



# DEPARTMENT OF MEDICAL LABORATORY SCIENCE

[med.UND.edu/mls](http://med.UND.edu/mls)

## Undergraduate Handbook 2020 - 2021

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## **DESCRIPTION OF THE MEDICAL LABORATORY SCIENCE PROFESSION**

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The medical laboratory scientist is qualified by academic and applied science education to provide service and research in clinical laboratory science and related areas in rapidly changing and dynamic healthcare delivery systems. Medical laboratory scientists perform, develop, evaluate, correlate and assure accuracy and validity of laboratory information; direct and supervise clinical laboratory resources and operations; and collaborate in the diagnosis and treatment of patients. The medical laboratory scientist has diverse and multi-level functions in the principles, methodologies and performance of assays; problem-solving; troubleshooting techniques; interpretation and evaluation of clinical procedures and results; statistical approaches to data evaluation; principles and practices of quality assurance/quality improvement; and continuous assessment of laboratory services for all major areas practiced in the contemporary clinical laboratory.

Medical laboratory scientists possess the skills necessary for financial, operations, marketing, and human resource management of the clinical laboratory.

Medical laboratory scientists practice independently and collaboratively, being responsible for their own actions, as defined by the profession. They have the requisite knowledge and skills to educate laboratory professionals, other health care professionals, and others in laboratory practice as well as the public.

The ability to relate to people, a capacity for calm and reasoned judgment and a demonstration of commitment to the patient are essential qualities. Communications skills extend to consultative interactions with members of the healthcare team, external relations, customer service and patient education.

Medical laboratory scientists demonstrate ethical and moral attitudes and principles that are necessary for gaining and maintaining the confidence of patients, professional associates, and the community.

(NAACLS, 2018)

## DESCRIPTION OF ENTRY LEVEL COMPETENCIES OF THE MEDICAL LABORATORY SCIENTIST

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At entry level, the medical laboratory scientist will possess the entry level competencies necessary to perform the full range of clinical laboratory tests in areas such as Clinical Chemistry, Hematology/Hemostasis, Immunology, Immunohematology/Transfusion medicine, Microbiology, Urine and Body Fluid Analysis and Laboratory Operations, and other emerging diagnostics, and will play a role in the development and evaluation of test systems and interpretive algorithms.

The medical laboratory scientist will have diverse responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/performance improvement wherever laboratory testing is researched, developed or performed.

At entry level, the medical laboratory scientist will have the following basic knowledge and skills in:

- A. Application of safety and governmental regulations and standards as applied to clinical laboratory science;
- B. Principles and practices of professional conduct and the significance of continuing professional development;
- C. Communications sufficient to serve the needs of patients, the public and members of the health care team;
- D. Principles and practices of administration and supervision as applied to clinical laboratory science;
- E. Educational methodologies and terminology sufficient to train/educate users and providers of laboratory services;
- F. Principles and practices of clinical study design, implementation and dissemination of results.

(NAACLS 2018)

# **UNIVERSITY OF NORTH DAKOTA**

## **DEPARTMENT OF MEDICAL LABORATORY SCIENCE**

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The Medical Laboratory Science (MLS) Program at the University of North Dakota (UND) is a university based program that has been educating Medical Laboratory Scientists since 1949. The UND Department of MLS is located at the UND School of Medicine and Health Sciences (SMHS), 1301 N. Columbia Rd, Stop 9037 Grand Forks, ND 58202-9037. Program information can be found on the Department of MLS website: [med.UND.edu/mls](http://med.UND.edu/mls)

### **ACCREDITATION**

The UND MLS Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) which is located at 5600 N. River Rd, Suite 720, Rosemont, IL 60018-5119.

### **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.

### **GOALS**

1. Develop and deliver a curriculum that: reflects current laboratory knowledge and best-practice; promotes critical thinking, scholarship, and life-long learning; is responsive to the needs of students with diverse backgrounds; and aligns with University of North Dakota (UND), UND School of Medicine & Health Sciences, and National Accrediting Agency for Clinical Laboratory Sciences standards
2. Provide a student-centered environment through individualized advising, responsive mentoring/instruction, and supportive faculty/staff
3. Help address healthcare needs in the state and affiliated regions by graduating students that: meet entry-level competencies; are employable in various settings; and are positioned for leadership in medical laboratory practice
4. Promote and advocate for medical laboratory professions

# UND MEDICAL LABORATORY SCIENCE PROGRAM

## ESSENTIAL FUNCTIONS

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Essential Functions are the physical, behavioral and cognitive attributes of an individual that are necessary to be able to be successful in an academic or clinical laboratory setting. The following Essential Functions have been defined by the UND MLS Program:

### 1. Communication

- a. read, comprehend, and respond to English communications (including person-to person, telephone, electronic, and written forms) in an effective, respectful, and time-sensitive manner
- b. follow oral and written directions

### 2. Behavior and Professional Standards

- a. demonstrate emotional stability to function effectively under stress, remain flexible, and adapt to an environment that may change rapidly without warning and in unpredictable ways
- b. maintain consistent, positive work behaviors including initiative, preparedness, dependability, persistence, and follow-through
- c. project an image of professionalism through appearance, dress, hygiene, positive attitude, and body language
- d. demonstrate appropriate interpersonal behaviors while interacting with others during program-related occurrences, including but not limited to: courtesy and cooperation; receiving and responding to constructive feedback; respect and empathy; and non-threatening conduct
- e. abstain from use of illegal, prescription, over-the-counter, experimental, recreational, or other drugs that have a significant effect upon an individual's judgment

### 3. Critical Thinking and Application

- a. demonstrate time management skills by completing assigned tasks within scheduled timeframe
- b. correlate principles to practice
- c. produce quality work with precision and accuracy in accordance with established protocol

### 4. Sensory Functions

- a. differentiate colors (hue, shading or intensity) and clarity
- b. read fine print including information displayed on orders, printouts, monitors, and equipment
- c. visually analyze specimens and reagents
- d. hear and respond to sounds produced in the laboratory environment

### 5. Motor/Physical Functions

- a. sit/stand for prolonged periods of time
- b. safely and accurately manipulate laboratory instrumentation and equipment
- c. be able to lift 10 lbs

# DEPARTMENT OF MEDICAL LABORATORY SCIENCE

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# MEDICAL LABORATORY SCIENCE CURRICULUM

Curriculum for the UND MLS program is outlined below. Individual course descriptions and specific degree/certificate requirements are listed in the UND Academic Catalog found on the UND website <http://UND-public.courseleaf.com/>. Students are required to meet regularly with UND MLS faculty/staff to develop and monitor a program of study that aligns with these established curriculum requirements.

## PRE-PROFESSIONAL COURSES

	Credits
BIMD 202	Introductory Medical Microbiology Lecture ..... 3
BIMD 220	Human Anatomy & Physiology I..... 3
BIMD 221	Human Anatomy & Physiology II..... 3
BIO 150/150L	General Biology I & Laboratory ..... 4
BIO 151	General Biology II ..... 3
CHEM 121/121L	General Chemistry I & Laboratory ..... 4
CHEM 122/122L	General Chemistry II & Chemistry Lab ..... 4
CHEM 340/340L	Survey of Organic Chemistry/Lab ..... 5
COMM 110	Introduction to Public Speaking ..... 3
COMM 212	Interpersonal Communications ..... 3
ENGL 110	College Composition I..... 3
ENGL 130	Composition II..... 3
Humanities Elective	Elective (Global Diversity)..... 3
MATH 103	College Algebra..... 3
MLS 101	Orientation to Medical Laboratory Science ..... 2
MLS 234	Human Parasitology ..... 2
MLS 234L	Human Parasitology Laboratory ..... 1
Social Science Elective	Introduction to Psychology (Recommended) (Elective)..... 3
Social Science Elective	Social Science Elective ..... 3
	Total Credits ..... 58

## MLS PROFESSIONAL PROGRAM COURSES

### Professional Year 1 (PY1)

	Credits
BIMD 301	Biochemistry..... 3
Humanities Elective	Elective (Humanities Category) ..... 3
Humanities Elective	Fine Art Category..... 3
MGMT 300	Principles of Management ..... 3
MLS 301	Immunology..... 3
MLS 325	Hematology ..... 3
MLS 325L	Hematology Laboratory..... 2
MLS 336	Laboratory Calculations..... 1
MLS 340	Molecular Diagnostics ..... 2
MLS 340L	Molecular Diagnostics Laboratory..... 1
MLS 380	Professional Issues in Clinical Laboratory Science..... 1
MLS 394	Medical Microbiology..... 2
Social Science Elective	Introduction to Sociology ..... 3
	Total Credits.....30

# MEDICAL LABORATORY SCIENCE CURRICULUM

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## MLS PROFESSIONAL PROGRAM COURSES

### Professional Year 2 (PY2)

		Credits
MLS 471	Clinical Chemistry I .....	2
MLS 472	Pre-analytical Skills .....	1
MLS 473	Clinical Hemostasis I .....	2
MLS 474	Clinical Urinalysis I .....	2
MLS 477	Clinical Immunohematology I .....	1
MLS 477L	Clinical Immunohematology I Laboratory .....	1
MLS 478	Clinical Microbiology I .....	2
MLS 479	Clinical Hematology I .....	2
MLS 489	Clinical Body Fluids .....	1
MLS 487	Medical Mycology .....	1
MLS 480	Clinical Immunohematology II .....	2
MLS 481	Clinical Chemistry II .....	2
MLS 483	Clinical Hemostasis II .....	1
MLS 484	Clinical Microbiology II .....	2
MLS 485	Clinical Urinalysis II .....	1
MLS 488	Clinical Hematology II .....	2
MLS 490	Financial & Quality Mgmt of the Clinical Laboratory .....	3
MLS 491	Clinical Chemistry III .....	2
MLS 492	Clinical Immunohematology III .....	2
MLS 494	Clinical Immunology .....	1
MLS 495	Clinical Microbiology III .....	2
MLS 498	Clinical Hematology III .....	2
	Credits .....	37
	Total Credits .....	126

# MEDICAL LABORATORY SCIENCE

## ROUTES OF STUDY

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### **TRADITIONAL BACHELOR OF SCIENCE IN MLS (BS-MLS)**

The traditional BS-MLS degree curriculum includes 126 credits of Pre-Professional & Professional coursework.

