is unacceptable. For this summer's course, any student not achieving the minimum score will receive remediation and retesting to ensure total understanding of safe practices.

2024-2025:

During the 2024–2025 academic year, 100% of students in MLS 450 met the benchmark by scoring 85% or higher on both Test 1 and the student evaluation of laboratory skills. This marks a notable improvement from 2023–2024, when the testing benchmark was not met. The current program director identified instructional inconsistencies as a contributing factor to the previous year's performance; since then, the current program director has assumed responsibility for this course. The updated instructional approach has emphasized student preparedness, safety protocol mastery, and clinical skill development. The return to full benchmark achievement demonstrates the effectiveness of these changes and supports the program's commitment to student competency and clinical readiness.

8 Assessment and Benchmark MLS 434 Leadership Self-Assessment

Assessment: MLS 434 - Special Topics students will participate in the online self-assessment of leadership, "*What's Your Leadership Style?*", and discuss results with classmates and the instructor.

Benchmark: 100% of MLS 434 - Special Topics students will participate in the online self-assessment of leadership.

8.1 Data

Academic Year	Student participation	
	#	%
2020-2021	11/11	100%
2021-2022	10/10	100%
2022-2023	10/11	91%
2023-2024	7/7	100%
2024-2025	5/5	100%

8.1.1 Analysis of Data and Plan for Continuous Improvement

2020-2021:

Benchmark met. Students continue to enjoy this assignment and assessment of their leadership skills. No corrective action necessary.

2021-2022:

Benchmark met. Students enjoyed being back in the classroom for face to face discussion and continue to enjoy discussing this assignment each year.

2022-2023:

Benchmark not met. One student forgot to complete the assignment by the specified deadline. Students continue to enjoy this assignment and assessment of their leadership skills.

2023-2024:

Benchmark met. Students continue to enjoy this assignment and assessment of their leadership skills. No corrective action necessary.

2024-2025:

All students participated in the assignment to assess their leadership skills. To elaborate upon this subject, classroom instruction this semester had a stronger emphasis on leadership development and professional behaviors. Students engaged in guided classroom discussions on various leadership styles - including transformational, democratic, and situational leadership—and examined how these approaches affect team dynamics in the clinical laboratory. Additionally, students participated in scenario-based learning exercises, where they practiced responding to real-world situations such as addressing errors, managing peer conflict, and demonstrating accountability under pressure. These discussions and exercises helped students translate theoretical leadership principles into actionable behaviors, which likely contributed to the program's successful benchmark achievement in both leadership and professionalism domains. Effective 2025-2026, we will no longer assess this benchmark

9 Assessment and Benchmark MLS 434 Test 1

Assessment: MLS 434 - Special Topics Test 1.

Test 1 topics include, but are not limited to: organizational charts, management styles and theories, directive techniques, motivational theories, federal regulations, governmental agencies, and organizations. This assessment ensures students have a solid understanding of management principles and regulatory frameworks essential for leadership roles in clinical laboratories. Raising the benchmark to 90% reflects the program's commitment to professional readiness and aligns with employer expectations. Strong performance supports graduate success in supervisory roles often assumed early in their careers.

Benchmark: 80% of MLS 434 - Special Topics students will score 90% or better on Test 1.

Prior to 2024-2025, 80% of MLS 434- Special Topics students will score 85% or better on Test 1.

9.1 Data

Academic Year	Students with score of 85% or higher	
	#	%
2020-2021	8/11	73%
2021-2022	9/9	100%
2022-2023	10/11	91%
2023-2024	7/7	100%

Academic Year	Students with score of 90% or higher	
	#	%
2024-2025	5/5	100%

9.1.1 Analysis of Data and Plan for Continuous Improvement

2020-2021:

Benchmark not met. While the benchmark was not met, a 4% improvement was noted. Reinforcement assignments will be added to improve learning experience for next year's group.

2021-2022:

Benchmark met. Students were eager to be back in the classroom. On campus discussions improved student interest resulting in higher test scores than usual.

2022-2023:

Benchmark met. Students enjoy this topic and classroom discussions. Interactive reinforcement activities will be added next year.

2023-2024:

Benchmark met. Students demonstrated comprehension of the material. To further enhance student learning in the future, the benchmark will be increased to 90% in the next cycle.

