GENERAL INFORMATION
INTRODUCTION

The purpose of this handbook is to give you general information concerning the Medical Laboratory Science (MLS) Program at The University of North Dakota. We would like to encourage you to read through this information to better acquaint yourself with the curriculum and policies of the program. The curriculum information will be helpful in keeping track of your progression in the program.

Student Advisement:
The Medical Laboratory Science program requires that each student meet with an advisor at least once each semester for career and academic counseling. In this session, the student’s academic program is planned and program policies are reviewed. The primary advisor for each of the following group of students is:

MLS Program Advisor (includes 4+1 and transfer):
Janna Schill, Rm 3110A
701-777-6302
janna.schill@med.und.edu

MLT Advisor:
Paul Samson, Rm 3108
701-777-6710
Paul.samson@med.und.edu

Mayo Cohort Advisor:
Bob Porter, Rm 3128
701-777-2647
robert.porter@med.und.edu

Categorical Advisor:
Chris Triske, Rm 3108
701-777-3575
Chris.triske@med.und.edu

Western College Alliance for Medical Laboratory Science (WCAMLS):
Karen Peterson, Rm 3128
701-777-2656
Karen.peterson@med.und.edu

If you have any questions or need any help with registration or general questions feel free to contact the MLS program administrative assistant, Mary Beth McGurran at 701-777-2634, marybeth.mcguigan@med.und.edu

Guidance:
Student services, support programs and activities are available at UND. Included are individual counseling and therapy, test services, career counseling, and substance abuse prevention office. These services can be reached at 1-800-CALL UND Extension 2127 or at 701-777-2127
MEDICAL LABORATORY SCIENCE

MISSION STATEMENT

The mission of the Department of Medical Laboratory Science is to educate laboratory professionals to meet the healthcare needs of the state, region and the nation. The Department is dedicated to providing students with the knowledge and skills necessary to succeed as practicing professionals.

PHILOSOPHY

The philosophy of the Department of Medical Laboratory Science is to provide high quality laboratory science education to healthcare entities in North Dakota, the region, and nationally. The Department strives to provide a cutting-edge learning environment that offers continuing education, certification, undergraduate, and graduate programs which allow individuals to develop into leaders in the laboratory science field.

GOALS

Department of Medical Laboratory Science Goals:
• To provide the student with the entry-level competencies needed to work in their field of study.
• To provide the student with adequate knowledge and background experience to qualify for national certification examinations appropriate to their level of education.
• To provide instruction and evaluation based on identified competencies and content of the clinical discipline that is responsive to individual student needs.
• To encourage graduates to remain in the region by providing sufficient clinical experiences in state.
• To provide sufficient medical laboratory science and histotechnician professionals to meet the needs of state, city, and rural communities.
• To increase the depth of learning in various major fields of laboratory sciences.
• To prepare graduates to work in both large and small clinical laboratories.

NATIONAL ACCREDITATION FOR CLINICAL LABORATORY SCIENCES

The University of North Dakota, Department of Medical Laboratory Science is committed to providing an educational program consistent with the Clinical Laboratory Scientist Standards outlined by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) which is located at 5600 N. River Rd, Suite 720, Rosemont, IL 60018-5119.
FACULTY AND STAFF

The UND Department of Medical Laboratory Science (MLS) is located on the 3rd floor of the School of Medicine and Health Sciences (SMHS). The main MLS office is located in room 3131.

Ruth Paur, PhD, MLS (ASCP)  
Assistant Professor  
Chair and Program Director  

Mary Coleman, MS, MLS(ASCP)CM, SH (ASCP)CM, CG(ASCP)CM  
Assistant Professor  
Summer Practicum Coordinator  
Altru Health System Clinical Coordinator  

Shannon Jongeward, BS, MLS(ASCP)  
Laboratory Manager  

Zac Lunak, PhD (MLS(ASCP)  
Assistant Professor  

Karen Peterson, MS, MLS(ASCP)  
Assistant Professor. Clinical Education Coordinator  
WCAMLS Advisor  

Robert Porter, MS, MLS(ASCP)  
Assistant Professor  
Mayo Cohort Coordinator/Advisor  

Linda Ray, MS, MLS(ASCP)  
Assistant Professor  
Safety Coordinator  

Paul Samson, BS, MLS(ASCP)  
Education Specialist, MLT Advisor  

Janna Schill, PhD, MLS(ASCP)  
Assistant Professor  
MLS Distance Education Coordinator, MLS Advisor  

Brooke Solberg, PhD, MLS(ASCP)  
Assistant Professor  
MS MLS Program Coordinator  

Chris Triske, MS, MLS(ASCP)  
Assistant Professor  
Categorical Program Coordinator/Advisor  

Mary Beth McGurran  
Administrative Assistant  

Cathy Perry  
Administrative Officer  

Orientation Handbook Undergraduate: Update 5/15
DESCRIPTION OF THE MEDICAL LABORATORY SCIENCE PROFESSION

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 2014)
DESCRIPTION OF ENTRY LEVEL COMPETENCIES
OF THE MEDICAL LABORATORY SCIENTIST

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 2014)
ESSENTIAL FUNCTIONS

University of North Dakota
Medical Laboratory Science Program

Essential Functions represent the non-academic requirements of the program that all students must master to successfully participate in the program and become employable. All MLS students, and therefore, all applicants are expected to:

1. Vision: be able to read and interpret charts, graphs, and labels; read and interpret instrument panels and printouts, discriminate colors, hue, shading or intensity and clarity, read microscopic material and record results

2. Speech and Hearing: be able to communicate effectively and sensitively in order to assess and comprehend verbal communication and adequately transmit information.

3. Motor Functions: Possess all skills necessary to carry out diagnostic procedures; manipulate tools, instruments and equipment; perform phlebotomy safely and accurately; travel to a clinical site for practical experience.

4. Behavioral Requirements: possess the emotional health required for full utilization of applicant's intellectual abilities; be able to recognize emergency situations and take appropriate action.