Pre-Professional coursework includes approximately 59 credits of basic science, liberal arts/essential studies, and introductory MLS courses. Upon successful completion of pre-professional coursework, students apply to the MLS professional program.

Professional program coursework is divided into Professional Year I (PYI) and Professional Year II (PYII). PYI includes 30 credits of upper-level basic sciences, remaining liberal arts/essential studies, and intermediate MLS courses. PYII spans 52 weeks and consists of 37 credits of advanced MLS coursework, including a clinical practicum completed at an affiliated medical laboratory.

Upon successful completion of BS-MLS degree requirements, the student receives a Bachelor of Science in Medical Laboratory Science degree from the University of North Dakota and is eligible for national Board Certification and entry-level practice as a Medical Laboratory Scientist (MLS; also sometimes referred to as a Clinical Laboratory Scientist or Medical Technologist).

### **WESTERN COLLEGE ALLIANCE FOR MEDICAL LABORATORY SCIENCE (WCAMLS)**

The Western College Alliance for Medical Laboratory Science (WCAMLS) is a collaboration between UND and 13 affiliate colleges/universities to facilitate delivery of MLS curricula. Students complete three years of aligned preparatory coursework at the WCAMLS affiliate, and then apply to complete a final year of professional coursework (Professional Year II) at UND. Professional Year II spans 52 weeks and consists of 37 credits of advanced MLS coursework, including a clinical practicum completed at an affiliated medical laboratory.

Upon successful completion of WCAMLS degree requirements, the student receives a Bachelor of Science degree from the WCAMLS affiliate, a certificate from UND verifying completion of a NAACLS accredited professional program, and is eligible for national Board Certification and entry-level practice as a Medical Laboratory Scientist (MLS; also sometimes referred to as a Clinical Laboratory Scientist or Medical Technologist).

### **MEDICAL LABORATORY TECHNOLOGY TO MEDICAL LABORATORY SCIENCE (MLT TO MLS)**

The MLT to MLS program route enables students with an associate's degree from a regionally accredited institution and completion of a NAACLS accredited MLT program to earn a Bachelors of Science degree in MLS (BS-MLS). Application is required for this program route. Students will work with an academic advisor in development of an individual program of study to meet Bachelors of Science in MLS degree requirements, which will include a clinical practicum.

Upon successful completion of BS-MLS degree requirements, the student receives a Bachelor of Science in Medical Laboratory Science degree from the UND and is eligible for national Board Certification and entry-level practice as a Medical Laboratory Scientist (MLS; also sometimes referred to as a Clinical Laboratory Scientist or Medical Technologist).

### **BACHELORS DEGREE PLUS MLS (B+MLS)**

Students that have earned a Bachelors of Science (BS) or Bachelors of Arts (BA) degree from a regionally accredited college or university are eligible for the B+MLS program. The B+MLS curriculum includes pre-requisite (see UND Academic Catalog for required pre-requisite courses) and professional program coursework.

Students will work with an academic advisor to develop a program of study and determine appropriate application processes.

Upon successful completion of pre-requisite coursework, the student completes Professional Year II (PYII) of the MLS curriculum. PYII spans 52 weeks and consists of 37 credits of advanced MLS coursework, including a clinical practicum completed at an affiliated clinical laboratory.

Upon successful completion of MLS curricular requirements without UND Essential Studies coursework, the student receives a Certificate in MLS from UND. Upon successful completion of MLS curricular requirements and UND Essential Studies coursework, the student receives a BS degree in MLS from UND. All graduates (certificate or BS degree) are all eligible for national Board Certification and entry-level practice as a Medical Laboratory Scientist (MLS; also sometimes referred to as a Clinical Laboratory Scientist or Medical Technologist).

### **UND MLS/MAYO CLINIC COHORT PROGRAM (MLS COHORT PROGRAM)**

The UND MLS/Mayo Clinic Cohort Program (MLS Cohort Program) route is a collaborative program between the UND Department of Medical Laboratory Science and the Mayo Clinic in Rochester, MN. Only current employees of the Mayo Clinic Department of Laboratory Medicine & Pathology are eligible for this program route. Students in the MLS Cohort Program complete didactic coursework online and laboratory coursework at Mayo Clinic facilities, with no on-campus visits required.

Students will apply to the program and upon admittance work with an academic advisor in development of a program of study to meet pre-requisite and professional coursework requirements. Upon successful completion of pre-requisite coursework, the student completes Professional Year II (PYII) of the MLS curriculum. PYI and PYII coursework typically is divided into five semester blocks (including at least one summer semester) beginning in either a fall or spring semester, but can also be extended beyond five semesters. Clinical practicum coursework is completed at the Mayo Clinic, which is an affiliated site.

Upon successful completion of MLS curricular requirements and UND Essential Studies coursework, the student receives a BS degree in MLS from UND. All BS degree graduates are eligible for national Board Certification and entry-level practice as a Medical Laboratory Scientist (MLS; also sometimes referred to as a Clinical Laboratory Scientist or Medical Technologist).

### **CATEGORICAL CERTIFICATES**

The Categorical Certificate program route allows students to become eligible for certification and professional employment at the Medical Laboratory Science (MLS) level within a specific categorical area of the laboratory. Categorical certificates are available in the following areas: Clinical Chemistry/Urinalysis; Hematology/Hemostasis; Immunohematology (Blood Bank); and Microbiology. Students that have earned a Bachelors degree from a regionally accredited college or university with at least 20 credits of general science coursework are eligible for the Categorical Certificate program.

Students will apply to the program and upon admittance, work with an academic advisor in development of an individual program of study to meet certificate requirements, which are outlined in the UND Academic Catalog. Students may choose to complete more than one categorical certificate. Coursework is completed online and/or at an affiliated categorical clinical site (typically the student is employed at this site), with no on-campus visits required.

Upon successful completion of Categorical Certificate requirements the student receives a certificate(s) from UND, and is eligible for entry-level practice and national Board Certification Examination(s) at the MLS level in specific certificate area(s), as follows:

<b>Categorical Certificate</b>	<b>ASCP Board of Certification Exam Eligibility*</b>
Clinical Chemistry/Urinalysis	Chemistry (C) Exam
Hematology/Hemostasis	Hematology (H) Exam
Immunohematology	Blood Bank (BB) Exam
Microbiology	Microbiology (M) Exam
All of the Above	Medical Laboratory Scientist (MLS) Exam

*\*All ASCP BOC Exams are at the MLS level (not specialist level)*

# POLICIES, PROCEDURES & PROCESSES

Related Links:

UND Code of Student Life: <https://UND.policystat.com/policy/5336470/latest/>

UND SMHS Student Policies: <https://med.UND.edu/policies/students.html>

UND MLS Student Resources: <https://med.und.edu/medical-laboratory-science/forms-handbook.html>

## **MODIFICATIONS to POLICIES, PROCEDURES and PROCESSES**

- The Medical Laboratory Science Professional and Academic Standards Committee (MLS PASC) will review and modify the UND MLS Undergraduate Handbook on an annual basis in May. The updated handbook will be available on the UND MLS website.
- If necessary, additional modifications may be made by the MLS PASC at any time. Modifications will be made available to students electronically and will take effect on the date of approval by the MLS PASC.
- The most current policies, procedures and processes will be applicable to all students. It is the student's responsibility to be aware of updates and/or modifications.

# MLS PROGRAM POLICIES, PROCEDURES & PROCESSES

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## I. PROFESSIONAL CURRICULUM (PY1 AND PY2) APPLICATION & ADVANCEMENT

Application and acceptance to the University of North Dakota (UND) is different than the application process of the MLS professional program. Acceptance (admission) to UND does not guarantee acceptance into the MLS professional program, nor does acceptance to the UND MLS professional program guarantee acceptance to UND. A separate application is required for each.

### A. General MLS Professional Program Application Processes

The application process will include:

1. An evaluation of pre-professional coursework for the following criteria:
  - a. Completion of required pre-professional curriculum.
  - b. Cumulative GPA of >2.8 on a scale of 4.0; those who are admitted but do not meet this criteria will be placed on probation within the MLS program.
  - c. A maximum of two required science and/or math courses with an initial grade of D or F can be repeated before entrance into the professional curriculum (PY1 and PY2).
  - d. A maximum of one letter grade of D is allowed to remain on a transcript for either a required math or science course.
  - e. A final grade of C or higher must be earned in all MLS courses.
  - f. A maximum of one MLS course can be repeated.

Applicants not meeting these criteria are still eligible to apply, but clarification of the un-met criteria may be requested and reviewed by the MLS Professional and Academic Standards Committee, and admission status may be impacted.

2. An evaluation of reference/advisor recommendations.
3. An evaluation of applicant-generated responses to the following:
  - a. A Critical Analysis Passage
    - i. The critical analysis is a component of the program application and is designed to evaluate critical thinking. The critical analysis passage is blindly scored by multiple MLS faculty/staff using an established rubric.
  - b. A Written-statement (self-assessment)
    - i. The written-statement is a component of the program application and is designed to assess writing skills. The written-statement is blindly scored by multiple MLS faculty/staff using an established rubric.
4. If information on the application is falsified, the applicant will NOT be considered for acceptance.
5. If the applicant has previously been terminated from a MLT/CLT or MT/MLS program, they will not be allowed to apply for entrance into the UND professional program (PY1 or PY2).
6. Students must complete a criminal background check in adherence with the SMHS Background Check policy.
7. If an applicant feels extenuating circumstances related to application criteria and/or processes exist, he/she should discuss the matter with the appropriate MLS faculty/staff to determine if a formal petition to the MLS Academic & Professional Standards Committee is warranted.

### B. Route-Specific MLS Professional Program Application & Advancement Processes

1. Traditional / WCAMLS / Bachelors + MLS:
  - a. To be eligible for application to the professional program, a minimum of 59 credits (semester) or equivalent must be completed before application.

