



Mailing Address:
 UND School of Medicine & Health Sciences Dept. of MLS
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MLS PROFESSIONAL PROGRAM APPLICATION: Class of 2022-2023

Each student seeking admission to the University of North Dakota (UND) Medical Laboratory Science (MLS) Professional Program must submit a **complete** application no later than **October 15, 2021**. Applicants will be individually notified via email of their admission status (full admission, alternate admission, no admission) by **December 1, 2020**.

Required Application Materials:

1. Completed application (this form)
2. Clear copies of all college level coursework
3. Submit proof (receipt of payment) of your initiation of the criminal background check
4. Critical Analysis Passage
5. Personal Statement

Application Criteria and Review

Application and admission information for the UND MLS program can be found in the UND MLS Undergraduate Handbook found on our webpage: <https://med.und.edu/medical-laboratory-science/files/docs/mls-ug-handbook-5-1-2021.pdf>. Other policies and information is included in the handbook, and we recommend that applicants review it.

An evaluation of your application and admission status recommendation will be completed by the Department of Medical Laboratory Science Professional and Academic Standards Committee. You will be notified (by email) of your professional program admission status by December 1, 2021.

I. APPLICANT INFORMATION

LAST Name	Middle Initial	FIRST Name
Are you a member of the military or a veteran? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Mobile Phone# (____) _____ - _____		
Address (Mailing address.) _____		
City _____	State _____	Zip: _____
E-mail Address _____		
Emergency Contact Name _____	Relationship _____	
Emergency Contact Mailing Address:) _____		
City _____	State _____	Zip: _____
Emergency Contact Phone# (____) _____ - _____		

A. Which Route are you applying to the UND MLS Professional Program through?

_____ UND Traditional Student

_____ UND 4+1 Student (student with previous Bachelor's Degree)

- What area/major was your Bachelor's Degree in? _____
 - From what institution? _____
 - Date of receiving the degree (month and year)? _____
- Name of an advisor/instructor that will give a reference for you: _____
 - Email of Reference: _____ Phone of Reference: _____
 - How long have you known the Reference? _____ Title/Role of Reference: _____
 - *Note: we will contact your reference and request they complete our electronic form. Please notify your reference so they are watching for this from us, as your application cannot be reviewed until the reference is received.*
- If you completed the UND MLS program, would you be seeking a Bachelor's Degree in MLS or a Certificate in MLS at the end of the program? _____ (If Bachelor's Degree, be sure to consult with your UND advisor to make sure you meet the needed requirements).

_____ WCAMLS Student

- Which School? _____
- Name of your advisor: _____ Email of advisor: _____
- What area will you earn a degree in after completing the UND MLS program? _____
 - When would you expect to earn that degree? _____
- Do or Will you have a Bachelor's degree prior to starting the UND MLS Professional Program? If so:
 - In what area? _____ From what institution? _____
 - Date of receiving the degree (month and year) _____

HOW DID YOU LEARN ABOUT THE PROFESSION OF MEDICAL LABORATORY SCIENCE (MLS)?

HOW DID YOU LEARN ABOUT THE MEDICAL LABORATORY SCIENCE (MLS) PROGRAM AT UND/YOUR SCHOOL?

II. EDUCATION HISTORY

In order to evaluate academic performance, **unofficial transcripts** must be submitted as part of your application. If you have attended more than one college or university, an unofficial transcript must be submitted for each institution you have attended.

Name of Institutions	Dates of Attendance			Institution Address (City / State)
	Year	To	Year	
High School				
University / College				
Degree Earned				
University / College				
Degree Earned				

III. ACADEMIC INFORMATION

A. ESTIMATED OVERALL COLLEGE GPA (required; cumulative from all college coursework): _____

B. Indicate YES or NO for each of the following statements. For any item that you answer YES to, answer the additional questions. These responses will serve as a petition to the admissions committee. If you checked 'YES' to multiple items, be sure to address each separately. If you answered 'NO' to all items, you do not need to answer the additional questions.

- Based on a grading scale of 4.00, my cumulative GPA is less than 2.80. (Cumulative GPA is calculated based on grades and credit hours earned for all college coursework). _____
- I have repeated 2 or more MLS science or math prerequisite courses (i.e., General Biology I or II, General Chemistry I or II, Anatomy, College Algebra, etc.). _____
- I have a letter grade of "D" or "F" in two or more science or math prerequisite courses. _____
- I have a letter grade of "D" or "F" in one or more MLS specific courses (i.e., Orientation to MLS; Hematology, Immunology, etc.). _____

Additional Question #1. Describe the circumstances that led to the situation (for questions related to failing grades, be sure to list the specific courses).

Additional Question #2. Describe what you have done or will be doing to try to improve in the given area, and/or why you feel the same issue won't keep occurring or why you feel you can still be successful in the UND MLS Program.

C. For all courses listed below, indicate if you have taken the course, and what grade you received. If you have not taken the course, list when you plan to take it.

