

# Academic Program Workspace

**Medical Laboratory Science (B.S.)**

**Created on: 10/15/2020 10:32:00 AM CST  
Last Modified: 10/15/2020 05:03:53 PM CST**

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## General Information (Academic Program Workspace)

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## General Program Information

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### NAME OF DEPARTMENT CHAIR

Brooke Solberg

### NAME OF PERSON SUBMITTING REPORT

Brooke Solberg

### SPECIALIZED ACCREDITATION IF APPLICABLE (NAME OF ACCREDITING AGENCY, STATUS OF ACCREDITATION, DATE OF NEXT ACCREDITATION)

National Accreditation Agency for Clinical Laboratory Sciences (NAACLS; <https://www.naacls.org/>); Fully accredited; Next Accreditation Review - 4/28

### LICENSURES OR CERTIFICATES OFFERED IF APPLICABLE (EX. RN, SECONDARY EDUCATION, PROFESSIONAL PILOT, ETC. )

Program completion makes students eligible for national certification at the Medical Laboratory Scientist (MLS) level through the American Society for Clinical Pathology (ASCP).

### PERCENTAGE OF DEGREE OFFERED ONLINE (100% ONLINE, ONLINE WITH SOME CAMPUS VISITS, OR NOT ONLINE)

Varies by program route.

### DO YOU OFFER 50% OR MORE OF YOUR COURSES LEADING TO YOUR DEGREE(S) AT ADDITIONAL LOCATIONS?

No.

# Standing Requirements

## MISSION STATEMENT

The mission of the Department of Medical Laboratory Science is to provide high-quality education that prepares students to positively impact healthcare through medical laboratory practice in the state and affiliated regions.

## OUTCOMES

### Medical Laboratory Science (B.S.) Outcome Set

#### Entry-Level Knowledge

The student will gain the knowledge required for entry-level practice as an MLS, including the ability to correlate patient data with theory.

##### Mapping

*No Mapping*

#### Technical Skills

The student will develop technical skills required for practice as an entry-level practice medical laboratory scientist.

##### Mapping

*No Mapping*

#### Problem Solving

The student will be able to apply managerial concepts, troubleshooting techniques, and problem solving strategies related to entry-level practice as a medical laboratory scientist.

##### Mapping

*No Mapping*

#### Professionalism

The student will be able to recognize professional behaviors vital for practice as an entry level Medical Laboratory Scientist.

##### Mapping

*No Mapping*

#### General Education

The student will incorporate principles related to UND student learning goals.

##### Mapping

*No Mapping*

## CURRICULUM MAP

*There are no curriculum map s*

## Assessment Map (When are outcomes measured? Upload map)

### ASSESSMENT MAP OF WHEN OUTCOMES ARE MEASURED (UPLOAD TABLE DETAILING WHAT OUTCOMES ARE MEASURED EACH YEAR)

Learning Outcome	Where and how assessment occurs	2020	2021	2022	2023	2024
The student will gain the knowledge required for entry-level practice as an MLS, including the ability to correlate patient data with theory.	Coursework (grades, evaluations, feedback); SELFI data; Course Action Logs; Performance Evaluations; Student exit surveys; Clinical site surveys; Comprehensive exam scores; Certification pass rates; attrition and placement rates. Advisory committee		X		X	
The student will develop technical skills required for practice as an entry-level practice medical laboratory scientist.	Coursework (grades, evaluations, feedback); SELFI data; Course Action Logs; Performance Evaluations; Student exit surveys; Clinical site surveys; Certification pass rates; Placement rates. Advisory committee	X		X		X
The student will be able to apply managerial concepts, troubleshooting techniques, and problem solving strategies related to entry-level practice as a medical laboratory scientist.	Coursework (grades, evaluations, feedback); SELFI data; Course Action Logs; Performance Evaluations; Student exit surveys; Clinical site surveys; Certification pass rates; placement rates.		X			
The student will be able to recognize professional behaviors vital for practice as an entry level Medical Laboratory Scientist.	Coursework (grades, evaluations, feedback); SELFI data; Course Action Logs; Performance Evaluations; Student exit surveys; Clinical site surveys; placement rates; Standards of Professional Conduct evaluations; handbook signature page; safety modules. Advisory committee			X		
The student will incorporate principles related to UND student learning goals.	Coursework (grades, evaluations, feedback); SELFI data; Course Action Logs; Performance Evaluations; Student exit surveys; Clinical site surveys; placement rates; EBP Rubric; Capstone Rubric				X	

## 2019-2020 Assessment Cycle

### ASSESSMENT REPORT

#### Mission Statement

The mission of the Department of Medical Laboratory Science is to provide high-quality education that prepares students to positively impact healthcare through medical laboratory practice in the state and affiliated regions.

