

Mission

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.

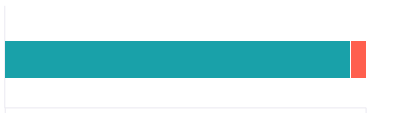
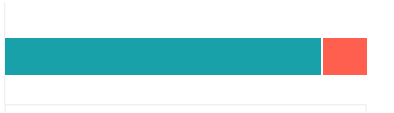
Academic Year 2024-25

Medical Laboratory Science MS Learning Outcomes

Learning Goal #1: Communication **MET**

The MS in MLS program sharpens students' communication skills so they are able to professionally represent and advocate for the laboratory. Specifically, students will be able to: Create and deliver clear, cohesive, and supported information that conveys a purposeful message

MEASURES	RESULTS	ACTIONS
Comprehensive Exam - Pass Rate All MS in MLS students must successfully complete comprehensive exams to meet degree requirements. The comprehensive exams require students to utilize communication skills to compose a substantial written case study related to the laboratory discipline that is supported by scholarly literature. Evaluators utilize a detailed, standardized rubric to determine pass/fail status. Indirect - Completion Rates Target 90% of students pass the comprehensive exam	MET Comprehensive Exam - Pass Rate ■ Met ■ Not Met  0% 100% Met: 92% Not Met: 8% Met Total: 92% Not Met Total: 8% Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Comprehensive Exam - Writing Style Rubric Evaluation All MS in MLS students must successfully complete comprehensive exams to meet degree requirements. The comprehensive exams require students to utilize communication skills to compose a substantial written case study related to the laboratory discipline that is supported by scholarly literature. Evaluators utilize a detailed, standardized rubric to determine pass/fail status. Direct - Other Target >80% of students 'Meet' all Writing Style criteria as outlined in the comprehensive exam grading rubric by at least their second submission	MET Comprehensive Exam - Writing Style Rubric Evaluation ■ Met ■ Not Met  0% 100% Met: 92% Not Met: 8% Met Total: 92% Not Met Total: 8% Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

Current Trends Presentation - MLS 524 A live, oral presentation focused on current trends or "hot topics" in the field of MLS Direct - Presentation <i>Current Trends and Issues in Medical Laboratory Science: MLS 524</i> Target >80% of students receive 'Excellent' ratings for 'presentation' criteria in the grading rubric (delivery style, mechanics, clarity of message, audience interaction)	MET Current Trends Presentation - MLS 524 Met Not Met  <table><tr><th>Category</th><th>Percentage</th></tr><tr><td>Met</td><td>96%</td></tr><tr><td>Not Met</td><td>4%</td></tr><tr><td>Met Total:</td><td>96%</td></tr><tr><td>Not Met Total:</td><td>4%</td></tr></table> Analysis Target met. No change to this measure will be made for the time being.	Category	Percentage	Met	96%	Not Met	4%	Met Total:	96%	Not Met Total:	4%	Maintain Assessment Strategy Target met - will continue to monitor this measure with the same assessment strategy.
Category	Percentage											
Met	96%											
Not Met	4%											
Met Total:	96%											
Not Met Total:	4%											
Scholarly Poster - MLS 525 Development of a scholarly poster to relay information related to core MLS content. Direct - Assignment <i>Professional Communication in the Medical Laboratory: MLS 525</i> Target >80% of students receive 'Excellent' ratings for at least four of the six grading rubric criteria related to conveying a clear and cohesive message (Segmenting Principle, Coherence Principle, Multimedia Principle, Contiguity Principles, Readability, Flow)	MET Scholarly Poster - MLS 525 Met Not Met  <table><tr><th>Category</th><th>Percentage</th></tr><tr><td>Met</td><td>88%</td></tr><tr><td>Not Met</td><td>12%</td></tr><tr><td>Met Total:</td><td>88%</td></tr><tr><td>Not Met Total:</td><td>13%</td></tr></table> Analysis Target met. No change to assessment measure for the time being.	Category	Percentage	Met	88%	Not Met	12%	Met Total:	88%	Not Met Total:	13%	Maintain Assessment Strategy Target met - will continue to monitor this measure with the same assessment strategy.
Category	Percentage											
Met	88%											
Not Met	12%											
Met Total:	88%											
Not Met Total:	13%											