2024-2025:

The MLS program met its newly raised benchmark for Special Topics Test 1 in MLS 434. The benchmark was increased from 85% to 90% or better, with a target of at least 80% of students achieving this level. This adjustment was made as part of the program's commitment to continuous improvement and to better reflect the academic rigor expected in the final semester of the MLS curriculum.

This year's test scores—92, 100, 100, 96, and 96—demonstrate strong student mastery of content related to laboratory management and professional regulation. 100% of students exceeded the new benchmark, affirming that both course content and instructional strategies effectively support advanced student learning. The successful implementation of this higher standard reinforces the program's ongoing efforts to align assessment expectations with professional readiness and leadership potential in clinical practice.

10 Assessment and Benchmark Employer Survey of Graduate

Assessment: Employer Survey of Graduate categories:

1. Quality of work.
2. Skills and competence.
3. Knowledge of laboratory tests.
4. Ability to work independently.
5. Cooperation and communication.
6. Professionalism and ethics.
7. Overall opinion of graduate.

Benchmark 1: 80% of entry level employers will rate MLS graduates as "Outstanding" or "Meets Expectations" on the Employer Survey of Graduate in the following categories:

1. Quality of work
2. Skills and competence.

Benchmark 2: 80% of entry level employers will rate MLS graduates as "Outstanding" or "Meets Expectations" on the Employer Survey of Graduate in the following category:

3. Knowledge of laboratory tests.
4. Ability to work independently.

Benchmark 3: 80% of entry level employers will rate their overall opinion of MLS graduates as "Outstanding" or "Meets Expectations" on the Employer Survey of Graduate in the following categories:

5. Cooperation and communication.
6. Professionalism and ethics.
7. Overall opinion of graduate

10.1 Data

2021-2022 (data from 2020-2021):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
3.	2/3	67%	1/3	33%	3/3	100%
4.	2/3	67%	1/3	33%	3/3	100%

2022-2023 (data from 2021-2022):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
3.	1/4	25%	3/4	75%	4/4	100%
4.	1/4	25%	3/4	75%	4/4	100%

2023-2024 (data from 2022-2023):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
3.	3/6	50%	3/6	50%	6/6	100%
4.	4/6	67%	2/6	33%	6/6	100%

2024-2025 (data from 2023-2024):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
1.	2/3	67%	1/3	33%	3/3	100%
2.	2/3	67%	1/3	33%	3/3	100%

10.1.1 Analysis of Data and Plan for Continuous Improvement

2020-2021:

Please note: Previous Xitracs reports were completed during the summer months, following graduation. No data available from employers yet; students have not graduated. Reporting will continue next year using previous year's data.

2021-2022:

Benchmark met. Employers are asked to complete a short survey of MLS graduates approximately six months after initial employment. Participation is voluntary. We continue to stress the importance of employer feedback surveys when speaking with lab directors.

2022-2023:

Benchmark met. Although ratings were lower than last year, one additional employer completed the survey. Employers are asked to complete a short survey of MLS graduates approximately six months after initial employment. Participation is voluntary. We continue to stress the importance of employer feedback surveys when speaking with lab directors.

2023-2024:

Benchmark met. Employers are asked to complete a short survey of MLS graduates approximately six months after initial employment. Participation is voluntary. We continue to stress the importance of employer feedback surveys when speaking with lab directors.

2024-2025:

100% of respondents rated our graduates as either "Outstanding" or "Meets Expectations" in both categories of interest—Quality of Work and Skills. This outcome aligns with historical trends of strong employer satisfaction and reflects the continued effectiveness of our curriculum and clinical training model. However, I am disappointed by the low response rate to this year's survey. To ensure future data better reflect the full range of employer experiences, I will stress the importance of survey participation at the next MLS Advisory Council meeting and encourage broader engagement from our clinical partners. Part of our plan for continuous improvement includes ensuring that we: a) Strengthen focus on critical thinking and decision-making skills during clinical training and seminar courses, particularly those aligned with real-time lab scenarios and emerging technologies, b) expand scenario-based simulations in pre-clinical coursework to increase student readiness and confidence in complex lab tasks, c) solicit qualitative feedback from employers to better understand what differentiates "Outstanding" performance from "Meets Expectations" in their evaluation, and d) continue to monitor trends year-over-year to determine if the current benchmark remains appropriately rigorous or if a revision is warranted in future cycles.

