



## Medical Laboratory Science [MLSC]

### **Cycles included in this report:**

Jun 1, 2022 to May 31, 2023

This PDF document includes any files attached to fields in this report.

To view the attachments you should view this file in Adobe Acrobat XI or higher, or another PDF viewer that supports viewing file attachments.

The default PDF viewer for your device or web browser may not support viewing file attachments embedded in a PDF.

If the attachments are in formats other than PDF you will need any necessary file viewers installed.

**Program Name: Medical Laboratory Science [MLSC]****Reporting Cycle: Jun 1, 2022 to May 31, 2023****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**

2018-2019:

Departmental and program outcomes revealed a 32% increase in student enrollment from Spring 2018 to Spring 2019. With increased enrollment came the need for increased lab stations and additional equipment. A \$2000 grant was received from the ASCP Foundation to offset expenses in obtaining additional equipment and software for student labs. Laboratory equipment/resources will continue to be evaluated through routine assessment tools, i.e. Graduate Exit Survey and Student Evaluation of Instruction.

Additional program outcomes revealed a need for improving ASCP BOC preparation. This year's cohort is piloting Harr's Medical Laboratory Science Review, an online review program. Improvements will be assessed over the next 3 years via ASCP BOC test scores.

2019-2020:

An ongoing need for senior year internship sites continues to exist. Most of our clinical sites can only accommodate 1-2 students per year. The MLS Program was able to acquire several new clinical sites throughout the year. New clinical sites include Opelousas General, Our Lady of Lourdes Regional Medical Center, and additions to Ochsner Lafayette General Health System, including St Martin, Acadia General, and the Lafayette General main campus.

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.

#### 4 Program Highlights from the Reporting Year

##### 2018-2019:

- 100% of graduates hired within a medical laboratory.
- 78% of graduates hired before graduating, remaining 22% hired within 2 months of graduating.
- 78% of graduates employed within the state of Louisiana (78% Lake Charles, LA), remaining 22% employed in Houston, TX.
- Received \$5000 Endowed Professorship Grant for improvements/upgrades to Microbiology equipment and Professional Development.
- Received \$2000 ASCP Educator's Grant for improvements/upgrades to Hematology software and equipment.
- Faculty member attended Interprofessional Education of Nursing Students in Washington, DC.
- Program Director attended ASCP Annual Meeting, MS/LSCLS Bi-State Meeting, NAACLS Workshop (Accreditation Workshop), CLEC (Educator's Conference), and ASCLS Annual Meeting (Served as Louisiana Delegate).
- Program Spotlight in National Newsletter: "Our Diversity is Showing", *ASCLS Today (American Society of Clinical Laboratory Scientists)*, page 6, Volume XXXII, Number 7, December 2018.

##### 2019-2020:

- 100% of graduates hired within a medical laboratory.
- 50% of graduates hired before graduating, remaining 21% hired within 2 months of graduating, remaining graduates hired within 6 months of graduating
- 43% of graduates employed within the state of Louisiana
- May 2020, most diverse MLS graduating class to date, students from 6 different countries.
- Program Director published article in national newsletter: "Defining Our Identity", *ASCLS Today (American Society of Clinical Laboratory Scientists)*, January 2020.
- Program Director named LSCLS Educator of the Year, spring 2020.
- Program Director served as Louisiana Delegate for the national ASCLS virtual meeting, June 2020.
- LSCLS Continuing Education Grant received from LSCLS for MLS faculty.
- Self-Study Report completed and submitted for reaccreditation to NAACLS.
- MLS faculty member expects to complete doctorate of education spring 2021.

##### 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

## 5 Program Mission

The mission of McNeese State University's Medical Laboratory Science Program is to provide students with unique opportunities and medical expertise which foster critical thinking skills, while encouraging professional advancement and a lifelong love of learning. Such opportunities facilitate the success of personal and professional goals within a global society, while contributing to a strong sense of ethical responsibility.

## 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, students cultivate skills for critical thinking, effective expression, and gain an understanding of the global community. The learning and social environment integrates discipline-specific knowledge with the values of lifelong learning, ethical responsibility, and civic engagement.