Group Presentation - MLS 515 Students work in groups to develop a 30-minute presentation that is presented live to the class and other MS in MLS program faculty Direct - Assignment <i>Capstone in Medical Laboratory Science: MLS 515</i> Target >80% of students receive at least 85% on evaluation of final project submissions	MET Group Presentation - MLS 515 ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Reflection Paper - MLS 515 Students synthesize a reflection paper to convey a purposeful message about their overall experience in the UND MS in MLS program and how it will impact their future goals. Direct - Assignment <i>Capstone in Medical Laboratory Science: MLS 515</i> Target >80% of students receive at least 85% on evaluation of final project submissions	MET Reflection Paper - MLS 515 ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Independent Study - MLS 997 Students develop a research question, explore and analyze relevant peer-reviewed literature, and synthesize an answer to their question. The product is written to convey a scholarly message to a broad audience related to the chosen topic. Direct - Assignment <i>Independent Study: MLS 997</i> Target 100% of students receive at least 80% on evaluation of final project submissions	MET Independent Study - MLS 997 ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

	Target met. No changes will be made to this measure at this time.	
Final Project - MLS 502 Throughout the course, students write summaries of various peer-reviewed articles on hot topics within the subject matter. At the end of the course, students compile their findings into a PowerPoint slide deck and record a 20-minute oral presentation of the content. Direct - Assignment <i>Advanced Clinical Hematology: Erythrocytes: MLS 502</i> Target >80% of students score >85% on rubric items: PowerPoint Presentation & Oral Presentation	MET Final Project - MLS 502 ■ Met ■ Not Met  0% 100% Met: 96% Not Met: 4% Met Total: 96% Not Met Total: 4% Analysis One student registered for this course, but did not complete any assignments or the final project. This student was excluded from assessment results as an outlier. Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Writing Assignment - MLS 513 Students summarize a provided journal article in their own words and present information in a way that would be conducive to a reader who would not have prior knowledge of the subject. Direct - Assignment <i>Advanced Clinical Immunology: MLS 513</i> Target >80% of students score >85% on assignment	MET Writing Assignment - MLS 513 ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Hot Topic Presentation - MLS 526 Oral presentation with a scholarly update on a 'hot topic' in hemostasis; delivered to the full class Direct - Assignment <i>Advanced Clinical Hemostasis: MLS 526</i> Target	MET Hot Topic Presentation - MLS 526 ■ Met ■ Not Met  0% 100% Met: 92% Not Met: 8%	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

>80% of students receive 'Excellent' ratings for Presentation and Delivery rubric criteria	Met Total: 92% Not Met Total: 8% Analysis Target met. No changes will be made to this measure for the time being.	
Class Discussion Boards - MLS 530 Students respond to several discussion board prompts written by the instructor that correlate to the unit topic. Students are required to make one original post and engage in meaningful communication by commenting on at least two peers' posts to receive full credit. <i>Medical Laboratory Leadership: Principles & Practice: MLS 530</i> Target >80% of students complete all discussion board posts including the original post and 2 comments	NOT MET Class Discussion Boards - MLS 530 ■ Met ■ Not Met  0% 100% Met: 78% Not Met: 22% Met Total: 78% Not Met Total: 22% Analysis Target met. No changes will be made to this measure for the time being.	Revise Curriculum IN PROGRESS For the next course offering (Spring 2026), we will add a bit more information at the beginning of the course when students are given an overview and directions on assignments. In regard to the discussion board assignments, we will reiterate to students that their learning is dependent on their active engagement with others in the discussion boards. We will also reiterate that the their peers are depending on them to be engaged in discussion for their peers' learning. Recommended Due Date: 01/12/2026
Reflection Papers - MLS 530 Student create a written paper in response to specific prompts provided by the instructor which are related to reflection of the course content in relation to students' own life experiences. Direct - Assignment <i>Medical Laboratory Leadership: Principles & Practice: MLS 530</i> Target >80% of students score >85% on 'writing style & content' section of rubric on all reflection papers	MET Reflection Papers - MLS 530 ■ Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Final Project - MLS 530 For the final project in the course, students are given a choice of 5 different project options ranging from literature review of current leadership research to a book review. Their project must be in written format to convey a meaningful message about the reviewed materials. Direct - Assignment	MET Final Project - MLS 530 ■ Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i>	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