5. Physical Requirements: be able to complete fine repetitive hand movement; twist and bend; handle flammable and infective materials; handle hazardous chemicals and electrical equipment, lift 10 lbs.; maintain prolonged sitting or standing positions; maintain concentration with distracting noises and close proximity to fellow workers; tolerate unpleasant odors, work in a building either above or below ground level; work in an environment without windows; and perform keyboarding.

6. Critical Thinking: be able to appropriately perform complex interpretative testing.

7. Professionalism: be able to maintain a professional attitude and appearance.

All students must read the MLS specific essential functions and verify in a written document that they believe they can meet all of the requirements listed. The signed document will be kept in their MLS program file. The written document to sign is included at the end of this handbook.

In addition to MLS specific essential functions the UND SMHS Technical Standards for Matriculation, Progression, and Graduation is located in Appendix I.
PROGRAMS OF STUDY

General Information:

There are several different program options. They include:

- Traditional student curriculum design (2+2 track) BS Degree
- Certificate in Medical Laboratory Science (4+1 track)
- Western College Alliance for MLS (3+1 track)
- Articulation Program (MLT / CLT track)
- Mayo Clinic Cohort Program (Mayo track)
- Categorical Certificate (Categorical track)

Traditional Student Curriculum Design (2+2 track) BS Degree:

Students complete a pre-professional curriculum (Pre-MLS) at UND. The pre-professional curriculum includes approximately 4 semesters of specific preparatory coursework for admission into the professional (BS-MLS) program. The professional program (BS-MLS) program is approximately five semesters in length and includes two semesters of preparatory coursework and three semesters in the final clinical year. The final clinical year of the professional curriculum is 37 credits and includes a 12 week on campus experience in the summer semester, online coursework, and a 28 week clinical affiliation experience. Upon successful completion of all courses, the student receives a BS in MLS degree from the University of North Dakota. The 2+2 track is described in more detail later in this unit of the handbook.

Certificate in Medical Laboratory Science (4+1 Track):

Students enrolled in the certificate program have earned a baccalaureate degree from a regionally accredited college or university. Prior to entering the final clinical year of the professional program the student must complete specific prerequisite courses. The final clinical year is the same as the traditional (2+2 track). The 4+1 student earns a certificate in Medical Laboratory Science from UND upon successful completion of all courses. If the student wishes to earn a second baccalaureate degree in Medical Laboratory Science from the University of North Dakota, he/she must also have completed coursework to meet the essential studies requirements (make appointment for verification with your academic advisor). The 4+1 track curriculum is described in more detail later in this unit of the handbook.

Western College Alliance for Medical Laboratory Science (WCAMLS) (3+1 Track):

Students in the 3+1 track are from affiliated universities of the collaborative WCAMLS. Students from the affiliated universities/colleges complete their first three years at their home university and enroll in year two (final clinical year) of the UND’s Medical Laboratory Science professional curriculum which includes the Summer program on campus with the following Fall and Spring semesters at a UND MLS clinical affiliate.

Each of the affiliated colleges have aligned specific curriculum content in their first three years with UND’s MLS program The universities and colleges that do not offer the professional courses such as hematology, clinical immunology, or medical microbiology contract with the...
University of North Dakota to deliver these courses by distance learning. The laboratory component of hematology may be completed on the UND campus in a concentrated section prior to the beginning of the final clinical year (before the Summer Practicum).

The MLS program is responsible for providing the year two (final clinical year) of the professional curriculum. After successfully completing the final year, students receive a B.S. degree from their home institution and a certificate from UND indicating they have successfully completed the NAACLS accredited MLS program.

Affiliation agreements between the University of North Dakota and the affiliated university or college describe in detail issues such as responsibilities of academic faculty, joint responsibilities, supervisory responsibilities for students, clinical teaching responsibilities, student professional liability coverage, student health and safety policies, and provision for renewal and termination. The WCAMLS (3+1) curriculum is described in more detail later in this unit of the handbook.

Articulation Program (MLT /CLT Track):

Medical Laboratory Technicians (MLT) or Clinical Laboratory Technicians (CLT), with national board certification, will follow individually designed programs of study to complete the curriculum for the baccalaureate in MLS degree. Transfer of credits must be from a regionally accredited institution and MLT/CLT specific coursework is transferred on a course by course basis.

MLT’s or CLT’s from community and technical colleges with academic articulation agreements will follow a specified curriculum plan.

Mayo Clinic Cohort Program (Mayo Track):

The University of North Dakota Medical Laboratory Science Program has a unique partnership with Mayo Clinic, Rochester, MN, to deliver education to employees. The mechanism of delivery includes online lectures, intensive on site student laboratory experiences, and clinical site training.

Categorical Certificate (Categorical Track):

Categorical certificates offered include:
- Clinical Chemistry and Urinalysis
- Clinical Hematology and Hemostasis
- Clinical Immunohematology
- Clinical Microbiology

The MLS categorical certificate program provides advanced skills to baccalaureate-prepared students to become eligible to work in a high complexity clinical laboratory and meet the requirements to take a national certification examination in a specific categorical area. Certificates include four “category” choices: Clinical Chemistry/Urinalysis, Hematology/Hemostasis, Immunohematology or Microbiology. Upon successful completion, the student is eligible to complete the categorical national certification examination.

The applicant to a categorical program requires a baccalaureate degree from a regionally accredited college with at least 20 semester credits of sciences (24 credits recommended).
mechanism of delivery includes online lectures and clinical site training. A clinical affiliate experience site must agree to participate and meet the approval of the categorical education coordinator before the student is allowed to enroll in the program.

Clinical Affiliates:
The UND MLS program is affiliated with over 70 medical centers. Each of the medical centers has accreditation with an appropriate accreditation agency such as the Joint Commission of Accreditation of Hospital Organizations (JCAHO). The purpose of the medical center affiliations is to provide MLS learning experiences for students in a clinical setting. The affiliation agreements with the medical centers specify the reason for the agreement, the responsibility of the academic faculty, responsibilities of the clinical facility, joint responsibilities, supervisory responsibilities for students, student professional liability coverage, student health and safety policies, provision for renewal, and termination clause providing for program completion of enrolled students. Students in all programs of study complete an experience at a clinical affiliate.