- | | |
|---------------------------------|--|
| • College Algebra _____ | • Upper-level Science #1 (include course title)
_____ |
| • Statistics _____ | • Upper-level Science #2 (include course title)
_____ |
| • General Chemistry I _____ | • Immunology _____ |
| • General Chemistry II _____ | • Hematology _____ |
| • Biochemistry _____ | • Medical Microbiology _____ |
| • Biology _____ | |
| • Anatomy & Physiology I _____ | |
| • Anatomy & Physiology II _____ | |

D. Have you ever been reprimanded, placed on probation, disciplined, suspended, sanctioned, or dismissed from any college, university, graduate school, professional school (including any other MLT/MLS program), professional organization or licensing agency for any reason?

- ✓ If yes, attach a written explanation describing the events, and include any correlating documentation from the involved institution. Your application will not be reviewed until this documentation is received.

IV. UND MLS PROFESSIONAL PROGRAM INFORMATION

The UND MLS Professional Program spans ~1 year and includes 39 credits of advanced MLS coursework over 3 semesters as follows:

Semester	Dates*	Times**	Format	Location
Summer 2022	May - August	Monday-Friday ~8:00am-5:00pm CST	-Online; Mix of synchronous and asynchronous	Up to you
Fall 2022	August - December	Monday-Friday ~8:00am-5:00pm CST	Face-to-face labs and course activities; Some online assignments	On-campus in Grand Forks, ND
Spring 2023	January - May	Monday-Friday ~8 hours/day; Specific times set by clinical site	Clinical practicum with some online assignments	At your assigned clinical affiliate

The clinical practicum is an 18-week clinical rotation (unpaid) completed at one of UND MLS's affiliated clinical sites. Students awarded full or alternate admission will be contacted by a UND Clinical Education coordinator in December to request information about the student's clinical site preferences. A list of current clinical affiliates can be found here: <https://med.und.edu/medical-laboratory-science/clinical-affiliates.html>, but note that this list is continuously being updated. Students will be notified by April 15th of their assigned affiliate. Note that UND MLS tries to place students at one of their preferred sites, but cannot guarantee it. See the <https://med.und.edu/medical-laboratory-science/files/docs/mls-ug-handbook-5-1-2021.pdf> for specific clinical placement procedures.

A. Initial to indicate that you have read and understand each item.

- ✓ I understand that the UND MLS Professional Program will include: Online coursework from May 2022-August 2022 I understand that I will be required to abide by unique clinical affiliate policies which may include (but are not limited to): vaccination requirements, drug testing, and additional criminal background check. _____
- ✓ I understand that the UND MLS Professional Program will include: On-Campus coursework from August 2022-December 2022. _____
- ✓ I understand that the UND MLS Professional Program will include: Clinical rotation coursework at an assigned clinical affiliate January 2023 – May 2023. _____
- ✓ I understand that I will be required to abide by unique clinical affiliate policies which may include (but are not limited to): vaccination requirements, drug testing, and additional criminal background check. _____

V. ESSENTIAL FUNCTIONS

Essential Functions are 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 & cooperation; receiving & responding to constructive feedback; respect & 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 10lbs

- A. I have reviewed the UND MLS Essential Functions and feel that I meet them (indicate YES or NO). _____
- If answering NO, please provide a brief description of any essential function skill you feel you are unable to meet.

VI. CRIMINAL BACKGROUND CHECK

A Criminal Background Check is required of each student at the time of admission into the MLS program, and must be completed through the UND-approved vendor, *Verified Credentials, Inc.* Applicants are responsible for the cost of this service (~\$65). Students will also be required to complete a renewal background check for an additional fee at a later point in the program.

To complete the Background Check, go to: <http://scholar.verifiedcredentials.com/UND>, using the appropriate school code (US Citizen - School Code: PPJIX-74494; Canadian Citizen - School Code: VWJVG-84848). **Attach proof (the receipt of payment) of initiating the criminal background check with this application. This must be included for your application to be considered.**

- A. **Have you ever been arrested for, charged with, pled guilty to, been convicted of or adjudicated guilty of, or paid any fines or penalties as a result of any violation of any law, ordinance, criminal or military law?** You may omit minor traffic violations such as speeding tickets and parking violations. You may not omit serious traffic violations such as driving under the influence of alcohol or drugs, reckless driving, driving without insurance, damage to property, or driving with a suspended or revoked license. _____
- a. If yes, attach an explanation of the following information related to the charge/incident: description; date; age at the time of the incident; type of charge (ex. misdemeanor); sentence received; final settlement; whether any additional charges have been filed; any other information you want to add. Your application will not be reviewed until this documentation is received.
- B. **Have you ever been accused or charged in a court-martial proceeding or received a less than an honorable discharge from any branch of the armed services of the United States of America?** _____
- a. If yes, provide records from the court or military office documenting the charge and the disposition of that charge, including any sanctions imposed. In addition, provide your own personal explanation describing the events that led to the charge(s). Your application will not be reviewed until this documentation is received.