- b. Admission into the MLS professional program is competitive and a maximum of 75 students will be admitted. The MLS Academic & Professional Standards Committee will evaluate and rank applicants based on the following:
  - i. Pre-professional coursework criteria
  - ii. Reference/advisor recommendations
  - iii. Applicant-generated responses
- c. Applicants will be notified via email of admission status (full admission, alternate admission, no admission). Applicants receiving alternate admission status will be placed on an alternate list in order of ranking, and moved to full admission status as/if openings become available. Applicants receiving non-admission status may be eligible to reapply for a future application cycle.
- d. Prior to advancement to PY2, students must submit an unofficial transcript documenting coursework completed after MLS program application to the UND MLS program for an audit (to verify pre-professional coursework requirements/criteria). The student will be notified if the audit reveals he/she is no longer eligible for PY2 coursework.
- e. Additionally, students transferring coursework to UND (including coursework completed after MLS program application) must submit an official transcript to the UND Office of Admissions. Students may experience course registration issues or delays until all required transfer credits have been received.

2. MLS Cohort Program:

- a. Prior to any professional coursework, applicants must complete the program application form and submit to the MLS Cohort coordinator. To be eligible, the applicant must be an employee of the Mayo Clinic Department of Laboratory Medicine & Pathology.
- b. Prior to advancement to PY2 coursework, students must:
  - i. Complete all UND Essential Studies requirements
  - ii. Complete all other required pre-professional coursework
  - iii. Complete all pre-professional and PY1 MLS courses
  - iv. Submit a Clinical Competency Checklist completed by a clinical supervisor (students requesting evaluation of previous clinical skills only)

3. MLT to MLS:

- a. Prior to any PY1 coursework, students must complete the program application and submit to the MLT to MLS coordinator. To be eligible, a student must have graduated from a NAACLS-accredited MLT program.
- b. Prior to advancement to PY2 coursework, students must:
  - i. Complete all UND Essential Studies requirements
  - ii. Complete all other required pre-professional coursework
  - iii. Complete all pre-professional and PY1 MLS courses
  - iv. Submit a Clinical Competency Checklist completed by a clinical supervisor

4. Categorical:

- a. Prior to any professional coursework, applicants must complete the program application form and submit to the UND Categorical coordinator. To be eligible, the applicant must have completed a baccalaureate degree from a regionally accredited college/university with at least 20 credits of general/basic science coursework and must be an employee at the affiliated clinical site.
- b. Advancement throughout professional coursework is contingent upon successful academic progress.



## II. CRIMINAL BACKGROUND CHECK

- A. The UND SMHS has a policy that requires criminal background checks of students in all health related programs, which can be found on the SMHS Student Policy Website.
- B. Per the SMHS policy, the criminal background checks must be completed through *Verified Credentials*, the approved agency. Students in the MLS Cohort, Categorical, and MLT to MLS program routes must UND MLS Faculty/Staff to determine if their employment background checks comply with the SMHS policy.
- C. A criminal background check must be completed at the time of application and again at the beginning of PY2 coursework. If criminal activity or allegations of criminal activity occurs *at any point* after the initial criminal background check (which occurs at the time of program application), the student must inform UND MLS faculty/staff immediately so that potential impact to academic progress can be assessed.
- D. The student is responsible for all fees associated with the *Verified Credentials* criminal background check, and must be able to pay the fees electronically at the time of background check submission.
- E. Discrepancies identified through the criminal background check will be reviewed by MLS faculty/staff and forwarded as appropriate to the SMHS Criminal Background Check Review Committee. Certain discrepancies may result in the student not being accepted into the MLS professional program or the student not being allowed to continue/advance in PY2.

## III. INHIBITING CONDITIONS

- A. Students who are known to have a condition (injury, infection, environmental disease) that may negatively impact themselves, fellow students, staff, faculty or patients have a professional obligation to inform and work with UND MLS faculty/staff to develop a plan to balance their own health, educational needs and confidentiality as well as the health of others with whom they may come in contact. See the UND SMHS Inhibiting Conditions Policy, found on the SMHS Student Policy website, for complete details.

## IV. DISABILITY ACCESS

- A. Contact UND MLS faculty/staff to request disability accommodations, discuss medical information, or plan for an emergency evacuation.
- B. To get confidential guidance and support for disability accommodation requests, students are expected to register with DSS at [UND.edu/disability-services](https://und.edu/disability-services) 280 McCannel Hall, or 701.777.3425.

## V. STUDENT/GRADUATE RECORDS

- A. All files concerning students are subject to the Family Education Rights and Privacy Act of 1974. Specific information concerning student records is published in the UND Code of Student Life.
- B. The Office of Admissions and Records (Registrar) maintains official documents for students enrolled in courses at the University of North Dakota, such as the application to the University, official transcripts from other institutions, UND transcripts and other such official documents. These records are maintained permanently.
- C. The Department of MLS also maintains a separate file on each student who has declared MLS as their major, whether earning a BS degree or a certificate of completion.

## **VI. UNIVERSITY REFUND POLICY**

- A. A student who drops or withdraws from the university after the beginning of instruction will be granted a refund of tuition in accordance with Undergraduate Academic Calendar published by the UND registrar ([UND.edu/academics/registrar/](http://UND.edu/academics/registrar/)). Note: no refund will be made to a student who is dismissed for failure to comply with UND MLS policies.

## **VII. UNEXPECTED UNIVERSITY OR PROGRAM INTERRUPTION/CLOSURE**

- A. In the event of an emergent situation that could impact University functions, a phone alert system at UND will notify all students, staff, and faculty of the immediate situation. Further information will be disseminated as the situation evolves. In addition, each department at UND has an established Continuity of Operations Plan (COOP) that will go into effect if the situation warrants, which includes direct notification of multiple departmental personnel (including the Program Director). The UND Department of MLS will work in cooperation with the UND Office of Emergency Management as appropriate. Course instructors will alert students to any potential course/schedule changes via Blackboard and/or email.
- B. In the event of an emergent or unforeseen circumstance arising that forces temporary or long-term closure of the program or University, within 30 days a teach-out plan will be implemented. In the teach-out plan, every effort will be made to provide students with options for the continuation of their program of study with the shortest interruption possible. Any refunds of tuition and fees would be determined by the UND Office of the Registrar.

## **VIII. LEAVE**

- A. Family leave, funeral leave, military leave, or sports participant leave will be given following the UND Code of Student Life Policies. A leave of absence may require a delay in completion of the program.

## **IX. DRUG AND ALCOHOL SCREENING**

- A. Any student may be subject to drug and/or alcohol screening as outlined in the SMHS Drug and Alcohol Screening and Education Program Policy. A positive drug/alcohol drug screen will be subject to disciplinary action up to and including immediate dismissal from the program. The complete Drug and Alcohol Screening and Education Program Policy can be found on the SMHS student policy website.

## **X. EMAIL COMMUNICATIONS**

- A. All students admitted to the MLS professional program and/or taking MLS courses will be assigned a UND email account. It is the student's responsibility to monitor this account regularly as all communication initiated from UND MLS faculty/staff will be made using this e-mail account.
- B. MLS faculty/staff will make every effort to respond to emails within 1-2 business days of receipt, unless otherwise indicated (ex. an out-of-office reply).

## **XI. PROMOTIONAL IMAGES**

- A. Photos and/or videos taken during MLS program coursework and activities may be utilized for educational and/or promotional purposes. Students not wanting their image to be utilized for these purposes must communicate the request in writing to the UND MLS Laboratory Manager.

## **XII. BIOHAZARD & SAFETY**

- A. Students are expected to be aware of and comply with the following safety standards and/or policies:
  - a. UND Bloodborne Pathogens Exposure Control Plan: <https://und.policystat.com/policy/7739092/latest/>
  - b. SMHS Bloodborne Pathogen Exposure: Immediate Steps
    - i. In the event of a needle stick, sharps injury, or exposure to blood or other potentially infectious material, follow the steps outlined in this link and any clinical site requirements: <https://med.und.edu/policies/bloodborne-pathogen-immediate-steps.html>
  - c. Department of MLS Safety Standard (Appendix 2)
  - d. Safety/Biohazard policies and procedures at the clinical affiliate site

## **XIII. STUDENT CONCERNS**

- A. If a student has a concern related to the safety of themselves or others, and/or the learning environment, he/she should communicate that concern to UND MLS faculty/staff immediately.

## **XIV. STUDENT PETITIONS**

- A. If a student feels extenuating circumstances have impacted or may impact programmatic decisions, he/she should discuss the matter with MLS faculty/staff to determine if a formal petition to the MLS Academic & Professional Standards Committee is warranted.

## **XV. STUDENT GRIEVANCES**

- A. Any student in a UND MLS program route and/or course can initiate an academic grievance related to decisions they feel are unfair and/or not in alignment with current policy. To initiate an academic grievance, students must follow the procedures outlined in the UND School of Medicine & Health Sciences (SMHS) Student Grievance Policy 3.9, which can be found on the UND SMHS website.
  - a. Procedural Note: Students must utilize the 'MLS Petition Form' (found on the UND MLS website) to submit the written grievance at the departmental level.

## **XVI. PROBATION STATUS**

- A. A student may be placed on probation within the Department of MLS for failure to comply with academic (grading, GPA, etc.) and/or standards of professional conduct policies.
  - a. A student being placed on probation will be provided with written documentation in the form of a probation letter indicating policy violations and requirements for continuance in the program.

- b. The probation letter must be signed by the student to indicate acknowledgement. A student's failure to sign the probation letter as directed will result in MLS program dismissal.
  - c. Failure to comply with probation letter requirements will result in MLS program dismissal (and may or may not be grounds for dismissal from UND, per UND policies).
- B. Students who have been placed on probation and meet the requirements established in the probation letter are still considered in good standing and will be allowed to continue in the program.
- C. Students on probation will be required to follow the academic and standards of professional conduct policies designated for students on probation.