10.2 Data

2019-2020:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	1/1	100%	—	—	1/1	100%

2021-2022 (data for 2020-2021):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	2/3	67%	1/3	33%	3/3	100%

2022-2023 (data for 2021-2022):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	1/4	25%	3/4	75%	4/4	100%

2023-2024 (data for 2022-2023):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	—	—	—	—	—	—

2024-2025 (data for 2023-2024):*data from individual evaluation documents. These new prompts will be added to the next cycle's survey.

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
3.	4/5	80%	1/5	20%	5/5	100%
4.	4/5	80%	1/5	20%	5/5	100%

10.2.1 Analysis of Data and Plan for Continuous Improvement

2020-2021:

Please note: Previous Xitracs reports were completed during the summer months, following graduation. No data available from employers yet; students have not graduated. Reporting will continue next year using previous year's data.

2021-2022:

Benchmark met. Employers are asked to complete a short survey of MLS graduates approximately six months after initial employment. Participation is voluntary. We continue to stress the importance of employer feedback surveys when speaking with lab directors.

2022-2023:

Benchmark met. Although ratings were lower than last year, one additional employer completed the survey. Employers are asked to complete a short survey of MLS graduates approximately six months after initial employment. Participation is voluntary. We continue to stress the importance of employer feedback surveys when speaking with lab directors.

2023-2024:

Survey was not sent out by previous program director prior to her retirement. New program director is revamping aspects of program, including post-completion surveys. This item was not assessed.

2024-2025:

Data for Assessments #1 and #2 were obtained from the employer survey, while data for Assessments #3 through #7 were gathered from individual evaluations. Beginning in 2024–2025, the survey is being redesigned to consolidate all assessment data into a single instrument, streamlining the data collection process and improving efficiency.

10.3 Data

2019-2020:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	1/1	100%	—	—	1/1	100%
8.	1/1	100%	—	—	1/1	100%
9.	1/1	100%	—	—	1/1	100%
10.	1/1	100%	—	—	1/1	100%

2021-2022 (data for 2020-2021):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	2/3	67%	1/3	33%	3/3	100%
8.	2/3	67%	1/3	33%	3/3	100%
9.	2/3	67%	1/3	33%	3/3	100%
10.	2/3	67%	1/3	33%	3/3	100%

2022-2023 (data for 2021-2022):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	1/4	25%	3/4	75%	4/4	100%
8.	1/4	25%	3/4	75%	4/4	100%
9.	2/4	50%	1/4	25%	3/4	75%
10.	1/4	25%	3/4	75%	4/4	100%

2023-2024 (data for 2022-2023):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	—	—	—	—	—	—
8.	—	—	—	—	—	—
9.	—	—	—	—	—	—
10.	—	—	—	—	—	—

2024-2025 (data for 2023-2024):

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
5.	3/5	60%	2/5	40%	5/5	100%
6.	4/5	80%	1/5	20%	5/5	100%
7.	4/5	80%	1/5	20%	5/5	100%

10.3.1 Analysis of Data and Plan for Continuous Improvement

2020-2021:

Please note: Previous Xitracs reports were completed during the summer months, following graduation. No data available from employers yet; students have not graduated. Reporting will continue next year using previous year's data.

2021-2022:

Benchmark met. Employers are asked to complete a short survey of MLS graduates approximately six months after initial employment. Participation is voluntary. We continue to stress the importance of employer feedback surveys when speaking with lab directors.

2022-2023:

Benchmark met in most categories. Attendance and Punctuality were below the benchmark at 75%. Employers participation has improved slightly over the last two years. Employers are asked to complete a short survey of MLS graduates approximately six months after initial employment. Participation is voluntary. We continue to stress the importance of employer feedback surveys when speaking with lab directors.

2023-2024:

Survey was not sent out by previous program director prior to her retirement. New program director is revamping aspects of program, including post-completion surveys. This item was not assessed.