<i>Medical Laboratory Leadership: Principles & Practice: MLS 530</i> Target >80% of students receive at least 85% on evaluation of final project	Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	
Discussion Boards - MLS 531 Students participate in discussion boards throughout each unit of the course. Students respond to instructor prompts and communicate with peers by responding to at least 2 peer posts. Direct - Assignment <i>Medical Laboratory Leadership: Principles & Practice: MLS 530</i> Target >80% of students complete all discussion board posts including the original post and 2 comments	MET Discussion Boards - MLS 531 ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Reflection Papers = MLS 531 Student create a written paper in response to specific prompts provided by the instructor which are related to reflection of the course content in relation to students' own life experiences. Direct - Assignment <i>Medical Laboratory Leadership: Practical Applications: MLS 531</i> Target >80% of students score >85% on 'writing style & content' section of rubric on all reflection papers	MET Reflection Papers = MLS 531 ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Discussion Boards - MLS 501 Students complete a total of 3 discussion boards on topics that include: 1) Total Testing Process & Diagnostic Management Teams; 2) Quality Control; and 3) Proficiency Testing.	MET Discussion Boards - MLS 501 ■ Met ■ Not Met 	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

For each discussion board, students are required to create original posts and reply to at least one other student post for each discussion board. Direct - Assignment <i>Advanced Laboratory Practice: Technical Concepts: MLS 501</i> Target >80% of students will complete	 0% 100% Met: 81% Not Met: 19% Met Total: 81% Not Met Total: 19% Analysis Target met. No changes will be made to this measure for the time being.	
Application Paper - MLS 501 Students write a 5-7 page paper utilizing at least 5 references, 3 of which must be peer reviewed, discussing an issue related to a technical concept in the lab. Students then provide a plan for a solution to the issue. Direct - Assignment <i>Advanced Laboratory Practice: Technical Concepts: MLS 501</i> Target >80% of students receive at least "Proficient" on rubric items: Content, Formatting & Grammar, and References.	NOT MET Application Paper - MLS 501 ■ Met ■ Not Met  0% 100% Met: 63% Not Met: 37% Met Total: 63% Not Met Total: 38% Analysis Of the rubric components assessed for this measure (content, formatting/grammar, references): students who received less than "proficient" did so for the following components: • 4 student - formatting/grammar • 1 student - references • 1 student - content and references	Revise Curriculum IN PROGRESS After speaking with the instructor this course, the following curricular changes will be made in the next course offering (Spring 2027): 1) add information about the UND Writing Center and encourage students to utilize this resource 2) provide students an example of an exemplary application paper as reference for their own work Recommended Due Date: 01/11/2027
Final Paper - MLS 589 Students select a laboratory related topic and search the peer reviewed literature to construct a literature review. Student must find at least 12 high quality sources and write a succinct overview of their topic to convey an update to the reader. Direct - Assignment <i>Readings in Medical Laboratory Science: MLS 589</i> Target >80% of students receive at least 85% on evaluation of final project submissions	MET Final Paper - MLS 589 ■ Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

Conclusion

Targets met for 16 of 18 measures. For targets not met, action plans have been devised that include minor changes to curriculum such as clarified assignment directions and additional student resources. Overall, students products and perceptions suggest that communication skills are being developed throughout the program, in alignment with the current Learning Outcome objectives.