## **XVII. DISMISSAL POLICIES**

- A. An instance of any of the following will be reviewed by the Department of MLS Professional and Academic Standards Committee and is grounds for immediate dismissal from the MLS program (and may or may not be grounds for dismissal from UND, per UND policies):
  - 1. Any proven evidence of academic dishonesty.
  - 2. Violation of the Health Insurance Portability and Accountability Act of 1996.
    - a. Disregard of the patient's right to confidentiality and/or privacy
    - b. Accessing patient/healthcare information not needed to complete laboratory duties
  - 3. Failure to comply with any institutional (University or clinical affiliate), department, program, or course policies/standards.
  - 4. Any activity or behavior that is careless, disruptive, unsafe, or harmful to oneself or others.
  - 5. Inability to meet UND MLS Essential Functions after reasonable accommodations pursued/attempted.
  - 6. Dismissal as determined by the UND Code of Student Life.
- B. Students who have been dismissed from the UND MLS program will not meet the degree requirements to earn a Bachelors degree or a certificate of completion and will not be eligible to take the board of certification exam.

## **XVIII. STANDARDS OF PROFESSIONAL CONDUCT**

- A. The student must comply with the Department of MLS Standards of Professional Conduct. The MLS Standards of Professional Conduct Evaluation Form (see Appendix 1) will be used to assess student compliance.
  - 1. If a student does not meet the Department of MLS Standards of Professional Conduct and the unmet standard warrants immediate dismissal per the Immediate Dismissal Policies outlined in this handbook:
    - a. The student is dismissed from the program, regardless of probation status.
  - 2. If a student does not meet the Department of MLS Standards of Professional Conduct and the unmet standard does not warrant immediate dismissal per the Immediate Dismissal Policies outlined in this handbook:
    - a. For the student not on probation: The student will be placed on probation; The student will receive documented notification outlining the unmet behavior/standard, and a written plan of corrective action. Failure to meet the requirements specified in the written plan will result in program dismissal.
    - b. For the student on probation: The student is dismissed from the program.

- c. All instances of unmet Standards of Professional Conduct, including probation status and program dismissals, are reviewed and approved by the Department of MLS Professional and Academic Standards Committee.

B. The Department of MLS Standards of Professional Conduct is as follows:

*The student is expected to:*

1. demonstrate time management skills by completing assigned tasks within scheduled timeframe
2. follow oral and written directions
3. demonstrate emotional stability to function effectively under stress, remain flexible, and adapt to an environment that may change rapidly without warning and in unpredictable ways
4. correlate principles to practice
5. demonstrate neatness by making the work area and submitted documents presentable
6. attend, be punctual, and be present for the duration of all scheduled program coursework
7. maintain consistent, positive work behaviors including initiative, preparedness, dependability, persistence, and follow-through
8. produce quality work with precision and accuracy in accordance with established protocol
9. work independently and show self-direction, personal responsibility, and accountability
10. project an image of professionalism through appearance, dress, hygiene, positive attitude, value of coursework and body language
11. read, comprehend, and respond to English communications (including person-to-person, telephone, electronic, and written forms) in an effective, respectful, and time-sensitive manner
12. demonstrate appropriate interpersonal behaviors while interacting with others during program-related occurrences, including but not limited to: courtesy and cooperation; receiving and responding to constructive feedback; respect and empathy; and non-threatening conduct
13. develop organizational, prioritization, and multi-tasking skills throughout all program coursework
14. abstain from use of illegal, prescription, over-the-counter, experimental, recreational, or other drugs that have a significant effect upon an individual's judgement
15. comply with all institutional (University and clinical affiliate), department, program, course, and laboratory policies and procedures, including safety standards/policies
16. demonstrate academic and professional integrity as outlined in departmental policies/procedures/standards
17. demonstrate responsible and appropriate use of electronic resources and communication systems (including but not limited to: cell phones, computers, tablets, email, instant messaging, social media, blogs, and websites) that is not disruptive or harmful to oneself or others

## **XIX. COURSE SECTIONS**

- A. For all MLS courses, MLS advisors will assign students to the appropriate course section for their designated route/program of study. Students will receive registration information for these courses during required advisement sessions.

## XX. PROCTOR INFORMATION

- A. It is the student's responsibility to find an acceptable proctor for distance coursework, and enter his/her proctor's information in the secure UND MLS Proctor Database (link to database found on the MLS website). At the beginning of each semester, the student should verify that his/her proctor information is correct. Falsification of proctor information will be grounds for dismissal from the program.
- B. A proctor MUST be a supervisor, librarian, high school principal or someone of authority. A proctor CANNOT be a friend, roommate, or family member. The proctor must have and use a professional email address. Proctors forfeit eligibility to enroll in any future undergraduate MLS course.
- C. Proctors and their supervisory role will be verified for authenticity by MLS faculty/staff. The MLS program reserves the right to approve/disapprove all proctors; students who proctors have been disapproved must find an alternate proctor.
- D. All closed-book exams and quizzes must have proctor supervision unless specified by course instructor.

## XXI. COURSE POLICIES

- A. Students must comply with all course policies listed in MLS course syllabi. Student compliance or non-compliance with these course policies will be reflected in the MLS Standards of Professional Conduct evaluations and addressed according to the MLS Standards of Professional Conduct Policy.

## XXII. GRADING

- 1. Grades for MLS courses may be determined using the following learning domains:

Domains	Examples
Cognitive	Quizzes, Assignments, Exams
Psychomotor	Performance in the laboratory
Affective	Standards of Professional Conduct Evaluation

- 2. A final grade of C or higher is must be earned in all Medical Laboratory Science (MLS) courses.
- 3. If a student receives a "D" or "F" grade in MLS 101, 234, 234L, 301, 325, 325L, 336, 340, 380, 394:
  - a. The student will meet with his/her academic advisor to evaluate and adjust the program of study to facilitate re-taking of the failed course(s). Repeated courses may impact program admission status and/or program advancement.
- 4. If a student receives an initial "D" or "F" grade in MLS 471, 472, 473, 474, 477, 477L, 478, 479, 483 (performance only), 485 (performance only), 491, 492, 495, 498 and/or does not successfully complete a single critical objective within a course, the following rules apply:
  - a. For the student not on probation:
    - i. The student is placed on probation for the remainder of PYII.
    - ii. The student will receive a written remediation plan developed by UND faculty/staff that will establish competence for continuance in the program. The written remediation plan will be signed by the instructor of the course/route coordinator, the MLS Program Director, and the student. Failure to comply with the written remediation plan will result in program dismissal.
  - b. For the student on probation:

- i. The student is dismissed from the MLS Program and continuance in the program.
- 5. If a student receives an initial “D” or “F” grade in MLS 480, 481, 483 (didactic only), 484, 485 (didactic only), 488, 494:
  - a. For the student not on probation:
    - i. First failing course grade: The student will receive a written remediation plan developed by UND faculty/staff that will establish competence for continuance in the program. The written remediation plan will be signed by UND faculty/staff and the student. Failure to comply with the written remediation plan will result in program dismissal.
    - ii. Second failing course grade:
      - 1. The student is placed on probation for the remainder of PYII.
      - 2. The student will receive a written remediation plan developed by UND faculty/staff that will establish competence for continuance in the program. The written remediation plan will be signed by UND faculty/staff and the student. Failure to comply with the written remediation plan will result in program dismissal.
  - b. For the student on probation:
    - i. First failing course grade: The student will receive a written remediation plan developed by UND faculty/staff that will establish competence for continuance in the program. The written remediation plan will be signed by UND faculty/staff and the student. Failure to comply with the written remediation plan will result in program dismissal.
    - ii. Second failing course grade: The student is dismissed from the MLS Program and continuance in the program.
- 6. If a student is allowed to remediate an initial “D” or “F” grade, upon successful completion of remediation the student would earn a letter grade of “C” for the course. Unsuccessful remediation would result in the student earning the original failing grade of “D” or “F”.

### **XXIII. HEALTH INSURANCE**

- A. Students are responsible for having a health insurance policy throughout the duration of coursework completed at a clinical affiliate site. UND program officials will complete verification of this policy.
- B. Students are responsible for payment of health-related bills that occur, including needle sticks or bloodborne/airborne pathogen exposure.

### **XXIV. LIABILITY INSURANCE**

- A. The University will provide professional liability insurance for University students and faculty/staff liaisons with maximum limits of \$1,000,000 per occurrence and \$5,000,000 annual aggregate.

### **XXV. CLINICAL SITE PLACEMENT**

- A. All clinical sites affiliated with the UND MLS program have met equivalency requirements which ensure that the site can provide an experience that meets defined UND MLS learning objectives.

- B. The UND SMHS MLS program guarantees clinical placement at an affiliated site for all students admitted/advanced into the Professional Year II of the curriculum. The program does not guarantee that the assigned clinical placement will be at one of the students' selected preferences or desired locations.
- C. If a student declines the clinical site placement assigned to him/her, he/she will not be allowed to continue in the program.
- D. Students should not begin communication with the assigned clinical site until authorization to do so has been given by UND MLS faculty/staff.
- E. Clinical site placements will be made in accordance with defined procedures established for each route of study.

#### **Clinical Site Placement Procedures:**

- F. MLS Cohort Students:
  - a. Clinical site placement will be at the Mayo Clinic, or other Mayo Clinic affiliate. Students will work with the program route coordinator to determine specific dates and/or locations for clinical practicum experiences.
- G. Categorical Certificate Program Students:
  - a. Prior to application, students will work with the program route coordinator to determine the clinical site assignment, including specific dates and/or locations for clinical practicum experiences.
- H. MLT to MLS Students:
  - a. Students will work with the program route coordinator to determine a clinical site assignment, including specific dates and/or locations for clinical practicum experiences.
- I. All Other Program Students (Traditional, WCAMLS, Bachelors+MLS):
  - a. A list of clinical sites affiliated with the UND MLS program can be found on the UND MLS webpage (note: a clinical site's ability to take a student is variable and subject to change based on their current resources; UND MLS personnel will provide students with the most current clinical site list at the beginning of the clinical site placement process).
  - b. Students who have been awarded full admission or alternate admission status will be contacted by UND clinical education coordinators via email the first week of December with a link to the online clinical site request survey and a list of current clinical site options. The student must complete the survey by date indicated in the email; surveys received after this date will not be considered in the first round of clinical site placement. This survey will ask for students' top three preferred clinical site locations (from the provided list). Additionally, certain clinical sites may implement one or more of the following, which will be communicated to students:
    - i. Interviews. Some clinical sites require that the student interview for a placement position (note: UND MLS does not participate in the interviews).
    - ii. Microbiology rotation. Students assigned to clinical sites that are unable to meet UND MLS defined learning objectives in the area of microbiology will be required to complete a Clinical Intensive Rotation in microbiology on-campus at UND.
    - iii. Unique requirements. Certain clinical sites may have other unique requirements including but not limited to: drug/alcohol testing, onboarding processes, vaccination requirements, additional caregivers background check, etc. Note that there may a fee associated with these requirements for which the student is responsible.
  - c. To complete clinical site placements, the Department of MLS Clinical Site Placement Committee (CSPC) will utilize clinical site preference survey responses and faculty/staff feedback related to which type of learning environment best supports individual student learning. When possible,



students will be assigned a clinical site that was one of their indicated preferences. Each year, clinical sites will communicate to UND MLS the maximum number of student rotations they can accommodate. When the number of students requesting a site exceeds the communicated maximum capacity, a lottery will be utilized to determine placement. All students indicating preference (first, second, or third) of a site that requires an interview will be provided contact information by UND MLS to set-up the interview. The student may opt out of the interview process at that time, and will be allowed to select a replacement clinical site preference. Students not selected by lottery or by an interviewing site will be contacted by the MLS CSPC for their next three preferences of remaining available clinical sites. A lottery will again be utilized to determine placement when demand exceeds capacity.