2024-2025:

Benchmark met. Data for Assessments #1 and #2 were obtained from the employer survey, while data for Assessments #3 through #7 were gathered from individual evaluations. Beginning in 2024–2025, the survey is being redesigned to consolidate all assessment data into a single instrument, streamlining the data collection process and improving efficiency.

11 Assessment and Benchmark Medical Laboratory Rotations

Assessment: Each course evaluates the student's overall knowledge, judgement, competency, and interpretation of test procedures. Evaluations are performed by LSBME licensed clinical instructors. Laboratory rotation grades are based upon many factors, including skills, judgement, competency, professionalism, and overall knowledge of lab sections.

Benchmark: 90% of senior MLS students will score 93% (A) or better in the following laboratory rotations.

- MLS 450 - Clinical Laboratory I
- MLS 451 - Clinical Laboratory II
- MLS 452 - Clinical Laboratory III

Prior to 2018-2019, the benchmark was 90% of students will score 85% or better.

Prior to 2016-2017, the benchmark was 80% of students will score 90% (A) or better.

11.1 Data

2020-2021:

Laboratory Rotations	Students scoring 93% (A) or higher	
	#	%
MLS 402	9/10	90%
MLS 410	11/11	100%
MLS 414	11/11	100%
MLS 418	10/11	91%
MLS 422	11/11	100%
MLS 426	11/11	100%
MLS 430	11/11	100%

2021-2022:

Laboratory Rotations	Students scoring 93% (A) or higher	
	#	%
MLS 402	9/9	100%
MLS 410	9/9	100%
MLS 414	10/10	100%
MLS 418	10/10	100%
MLS 422	10/10	100%
MLS 426	10/10	100%
MLS 430	8/10	80%

2022-2023:

Laboratory Rotations	Students scoring 93% (A) or higher	
	#	%
MLS 402	8/8	100%
MLS 410	8/8	100%
MLS 414	9/10	90%
MLS 418	9/9	100%
MLS 422	8/8	100%
MLS 426	9/9	100%
MLS 430	12/12	100%

2023-2024:

Laboratory Rotations	Students scoring 93% (A) or higher	
	#	%
MLS 402	7/7	100%
MLS 410	7/7	100%
MLS 414	7/7	100%
MLS 418	7/7	100%
MLS 422	7/7	100%
MLS 426	7/7	100%
MLS 430	7/7	100%

2024-2025:

Laboratory Rotations	Students scoring 93% (A) or higher	
	#	%
MLS 450	5/5	100%
MLS 451	4/5	80%
MLS 452	2/5	40%

11.1.1 Analysis of Data and Plan for Continuous Improvement

2020-2021:

Benchmark met. Decision made to purchase professionally created online medical laboratory assignments to supplement laboratory rotations. Students will purchase LabCE case study assignments for the upcoming academic year to improve overall laboratory performance.

2021-2022:

Benchmark met. This cohort's overall performance was affected by junior level online labs during the pandemic and hurricanes affected. Instructors have since added professionally created online lab simulations for improvement of future online courses.

2022-2023:

Benchmark met. This cohort's lab rotations were supplemented with professionally created online medical laboratory assignments during their junior and senior years. An overall improvement was noted with all senior level lab rotations.

2023-2024:

Benchmark met. While there is no need for corrective action at this time, avenues for improvement are always being assessed and integrated into these courses with clinical laboratory rotations.

2024-2025:

In MLS 450 – Clinical Laboratory I, 100% of students scored 93% or higher, successfully exceeding the benchmark. However, in MLS 451 – Clinical Laboratory II, only 80% of students met the benchmark, and in MLS 452 – Clinical Laboratory III, just 40% of students achieved the target score. These results suggest that while student performance remains strong in foundational clinical rotations, performance decreases as students progress into more advanced and demanding sections. This outcome was expected due to the intentional curricular restructuring that took place last year, consolidating individual discipline-based clinical courses into a three-course progressive rotation sequence (MLS 450, 451, and 452). This format was designed to reflect a natural increase in complexity, responsibility, and technical skill as students move through the clinical year. As a result, MLS 452 represents the most advanced stage, with greater emphasis on independent judgement, high-level instrumentation, and integration of evolving laboratory technologies. The current data highlights how this structure creates an upward challenge curve, which is pedagogically sound but also reinforces the need for robust student preparation as expectations increase. The MLS program director and faculty member are dedicated to improving outcomes in MLS 451 & MLS 452. Throughout the next academic year, the following strategies will be implemented: 1. Enhance preparatory instruction in didactic courses to better align with the expectations and complexity of upper-level clinical rotations. 2. Incorporate more advanced simulation and pre-clinical case study exercises that mirror the technology and decision-making processes students will encounter in these rotations. 3. Strengthen feedback loops with clinical instructors, seeking more detailed insight into specific areas where students fall short, and using that data to refine pre-clinical preparation. 4. Reevaluate the pacing and sequencing of rotations to determine if curriculum adjustments could better scaffold student success across all three clinical experiences.