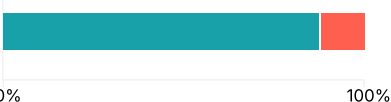
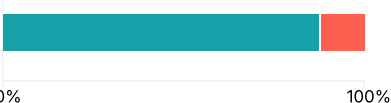
Learning Goal #3: Expertise **MET**

The MS in MLS program facilitates a deepened understanding of concepts within the field of medical laboratory science. Specifically, students will be able to: Integrate foundational, experiential, and emerging knowledge to explore and advance understanding of disciplinary concepts

MEASURES	RESULTS	ACTIONS								
Comprehensive Exam - Pass Rate All MS in MLS students must successfully complete comprehensive exams to meet degree requirements. The comprehensive exams require students to integrate knowledge gained through coursework and research to advance understanding in the exam's topic area. Indirect - Completion Rates Target 90% of students pass the comprehensive exam	MET Comprehensive Exam - Pass Rate ■ Met ■ Not Met  <table><tr><td>Met:</td><td>92%</td></tr><tr><td>Not Met:</td><td>8%</td></tr><tr><td>Met Total:</td><td>92%</td></tr><tr><td>Not Met Total:</td><td>8%</td></tr></table> Analysis Target met. No changes will be made to this measure for the time being.	Met:	92%	Not Met:	8%	Met Total:	92%	Not Met Total:	8%	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Met:	92%									
Not Met:	8%									
Met Total:	92%									
Not Met Total:	8%									
Comprehensive Exam - Content Criteria Rubric Evaluation All MS in MLS students must successfully complete comprehensive exams to meet degree requirements. The comprehensive exams require students to integrate knowledge to compose a substantial, scholarly case study related to the laboratory discipline. Direct - Other Target >80% of students 'Meet' all "Content" rubric criteria focused on disciplinary knowledge/expertise (patient history, laboratory results, general diagnosis, pathophysiology, laboratory applications) by at least their second submission	MET Comprehensive Exam - Content Criteria Rubric Evaluation ■ Met ■ Not Met  <table><tr><td>Met:</td><td>92%</td></tr><tr><td>Not Met:</td><td>8%</td></tr><tr><td>Met Total:</td><td>92%</td></tr><tr><td>Not Met Total:</td><td>8%</td></tr></table> Analysis Target met. No changes will be made to this measure for the time being.	Met:	92%	Not Met:	8%	Met Total:	92%	Not Met Total:	8%	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Met:	92%									
Not Met:	8%									
Met Total:	92%									
Not Met Total:	8%									
Trends in Research Poster Presentation - MLS 524	MET Trends in Research Poster Presentation - MLS 524	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.								

A live poster presentation highlighting current research/updates in disciplinary topics Direct - Presentation <i>Current Trends and Issues in Medical Laboratory Science: MLS 524</i> Target >80% of students receive highest ratings for 'Content' criteria in the grading rubric (Introduction, Methods, Results, Applications & Next Steps)	■ Met ■ Not Met  0% 100% Met: 96% Not Met: 4% Met Total: 96% Not Met Total: 4% Analysis Target met. No changes will be made to this measure for the time being.	
SELF - Course Learning Outcomes The MS in MLS curriculum requires completion of at least three MLS "Core Courses" – courses focused on core, disciplinary content in the field. As such, we monitor students' responses to the following SELF item when assessing the disciplinary 'Expertise' learning outcome: "I have gained knowledge/skills that reflect the learning outcomes of this course." <i>Note: SELF results are compiled from all courses delivered during this assessment cycle that are related to this outcome (Expertise). Courses for this assessment cycle include MLS 502, MLS 513, and MLS 526.</i> Indirect - Course Evaluation Target >90% of responding students agree or strongly agree that they gained knowledge/skills that reflect the learning outcomes of the Core Course	MET SELF - Course Learning Outcomes ■ Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Erythrocyte Disorder Digital Case Studies - MLS 502 Students assess patient peripheral blood smears of various red blood cell disorders and answer questions to correlate the visual assessment & laboratory findings with the underlying pathophysiology theory. Direct - Assignment <i>Advanced Clinical Hematology: Erythrocytes: MLS 502</i> Target >80% of students received at least 85% on all case studies (total of 4)	MET Erythrocyte Disorder Digital Case Studies - MLS 502 ■ Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Met: 100% Met Total: 100% Not Met Total:	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