MLS Tuition
When a student is registered in a 300 and 400 level MLS courses, a specific MLS tuition is assessed. Additional information is available in the Medical Laboratory Science Program office, room 3131, UND School of Medicine and Health Sciences, 501 N. Columbia Rd Stop 9037, Grand Forks, ND 58202, at 701-777-2634 or at marybeth.mcgurran@med.und.edu
CURRICULUM DESIGN AND ACADEMIC REQUIREMENTS

TRADITIONAL STUDENT (2+2 TRACK) BS DEGREE

Curriculum Design
The BS MLS degree includes two years of pre-professional (freshman and sophomore pre-MLS) education followed by two years of professional (junior and senior) (BS-MLS) coursework. The senior year is three semesters in length and is called the final clinical year of the program. Required 125 credits (36 of which must be numbered 300 or above, and 60 credits of which must be from a 4 year institution) including:

I. Essential Studies Requirements, depending upon entrance date to UND. (see university listing).
II. Required MLS Curriculum

Pre-professional Curriculum (Freshman and Sophomore Years-Pre-MLS):
The pre-professional curriculum is a blend of basic sciences, essential studies, and MLS specific courses.

Freshman Year – Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 150/150L</td>
<td>General Biology I &amp; Laboratory</td>
</tr>
<tr>
<td>CHEM 121/121L (Q)</td>
<td>General Chemistry I &amp; Laboratory</td>
</tr>
<tr>
<td>ENGL 110 (C)</td>
<td>College Composition I</td>
</tr>
<tr>
<td>MATH 103 or MATH 104 (Q)</td>
<td>College Algebra or Finite Math</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
</tr>
</tbody>
</table>

Freshman Year – Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 151</td>
<td>General Biology II</td>
</tr>
<tr>
<td>CHEM 122/122L (Q)</td>
<td>General Chemistry II &amp; Chemistry Lab</td>
</tr>
<tr>
<td>COMM 110 (C)</td>
<td>Introduction to Public Speaking</td>
</tr>
<tr>
<td>ENGL 120 or 125 (C)</td>
<td>College Comp II or Tech &amp; Business Writing</td>
</tr>
<tr>
<td>Humanities Elective (G)</td>
<td>Elective (Global Diversity)</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
</tr>
</tbody>
</table>

Sophomore Year – Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 101</td>
<td>Orientation to Medical Laboratory Science</td>
</tr>
<tr>
<td>ANAT 204</td>
<td>Anatomy for Paramedical Personnel</td>
</tr>
<tr>
<td>COMM 212</td>
<td>Interpersonal Communications</td>
</tr>
<tr>
<td>MBIO 202</td>
<td>Introductory Medical Microbiology Lecture</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>Introduction to Psychology (Recommended) (Elective)</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
</tr>
</tbody>
</table>

Sophomore Year – Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 234</td>
<td>Human Parasitology</td>
</tr>
<tr>
<td>MLS 234L</td>
<td>Human Parasitology Laboratory</td>
</tr>
<tr>
<td>CHEM 240/240L</td>
<td>Organic Chemistry &amp; Organic Chemistry Lab</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>US Diversity Elective</td>
</tr>
</tbody>
</table>

Orientation Handbook Undergraduate: Update 5/15
Professional Curriculum (Junior and Senior Years – BS-MLS):
- MLS tuition is assessed during the professional curriculum coursework (MLS 300 and 400 level courses). Contact the MLS office for specific information.
- During the second year of the professional curriculum (final clinical year), students register for courses in the Summer, Fall and Spring semesters.
- After the Summer Semester coursework is completed, the student will participate in a clinical affiliation for the remainder of the fall and spring semesters.

<table>
<thead>
<tr>
<th>Junior Year – Fall Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 301 Immunology</td>
<td>3</td>
</tr>
<tr>
<td>MLS 325 Hematology</td>
<td>3</td>
</tr>
<tr>
<td>MLS 325L Hematology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>MLS 336 Laboratory Calculations</td>
<td>1</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year – Spring Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 340 Molecular Diagnostics</td>
<td>2</td>
</tr>
<tr>
<td>MLS 340L Molecular Diagnostics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MLS 380 Professional Issues in Clinical Laboratory Science</td>
<td>1</td>
</tr>
<tr>
<td>MLS 394 Medical Microbiology</td>
<td>2</td>
</tr>
<tr>
<td>BICH 301 Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 300 Principles of Management</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year – Summer Semester (on UND campus)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 471 Clinical Chemistry I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 472 Pre-analytical Skills</td>
<td>1</td>
</tr>
<tr>
<td>MLS 473 Clinical Hemostasis I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 474 Clinical Urinalysis I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 477 Clinical Immunohematology I</td>
<td>1</td>
</tr>
<tr>
<td>MLS 477L Clinical Immunohematology I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MLS 478 Clinical Microbiology I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 479 Clinical Hematology I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 487 Medical Mycology</td>
<td>1</td>
</tr>
<tr>
<td>MLS 489 Clinical Body Fluids</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year – Fall Semester (At clinical affiliate)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 471 Clinical Chemistry I (on line)</td>
<td>2</td>
</tr>
<tr>
<td>MLS 480 Clinical Immunohematology II</td>
<td>2</td>
</tr>
</tbody>
</table>

Orientation Handbook Undergraduate: Update 5/15
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
Credits......................................................................................... 12

Senior Year – Spring Semester (At clinical affiliate) Credits
MLS 490 (CA)  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......................................................................................... 12

Q = Quantitative Reasoning
C = Communication
G = Global Diversity
CA = Capstone and Advanced Communication

TOTAL SENIOR CREDITS........................................................................ 37
TOTAL PROGRAM CREDITS.................................................................... 126

ACADEMIC REQUIREMENTS FOR ADMISSION TO THE PROFESSIONAL PROGRAM
■ A cumulative GPA of at least 2.8 on a scale of 4
■ No more than one grade of D in any math or science course other than MLS courses
■ No standing D’s in any MLS course
■ A maximum of two science courses repeated
■ A maximum of one MLS course repeated
■ A minimum of 55 credits completed before admission to the professional program

Additional requirements for admission are listed in the policy section of this handbook

An application will be emailed to eligible students in April of their sophomore year. The application deadline is May 15. If the student has not received an application or has application questions the student should contact the program administrative assistant at marybeth.mcgurran@med.und.edu with their name and student ID#, phone number, home address and email address. Acceptance into the BS-MLS professional program is on a competitive basis.