- d. Students with alternate admission status will be entered into the clinical placement process upon advancement to full admission status.

## **XXVI. CLINICAL PRACTICUM HOURS**

- A. The scheduling of required clinical practicum rotations is influenced by workflow at the assigned clinical affiliate and the desire to expose students to various skillsets. As such, clinical practicum experiences may occur during any shift.

## **XXVII. EMPLOYMENT/SERVICE WORK**

- A. Service Work is defined as performance of duties expected of a paid employee by an unpaid student. Upon demonstration of proficiency in the learning environment, students may perform clinical tests under the direct supervision of a qualified laboratorian employed by the clinical affiliate. At no time is the unpaid student expected, nor allowed, to perform service work and/or replace paid employees.
- B. A student can seek out optional employment at his/her own discretion. However, employment is not a required program component and this does not fall under any academic jurisdiction.

## **XXVIII. UNEXPECTED DISCONTINUANCE OF A CLINICAL AFFILIATE**

- A. In the event of an unexpected discontinuation of a clinical site affiliation that a student has been or is assigned to, the Department of MLS will secure an alternate clinical site to allow the student to finish his/her program of study. Clinical site availability may delay program completion time.

## **XXIX. FINAL COMPREHENSIVE EXAM**

- A. A final comprehensive exam will be given during the last semester of the program. The final comprehensive exam is formatted to mimic a national certification exam for MLS. To ensure preparedness for the national certification exam, students earning a score below the designated cut-off will complete additional preparatory exercises.

## **XXX. NATIONAL CERTIFICATION EXAM ELIGIBILITY**

- A. The issuing of a baccalaureate degree, certificate or categorical certificate in MLS from the University of North Dakota is NOT contingent upon the student passing any type of national/external certification examination.

# ROUTE-SPECIFIC POLICIES, PROCEDURES & PROCESSES

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## I. TRADITIONAL / WCAMLS / BACHELORS + MLS / MLT TO MLS

### A. Clinical Practicum Attendance Expectations

- a. Daily Schedule:
  - i. Students are expected to report to their clinical affiliate on time, as scheduled.
  - ii. Students are expected to stay at the clinical affiliate until dismissed by the bench instructor for the day.
  - iii. Asking the bench instructor to be able to leave early is not appropriate.
  - iv. Student compliance or non-compliance with attendance expectations will be reflected in the MLS Standards of Professional Conduct evaluations
- b. Personal/Illness Leave Time:
  - i. A maximum of five personal/illness leave days are granted. Personal/illness leave is only meant to be used when absolutely necessary.
  - ii. For each day of an illness related absence, the student MUST call the department/area he/she is currently rotating in at least ½ hour before the scheduled arrival time, AND email a UND MLS Faculty/Staff.
  - iii. Personal/illness time must be taken in a minimum of a four-hour block.
  - iv. The student may request personal leave time only with the consent of the clinical affiliate site liaison. Notification must be made at least five days in advance.
- c. Make-Up Time:
  - i. If the student exceeds more than the total of five personal days allowed, each day in excess must be made up in full.
  - ii. If an excess of personal leave time has occurred, the clinical affiliate may decline the opportunity for make-up time to be completed at their institution and an alternative site placement may occur.
  - iii. Make-up days may delay graduation and/or certification exam eligibility.
- d. Extended Time Off:
  - i. If the student needs an extended period of time off, the clinical affiliate site liaison, the student, and UND MLS faculty/staff will assess the situation and make appropriate adjustments if possible, and in accordance with established policies (ex. Leave, Inhibiting Conditions, etc.).
  - ii. An alternate clinical affiliate site may need to be assigned.
- e. Inclement Weather:
  - i. Notification of university/college closure due to inclement weather does not automatically mean the student is excused from attending clinical practicum for that day.
  - ii. For each day of inclement weather, the student MUST call the department/area he/she is currently rotating in at least ½ hour before the scheduled arrival time to determine whether attendance is appropriate.

## II. MLT to MLS

### A. Clinical Practicum Didactic Coursework (study guides):

- a. MLT's or CLT's who are not national board certified, regardless of work experience, will be required to complete all study guide courses with a grade of "C" or better before the BS MLS degree is awarded.

- b. Certified MLT's or CLT's with less than three years generalist experience will be required to complete all study guide courses with a grade of "C" or better before the BS MLS degree is awarded.
- c. Certified MLT's or CLT's with at least three years generalist experience may be eligible to complete a three-credit review course instead of the traditional study guide format providing the following criteria have been met:
  - i. Generalist experience must be from within the past seven years.
  - ii. Generalist experience must include working in all four major areas of MLS (Immunohematology, Microbiology, Hematology, and Clinical Chemistry).
  - iii. Eligibility will be determined by reviewing the student's competency checklist and past work experience.
  - iv. Final determination of eligibility will be made by the MLT coordinator and/or committee decision.

### III. MLS COHORT PROGRAM

#### A. Proctor Policies:

- a. In addition to the proctor information in the general policies, Mayo Clinic proctors forfeit eligibility to enroll in either the UND MLS Cohort Program at Mayo Clinic or UND MLS Categorical program.
- b. A proctor MUST be a supervisor, education specialist or someone of authority within the Mayo Clinic System.
- c. All closed book exams/quizzes must have proctor supervision unless specified by the course instructor. Proctor verification (electronic or handwritten) will be required for all proctored exams/quizzes.

#### B. Competency Checklist:

- a. Completion of this checklist is required prior to starting their senior semesters for any student requesting evaluation of previous clinical skills. If a student does not complete the competency checklist they will be required to enroll in all courses as scheduled.
- b. The checklist is used to indicate the level of performance a cohort student has already achieved for each of the following major areas of the laboratory: Microbiology, Chemistry, Immunohematology, Hematology, Coagulation, Body Fluids, Urinalysis, Phlebotomy, and Immunology.
- c. A Clinical supervisor must complete this from by checking the appropriate column (highest level attained) following an assessment of the cohort student's past work history.

#### C. Intensive Laboratory Sessions:

- a. There are three mandatory senior intensive laboratory sessions which all students must attend. These intensive laboratory sessions take place over a one to two week period and are only offered once per year, each in a separate semester, at designated dates and starting times. Intensive labs are taught by UND instructors in Stabile-350.
- b. Students may be assigned additional intensive laboratory experiences beyond the three primary labs scheduled in the senior year. Students are required to attend all sessions as there are no makeup labs and intensive labs are only offered once per year. Students must make their own arrangements with department supervisors so that they can attend.

#### D. Clinical Intensive Rotations (CIR's):

- a. There are four mandatory core clinical rotations (MLS 491, 492, 495, 498). These clinical rotations are taught by Mayo Clinic education specialists. All CIR's are only offered on designated dates and starting times.

- b. Special coagulation is taught by Mayo Clinic education specialists on designated dates and starting times.
- E. Study guide courses:
  - a. All students participating in the MLS Cohort Program will be required to complete all study guide courses with a grade of “C” or better before the BS MLS degree is awarded. These mandatory review courses (MLS 480, 481, 483, 484, 485, 488, 494) should be taken in the student’s final semesters, unless approved by their advisor to be taken earlier. Completion of the study guides, quizzes, and exams within these courses will help prepare students for the UND Final Comprehensive exam as well as the national board of certification exam. Students will not be released (eligible) to take the ASCP national certification exam until all study guide courses have been satisfactorily completed, and the student has taken the UND Final Comprehensive Exam.
- F. MLS Cohort Graduation Ceremony:
  - a. It is expected that all MLS Cohort students graduating with a BS MLS degree take part in the graduation celebration at Mayo Clinic.
- G. MLS Cohort Signature Page:
  - a. The Signature Page for MLS Cohort students will include the traditional acknowledgement items found on the last page of this handbook, as well as additional items specific to the program route. UND MLS faculty/staff will provide students with this Signature Page.

