WESTERN COLLEGE ALLIANCE FOR MEDICAL LABORATORY SCIENCE (WCAMLS)
APPLICATION TO THE CLINICAL YEAR

DIRECTIONS: U.S. mail your application using the address above. In order for your application to be considered a complete application the following must be received in the UND MLS office by the application deadline of October 15, 2019.

Required Application Materials:
1. An UNOFFICIAL transcript of all college level coursework MUST accompany this application.
2. Electronic Reference: A reference evaluation must be submitted to UND from your WCA MLS academic advisor. Your WCA MLS advisor has been given a link to an electronic reference form to complete for you as an applicant. You will need to contact your advisor and ask them to complete the electronic reference form. Your application will not be complete until this is received. This is the ONLY reference required.
3. Submit proof (receipt of payment) of your initiation of the criminal background check (see page 3).
4. Critical Analysis Passage – Part A (Answer separately from Part B)
5. Personal Statement – Part B (Answer separately from Part A)

Admission Criteria:
- A cumulative GPA of 2.800 on a scale of 4.000
- No more than one grade of D in any math or science courses
- No standing D’s in any MLS/CLS course (or equivalent course)
- All pre-requisites must be successfully completed before advancement into the summer session.
- A maximum of two science courses repeated
- A maximum of one MLS course repeated

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 2, 2019. Program acceptance is a competitive process with a limited number of positions available annually.

In addition to acceptance to the UND MLS program, all students must meet requirements established for admission to The University of North Dakota.
Emergency Contact Mailing Address: ______________________________________________________
City __________________________________ State ________________ Zip: ______________________
Emergency Contact Phone# (____) ______ - _______

<table>
<thead>
<tr>
<th>Education History</th>
<th>Dates of Attendance</th>
<th>Institution Address (City / State)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Institutions</td>
<td>Year to Year</td>
<td>Year to Year</td>
</tr>
<tr>
<td>High School</td>
<td></td>
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<tr>
<td>University / College</td>
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<tr>
<td>Degree Earned</td>
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<tr>
<td>University / College</td>
<td></td>
<td></td>
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<tr>
<td>Degree Earned</td>
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</tbody>
</table>

OVERALL GPA (required): ___________________ (This GPA includes all college coursework from all institutions)
If your overall GPA is less than 2.800 you will need to complete a petition form [link] and submit it with this application for consideration to the Department of Medical Laboratory Science Professional and Academic Standards Committee.

I understand I will enter The University of North Dakota summer curriculum as a WCAMLS student. I will earn my degree from my home institution (List Institution) ________________________________ (City)____________________, (State)____________ and receive a certificate in Medical Laboratory Science from The University of North Dakota.

I have/will have earned a BS degree in (List field of study) _________________________________, Mth___/Yr___).

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

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

CLINICAL PRACTICUM
The UND MLS professional program is comprised of a 12-month professional program which includes: the summer practicum, off-campus coursework, and a clinical practicum. The clinical practicum is a 27-week rotation at a health care facility which takes place fall and spring semester. Students are given an opportunity to provide their top three clinical site preferences. The most up-to-date clinical site list can be found at [link]. Note: the UND MLS program guarantees clinical site placement for all students admitted to the professional program, however, it may not be one of the student’s top three preferences. Occasionally a site may request to become inactive for a given year. Students who have been awarded full admission or alternate admission status will be contacted by the UND clinical education coordinators by email the first week of December. At that time students will be required to complete an online selection process indicating their top three clinical site preferences. The student must complete the online selection process by December 16th, any submissions after this date will be not considered in the first round of clinical site placement. The committee will begin clinical site placement Feb. 1, students will be notified by March 1 via email of their clinical site placement.
ESSENTIAL FUNCTIONS
In order to successfully complete coursework required in Medical Laboratory Science, several "Essential Functions" must be met. Essential functions, the nonacademic standards that a student must be able to master to participate successfully in the program and become employable, are as follows:

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 10lbs

Do you meet ALL Medical Laboratory Science essential functions listed above?  
Yes  No

CRIMINAL BACKGROUND CHECK
A Criminal Background Check is required of each student prior to admission into the MLS program. The UND School of Medicine and Health Sciences has an agreement with Verified Credentials, Inc. Website: http://scholar.verifiedcredentials.com/UND US Citizen - School Code: PPJJX-74494; Canadian Citizen - School Code: VWJVG-B44848 to perform this check. Applicants are responsible for the cost of this service (Approximately $65). A program applicant must complete the background check at time of program application. Please submit proof of background check submission (receipt of payment) with the complete application. Do not submit your application without the receipt of payment. Students will be required to complete a renewal background check for an additional fee at the start of summer curriculum coursework.

1. 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?  
Yes  No

If the answer to #1 is yes, you must provide a letter or other documentation from the college, university, graduate school, professional school, professional organization or licensing agency describing the events which led to your being disciplined including the sanction imposed. In addition to the documentation from the college, university, graduate school, professional school, professional organization, or licensing agency, you must provide your own personal explanation on a separate sheet describing the events that led to you being disciplined. Failure to submit this documentation in a timely manner may cause your admission status to the Medical Laboratory Science program to be denied or withdrawn.
2. 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.

3. Have you ever been accused or charged in a court-martial proceeding or received a less than honorable discharge from any branch of the armed services of the United States of America?

If the answers to either of the above question 2 or 3 are yes, you must provide records from the court or military office documenting the charge and the disposition of that charge, including any sanctions imposed. In addition to the documentation from the court or military office, you must provide your own personal explanation on a separate sheet describing the events that led to the charge(s). Your file will not be considered complete and it will not be reviewed until this documentation has been submitted. Failure to submit this documentation in a timely manner may cause your admission status to the Medical Laboratory Science program to be denied or withdrawn.

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**MYELOID TO ERYTHROID (M:E) RATIO PROCEDURE**

1) Using the 100x objective, observe the bone marrow sample.

2) 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.

3) 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:

<table>
<thead>
<tr>
<th># of Myeloid Cells Counted (“M”)</th>
<th># of Erythroid Cell Counted (“E”)</th>
<th>Final (Reportable) M:E Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>162</td>
<td>38</td>
<td>4:1</td>
</tr>
</tbody>
</table>

4) The normal 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.

<table>
<thead>
<tr>
<th>Cells Counted</th>
<th>Segmented neutrophil</th>
<th>Basophil</th>
<th>Monocyte</th>
<th>Basophilic Normoblast</th>
<th>Mature RBC</th>
<th>Orthochromic Normoblast</th>
<th>Myelocyte</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>62</td>
<td>19</td>
<td>27</td>
<td>32</td>
<td>104</td>
<td>57</td>
<td>30</td>
</tr>
</tbody>
</table>

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 normal 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?

**Part B: SELF ASSESSMENT**

Directions: On a separate sheet of paper from Part A, type your name and 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.