Exceptions for acceptance and continuance in the program may be made by petition to the Medical Laboratory Science Professional and Academic Standards Committee. A copy of the petition is available on the MLS website.

CERTIFICATE IN MEDICAL LABORATORY SCIENCE (4+1 TRACK)
The MLS program offers a 4+1 curriculum plan. A student is eligible for this program if they have earned a BS or BA degree and have completed the following prerequisite courses:

Orientation Handbook Undergraduate: Update 5/15
### Courses and Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Chemistry</td>
<td>(8)</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>(3)</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>(3)</td>
</tr>
<tr>
<td>General Biology</td>
<td>(6)</td>
</tr>
<tr>
<td>Microbiology</td>
<td>(3)</td>
</tr>
<tr>
<td>Anatomy</td>
<td>(3)</td>
</tr>
<tr>
<td>Physiology</td>
<td>(3)</td>
</tr>
<tr>
<td>MLS 234 Human Parasitology*</td>
<td>(2)</td>
</tr>
<tr>
<td>MLS 301 Immunology*</td>
<td>(2)</td>
</tr>
<tr>
<td>MLS 325 Hematology*</td>
<td>(3)</td>
</tr>
<tr>
<td>MLS 325L Hematology Laboratory**</td>
<td>(2)</td>
</tr>
<tr>
<td>MLS 340 Molecular Diagnostics*</td>
<td>(2)</td>
</tr>
</tbody>
</table>

**Strongly Recommended:**
- MLS 336 Laboratory Calculations*
- MLS 394 Medical Microbiology*

*Available online from the UND MLS program.
**Offered as an intensive lab on campus in May one week before the Summer session.

### Academic Requirements for Admission to MLS Certificate Program
- A cumulative GPA of at least 2.8 on a scale of 4
- No more than one grade of D in any math or science course other than MLS courses
- No standing D’s in any MLS course
- A maximum of two science courses repeated
- A maximum of one MLS course repeated

Additional requirements for admission are listed in the policy section of this handbook.

- Upon successful completion of the prerequisite coursework the 4+1 student applies to the second year (final clinical year) of the professional program.
- After the Summer Semester coursework is completed, the student will participate in a clinical affiliation during the Fall and Spring Semesters to complete the 4+1 curriculum.
- MLS tuition is assessed during the professional curriculum coursework (MLS 300 and 400 level courses). Contact the MLS office for specific information.

Application for acceptance into the professional program must be made by at least Nov. 1st of the year prior to the following final clinical year entrance date.

### Summer Semester (On UND campus) and Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 472 Clinical Pre-analytical Testing</td>
<td>1</td>
</tr>
<tr>
<td>MLS 473 Clinical Hemostasis I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 474 Clinical Urinalysis I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 477 Clinical Immunohematology I</td>
<td>1</td>
</tr>
<tr>
<td>MLS 477L Clinical Immunohematology I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MLS 478 Clinical Microbiology I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 479 Clinical Hematology I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 487 Medical Mycology</td>
<td>1</td>
</tr>
<tr>
<td>MLS 489 Clinical Body Fluids</td>
<td>1</td>
</tr>
</tbody>
</table>
Fall Semester (At clinical affiliate)
MLS 471 Clinical Chemistry I ........................................................... 2
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

Spring Semester (At clinical affiliate)
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

WESTERN COLLEGE ALLIANCE FOR MEDICAL LABORATORY SCIENCE (WCAMLS) (3+1 TRACK)

The UND Medical Laboratory Science program is affiliated with Bemidji State University, Bemidji, MN; Jamestown College, Jamestown, ND; Mayville State University; Mayville, ND; Minot State University, Minot, ND; Montana State University, Billings, MT; Northern State University, Aberdeen, SD. St. Cloud State University, St. Cloud, MN; University of Mary, Bismarck, ND; University of South Dakota, Vermillion, SD; University of Wisconsin, LaCrosse, LaCrosse, WI; Valley City State University, Valley City, ND; Winona State University, Winona, MN.

The program of study for the first three years at these colleges is aligned with the UND MLS program. Students from these institutions apply to the UND MLS program for their final year of study. A certificate in MLS from the University of North Dakota is issued verifying completion of 12 months of clinical training in the UND NAACLS accredited program. The students are eligible for a BS or BA degree in MLS or a related major, or a certificate from their respective institution.

ACADEMIC REQUIREMENTS FOR ADMISSION TO THE PROFESSIONAL PROGRAM
■ A cumulative GPA of at least 2.8 on a scale of 4
■ No more than one grade of D in any math or science course other than MLS courses
■ No standing D’s in any MLS or equivalent course
■ All pre-requisites must be successfully completed before entrance into the summer session
■ A maximum of two science courses repeated
■ A maximum of one MLS course repeated

Additional requirements for admission are listed in the policy section of this handbook
A summer practicum experience on the UND campus in Grand Forks, ND is required, followed by approximately seven months (fall and spring semesters) in a clinical laboratory of a medical center. The Summer Practicum experience is approximately twelve weeks long and will include lecture and laboratory classes organized in blocks. No more than two classes will be held per block. Lecture and laboratory experiences are held at least eight hours each day. The calendar for the summer practicum experience will be completed by March 1 of that year and will be emailed to prospective summer practicum students and posted on our website.