## 7 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.

### Outcome Links

#### Application of Regulations and Standards [Program]

Medical Laboratory Science graduates will display basic knowledge and skills in the application of safety and governmental regulations and standards as applied to medical laboratory science.

## 7.1 Data

--	--

Academic Year	Students with score of 85% or higher	
	#	%
2016-2017	—	75%
2017-2018	—	75%
2018-2019	24/30	80%
2019-2020	20/27	74%
2020-2021	16/27	59%
2021-2022	6/8	75%
2022-2023	9/11	82%

### 7.1.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Benchmark met. Module 3 test scores improved by 5% when compared to previous years. Additional review questions were added to the learning module assignment. Assignments and exams will be reviewed and updated as needed pending outcome assessments.

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.

## 8 Assessment and Benchmark MLS 430 Test 1

Assessment: MLS 430 - Clinical Orientation and Phlebotomy 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 430 - Clinical Orientation and Phlebotomy students will score 85% (B) or better on Test 1 and the student evaluation of laboratory skills.

### Outcome Links

#### Application of Regulations and Standards [Program]

Medical Laboratory Science graduates will display basic knowledge and skills in the application of safety and governmental regulations and standards as applied to medical laboratory science.

## 8.1 Data

Academic Year	Students with score for Test 1 of 85% or higher		Students with student evaluation score of 85% or higher	
	#	%	#	%
2016-2017	—	100%	—	100%
2017-2018	—	100%	—	100%
2018-2019	6/6	100%	6/6	100%
2019-2020	10/13	77%	13/13	100%
2020-2021	9/11	82%	11/11	100%
2021-2022	9/9	100%	9/9	100%
2022-2023	10/10	100%	10/10	100%

### 8.1.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Both benchmarks met. This was an exceptionally small group of learners - class size is expected to be back to normal next year. Learning module was updated with new and improved HIPAA videos for ease of comprehension.

2019-2020:

Testing benchmark not met. Evaluation of students benchmark met. Students were delayed from beginning laboratory rotations due to COVID pandemic. Online learning assignments will be reviewed for areas of improvement. Learning module will be reviewed to add virtual simulations.

2020-2021:

Testing benchmark not met. Evaluation of students benchmark met. A decision was made to purchase professionally created online medical laboratory assignments. Students will purchase LabCE case study assignments for the upcoming academic year.

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.

## 9 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.

### Outcome Links

#### Administration and Supervision [Program]

Medical Laboratory Science graduates will recognize principles and practices of administration and supervision as applied to medical laboratory science.

### 9.1 Data

Academic Year	Student participation	
	#	%
2016-2017	—	100%
2017-2018	—	100%

2018-2019	7/7	100%
2019-2020	13/13	100%
2020-2021	11/11	100%
2021-2022	10/10	100%
2022-2023	10/11	91%

### 9.1.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Benchmark met. Students enjoyed the face-to face in depth discussion. Feedback revealed interest in a more detailed personal assessment. Instructors will search for an updated leadership assessment for next year's class.

2019-2020:

Benchmark met. Two students were late in completing the assignment, completed after being reminded. Students continue to enjoy this assignment and assessment of their leadership skills.

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.

## 10 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.

Benchmark: 80% of MLS 434 - Special Topics students will score 85% or better on Test 1.

### Outcome Links

#### Administration and Supervision [Program]

Medical Laboratory Science graduates will recognize principles and practices of administration and supervision as applied to medical laboratory science.

#### Application of Regulations and Standards [Program]

Medical Laboratory Science graduates will display basic knowledge and skills in the application of safety and governmental regulations and standards as applied to medical laboratory science.

### 10.1 Data

Academic Year	Students with score of 85% or higher	
	#	%
2016-2017	—	100%
2017-2018	—	86%
2018-2019	5/7	71%
2019-2020	9/13	69%

2020-2021	8/11	73%
2021-2022	9/9	100%
2022-2023	10/11	91%

### 10.1.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Benchmark not met. Updated notes and test questions were challenging to this small group of students. Reinforcement assignments will be added to improve learning experience for next year's group.