	Analysis Target met. No changes will be made to this measure for the time being.									
Immunological Testing Worksheet - MLS 513 Students develop hypothetical testing methodologies based on scenarios provided. Deep understanding of basic immunological principles and testing methodologies is required. <i>Advanced Clinical Immunology: MLS 513</i> Target >80% of students received at least 85% on evaluation of worksheet	MET Immunological Testing Worksheet - MLS 513 ■ Met ■ Not Met  <table><tr><td>Met:</td><td>88%</td></tr><tr><td>Not Met:</td><td>12%</td></tr><tr><td>Met Total:</td><td>88%</td></tr><tr><td>Not Met Total:</td><td>13%</td></tr></table> Analysis Target met. No changes will be made to this measure for the time being.	Met:	88%	Not Met:	12%	Met Total:	88%	Not Met Total:	13%	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Met:	88%									
Not Met:	12%									
Met Total:	88%									
Not Met Total:	13%									
Build-Your-Own-Assessment assignment - MLS 527 Students create a hypothetical assessment plan for an accredited, university-based laboratory science program <i>Medical Laboratory Education: Assessment and Accreditation: MLS 527</i> Target >80% of students meet criteria of 'Excellent' for at least 5 of 8 rubric criteria	NOT MET Build-Your-Own-Assessment assignment - MLS 527 ■ Met ■ Not Met  <table><tr><td>Met:</td><td>69%</td></tr><tr><td>Not Met:</td><td>31%</td></tr><tr><td>Met Total:</td><td>69%</td></tr><tr><td>Not Met Total:</td><td>31%</td></tr></table> Analysis This was a new assignment implemented during this assessment cycle. It did not appear that there was a problem with actual skill level, as a majority of instances of not meeting 'excellent' criteria resulted from not fully addressing each assignment component (vs. addressing it inaccurately or with a flawed approach).	Met:	69%	Not Met:	31%	Met Total:	69%	Not Met Total:	31%	Revise Curriculum IN PROGRESS For the next course offering Spring 2027), add details to assignment directions to clarify the specific requirements for each assignment component, and provide an example assignment as a resource for students. Recommended Due Date: 01/11/2027
Met:	69%									
Not Met:	31%									
Met Total:	69%									
Not Met Total:	31%									
Testing Algorithm - MLS 526 Students investigate the diagnostic testing approach for coagulation disorder by developing a visual flowchart illustrating the testing algorithm, along with a sourced written description of the steps involved. Direct - Assignment	MET Testing Algorithm - MLS 526 ■ Met ■ Not Met  <table><tr><td>Met:</td><td>88%</td></tr><tr><td>Not Met:</td><td>12%</td></tr><tr><td>Met Total:</td><td>88%</td></tr><tr><td>Not Met Total:</td><td>13%</td></tr></table> Analysis Target met. No changes will be made to this measure for the time being.	Met:	88%	Not Met:	12%	Met Total:	88%	Not Met Total:	13%	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Met:	88%									
Not Met:	12%									
Met Total:	88%									
Not Met Total:	13%									