Near the end of the Summer Practicum, the student will be given a comprehensive exam. See the Program Policies of this handbook for more detailed information.

MLS 471 Clinical Chemistry I will be delivered asynchronously online for completion between the end of the summer practicum experience (approximately mid August) and the beginning of the clinical affiliation (approximately the last week of September). MLS 471 must be successfully completed with a grade of C or higher before the clinical affiliation begins.

### Summer Semester (on UND Campus)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 472</td>
<td>Clinical Pre-analytical Testing</td>
<td>1</td>
</tr>
<tr>
<td>MLS 473</td>
<td>Clinical Hemostasis I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 474</td>
<td>Clinical Urinalysis I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 477</td>
<td>Clinical Immunohematology I</td>
<td>1</td>
</tr>
<tr>
<td>MLS 478L</td>
<td>Clinical Immunohematology I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MLS 478</td>
<td>Clinical Microbiology I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 479</td>
<td>Clinical Hematology I</td>
<td>2</td>
</tr>
<tr>
<td>MLS 487</td>
<td>Medical Mycology</td>
<td>1</td>
</tr>
<tr>
<td>MLS 489</td>
<td>Clinical Body Fluids</td>
<td>1</td>
</tr>
</tbody>
</table>

### Fall Semester (at clinical affiliate)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 471</td>
<td>Clinical Chemistry I (online before clinical site)</td>
<td>2</td>
</tr>
<tr>
<td>MLS 480</td>
<td>Clinical Immunohematology II</td>
<td>2</td>
</tr>
<tr>
<td>MLS 481</td>
<td>Clinical Chemistry II</td>
<td>2</td>
</tr>
<tr>
<td>MLS 483</td>
<td>Clinical Hemostasis II</td>
<td>1</td>
</tr>
<tr>
<td>MLS 484</td>
<td>Clinical Microbiology II</td>
<td>2</td>
</tr>
<tr>
<td>MLS 485</td>
<td>Clinical Urinalysis II</td>
<td>1</td>
</tr>
<tr>
<td>MLS 488</td>
<td>Clinical Hematology II</td>
<td>2</td>
</tr>
</tbody>
</table>

### Spring Semester (at clinical affiliate)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 490</td>
<td>Financial &amp; Quality Mgmt of the Clinical Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>MLS 491</td>
<td>Clinical Chemistry III</td>
<td>2</td>
</tr>
<tr>
<td>MLS 492</td>
<td>Clinical Immunohematology III</td>
<td>2</td>
</tr>
<tr>
<td>MLS 494</td>
<td>Clinical Immunology</td>
<td>1</td>
</tr>
<tr>
<td>MLS 495</td>
<td>Clinical Microbiology III</td>
<td>2</td>
</tr>
<tr>
<td>MLS 498</td>
<td>Clinical Hematology III</td>
<td>2</td>
</tr>
</tbody>
</table>
ARTICULATION PROGRAM (CLT/MLT TRACK)

Clinical Laboratory Technician (CLT) or Medical Laboratory Technician (MLT) graduates (board certified) are encouraged to apply to the UND MLS program. A CLT/MLT graduate will be eligible to transfer of up to 60 semester credits depending on the curriculum completed. Transfer credits allow the waiver of several science courses in the MLS professional curriculum. The student’s record is evaluated and a recommendation made to the UND Office of the Registrar regarding the number of credits to be transferred and the science courses to be waived. The student may be eligible for a shortened professional program based on previous coursework, years of experience working in a clinical laboratory, and a competency assessment.

The basic outline for each articulation agreement is the same but the specific courses counted as equivalencies are unique and determined by the CLT/MLT curriculum at the technical or community college or military training. A specific outline for the number of credits that will transfer has been incorporated into articulation agreements with numerous regional technical and community colleges. Each board certified MLT or CLT will have a curriculum plan developed specifically for them.

Additional requirements for admission are listed in the policy section of this handbook

CATEGORICAL CERTIFICATE TRACK

Categorical certificates offered include:
- Clinical Chemistry and Urinalysis
- Clinical Hematology and Hemostasis
- Clinical Immunohematology
- Clinical Microbiology

The categorical certificate curriculums include course work in the specific categorical discipline offered in the 2+2 track described previously and other course work required to be eligible to take a categorical exam. Upon successful completion of the curriculum, students will receive a certificate of completion and be eligible to take a categorical national board of certification exam. The curriculum includes both an academic and a clinical component. The curriculum for each category is as follows and both components are completed at the clinical affiliate.

ACADEMIC REQUIREMENTS FOR ADMISSION TO A CATEGORICAL PROGRAM
- A cumulative GPA of at least 2.8 on a scale of 4
- No more than one grade of D in any math or science course other than MLS courses
- A maximum of two science courses repeated
- BS or BA degree
- Successful completion of at least 20 semester credits in sciences (biological, chemistry, physics and/or medical sciences) with a C or better, 24 semester credits is recommended
- Acceptance at a clinical affiliate must be completed before acceptance into a categorical program

Additional requirements for admission are listed in the policy section of this handbook
### Clinical Chemistry/Urinalysis Categorical

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 336</td>
<td>Laboratory Calculations*</td>
<td>1</td>
</tr>
<tr>
<td>MLS 340</td>
<td>Molecular Diagnostics</td>
<td>2</td>
</tr>
<tr>
<td>MLS 460</td>
<td>Laboratory Practice*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 465</td>
<td>Clinical Laboratory Management*</td>
<td>3</td>
</tr>
<tr>
<td>MLS 471</td>
<td>Clinical Chemistry I*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 474</td>
<td>Clinical Urinalysis I**</td>
<td>2</td>
</tr>
<tr>
<td>MLS 481</td>
<td>Clinical Chemistry II*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 485</td>
<td>Clinical Urinalysis II*</td>
<td>1</td>
</tr>
<tr>
<td>MLS 489</td>
<td>Clinical Body Fluids*</td>
<td>1</td>
</tr>
<tr>
<td>MLS 491</td>
<td>Clinical Chemistry III**</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Categorical Credits</strong></td>
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<td><strong>18 credits</strong></td>
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### Hematology/Hemostasis Categorical