2019-2020:

Benchmark not met. While the benchmark was not met, five students (38%) scored 100% on this test and four (31%) scored 96%. Weaker students will be encouraged to study and complete review assignments.

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.

## 11 Assessment and Benchmark Employer Survey of Graduate

Assessment: Employer Survey of Graduate categories:

3. Quality of work.
4. Skills and competence.
5. Knowledge of laboratory tests.
6. Ability to work independently.
7. Cooperation and communication.
8. Professionalism and ethics.
9. Attendance and punctuality.
10. Overall opinion of graduate.

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

3. Quality of work
4. Skills and competence.

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

7. Cooperation and communication.

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

7. Cooperation and communication.
8. Professionalism and ethics.
9. Attendance and punctuality.
10. Overall opinion of graduate.

### Outcome Links

#### Clinical Study [Program]

Medical Laboratory Science graduates will exhibit principles and practices of clinical study design,



implementation, and dissemination of medical test results.

### **Communications [Program]**

Medical Laboratory Science graduates will demonstrate communications sufficient to serve the needs of patients, the public, and members of the health team.

### **Professional Conduct and Development [Program]**

Medical Laboratory Science graduates will exhibit principles and practices of professional conduct and the significance of continuing professional development.

## **11.1 Data**

2018-2019:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
3.	1/2	50%	1/2	50%	2/2	100%
4.	1/2	50%	1/2	50%	2/2	100%

2019-2020:

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

2021-2022 (data from 2020-2021):

\*No data available from employers. Students have not graduated. Previous Xitracs reports completed during the summer months. Reporting will continue next year using previous year's data.

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%

### **Outcome Links**

#### **Clinical Study [Program]**

Medical Laboratory Science graduates will exhibit principles and practices of clinical study design, implementation, and dissemination of medical test results.

### **11.1.1 Analysis of Data and Plan for Continuous Improvement**

2018-2019:

Benchmark met. Due to this year's extremely small graduating class, only four students were hired in town. Two of the employers responded to the survey. We expect increased participation with next year's larger class size.

2019-2020:

Benchmark met. We had several international graduates who chose to move away from this area, thus we had limited access to employer contact information. In addition, employer surveys were conducted in late August, just before two major hurricanes. Only one employer responded to our survey. We hope to be back on track with survey participation next year.

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.

## 11.2 Data

2018-2019:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
7.	1/2	50%	1/2	50%	2/2	100%

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%

### Outcome Links

#### Communications [Program]

Medical Laboratory Science graduates will demonstrate communications sufficient to serve the needs of patients, the public, and members of the health team.

### 11.2.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Benchmark met. Due to this year's extremely small graduating class, only four students were hired in town. Half (2) of the employers responded to the survey. We expect increased participation with next year's larger class size.

#### 2019-2020:

Benchmark met. We had several international graduates who chose to move away from this area, thus we had limited access to employer contact information. In addition, employer surveys were conducted in late August, just before two major hurricanes. Only one employer responded to our survey. We hope to be back on track with survey participation next year.

#### 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.

### 11.3 Data

#### 2018-2019:

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

#### 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%

### Outcome Links

#### Application of Regulations and Standards [Program]

Medical Laboratory Science graduates will display basic knowledge and skills in the application of safety and governmental regulations and standards as applied to medical laboratory science.

### 11.3.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Benchmark met. Due to this year's extremely small graduating class, only four students were hired in town. Half (2) of the employers responded to the survey. We expect increased participation with next year's larger class size.

2019-2020:

Benchmark met. We had several international graduates who chose to move away from this area, thus we had limited access to employer contact information. In addition, employer surveys were conducted in late August, just before two major hurricanes. Only one employer responded to our survey. We hope to be back on track with survey participation next year.

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.

## 12 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 402 - Clinical Microbiology Laboratory
- MLS 410 - Clinical Immunohematology Laboratory Blood Bank

- MLS 414 - Clinical Chemistry Laboratory
- MLS 418 - Clinical Hematology Laboratory
- MLS 422 - Clinical Immunology Laboratory
- MLS 426 - Clinical Urinalysis and Body Fluids Laboratory
- MLS 430 - Clinical Orientation and Phlebotomy

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.