<i>Advanced Clinical Hemostasis: MLS 526</i> Target >80% of students receive 'Excellent' for Accuracy or Scope rubric criteria	Met: 82% Not Met: 18% Met Total: 82% Not Met Total: 18% Analysis Target met. No changes will be made to this measure for the time being.	
New Equipment: Instrument Selection Assignment - MLS 501 Students perform steps of instrument acquisition for a hypothetical case - they select the department and research various comparable options for instrumentation, go through the process of narrowing down their selection and create an instrument selection report, an implementation plan, and develop a Quality Indicator for a process that directly relates to their new instrumentation. Direct - Assignment <i>Advanced Laboratory Practice: Technical Concepts: MLS 501</i> Target >80% receive at least proficient on rubric items: Reason for Change, Gather Data/Present Findings, Narrow Down Choice, Compare Choices, Final Selection	MET New Equipment: Instrument Selection Assignment - MLS 501 ■ Met ■ Not Met  0% 100% Met: 88% Not Met: 12% Met Total: 88% Not Met Total: 13% Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
New Equipment: Instrument Implementation Plan - MLS 501 Students perform steps of instrument acquisition for a hypothetical case - they select the department and research various comparable options for instrumentation, go through the process of narrowing down their selection and create an instrument selection report, an implementation plan, and develop a Quality Indicator for a process that directly relates to their new instrumentation. Direct - Assignment <i>Advanced Laboratory Practice: Technical Concepts: MLS 501</i> Target >80% receive at least proficient on rubric items: Summary, Task List, Installation Qualification, Operational Qualification, Performance Qualification	MET New Equipment: Instrument Implementation Plan - MLS 501 ■ Met ■ Not Met  0% 100% Met: 88% Not Met: 12% Met Total: 88% Not Met Total: 13% Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

Literature Review - MLS 589 Students select a laboratory related topic and search the peer reviewed literature to construct a literature review. Students must construct a succinct yet detailed review of the topic and must develop expertise on the topic to do so successfully. Direct - Assignment <i>Readings in Medical Laboratory Science: MLS 589</i> Target >80% of students receive at least 85% on evaluation of final project submissions	MET Literature Review - MLS 589 ■ Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
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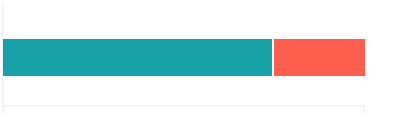
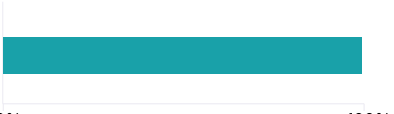
Conclusion

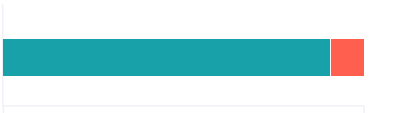
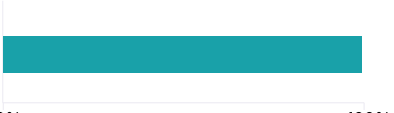
Targets met for 10 of 11 measures. For targets not met, action plans have been devised that include minor changes to curriculum such as clarified assignment directions and additional student resources. Overall, students products and perceptions suggest that expertise and advanced understanding of core concepts are being developed throughout the program, in alignment with the current Learning Outcome objectives.

Learning Goal #5: Research/Scholarly Activity **MET**

The MS in MLS program equips students with skills for scholarly research activities. Specifically, students will be able to: Collect and critically analyze information to investigate relevant topics; Synthesize and disseminate ethical, purposeful, and original scholarly products relevant to the field of laboratory science

MEASURES	RESULTS	ACTIONS
Test Utilization Assignment - MLS 526 Students will develop an evidence-based recommendation that promotes proper utilization of lab testing during the diagnostic, management, or treatment phases of a coagulation disorder Direct - Assignment <i>Advanced Clinical Hemostasis: MLS 526</i> Target >80% of students meet all but one aspect of 'Excellent' criteria for Rationale and References & Citation components of rubric	MET Test Utilization Assignment - MLS 526 ■ Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

Article Analysis Assignment - MLS 590 Using UND library resources, students locate at least 15 peer-reviewed journal articles related to their independent study topic. They then complete an annotated bibliography by assessing the introduction, methods, results, and discussion in addition to providing a summary for each article. Direct - Assignment <i>Project Development: MLS 590</i> Target >80% of students receive at least an 85% upon evaluation of the assignment	NOT MET Article Analysis Assignment - MLS 590 ■ Met ■ Not Met  0% 100% Met: 75% Not Met: 25% Met Total: 75% Not Met Total: 25% Analysis This was the first delivery of a newly formatted course and the sample size was quite small (n=4). One of the students did not complete the assignment. She eventually finished it the following semester to complete her Independent Study.	Gather Additional Data IN PROGRESS This year (Fall 2025) we have 14 total students in the course, so we will continue to collect data for this measure and reassess. Recommended Due Date: 01/12/2026
Final Independent Study - MLS 997 Students develop a research question, explore and analyze relevant peer-reviewed literature, and synthesize an answer to their question. The product is written to convey a scholarly message to a broad audience related to the chosen topic supported by high quality sources. Direct - Assignment <i>Independent Study: MLS 997</i> Target 100% of students will receive at least 80% on evaluation of final submissions	MET Final Independent Study - MLS 997 ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