## APPENDIX 1: Department of MLS Standards of Professional Conduct Evaluation Form

### DEPARTMENT OF MLS STANDARDS of PROFESSIONAL CONDUCT EVALUATION

<b>Student</b>		<b>Date</b>		<b>Course(s)/Area(s)</b>	
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<b>MEETS</b>	The student is meeting the standard
<b>NEEDS IMPROVEMENT</b>	The student needs improvement and requires re-direction/feedback to move toward 'meets'
<b>DOES NOT MEET</b>	The student is not meeting the standard and requires further action beyond re-direction/feedback, as described in the MLS professional policies

STANDARD OF PROFESSIONAL CONDUCT		MEETS	NEEDS IMPROVE- MENT	DOES NOT MEET
1	demonstrate time management skills by completing assigned tasks within scheduled timeframe			
2	follow oral and written directions			
3	demonstrate emotional stability to function effectively under stress, remain flexible, and adapt to an environment that may change rapidly without warning and in unpredictable ways			
4	correlate principles to practice			
5	demonstrate neatness by making the work area and submitted documents presentable			
6	attend, be punctual, and be present for the duration of all scheduled program coursework			
7	maintain consistent, positive work behaviors including initiative, preparedness, dependability, persistence, and follow-through			
8	produce quality work with precision and accuracy in accordance with established protocol			
9	work independently and show self-direction, personal responsibility, and accountability			
10	project an image of professionalism through appearance, dress, hygiene, positive attitude, value of coursework and body language			
11	read, comprehend, initiate and respond to English communications (including person-to person, telephone, electronic, and written forms) in an effective, respectful, and time-sensitive manner			
12	demonstrate appropriate interpersonal behaviors while interacting with others during program-related occurrences, including but not limited to: courtesy and cooperation; receiving and responding to constructive feedback; respect and empathy; and non-threatening conduct			
13	develop organizational, prioritization, and multi-tasking skills throughout all program coursework			
14	abstain from use of illegal, prescription, over-the-counter, experimental, recreational, or other drugs that have a significant effect upon an individual's judgment			
15	comply with all institutional (University and clinical affiliate), department, program, course, and laboratory policies and procedures, including safety standards/policies			
16	demonstrate academic and professional integrity as outlined in departmental policies/procedures/standards			
17	demonstrate responsible and appropriate use of electronic resources and communication systems (including but not limited to: cell phones, computers, tablets, email, instant messaging, social media, blogs, and websites) that is not disruptive or harmful to oneself or others			

**Evaluator(s):**

**Comments/Feedback:**

**Student Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

*-By signing this form, I am indicating that I have read and understand the comment provided in this evaluation and/or written plan.*

## APPENDIX 2: Department of MLS Laboratory Safety Standard

University of North Dakota  
Department of Medical Laboratory Science  
Grand Forks, ND

**STANDARD: Laboratory Safety**

**Effective: 04/10/2019**

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### PURPOSE

This standard establishes general safe practices in the Medical Laboratory Science (MLS) biohazard laboratory. Control measures described in this standard are essential for protecting all laboratory occupants from potential biological, chemical, and physical hazards.

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### ROLES AND RESPONSIBILITIES

**Safety Coordinator** - Provide guidance and ensure safety in the laboratory

**Faculty/Staff/GTA's** - Comply with all MLS safety policies, report unsafe working conditions as well as accidents to the MLS Safety Coordinator or Program Director

**Students** - Comply with all MLS safety policies

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### DEFINITIONS

**Work Practice Controls** – Also known as Administrative Controls, are changes in work procedures such as written safety policies, rules, posted signs, alarms and warnings, and training with the goal of reducing the duration, frequency, and severity of exposure to hazardous chemicals or situations.

**Personal Protective Equipment (PPE)** – Equipment worn or used to minimize exposure to physical, chemical, or biological agents. Per OSHA regulations, personal protective equipment must prohibit blood or other potentially infectious materials (OPIM) from passing through to clothing, skin, eyes, mouth, or other mucous membranes.

**Sharps** – Objects that can penetrate skin, such as needles, scalpels, broken glass, and capillary tubes. If blood or other potentially infectious materials (OPIM) are present or may be present on the sharp, it is considered a contaminated sharp.

**Standard precautions** – 1<sup>st</sup> tier of basic infection control. A set of precautions applied to all patients designed to reduce the risk of transmission of bloodborne and other potentially infectious materials (OPIM) in the health care setting. All blood, tissue, body fluids, secretions, and excretions (except sweat) are considered potentially infectious.

## STANDARD: Laboratory Safety

### GENERAL SAFETY

#### Engineering Controls

Engineering controls are controls designed to reduce work related hazards. They reduce exposure by removing, eliminating, or isolating the hazard.

Biological Safety Cabinet (BSC)	<ul style="list-style-type: none"><li>• Act as a primary barrier to contain hazardous biological materials within the cabinet and away from the laboratorian's breathing zone.</li><li>• Includes three classes (I, II, III). Class II is further divided into four types: A1, A2, B1, B2.</li><li>• The MLS biohazard lab has two (2) class II, type A2 BSC's.</li></ul> <p>Students will be instructed on the use of the BSC's as needed based on the class and activity.</p>
Centrifuge Safety Equipment	<ul style="list-style-type: none"><li>• Protects against release of aerosols</li><li>• Includes safety cups, rotors with covers, removable rotors, and O-rings</li><li>• Always check tubes for cracks prior to placing in centrifuge</li></ul>
Pipetting Aids	<ul style="list-style-type: none"><li>• For the safe use of pipettes</li><li>• Bulbs, pipettes with cotton plugs</li></ul>
Splatter shields	<ul style="list-style-type: none"><li>• Protects from exposure when opening specimen containers or manipulating specimens in a manner that would cause a splash</li></ul> <p>Students will be instructed on the use of splatter shields as needed.</p>
Enclosed Electrical Incinerators	<ul style="list-style-type: none"><li>• Reduce splatter when decontaminating bacteriological loops</li></ul> <p>The MLS Biohazard laboratory uses only enclosed electrical incinerators.</p>

#### Personal Protective Equipment

PPE is not a substitute for good engineering or work practice controls. PPE is used in conjunction with these controls to ensure safety.

Fluid Resistant Laboratory Coats	<p>Fluid resistant laboratory coats are to be worn at all times in the MLS Biohazard laboratory. It is at the discretion of the instructor whether or not students need to wear lab coats while in the lab for lecture only. Cloth lab coats are not allowed.</p> <ul style="list-style-type: none"><li>• Lab coats must be long sleeved, knee length, button in the front<ul style="list-style-type: none"><li>○ Students<ul style="list-style-type: none"><li>▪ White lab coats</li><li>▪ Purchase through UND MLS Club or UND Bookstore.</li></ul></li><li>○ Faculty/Staff/GTA's - Ceil Blue lab coats</li></ul></li></ul>
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**STANDARD: Laboratory Safety**

	<ul style="list-style-type: none"><li>• Remove lab coat immediately if it becomes contaminated with hazardous materials. Place contaminated lab coats into marked biohazard bags for laundering.</li><li>• Remove lab coat prior to leaving the laboratory. Lab Coats are not to be worn outside of the MLS biohazard lab.</li><li>• Lab coats are laundered by UND laundry services. Bringing lab coats home for laundering is prohibited.</li></ul>
Disposable Gloves	<p>Disposable gloves must be worn in the laboratory when performing tasks where contact with blood or OPIM is possible, including surfaces contaminated with these materials.</p> <ul style="list-style-type: none"><li>• Immediately remove gloves that are contaminated with blood or OPIM and discard in the biohazard containers. Wash hands before putting a new pair of gloves on.</li><li>• Gloves should be replaced when they are torn, punctured, wet, or when their ability to function as a barrier is compromised.</li><li>• Do not wash or reuse disposable gloves</li><li>• Remove gloves and wash hands when finished working with hazardous materials as well as prior to leaving the laboratory at any time.</li><li>• Remove gloves using an aseptic technique and discard in the biohazard waste.</li></ul> <p>Nitrile gloves are provided by the MLS department. In the case of allergy to provided gloves, other alternatives will be offered by the department.</p>
Heat Resistant Gloves	<p>Protect hands when handling hot objects.</p> <ul style="list-style-type: none"><li>• Use when removing autoclave bins or handling other hot objects such as electrophoresis gels.</li></ul>
Face and Eye Protection	<p>Safety goggles, face shields, or other eye and face protectors need to be worn when performing activities that pose a risk of splashing hazardous substances into the eyes, nose, or mouth.</p> <ul style="list-style-type: none"><li>• This type of exposure may happen during tasks such as handling chemicals or infectious materials.</li><li>• Prescription eyeglasses do not offer adequate protection from splashes. Safety glasses that fit over the top of prescription glasses will be required.</li></ul> <p>Safety goggles and/or face masks, including those that fit over the top of prescription glasses, will be provided by the MLS department.</p>



## STANDARD: Laboratory Safety

### Sharps Engineering Controls

Additional engineering controls to use when working with sharps.

Handling of Sharps	<p>Handle all needles, contaminated glass, and other sharp objects with extreme caution.</p> <ul style="list-style-type: none"><li>• Never purposely bend, break, or re-cap used needles.<ul style="list-style-type: none"><li>◦ *OSHA exception: if the procedure requires the contaminated needle to be recapped or removed and no alternative is feasible and the action is required by the medical procedure. If such action is required, then the recapping or removal of the needle must be done by the use of a mechanical device or a one-handed technique.</li></ul></li><li>• Needles with safety shields will be used for all phlebotomy procedures.</li><li>• After use, place all sharps in a puncture-resistant container.</li></ul>
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### Work Practice Controls

Infection Control	<ul style="list-style-type: none"><li>• Mouth pipetting is prohibited.</li><li>• Hands must be kept away from the mouth, nose, eyes, and other mucous membranes to reduce the possibility of self-inoculation.</li><li>• Use Biohazard wipes when removing the tops from specimens to minimize aerosol production.</li><li>• Never leave a discarded tube or infected material unattended or unlabeled.</li><li>• The laboratory door must be kept shut (do not prop open). This is to ensure proper air exchange as well as to reduce the risk of biohazard contamination outside of the laboratory.</li></ul>
Hand Hygiene	<p>Hands should be washed after the following:</p> <ul style="list-style-type: none"><li>• Removing gloves</li><li>• Before leaving the laboratory</li><li>• Before and after contact with patients</li><li>• Before eating, drinking, smoking or the manipulation of contact lenses</li><li>• Immediately after accidental contact with blood or OPIM.</li></ul> <p>Steps recommended for proper handwashing:</p> <ol style="list-style-type: none"><li>1. Wet hands with clean running water (warm or cold) and apply soap.</li><li>2. Rub hands together to make a lather and scrub the well. Be sure to scrub the back of the hands, between fingers, and under nails.</li><li>3. Continue rubbing hands for at least 20 seconds. Rinse hands well under running water.</li><li>4. Dry hands using a clean towel.</li><li>5. Use towel to turn off faucet.</li></ol>