#### Outcome Links

#### Clinical Study [Program]

Medical Laboratory Science graduates will exhibit principles and practices of clinical study design, implementation, and dissemination of medical test results.

### 12.1 Data

2018-2019:

Laboratory Rotations	Students scoring 93% (A) or higher	
	#	%
MLS 402	6/6	100%
MLS 410	6/6	100%
MLS 414	6/6	100%
MLS 418	6/6	100%
MLS 422	6/6	100%
MLS 426	6/6	100%
MLS 430	6/6	100%

2019-2020:

Laboratory Rotations	Students scoring 93% (A) or higher	
	#	%
MLS 402	13/13	100%
MLS 410	13/13	100%
MLS 414	13/13	100%
MLS 418	12/13	92%
MLS 422	12/13	92%
MLS 426	13/13	100%
MLS 430	13/13	100%

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%

### 12.1.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Benchmark met. Improvements to student labs include maintaining donated lab supplies from local labs for student practice. In addition, a new grant was awarded for purchasing software to improve student assessment of body fluids (MLS 426) and mycology samples (MLS 404).

2019-2020:

Benchmark met for 5/7 clinical lab rotations. Benchmark missed by only 1% point on 2/7 lab rotations (1 student made 2 B's). Students are doing well in all sections of the laboratory. Due to very small class sizes - only 1 student making a B in two different lab rotations caused the percentage to fall below the benchmark. Will readjust next year's benchmark to accommodate for small class size/percentage.

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.

## 13 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.

#### Outcome Links

#### Professional Conduct and Development [Program]

Medical Laboratory Science graduates will exhibit principles and practices of professional conduct and the significance of continuing professional development.

### 13.1 Data

Academic Year	ASCP		ASCLS		LSCLS		Other	
	#	%	#	%	#	%	#	%
2016-2017	—	40%	—	80%	—	80%	—	—
2017-2018	—	89%	—	33%	—	33%	—	—
2018-2019	8/9	89%	2/9	33%	1/9	17%	0/9	0%
2019-2020	8/9	89%	0/9	0%	0/9	0%	0/9	0%
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%

#### 13.1.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Benchmark met. Only one student and one instructor attended the LA/MS Meeting in Monroe, LA in April 2019. No funds were available for travel this year. Students will be encouraged to participate in professional activities and raise travel funds to attend next year's meeting in Jackson, MS. An assignment is being planned to showcase the importance of professional societies for the upcoming year.

2019-2020:

Benchmark met. Both national and state level organizations struggle to maintain professional membership levels. Marketing questionnaires were discussed at last year's national ASCLS meeting. McNeese educators will continue to encourage students to join professional organizations.

2020-2021:

Please note, no data available. Cohort has not graduated yet. Previous Xitracs reports completed during summer months, allowing time for student employment and survey completion. Reporting will continue with next academic year.

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.

#### 14 Assessment and Benchmark Student Evaluation Form

Assessment: Senior MLS students are evaluated after each lab rotation by medical laboratory instructors. Instructors evaluate students in ten different categories using the Student Evaluation Form. Communication is the eighth category. Cooperation is the 7th category. 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:

- 8. Communication - Communicates and interacts well with others.
- 7. 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. Also, #9 is now #7 on student evaluation forms. Data updated to include these changes.

#### Outcome Links

##### Communications [Program]

Medical Laboratory Science graduates will demonstrate communications sufficient to serve the needs of patients, the public, and members of the health team.

#### 14.1 Data

2018-2019:

Category	Outstanding		Meets Expectations		Total	
	#	%	#	%	#	%
8. Communication	40/42	95%	2/42	5%	42/42	100%
7. Cooperation	42/42	100%	—	—	42/42	100%

2019-2020:

Unable to access data for this section due to hurricane damage; data located in Hardtner Hall.

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%

#### 14.1.1 Analysis of Data and Plan for Continuous Improvement

2018-2019:

Benchmark met. Benchmark was increased to 95% and Cooperation was added. Additional communication activities will be added to MLS 434 in order to maintain positive outcomes.

2019-2020:

Please Note - Unable to access data for this section due to hurricane damage, located in Hardtner Hall.

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.

End of report