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<tr>
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</thead>
<tbody>
<tr>
<td>MLS 325</td>
<td>Hematology*</td>
<td>3</td>
</tr>
<tr>
<td>MLS 325L</td>
<td>Hematology Laboratory**</td>
<td>2</td>
</tr>
<tr>
<td>MLS 336</td>
<td>Laboratory Calculations*</td>
<td>1</td>
</tr>
<tr>
<td>MLS 460</td>
<td>Laboratory Practice*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 465</td>
<td>Clinical Laboratory Management*</td>
<td>3</td>
</tr>
<tr>
<td>MLS 473</td>
<td>Clinical Hemostasis I**</td>
<td>2</td>
</tr>
<tr>
<td>MLS 479</td>
<td>Clinical Hematology I**</td>
<td>2</td>
</tr>
<tr>
<td>MLS 483</td>
<td>Clinical Hemostasis II*</td>
<td>1</td>
</tr>
<tr>
<td>MLS 488</td>
<td>Clinical Hematology II*</td>
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<tr>
<td>MLS 489</td>
<td>Clinical Body Fluids*</td>
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<td>MLS 498</td>
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<tr>
<td><strong>Total Categorical Credits</strong></td>
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### Immunohematology Categorical

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>MLS 301</td>
<td>Immunology*</td>
<td>3</td>
</tr>
<tr>
<td>MLS 336</td>
<td>Laboratory Calculations*</td>
<td>1</td>
</tr>
<tr>
<td>MLS 460</td>
<td>Laboratory Practice*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 465</td>
<td>Clinical Laboratory Management*</td>
<td>3</td>
</tr>
<tr>
<td>MLS 473</td>
<td>Clinical Hemostasis I**</td>
<td>2</td>
</tr>
<tr>
<td>MLS 477</td>
<td>Clinical Immunohematology I*</td>
<td>1</td>
</tr>
<tr>
<td>MLS 477L</td>
<td>Clinical Immunohematology I Laboratory**</td>
<td>1</td>
</tr>
<tr>
<td>MLS 480</td>
<td>Clinical Immunohematology II*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 492</td>
<td>Clinical Immunohematology III**</td>
<td>2</td>
</tr>
<tr>
<td>MLS 494</td>
<td>Clinical Immunology*</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Categorical Credits</strong></td>
<td></td>
<td><strong>18 credits</strong></td>
</tr>
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### Microbiology Categorical

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS 234</td>
<td>Parasitology*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 336</td>
<td>Laboratory Calculations*</td>
<td>1</td>
</tr>
<tr>
<td>MLS 340</td>
<td>Molecular Diagnostics</td>
<td>2</td>
</tr>
<tr>
<td>MLS 394</td>
<td>Medical Microbiology*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 460</td>
<td>Laboratory Practice*</td>
<td>2</td>
</tr>
<tr>
<td>MLS 465</td>
<td>Clinical Laboratory Management*</td>
<td>3</td>
</tr>
<tr>
<td>MLS 478</td>
<td>Clinical Microbiology I**</td>
<td>2</td>
</tr>
<tr>
<td>MLS 484</td>
<td>Clinical Microbiology II*</td>
<td>2</td>
</tr>
</tbody>
</table>

*Orientation Handbook Undergraduate: Update 5/15*
MLS 487  Medical Mycology*  1 credits
MLS 495  Clinical Microbiology III**  2 credits
TOTAL........................................................................................................................................19 credits
*Distance Course (Internet)  **Clinical Laboratory

MAYO CLINIC COHORT PROGRAM (MAYO TRACK)

In a joint venture between Mayo Clinic and the University of North Dakota’s Medical Laboratory Science program, a unique MLS cohort program has been established. The program blends online MLS curriculum from UND with onsite intensive laboratory training sessions and clinical rotations at Mayo Clinic. The program has been developed for working professionals and is designed to be completed around the work hours of the Mayo Clinic employee, with no outside travel required.

Mayo Cohort Senior Semester Curriculum Design Information:

The senior courses (MLS 400 – level courses) are divided into five semester blocks. Semester blocks are independent of each other, so a student may start senior courses in either the fall or spring semester. At least one summer semester will be required.

“Reduced Load”- students may choose to enroll in fewer courses per semester, and extend their senior program (final clinical year) of study beyond five semesters.
Example of Mayo Cohort Curriculum Design (Intensive Lab Schedule)

| UND Mayo Cohort "Senior" Semesters (1-5) |  
|----------------------------------------|---|
| **Semester 1**                          | **Semester 2**                      | **Semester 3**                      |
| **2013 Fall Semester CR**              | **2014 Spring Semester CR**         | **2014 Summer Semester CR**         |
| MLS 478 Cl. Microbiology I             | MLS 477 Cl. Immunohem I             | MLS 472 Pre-analytical testing I    |
| MLS 477 Cl. Medical Mycology           | MLS 477 Cl. Immunohem I Lab         | MLS 474 Cl. Urinalysis I            |
| MLS 471 Cl. Chemistry I               | MLS 473 Cl. Hemostasis I            | MLS 479 Cl. Hematology I            |
| **Intensive Lab 1**                    | **Intensive Lab 2**                 | **Intensive Lab 3**                 |
| Topics: Microbiology/Mycology          | Topics: 477 Immunohem & 473 Hemostasis | Topics: 479 Heme                    |
| Time: M-F from 4:00 to 8:00pm          | Time: M-F from 4:30 to 8:30pm       | Time: M-Th from 4:00 to 8:00pm      |
| Total Credits: 5                       | Total Credits: 6                    | Total Credits: 7                    |