12 Assessment and Benchmark Professional Organization Involvement

Assessment: Student involvement in professional organizations.

Benchmark: 80% of senior MLS students will become active members of one of the following professional organizations:

- ASCP (national)
- ASCLS (national)
- LSCLS (state)
- Other (specify)

Prior to 2016-2017, the benchmark was 90% of senior MLS students.

12.1 Data

Academic Year	ASCP		ASCLS		LSCLS		Other	
	#	%	#	%	#	%	#	%
2020-2021	16/17	94%	0/17	0%	2/17	12%	0/17	0%
2021-2022	12/13	92%	0/13	0%	0/13	0%	1/13	7%
2022-2023	7/7	100%	2/7	29%	2/7	29%	—	—
2023-2024	7/7	100%	6/7	86%	6/7	86%	—	—
2024-2025	5/5	100%	5/5	100%	5/5	100%	—	—

12.1.1 Analysis of Data and Plan for Continuous Improvement

2021-2022 (based on 2020-2021):

Benchmark met. Both national and state level organizations continue to struggle with professional membership levels. For example, the bistate meeting (LA/MS) typically has 400 attendees, only 150 members attended this year. Social media promotions and marketing questionnaires have been updated to attract younger lab professionals. McNeese educators continue to encourage students to join professional organizations.

2022-2023 (based on 2021-2022):

Benchmark met. Both national and state level organizations continue to struggle with professional membership levels. Virtual meetings offered to improve community engagement. Social media promotions and marketing questionnaires have been updated to attract younger lab professionals. McNeese educators continue to encourage students to join professional organizations.

2023-2024:

Current year cohort data is available. 100% of graduating seniors obtained membership in one or more of the associated professional memberships listed. The current program director and the one MLS faculty member continue to stress the importance and relevance of new graduates being active in professional organizations.

2024-2025:

ASCP membership is offered free of charge to students, and we actively promote this opportunity to encourage early professional engagement. ASCLS membership is available at a reduced student rate, and beginning last year, we implemented a bulk membership option that further decreased the cost for our students. LSCLS membership is automatically included with ASCLS student membership.

This broader participation has already yielded positive outcomes. With all students joining LSCLS, we were able to submit their clinical-year case study papers to the LSCLS student paper competition—resulting in two students receiving awards. Participation in these types of professional events not only enhances their résumés but also fosters professional involvement, recognition, and networking within the clinical laboratory science community.

13 Assessment and Benchmark Student Evaluation Form

Assessment: Senior MLS students are evaluated after each lab rotation by medical laboratory instructors. Instructors evaluate students in multiple categories using the Student Evaluation Form. Cooperation requires advanced communication skills for collaboration and coordination of workflow with clinical instructors.

Benchmark: When performing a random sampling of 20 student evaluations, 95% of senior MLS students will score "Excellent" or "Average" when evaluated by medical laboratory instructors on the Student Evaluation Form for each lab section in the following categories:

- Communication - Communicates and interacts well with others.
- Cooperation - Attempts to correct noted deficiencies.

Prior to 2018-2019, the benchmark was 90% of senior MLS students will score "Excellent" or "Average" when evaluated by medical laboratory instructors on the Student Evaluation Form for each lab section in the following category:

- 8. Communication - Communicates and interacts well with others.

As of 2020-2021, benchmark changed to "random sampling of 20 student evaluations" instead of all student evaluations. Data updated to include these changes.