#### Measures

##### Medical Laboratory Science (B.S.) Outcome Set

###### Outcome

###### Outcome: Technical Skills

The student will develop technical skills required for practice as an entry-level practice medical laboratory scientist.

###### Measure: Advisory Committee Feedback

*Program level Indirect - Other*

###### Details/Description:

Our MLS Advisory Committee (AC) comprised of professionals representing different aspects of the laboratory science profession meets annually to discuss and provide feedback on program-specific questions and initiatives. Questions asked of the AC related to this goal relate to overall reputation of UND MLS students in the workforce, and strengths and potential weaknesses of the program in preparing students for professional practice. Feedback from these questions give us 'outside' feedback from various perspectives that we may not be able to gather internally.

###### Target:

TARGET for #1: >95% of committee members report a perceived positive reputation of UND MLS graduates.

THRESHOLD FOR REVIEW for #2-3: Evidence of trends in responses (>2-3 similarly-themed comments) related to the following questions:

1. "What is the general reputation of the UND MLS program and its graduates (professional performance, professional success, comparison to students from other programs, etc.)?"
2. "What is UND MLS is doing well in the education of future laboratory professionals?"
3. "What could UND MLS could be doing better in the education of future laboratory professionals?"

###### Implementation Plan (timeline):

Gathered and assessed annually.

###### Measure: Employer/Site Survey

*Program level Indirect - Survey*

###### Details/Description:

All clinical site affiliates where students complete clinical rotations are asked to complete an Employer/Site Survey annually. The specific question from the Employer/Site Survey that we monitor for this goal is: "Please list any notable content

	areas and/or skills the UND MLS students could use improvement in.” Responses to this measure gives us insight as to whether there are specific technical skills from Objectives 2.1-2.3 that UND MLS program students tend to be lacking or in need of more significant
<b>Target:</b>	THRESHOLD FOR INTERNAL REVIEW: Evidence of trends in responses (>2-3 similarly-themed comments) related to the following question: “Please list any notable content areas and/or skills the UND MLS students could use improvement in.”
<b>Implementation Plan (timeline):</b>	Distributed to affiliated clinical sites annually.

**Measure:** Performance Evaluations  
*Course level Direct - Other*

<b>Details/Description:</b>	Standardized evaluations of student performance during clinical rotation coursework in final two semesters of program. Each student has a performance evaluation in each of the six clinical rotation courses (MLS 483, 485, 491, 492, 495, 498), and each performance evaluation includes evaluation of all criteria within the Objectives 2.1 – 2.3. We monitor the performance evaluations for this goal because they give us feedback and ranked scores related to each students’ entry-level technical skills.
<b>Target:</b>	THRESHOLD FOR INTERNAL REVIEW: Evidence of trends (>2-3 similarly-themed comments) related to technical skill weaknesses will be reviewed by the departmental committee as a whole, with potential intervention/action steps identified.
<b>Implementation Plan (timeline):</b>	Analyzed annually.

**Measure:** Placement/Employment Rate (PER)  
*Program level Direct - Other*

<b>Details/Description:</b>	Percentage of graduates that find employment in the field (or continue their education) within one year of graduation (for those seeking employment). We assess the PER for this goal because students being hired in the field within one year of graduation suggests that employers are finding them to meet entry-level qualifications, including technical skills.
<b>Target:</b>	Minimum Accreditation Standard – rate of 70%; Minimum Internal Departmental Target – rate of 90%
<b>Implementation Plan (timeline):</b>	Analyzed and reported annually

**Measure:** Retention/Graduation Rate (RGR)  
*Program level Direct - Other*

<b>Details/Description:</b>	Percentage of students beginning the second half of the program (the clinical coursework) that go on to successfully graduate. We monitor the RGR for this goal because the clinical portion of MLS coursework focuses extensively on development and evaluation of the entry-level technical skills listed in Objectives 2.1-2.3. Thus a
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student successfully completing clinical coursework and moving on to graduation suggests that he/she has shown competence with entry-level practice technical skills throughout the curriculum.