<table>
<thead>
<tr>
<th><strong>Semester 4</strong></th>
<th><strong>Semester 5</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2014 Fall Semester CR</strong></td>
<td><strong>2015 Spring Semester CR</strong></td>
</tr>
<tr>
<td>MLS 489 Cl. Body Fluids</td>
<td>MLS 480 Cl. Immunohem II</td>
</tr>
<tr>
<td>MLS 489 Cl. Basic Histology</td>
<td>MLS 480 Cl. Chemistry II</td>
</tr>
<tr>
<td>MLS 483 Cl. Hemostasis II</td>
<td>MLS 483 Cl. Coagulation III</td>
</tr>
<tr>
<td>(Projected in August-Sept)</td>
<td>(Projected in September)</td>
</tr>
<tr>
<td>MLS 485 Cl. Urinalysis II</td>
<td>MLS 484 Cl. Microbiology II</td>
</tr>
<tr>
<td>MLS 484 Cl. Immunology</td>
<td>MLS 486 Cl. Hematology II</td>
</tr>
<tr>
<td><strong>Intensive Labs - Stable 3-00</strong></td>
<td>Total of 3 mandatory intensive labs that each run Monday thru Saturday for up to two consecutive weeks. (M-F labs are scheduled for 4 hour shifts, Sat labs for 4-4 hours)</td>
</tr>
</tbody>
</table>
| **Total Credits: 8**                   | Exact dates & times of intensive labs will vary with each cohort

**Mayo Clinical Intensive Rotations**

The Mayo Laboratory Clinical Intensive Rotations (CIRs) listed above may vary when offered and need to be enrolled in when appropriate. (MLS 491, 492, 495, 498)

They are only listed in the above semesters for tracking purposes. Cohort students will be enrolled in these courses based on availability times at Mayo and after they have finished or completed a majority of the corresponding lecture component. If competency level requirements for a specific rotation have already been met, the student may petition to “test out” of that rotation.

**Note:** Short Mayo Rotations not included in this schedule and to be determined at a later date are the following:

- **Coagulation Rotation (MLS 473)** - Arranged after MLS 473 lecture is completed.
- **Phlebotomy Rotation (MLS 472)** - Arranged for MLS 472 in either last summer or the fall semester

**Study Guide Courses (SGCs)**

- **MLS Study Guide Courses** - Review of MLS courses for ASCP National Board of Certification Exam
- (Students may want to divide them up and take them in over 2 semesters.)
COURSE DESCRIPTIONS

The Medical Laboratory Science program is within School of Medicine and Health Sciences at the University of North Dakota. The Medical Laboratory Science (MLS) courses offered are listed below:

101. Orientation to Medical Laboratory Sciences: 2 credits. Introduction to the role, ethics, conduct, certification, education, employment, and fundamental knowledge and skills related to medical laboratory science.

234. Human Parasitology: 2 credits. Physiological aspects of human parasites, their symbiotic host parasite relationships and clinical diagnostic techniques.

234L Human Parasitology Laboratory: 1 credit. Laboratory methods for the identification and diagnosis of human parasites.

301. Immunology: 3 credits. Principles of clinical immunology focusing on cellular and molecular nature of antigens and immunoglobulin, the immune response, immunogenetics, and immune mediated disease.


325L Hematology Laboratory: 2 credits Co-requisite: 325. Morphologic examination of blood and bone marrow and laboratory testing used in hematological study.

336. Laboratory Calculations: 1 credit. Calculations used in the clinical laboratory including measurement systems, dilutions, graphing, solution chemistry statistics of quality control and research interpretation.

340. Molecular Diagnostics: 2 credits. An introduction to specific molecular biology application in the laboratory and a discussion of cell biology, DNA chemistry, genetics, nucleic acid extraction and modification, blotting, polymerase chain reactions, and probes in relation to diagnostic investigations.

340L Molecular Diagnostics Laboratory: 1 credit. Application of molecular techniques including the operation of molecular based instrumentation, DNA extraction and measurement, blotting, polymerase chain reactions, and utilization of probes.

380 Professional Issues in Clinical Laboratory Science: 1 credit. Discussion of MLS professional issues, ethics, current topics of healthcare delivery, governmental regulations, societal concerns, cultural diversity, disease prevention, research and environment.

394. Medical Microbiology: 2 credits. Medically important microorganisms are identified using a wide variety of clinical techniques. Included in the discussion will be susceptibility studies and the correlation of the presence of microorganisms to health and disease.

399. Special Topics in Clinical Laboratory Science: 1-13 credits. Lecture, discussion and readings in topics of current interest in the clinical laboratory sciences.
460. **Laboratory Practice**: 2 credits. This course represents an overview of standard laboratory practices including safety, glassware, microscopes, centrifuges, balances, specimen collection and handling.

464. **Clinical Review**: 3 credits. Emphasis is on concepts related to the role of a clinical laboratory scientist. Analysis and evaluation focuses on the theories of immunohematology, clinical chemistry, microbiology, hematology and other areas contributing to clinical application.

465. **Clinical Laboratory Management**: 3 credits. Management practices in the clinical laboratory including concepts related to service and quality, information management, financial management, personnel management, laboratory education and research.

471. **Clinical Chemistry I**: 2 credits. Theories and principles of clinical chemistry procedures are discussed as well as how the results of these procedures correlate to health and disease.

472. **Preanalytical Skills**: 1 credit. Theory and practice of phlebotomy in the clinical setting, specimen processing, review of state and federal regulations, safety and biohazard compliance, interpersonal relationship skills.

473. **Clinical Hemostasis I**: 2 credits. Physiologic mechanisms of normal human hemostasis as well as hereditary and acquired defects. Laboratory techniques performed and discussed are screening tests and specific assays for abnormalities, procedures to monitor therapeutic measures and practice, and maintenance of current instrumentation.

474. **Clinical Urinalysis I**: 2 credits. Theory, techniques and practice of microscopy and urinalysis with emphasis on identification of elements in the sediment.

477. **Clinical Immunohematology I**: 1 credit. Theory of modern transfusion techniques, component therapy, and quality assurance.