13.1 Data

2020-2021:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
8. Communication	19/20	95%	1/20	5%	20/20	100%
7. Cooperation	19/20	95%	1/20	5%	20/20	100%

2021-2022:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
8. Communication	19/20	95%	1/20	5%	20/20	100%
7. Cooperation	19/20	95%	1/20	5%	20/20	100%

2022-2023:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
8. Communication	20/20	100%	—	—	20/20	100%
7. Cooperation	20/20	100%	—	—	20/20	100%

2023-2024:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
8. Communication	19/20	95%	1/20	5%	20/20	100%
7. Cooperation	19/20	95%	0/20	0%	19/20	95%

2024-2025:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
Communication	17/20	85%	3/20	15%	20/20	100%
Cooperation	20/20	100%	—	—	20/20	100%

13.1.1 Analysis of Data and Plan for Continuous Improvement

2020-2021:

Benchmark met. Students are continuously encouraged to communicate with confidence and respect while working in a professional environment throughout the academic year.

2021-2022:

Benchmark met. Students review communication guidelines during orientation, and are encouraged to communicate and respect all clinical instructors. To date, we have only had a few minor disagreements between clinical instructors and students.

2022-2023:

Benchmark met. This cohort was an exceptional group of students - polite, professional, and courteous. Students are continuously encouraged to communicate with confidence and respect while working in a professional environment throughout the academic year.

2023-2024:

Benchmark met. The majority of this cohort were well received in their off-campus clinical sites and worked cooperatively with their clinical preceptors and other trainers. The MLS program had one student who was almost expelled from the program for poor communication and cooperation. We performed multiple remediative sessions, included student services staff and resources, as well as role play scenarios. The student's behavior improved enough that she was able to complete the clinical rotations successfully.

2024-2025:

To further strengthen student communication skills, a dedicated communication course was added to the MLS curriculum last year. This course was designed to enhance verbal, written, and interprofessional communication in a healthcare context, with the goal of better preparing students for the interpersonal demands of clinical practice. The results from this cycle suggest the course is having a positive impact, and we anticipate even stronger outcomes as the course becomes more fully integrated into the student experience.

14 Assessment and Benchmark MLS 210 Test 3

Assessment: MLS 210 - Introduction to Medical Laboratory Science Test 3.

Test 3 topics include, but are not limited to blood borne pathogens, infection control, governmental agencies, personal safety, fire safety, NFPA chemical rating system, chemical spill cleanup, electrical safety, biosafety hoods, and common hazard signs found in a medical laboratory.

Benchmark: 75% of MLS 210 - Introduction to Medical Laboratory Science students will score 85% (B) or better on Test 3.

14.1 Data

Academic Year	Students with score of 85% or higher	
	#	%
2020-2021	16/27	59%
2021-2022	6/8	75%
2022-2023	9/11	82%
2023-2024	—	—
2024-2025	5/5	100%

14.1.1 Analysis of Data and Plan for Continuous Improvement

2019-2020:

Benchmark not met. Module 3 test scores decreased by 6% from last year. This test was the first after switching to online learning during the COVID pandemic. Online assignments will be updated to include a comprehensive review of the learning module.

2020-2021:

Benchmark not met. Module 3 test scores decreased by 15% from last year. Overall, lower test scores noted following 2 major hurricanes, an ice storm, and COVID restrictions. Improved contingency plan will be implemented by faculty members for the upcoming academic year.

2021-2022:

Benchmark met. Students are adjusting to being back in the classroom following the pandemic and major hurricanes in our area. Students have repeatedly expressed their gratitude of being back on campus. Some students have put school on hold, as noted by the drastically smaller class size. Additional recruiting efforts are underway.

2022-2023:

Benchmark met. Module 3 test scores improved by 7% when compared to previous year. Additional review questions were added to the learning module assignment. Assignments and exams will be reviewed and updated as needed pending outcome assessments.

2023-2024:

Unable to analyze this benchmark. The previous Program Director retired and the new Program Director and new faculty member have restructured classes, curriculum, and assignments. The MLS 210 exam 3 is not the same as the one noted here historically. The new Program Director will need to establish new data points for future analyses.

2024-2025:

Benchmark was met. MLS 201 had five students who scored above 85%. We will continue to implement new and improved ways to restructure the class to ensure all students will achieve the benchmark.