**Target:** Minimum Accreditation Standard – rate of 70%;  
Minimum Internal Departmental Target – rate of 90%

**Implementation Plan (timeline):** Analyzed and reported annually

**Measure:** Student Exit Surveys  
*Program level Indirect - Survey*

**Details/Description:** At the end of the BS in MLS program, students complete an Exit Survey which asks for responses related to many areas of assessment. The specific question from the Exit Survey that we monitor for this goal is: “After completion of the MLS Program, I feel adequately prepared to practice as an entry-level medical laboratory scientist.” While the performance evaluations give feedback on student skills from an evaluator perspective, this measure helps us assess the students’ own confidence in their entry-level capabilities.

**Target:** Minimum Internal Departmental Target – >90% of students show some level of agreement with the statement: “After completion of the MLS Program, I feel adequately prepared to practice as an entry-level medical laboratory scientist.”

**Implementation Plan (timeline):** Distributed at the end of the program; Analyzed annually

## ASSESSMENT FINDINGS

### Finding per Measure

#### Medical Laboratory Science (B.S.) Outcome Set

Outcome

##### **Outcome: Technical Skills**

The student will develop technical skills required for practice as an entry-level practice medical laboratory scientist.

**Measure:** Advisory Committee Feedback  
*Program level Indirect - Other*

**Details/Description:** Our MLS Advisory Committee (AC) comprised of professionals representing different aspects of the laboratory science profession meets annually to discuss and provide feedback on program-specific questions and initiatives. Questions asked of the AC related to this goal relate to overall reputation of UND MLS students in the workforce, and strengths and potential weaknesses of the program in preparing students for professional practice. Feedback from these questions give us ‘outside’ feedback from various perspectives that we may not be able to gather internally.

**Target:** TARGET for #1: >95% of committee members report a perceived positive reputation

of UND MLS graduates.

THRESHOLD FOR REVIEW for #2-3: Evidence of trends in responses (>2-3 similarly-themed comments) related to the following questions:

1. "What is the general reputation of the UND MLS program and its graduates (professional performance, professional success, comparison to students from other programs, etc.)?"
2. "What is UND MLS is doing well in the education of future laboratory professionals?"
3. "What could UND MLS could be doing better in the education of future laboratory professionals?"

**Implementation Plan (timeline):**

Gathered and assessed annually.

Findings for Advisory Committee Feedback

**Summary of Findings:**

1. 100% of AC members reported that they feel UND MLS graduates have a 'strong' (80%) or 'good' (20%) reputation.
2. A trend in comments (>2-3) stating that the UND MLS program is delivering a strong education in laboratory and technical skills
3. A trend in comments (>2-3) stating that the UND MLS program could potentially improve education related to documentation and/or procedure composition skills.

**Action Plan:**

1. NA; Continue to monitor future AC feedback related to reputation of students' skills
2. Positive trend identified related to overall instruction; suggests current strategies are appropriate; Continue to monitor program strengths for changes
3. A trend identified related to room for improvement in the following technical skills area: documentation/procedure writing. Feedback discussed by MLS Curricular groups, and it was decided to add and/or increase coverage of these two areas. They will be included in the new 'Laboratory Operations' courses that will begin in the MLS curriculum starting in Spring 2021. Will continue to monitor to see if this curricular change improves perceptions of student technical skills in this area.

**Measure:** Employer/Site Survey

*Program level Indirect - Survey*

**Details/Description:**

All clinical site affiliates where students complete clinical rotations are asked to complete an Employer/Site Survey annually. The specific question from the Employer/Site Survey that we monitor for this goal is: "Please list any notable content areas and/or skills the UND MLS students could use improvement in." Responses to this measure gives us insight as to whether there are specific technical skills from Objectives 2.1-2.3 that UND MLS program students tend to be lacking or in need of more significant

**Target:** THRESHOLD FOR INTERNAL REVIEW: Evidence of trends in responses (>2-3 similarly-themed comments) related to the following question: "Please list any notable content areas and/or skills the UND MLS students could use improvement in."

**Implementation Plan (timeline):** Distributed to affiliated clinical sites annually.

#### Findings for Employer/Site Survey

**Summary of Findings:** Qualitative analysis of 23 employer/site survey responses identified one trend (2 responses) related technical skills listed in Objectives 2.1-2.3. Specifically, increased phlebotomy training prior to clinical rotations was identified as a potential area for improvement.

**Action Plan:** Phlebotomy has been removed as a NAACLS curricular requirement for MLS programs. However, since our program serves many rural facilities (and rural facilities often need MLS personnel to have phlebotomy skills), we have kept it as part of our curriculum and training, although it is not a major focus. Since this was not a pervasive trend (and has not been in the past either), the decision was made to continue without change in regards to phlebotomy, but to monitor that area closely for trends, and add it as a question for Advisory Committee feedback.