Hot Topic Article Reviews - MLS 502 Students locate a peer-reviewed article of their choosing related to the correlation unit topics. They then write an assessment of the article. Direct - Assignment <i>Advanced Clinical Hematology: Erythrocytes: MLS 502</i> Target >90% of students score at least 85% by their last hot topic article review	MET Hot Topic Article Reviews - MLS 502 ■ Met ■ Not Met  0% 100% Met: 91% Not Met: 9% Met Total: 91% Not Met Total: 9% Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Writing Assignment - MLS 513 Students analyze a provide peer-reviewed journal article which includes a synthesis summarizing the content. Direct - Assignment <i>Advanced Clinical Immunology: MLS 513</i> Target >80% of students receive at least an 85% on all rubric items	MET Writing Assignment - MLS 513 ■ Met  0% 100% Values are not shown when too close to each other. Click or use arrow keys to see details. Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

Application Paper - MLS 501 Students must locate and use a minimum of 5 sources, 3 of which must be peer-reviewed, to create a 5-7 page problem-solving paper related to laboratory technical concepts. Direct - Assignment <i>Advanced Laboratory Practice: Technical Concepts: MLS 501</i> Target >80% of students receive at least 'Proficient' on all rubric items	MET Application Paper - MLS 501 ■ Met ■ Not Met  0% 100% Met: 88% Not Met: 12% Met Total: 88% Not Met Total: 13% Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Comprehensive Exam Pass Rate All MS in MLS students must successfully complete comprehensive exams to meet degree requirements. The comprehensive exams require students to utilize communication skills to compose a substantial written case study related to the laboratory discipline that is supported by scholarly literature. Evaluators utilize a detailed, standardized rubric to determine pass/fail status. Indirect - Completion Rates Target At least 90% of students pass the comprehensive exam	MET Comprehensive Exam Pass Rate ■ Met ■ Not Met  0% 100% Met: 92% Not Met: 8% Met Total: 92% Not Met Total: 8% Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

Literature Review - MLS 589 Students select a laboratory related topic and search the peer reviewed literature to construct a literature review. Students closely analyze each article before using the information to construct a succinct yet detailed review of the topic. Direct - Assignment <i>Readings in Medical Laboratory Science: MLS 589</i> Target >80% of students receive at least 85% on evaluation of final project submissions	MET Literature Review - MLS 589 ■ Met  0% 100% <i>Values are not shown when too close to each other. Click or use arrow keys to see details.</i> Met: 100% Met Total: 100% Not Met Total: Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.
Comprehensive Exam - Overall & References Rubric Evaluation All MS in MLS students must successfully complete comprehensive exams to meet degree requirements. The comprehensive exams require students to integrate knowledge to compose a substantial, scholarly case study related to the laboratory discipline. Indirect - Other Target >80% of students 'Meet' all Overall and References rubric criteria by at least their second submission	MET Comprehensive Exam - Overall & References Rubric Evaluation ■ Met ■ Not Met  0% 100% Met: 85% Not Met: 15% Met Total: 85% Not Met Total: 15% Analysis Target met. No changes will be made to this measure for the time being.	Maintain Assessment Strategy Target met. We will continue to monitor this measure with the same assessment strategy.

Conclusion

Targets met for 8 of 9 measures. For target not met, action plan includes collecting more data to reassess the following assessment cycle. Overall, students products and perceptions suggest that scholarly skills such as critical analysis and synthesis of ideas are being developed throughout the program, in alignment with the current Learning Outcome objectives.