**STANDARD: Laboratory Safety**

Decontamination	<p>Decontaminate work areas with an appropriate chemical germicide after a spill with blood or OPIM and at the end of every laboratory session.</p> <ul style="list-style-type: none"><li>• Wear gloves and appropriate PPE when decontaminating work surfaces.</li><li>• Commercial disinfectants or a 1:10 bleach solution will be used in the MLS biohazard lab.</li></ul> <p>For biohazard spills, notify an instructor immediately.</p> <ul style="list-style-type: none"><li>• Decontaminate work space as soon as feasible after a spill of blood or body fluid.</li><li>• PPE and double gloves should be worn when doing the clean-up.</li><li>• Saturate the spill with bleach and let sit for five minutes.</li><li>• If glass is involved, the spill should be picked up with a biohazard disposal kit or dustpan and broom and disposed of in a biohazard labeled sharps container.</li></ul> <p>For chemical spills, notify an instructor immediately.</p> <ul style="list-style-type: none"><li>• Follow all directions indicated in the SDS sheet.</li><li>• For small spills, use the chemical spill kit located in the safety cabinet</li><li>• For large spills, contact the UND Office of Safety Immediately.</li></ul>
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**Emergency Aids**

Eyewash Stations	<p>In the event of a hazardous splash to the eye, immediately notify an instructor and proceed to the nearest eyewash station.</p> <ul style="list-style-type: none"><li>• Active the eyewash.</li><li>• Hold eyes open and flush for a minimum of 15 minutes, rolling the eyes left to right and up and down to ensure all surfaces are flushed.</li><li>• Contact lenses may be gently taken out during flushing.</li></ul> <p>Immediately seek medical attention after flushing is complete.</p>
Emergency Shower	<p>In the event of a hazardous splash to the body, immediately notify an instructor and proceed to the nearest emergency shower.</p> <ul style="list-style-type: none"><li>• Stand under the shower and turn water on</li><li>• Remove contaminated clothing while under the shower</li><li>• Rinse for a minimum of 15 minutes.</li></ul> <p>Immediately seek medical attention after rinsing is complete.</p> <p>Instructors will notify UND Office of Safety in the event the emergency shower is used to control the water from leaking to other areas of the building.</p>

## **STANDARD: Laboratory Safety**

### **Waste Disposal**

Students will be instructed on proper waste disposal during safety orientation.

Biohazard Waste Containers	Specimens, including blood and OPIM must be disposed of in a container that prevents leakage. <ul style="list-style-type: none"><li>• Containers must have a biohazard label and be red/orange in color.</li><li>• All gloves, plastic transfer pipettes, and anything contaminated with blood or OPIM that is not a sharps must be disposed of in biohazard waste.</li></ul>
Sharps containers	All needles and contaminated glass are to be disposed of in sharps containers. <ul style="list-style-type: none"><li>• Sharps containers must be impervious, puncture resistant, and rigid to eliminate the potential of physical injury.</li><li>• All needles and lancets as well as contaminated glass slides, tubes, and glass pipettes.</li></ul>
Regular Waste	All other waste not sharps or considered biohazard. <ul style="list-style-type: none"><li>• Paper towels used for handwashing and decontaminating work surfaces</li><li>• Paper products such as wrappers and lens paper/kim wipes.</li></ul>

### **Personnel Responsibility**

Food, Drink, and Like Substances	<ul style="list-style-type: none"><li>• Eating, drinking, smoking, handling contact lenses, or putting anything in one's mouth while in the laboratories where there is a reasonable likelihood of occupational exposure is prohibited.</li><li>• Chewing gum is acceptable, however, it must be placed in one's mouth prior to entry into the lab.</li><li>• Food and beverages are not to be kept in refrigerators, freezers, shelves, cabinets, counter or bench tops or other areas designated as work areas by the laboratory or where blood or other potentially infectious materials are present or may be present.</li></ul>
Cosmetics, Hair, Beards, and Jewelry	<ul style="list-style-type: none"><li>• Application of cosmetics in the MLS biohazard lab is prohibited. Hand cream is not considered a cosmetic and is permitted.</li><li>• Hair longer than chin length must be secured back to prevent it from contact with contaminated materials and away from moving equipment such as centrifuges.</li><li>• Jewelry or flowing scarves that can become caught in equipment or hang into infective materials need to be removed prior to working in the lab.</li><li>• Men with beards should observe the same precautions provided for long hair. Long beards are dangerous because they can get caught in moving equipment. All beards are sources of bacterial contamination.</li></ul>

**STANDARD: Laboratory Safety**

Personal Property	<ul style="list-style-type: none"><li>• Backpacks must be stored either in the shelves on the south side of the MLS laboratory or in the student's respective learning community.</li><li>• Personal electronic device (e.g., cell phone, laptop computer) use by students is not allowed in the MLS biohazard lab. Personal electronic devices may be kept in backpacks stored in their designated area in the lab.<ul style="list-style-type: none"><li>○ Computers with keyboards/mice are available at every lab bench station for student use.</li><li>○ Instructor's may, at times, use personal electronic devices in areas away from sample testing in order to facilitate teaching.</li></ul></li></ul>
Hygiene	<p>Students must maintain proper hygiene while in attendance in the MLS laboratory. This includes, but is not limited to:</p> <ul style="list-style-type: none"><li>• Showering/bathing daily</li><li>• Maintaining clean, neat hair</li><li>• Using personal care products (e.g. deodorant, toothpaste)<ul style="list-style-type: none"><li>○ Fragrant products such as perfume, cologne, other strongly scented products, and essential oils are not to be used in the MLS laboratory.</li></ul></li></ul>

**CLOTHING/ATTIRE**

Clothing	<p>Proper clothing is essential while working in the laboratory. The dress code for the laboratory is casual: jeans/pants/scrubs are all OK. Absolutely no shorts. Dresses are allowed provided they cover the entire leg (see clearance guideline below) and are worn with socks and appropriate shoes.</p> <ul style="list-style-type: none"><li>• Clothing must be clean, neat, and in good repair.</li><li>• Clothing must fit appropriately.</li><li>• Legs must be completely covered in the laboratory.<ul style="list-style-type: none"><li>○ No skin may show around ankle area.</li><li>○ Pants must not have any holes.</li></ul></li><li>• Pants or dresses may not drag on the floor when in the lab. Dresses and pants should have 1 to 1.5 inches of clearance from the floor.</li></ul>
Footwear	<ul style="list-style-type: none"><li>• Shoes should be comfortable, rubber-soled, and cover the entire foot, including the toe, heel, and instep. Clog-style shoes are not appropriate footwear, even if they have a heel strap.</li><li>• Canvas shoes are not recommended as they may absorb chemicals and infectious fluids. Leather, vinyl, or synthetic fluid-impermeable material is suggested.</li></ul>

## STANDARD: Laboratory Safety

### CHEMICAL SAFETY

General	<ul style="list-style-type: none"> <li>Students will be informed as to any hazards associated with chemicals used for laboratory tasks.</li> <li>Always add acid to water</li> <li>Never smell a chemical directly. Vapors should be wafted toward the nose if necessary.</li> <li>Safety Data Sheets for all chemicals are kept in the SDS binder in the Safety Cabinet in the MLS Biohazard lab.</li> <li>All chemicals must be properly labeled. Primary containers must be labeled according to the Globally harmonized System (GHS) of classification. Secondary containers may either be labeled according to GHS regulations or by the National Fire Protection Agency (NFPA) regulations.</li> </ul> <p>Note: It is a direct OSHA violation to re-label primary containers.</p>
NFPA labeling	<p>Department of Transportation requirement for shipping chemicals.</p> <ul style="list-style-type: none"> <li>Color coded diamond with four quadrants             <ul style="list-style-type: none"> <li>Blue: Health hazard</li> <li>Red: Fire hazard</li> <li>Yellow: Reactivity hazard</li> <li>White: Indicates water reactivity, radioactivity, biohazards, or other special hazards.</li> </ul> </li> <li>Numbers are used in the upper three quadrants to signal the degree of emergency             <ul style="list-style-type: none"> <li>A numerical scale of 0 to 4 is used                 <ul style="list-style-type: none"> <li>0 = no unusual hazard</li> <li>1 = minor hazard</li> <li>2 = moderate hazard</li> <li>3 = severe hazard</li> <li>4 = extreme hazard</li> </ul> </li> </ul> </li> </ul> <div> <p>The diagram is a diamond shape divided into four quadrants. The top-left quadrant is blue and labeled 'HEALTH HAZARD'. The top-right quadrant is red and labeled 'FIRE HAZARD'. The bottom-right quadrant is yellow and labeled 'INSTABILITY HAZARD'. The bottom-left quadrant is white and labeled 'SPECIFIC HAZARD'. Each quadrant contains a list of hazard levels and their corresponding descriptions. The 'SPECIFIC HAZARD' quadrant also includes a legend for various hazard codes.</p> <p><b>HEALTH HAZARD</b>  4 - Deadly  3 - Extreme Danger  2 - Hazardous  1 - Slightly Hazardous  0 - Normal Material</p> <p><b>FIRE HAZARD</b>  Flash Points  4 - Below 73° F  3 - Below 100° F  2 - Below 200° F  1 - Above 200° F  0 - Will Not Burn</p> <p><b>INSTABILITY HAZARD</b>  4 - May Detonate  3 - Shock and Heat May Detonate  2 - Violent Chemical Change  1 - Unstable if Heated  0 - Stable</p> <p><b>SPECIFIC HAZARD</b>  Acid.....ACID  Alkali.....ALK  Corrosive.....COR  Oxidizer.....OX  Radiation Hazard...☢  Use No Water....☞  Use No Water....☞</p> </div>

## STANDARD: Laboratory Safety

GHS

United Nations Globally Harmonized System of Classification and Labeling of Chemicals.

- Chemical Labeling requirements include:
  - Product Identifier, Supplier Identification, Precautionary, Hazard Pictograms, Signal Word-severity of hazard, Hazard Statements, Precautionary statements.
  - Pictograms included in chart below.

**GHS Labels**

Oxidizers - Can burn without air, or can intensify fire in combustible materials.

Explosives - May explode if exposed to fire, heat, shock, friction.

Corrosives - May cause skin burns and permanent eye damage.

Gases Under Pressure - Gas released may be very cold. Gas container may explode if heated.

Flammable if exposed to ignition sources, sparks, heat. Some substances may give off flammable gases.

Toxic to aquatic organisms and may cause long lasting effects in the environment.