#### **Measure:** Performance Evaluations *Course level Direct - Other*

**Details/Description:** Standardized evaluations of student performance during clinical rotation coursework in final two semesters of program. Each student has a performance evaluation in each of the six clinical rotation courses (MLS 483, 485, 491, 492, 495, 498), and each performance evaluation includes evaluation of all criteria within the Objectives 2.1 – 2.3. We monitor the performance evaluations for this goal because they give us feedback and ranked scores related to each students' entry-level technical skills.

**Target:** THRESHOLD FOR INTERNAL REVIEW: Evidence of trends (>2-3 similarly-themed comments) related to technical skill weaknesses will be reviewed by the departmental committee as a whole, with potential intervention/action steps identified.

**Implementation Plan (timeline):** Analyzed annually.

#### Findings for Performance Evaluations

**Summary of Findings:** Qualitative analysis of >400 student evaluations revealed a few individual weaknesses related to certain technical skills listed in Objectives 2.1-2.3, but no overall trends.

**Results :** Target Achievement: Met  
**Action Plan:** NA; Continue to monitor future evaluations

**Measure:** Placement/Employment Rate (PER)  
*Program level Direct - Other*

**Details/Description:** Percentage of graduates that find employment in the field (or continue their education) within one year of graduation (for those seeking employment). We assess the PER for this goal because students being hired in the field within one year of graduation suggests that employers are finding them to meet entry-level qualifications, including technical skills.

**Target:** Minimum Accreditation Standard – rate of 70%;  
Minimum Internal Departmental Target – rate of 90%

**Implementation Plan (timeline):** Analyzed and reported annually

**Findings for Placement/Employment Rate (PER)**

**Summary of Findings:** Information received from 50 of 78 graduates. All responding graduates looking for employment in the MLS or related healthcare field found employment (or furthered education) within one year of graduation, for a 100% rate.

**Results :** Target Achievement: Exceeded

**Action Plan:** Met targets – no further action necessary; Continue to monitor future rates

**Measure:** Retention/Graduation Rate (RGR)  
*Program level Direct - Other*

**Details/Description:** Percentage of students beginning the second half of the program (the clinical coursework) that go on to successfully graduate. We monitor the RGR for this goal because the clinical portion of MLS coursework focuses extensively on development and evaluation of the entry-level technical skills listed in Objectives 2.1-2.3. Thus a student successfully completing clinical coursework and moving on to graduation suggests that he/she has shown competence with entry-level practice technical skills throughout the curriculum.

**Target:** Minimum Accreditation Standard – rate of 70%;  
Minimum Internal Departmental Target – rate of 90%

**Implementation Plan (timeline):** Analyzed and reported annually

### Findings for Retention/Graduation Rate (RGR)

<b>Summary of Findings:</b>	80 students began the clinical experience; 2 students did not successfully complete the clinical experience. The remaining 78 students all successfully completed the program for a 98% rate.
<b>Results :</b>	Target Achievement: Exceeded
<b>Action Plan:</b>	Met targets – no further action necessary; Continue to monitor future rates

### **Measure:** Student Exit Surveys *Program level Indirect - Survey*

<b>Details/Description:</b>	At the end of the BS in MLS program, students complete an Exit Survey which asks for responses related to many areas of assessment. The specific question from the Exit Survey that we monitor for this goal is: "After completion of the MLS Program, I feel adequately prepared to practice as an entry-level medical laboratory scientist." While the performance evaluations give feedback on student skills from an evaluator perspective, this measure helps us assess the students' own confidence in their entry-level capabilities.
<b>Target:</b>	Minimum Internal Departmental Target – >90% of students show some level of agreement with the statement: "After completion of the MLS Program, I feel adequately prepared to practice as an entry-level medical laboratory scientist."
<b>Implementation Plan (timeline):</b>	Distributed at the end of the program; Analyzed annually

### Findings for Student Exit Surveys

<b>Summary of Findings:</b>	45 total respondents; 94.7% of respondents showed some level of agreement (63.1% - strongly agree; 31.6% - somewhat agree)
<b>Results :</b>	Target Achievement: Exceeded
<b>Action Plan:</b>	NA; Continue to monitor future survey results (internal note; while threshold levels for internal review were not met, we did feel that the amount of 'strongly agree' responses were lower than normal; we feel the upheaval of COVID during the spring semester may have contributed to that and do not feel it is necessarily a permanent trend – but will continue to monitor)

## Overall Reflection

No text specified