VII. CRITICAL ANALYSIS PASSAGE

Directions: Answer the following five questions in your own words, based ONLY on the M:E Ratio Procedure listed below. Use complete sentences. DO NOT use other sources (books, websites, people, instructors, advisors, etc.). It is ok if you are not familiar with this procedure. You are to base your answers only on the information you read in the procedure, and NOT previous knowledge or other sources.

MYELOID TO ERYTHROID (M:E) RATIO PROCEDURE

- Using the 100x objective, observe the bone marrow sample.
- Begin counting cells, identifying each as either "myeloid", "erythroid", or "neither" as follows:
MYELOID: *segmented neutrophil, metamyelocyte, band neutrophil, myelocyte, eosinophil, basophil*
ERYTHROID: *orthochromic normoblast, polychromatophilic normoblast, basophilic normoblast*
NEITHER: *mature RBC, monocyte, lymphocyte, plasma cell*
 Tally the number of Myeloid cells and Erythroid cells as you go. DO NOT include cells in the Neither category in your count (skip them). Keep counting until you have reached 200 total Myeloid and Erythroid cells. Make sure to count in a systematic way, so that cells are not counted twice or missed.
- Once 200 total Myeloid and Erythroid cells have been counted, transcribe your results into a ratio. The Myeloid (M) number should be listed first, and the Erythroid (E) number should be second. The "E" number should always be 1. Round all values to the nearest whole number, unless the value is below one, then round to the nearest tenth. See the following for example:

# of Myeloid Cells Counted ("M")	# of Erythroid Cell Counted ("E")	Final (Reportable) M:E Ratio
162	38	4:1

- The reference interval for an adult M:E Ratio is: 2:1 – 4:1. Increased M:E ratios may be seen in infection or chronic myelogenous leukemia. Decreased M:E ratios may be seen normoblastic hyperplasia.

QUESTIONS:

1. Explain what, if anything, might happen if the technologist performing a M:E Ratio counted cells using the 10x objective, instead of the 100x objective as stated in the procedure.

2. Calculate the M:E Ratio for a sample that gave the following counts using 100x objective. Record results below.

	Segmented neutrophil	Basophil	Monocyte	Basophilic Normoblast	Mature RBC	Orthochromic Normoblast	Myelocyte
Cells Counted	52	19	27	32	104	57	30

Myeloid Cells: _____ Erythroid Cells: _____ Final M:E Ratio: _____

3. Assuming the results from question 2 came from an adult male, would his M:E ratio be increased, decreased, or normal when compared to the reference interval? Would you believe that this result came from a patient with Chronic Myelogenous Leukemia? Why or Why not?

4. A person performing a M:E Ratio did everything correctly, except he/she counted all lymphocytes as orthochromic normoblasts. Would the final M:E Ratio be accurate? How might the final M:E Ratio result be impacted in this situation?

5. A person performing a M:E Ratio did everything correctly, except he/she counted 100 total cells. How might the final M:E Ratio result be impacted in this situation?

VIII. SELF ASSESSMENT

Directions: Provide a response to **ALL** of the questions posed below. Your response to each question should exhibit a college-level of writing, demonstrate thoughtful contemplation of the question, be in your own words, and be 150-250 words in length.

1. Why do you want to become a Medical Laboratory Scientist (or why do you want to complete the Medical Laboratory Science program)?
2. What personal qualities and/or experiences do you possess that will help you be successful in the Medical Laboratory Science program?
3. In what area do you think you will need to improve or grow the most in order to be successful in the Medical Laboratory Science program and as a working professional?

My signature indicates I have completed this application accurately, honestly, and to the best of my ability.

Signature _____ Date _____

The UND MLS program is accredited by the National Accrediting Agency for CLS (NAACLS)
5600 N River Rd Suite 720, Rosemount, IL 60018-5119

Equal Opportunity Statement

It is the policy of the University of North Dakota that no person in the United States shall be discriminated against because of race, religion, age, color, gender, disability, national origin, creed, sexual orientation, gender identity, marital status, veteran's status, or political belief or affiliation and the equal opportunity and access to facilities shall be available to all. This policy is particularly applicable in the admission of students in all colleges, and in their academic pursuits. It also is applicable in the University-owned or University-approved housing, food services, extracurricular activities and all other student services. It is a guiding policy in the employment of students either by the University or by outsiders through the University and in the employment of faculty and staff. Concerns regarding Title IX, Title VI, Title VII, ADA, and Section 504 may be addressed to Donna Smith, Director of Equal Employment Opportunity/Affirmative Action and Title IX Coordinator at 701-777-4171, und.affirmativeactionoffice@und.edu or the Office for Civil Rights, U.S. Dept. of Education, 500 West Madison, Suite 1475, Chicago, IL 60611 or any other federal agency.