Toxic material which may cause life threatening effects even in small amounts and with short exposure.

May cause serious and prolonged health effects on short or long term exposure.

Irritant - May cause irritation (redness, rash) or less serious toxicity.

## FIRE SAFETY and EVACUATION

Fire Safety/ Evacuation	<p>All students receive safety training each semester they are enrolled in a MLS laboratory course, including summer session. Staff/Faculty/GTA's receive safety training upon hire. The following fire safety information is included in the training:</p> <ul style="list-style-type: none"> <li>Location of fire extinguishers</li> <li>Location of fire pull box</li> <li>Location of all exits</li> <li>Map of floor plan with exits and evacuation routes</li> </ul> <p>In addition, evacuation routes and designated storm shelter areas is covered.</p> <p>Open flames are prohibited in the MLS biohazard lab, including the use of Bunsen burners.</p>
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## **STANDARD: Laboratory Safety**

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### **REFERENCES**

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1. CLSI. Clinical laboratory safety; approved guideline third edition. CLSI document GP17-A3. Wayne, PA: Clinical and Laboratory Standards Institute; 2012.
2. OSHA. Occupational Safety and Health Standards Toxic and Hazardous Substance, Bloodborne pathogens, standard 1910.1030. [Internet] Washington, DC: [Updated 2017 Sept 18] Available from [www.OSHA.gov](http://www.OSHA.gov)

## APPENDIX 3: Technical Standards for Matriculation, Progression, and Graduation

Final Draft 8/4/2014

Approved by FAC 8/4/2014

Approved by the Dean 8/4/14

### Technical Standards for Matriculation, Progression, and Graduation

#### University of North Dakota School of Medicine and Health Sciences

##### A. Overview

This policy describes the technical standards required for students in the health professions of medicine, occupational therapy, physical therapy, physician assistant, medical laboratory science, athletic training and public health. The University of North Dakota School of Medicine and Health Sciences (UNDSMHS) has a responsibility to society to graduate the best possible healthcare providers. All health profession graduates of this institution must use professional knowledge, skills, and attitudes to function in a wide variety of health care settings and to render a wide spectrum of patient care. The technical standards are designed to ensure the graduation of capable, well rounded and appropriately trained health care providers. (Each professional program may have additional technical standards specific to the requirements of the program.) In order to fulfill this responsibility, UND SMHS has established six areas of competency that must be sufficiently developed to participate in, and to graduate from a health profession's program.

##### Competency Areas:

1. Health Care/Scientific Knowledge
2. Clinical Skills
3. Ethical and Professional Behavior
4. Interpersonal and Communication Skills
5. Lifelong Learning
6. Healthcare Systems - based Practice and Improvement

The health profession's programs offered at UNDSMHS are academically rigorous with the structured broad general training that is intended to produce "undifferentiated healthcare providers." The school's academic and technical standards are intended to support that model. Whereas a truly undifferentiated healthcare provider may not be achievable, the standards attempt to ensure that health profession graduates of the school possess the background to pursue virtually any area of specialty. Thus all students must meet the academic and technical standards to matriculate, to progress through the curriculum, and to meet the requirements for graduation.

*Academic standards* refer to acceptable demonstrations of mastery in various disciplines, before matriculation and after, as judged by faculty members, examinations, and other measurements of performance. Every effort is made to meet the academic needs of the health profession student within the professional program. When a student's ability to perform the technical standards is compromised, the student must demonstrate alternative means and/or abilities to perform the specified tasks. The following technical standards describe the basic competencies essential to successful completion of the health profession programs at UND SMHS.

Beyond the academic standards, students must demonstrate the following technical standards **with or without accommodations**. It is the student's responsibility to identify/disclose any disabilities if requesting any needed accommodations.

##### Technical Standards and Capacity



In order for a student to adequately address the six competency areas noted earlier, each student must possess the requisite capacities/abilities in the following broad areas:

1. Perception/Observation

To achieve the required competencies in the classroom setting, in the clinical setting, and in the small group setting, students must be able to perceive, assimilate, and integrate information from a variety of sources. Students must be able to perceive and appropriately interpret nonverbal communications.

2. Communication

Students must be able to skillfully communicate through oral, written, and electronic means (in English) with faculty members, health care team members, patients, families, and other students in order to elicit, convey, and clarify information; create rapport; and work collaboratively. Students must be able to clearly speak and hear in order to effectively communicate with patients, including individuals from different cultural and social backgrounds: this includes, but is not limited to the ability to establish rapport with patients and effectively communicate judgments and treatment information.

3. Functional Activities

Students must possess sufficient motor, tactile, and sensory functions in order to attend and participate in activities which are part of the curriculum. This includes production of written and oral communication commensurate with the profession. Depending on the health profession, students are expected to assess patients using all appropriate evaluation tools, diagnostic maneuvers and procedures, perform basic laboratory procedures and tests, and provide patient care appropriate to the circumstances.

Students are expected to function in a wide variety of patient care settings, including independent and potentially rapid - paced/high demand environments. Motor, tactile, sensory, and proprioceptive abilities are necessary to perform a complete and thorough assessment and intervention plan with the patient. Students must also be able to safely and efficiently utilize equipment and materials necessary to assist patients.

4. Professional and Ethical Behavior

Students must consistently demonstrate the core attributes of professional behavior appropriate to the healthcare field, including commitment to excellence, honesty, integrity, respect for others, empathy, compassion, professional responsibility, social responsibility, and altruism. Students must exhibit the ability to meet the challenges of any medical situation that requires a readiness for immediate and appropriate response without interference of personal or medical problems.

It is the student's responsibility to attend and be able to travel to and from classes and clinical assignments in a timely manner. Students must possess the organizational skills and stamina for performing required tasks and assignments within allotted time frames.

Students must adhere to the policies of the State Board of Higher Education, the University, the School of Medicine and Health Sciences, the health profession program, and the clinical/practicum sites. This includes matters ranging from professional dress and behavior to attending the program's academic schedule which may differ from the University's academic calendar and be subject to change at any time.

Students need to take the initiative to address and direct their own learning. They are required to work cooperatively and collaboratively with peers on assigned projects, and participate willingly in the supervisory process involving evaluation of abilities and acquisition of skills. The students will take initiative in becoming a contributory member of a health care team as appropriate for their program and level of education.

5. Cognition

Students must demonstrate critical thinking skills so that they can problem solve, understand abstract ideas, and synthesize information presented in the classroom, laboratory and clinical settings. Students must be able to measure, calculate, reason, analyze, process, integrate, synthesize, retain and apply facts, concepts, and data related to the art and science of healthcare. Students must have the cognitive capacity to appropriately utilize technology in the

classroom and in the clinical setting. Students must also be able to analyze three - dimensional and spatial relationships. Sound judgment and ethical reasoning as well as clinical reasoning are essential. Students must possess the above abilities to reach diagnostic and therapeutic judgments.

6. Behavioral and Social

Students must demonstrate emotional stability and be capable of developing mature and effective interpersonal relationships with other students, faculty, and healthcare workers. Students must be able to tolerate physically and emotionally taxing workloads and function effectively under stress. Students must be able to adapt to changing environments, display flexibility, accept and integrate constructive criticism, and function in the face of uncertainties inherent in the educational and clinical settings.

Students must be able to engage in personal reflection and self - awareness as a mechanism of effective personal growth, development and lifelong learning.

Additional or clarifying technical standards may be required of the individual health profession program. See individual professional program policies for specific details.

Each clinical or practicum site may have additional technical standards that might affect a student's ability to complete clinical placements.

**It is the responsibility of the student to request necessary accommodations through university procedures.**

If any health profession applicants or enrolled students have a question about whether they can meet these standards due to functional limitations from a disability, they should contact Disability Services for Students (DSS), the campus resource for confidential discussion and support regarding reasonable accommodations:

Disability Services for Students  
Room 190 McCannel Hall Stop 9040  
Grand Forks, ND 58202 – 9040  
dss@und.edu  
701 – 777 - 3425 Voice/TDD  
Fax 701 – 777 – 4170



## STUDENT SIGNATURE PAGE

*The UND MLS Undergraduate Handbook contains policies, procedures and processes that MLS students must comply with in order to be successful academically and professionally. It is the responsibility of the UND MLS program to ensure that students are aware of these policies, procedures and processes, which is accomplished through completion of this signature page. Note that students in the MLS Cohort Program route will complete a separate signature page that contains additional route-specific acknowledgement items.*

Initial each item as acknowledgement:

Initials	Signature Page Item
	1. I have read and agree to comply with the policies, procedures and processes as defined in the UND MLS Undergraduate Handbook. I understand that the policies, procedures and processes in the handbook are subject to modification and that I am responsible for updates as they occur.
	2. I have read and understand that I must be able to meet the UND MLS Essential Functions in order to be successful in the academic and clinical laboratory. I understand that if I am unable to meet the UND MLS Essential Functions I must inform UND MLS faculty/staff in order to determine if accommodation options are available that would allow for continuation in the program.
	3. I am aware of the UND SMHS Inhibiting Conditions policy, and understand that if I have a condition (injury, infection, immunocompromised status, environmental disease) that may negatively impact myself, fellow students, staff, faculty or patients, I have a professional obligation to inform and work with UND MLS faculty/staff immediately.
	4. I give permission to the UND to release information from my student files for purposes of job or educational opportunities and/or advancement.
	5. I have read the MLS safety and biohazard standards and have been informed about the blood borne pathogens exposure control plan regulations and policies. I understand that I am responsible for compliance with these policies and standards.
	6. I understand that photos and/or videos taken during MLS program coursework and activities may be utilized for educational and/or promotional purposes, and give consent for my image to be utilized in them. If I do not want my image to be utilized in such photos and/or videos, I must communicate that request in writing the UND MLS Laboratory Manager.
	7. I understand that in order to learn phlebotomy skills, students and instructors in the MLS program may be performing venipunctures and fingersticks on each other. I give permission for the phlebotomy procedures to occur.
	8. I understand that my criminal background check information and my immunization records may be shared with my clinical affiliate.

\_\_\_\_\_  
Clearly Print Your Full Name

\_\_\_\_\_  
Clearly Print Your 3 Initials

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date