477L. **Clinical Immunohematology I Laboratory**: 1 credit. Practical application of modern transfusion techniques, component therapy, and quality assurance.

478. **Clinical Microbiology I**: 2 credits. Groups of medically important bacteria are studied and correlated to laboratory practice in identification. Included in the discussion are antibiotic susceptibility testing, quality control, and methods of identification including rapid, automated, and traditional methods.

479. **Clinical Hematology I**: 2 credits. Emphasis on interpretive correlation of hematology findings and pathophysiology. Topics of current interest and advances in hematology.

480. **Clinical Immunohematology II**: 2 credits. Applied theory and modern transfusion at the clinical affiliate.

481. **Clinical Chemistry II**: 2 credits. Applied theory and practice in clinical chemistry at the clinical affiliate.
483. **Clinical Hemostasis II:** 1 credit. Techniques and practice in routine phlebotomy at the clinical affiliate.

484. **Clinical Microbiology II:** 2 credits. Applied theory and practice in clinical microbiology at the clinical affiliate.

485. **Clinical Urinalysis II:** 1 credit. Applied theory and practice in urinalysis and observation, practice, or research in specialized areas or settings at the clinical affiliate.

487. **Medical Mycology:** 1 credit. Comparative morphology, physiology and pathogenicity of medically important fungi. Laboratory methods for identification, emphasize interpretation and evaluation of results including the recognition of contaminating organisms.

488. **Clinical Hematology II:** 2 credits. Applied theory and practice in hematology at the clinical affiliate.

489. **Clinical Body Fluids:** 1 credit. Overview of the theory and practice in manual procedures of human body fluids. The body fluids to be discussed include: spinal, synovial and amniotic fluid, transudates and exudates, fecal specimens, gastric, sweat, and other body fluid secretions.

490. **Financial and Quality Management of the Clinical Laboratory:** 3 credits. A capstone course designed to provide senior students with the skills to manage a clinical laboratory. The course brings together previous content with a focus on laboratory profitability, quality management, and quality improvement.

491. **Clinical Chemistry III:** 2 credits. Techniques and practice in clinical chemistry at the clinical affiliate.

492. **Clinical Immunohematology III:** 2 credits. Techniques and modern transfusion practices at the clinical affiliate.

495. **Clinical Microbiology III:** 2 credits. Techniques and practice in clinical microbiology at the clinical affiliate.

498. **Clinical Hematology III:** 2 credits. Techniques and modern hematology practices at the clinical affiliate.
**CLINICAL AFFILIATE INFORMATION**

**Introduction:**
The MLS program at the University of North Dakota has over 70 clinical affiliates. The process of clinical site selection for the students is included in the “Program Policies” unit of this handbook under “Clinical Year Policies”

Current Clinical Affiliation Site List (The list of clinical affiliates is subject to change),

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>CITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARIZONA</strong></td>
<td></td>
</tr>
<tr>
<td>Southern Arizona VA Healthcare System</td>
<td>Tucson</td>
</tr>
<tr>
<td>Sonora Quest VA</td>
<td>Tempe</td>
</tr>
<tr>
<td><strong>COLORADO</strong></td>
<td></td>
</tr>
<tr>
<td>Delta Country Memorial Hospital</td>
<td>Delta</td>
</tr>
<tr>
<td>Denver VA Medical Center</td>
<td>Denver</td>
</tr>
<tr>
<td>St. Mary’s Hospital</td>
<td>Grand Junction</td>
</tr>
<tr>
<td>The Children’s Hospital Association</td>
<td>Denver</td>
</tr>
<tr>
<td>University of Colorado Hospital</td>
<td>Denver</td>
</tr>
<tr>
<td><strong>IOWA</strong></td>
<td></td>
</tr>
<tr>
<td>Central Iowa Healthcare Systems</td>
<td>Des Moines</td>
</tr>
<tr>
<td><strong>MINNESOTA</strong></td>
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</tr>
<tr>
<td>Austin Medical Center</td>
<td>Austin</td>
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<td>Bloomenson Country Hospital</td>
<td>Ely</td>
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<td>Centra Care Laboratory Services</td>
<td>St. Cloud</td>
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<td>Douglas Country Hospital</td>
<td>Alexandria</td>
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<tr>
<td>Grand Itasca Clinic &amp; Hospital</td>
<td>Grand Rapids</td>
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<td>Health East Medical Laboratory</td>
<td>St. Paul</td>
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<td>Lake Region Healthcare</td>
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<td>Meritcare Northwest Medical Center</td>
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<td>Park Nicollet Health System, Methodist Hospital</td>
<td>Minneapolis</td>
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AFFILIATION BETWEEN THE UNIVERSITY OF NORTH DAKOTA AND THE CLINICAL AFFILIATE
Master Clinical Affiliation Agreement

This Agreement is made by and between the University of North Dakota ("University" or "UND") and Enter Facility Name - City, State ("Facility").

WHEREAS, the State of North Dakota, doing business as the University of North Dakota, desires to obtain internships or clinical education experience for its students/residents and

WHEREAS, it is the shared responsibility of the University and the Facility to create and maintain an appropriate learning environment and

WHEREAS, the Facility is committed to the professional education and training of University students/residents and is willing to assist in their education by providing them high-quality internships or clinical education experiences.

NOW THEREFORE, the University and Facility agree as follows:

I. THE UNIVERSITY AGREES:

1.1 To provide Facility with a list of University departments and programs covered by this Agreement (see Exhibit A).

1.2 To be responsible for meeting applicable program accreditation requirements.

1.3 To provide information to its students/residents and the Facility that outlines standards of performance and guidelines for the clinical education experience or internship.

1.4 To assign appropriate faculty/staff to serve as clinical education or internship liaisons between the Facility and the University (see Exhibit A).

1.5 To provide professional and general liability insurance for University students/residents and faculty/staff liaisons with maximum limits of $1,000,000 per occurrence and $5,000,000 annual aggregate.

1.6 To inform students/residents of the confidential nature of all Facility patient and client records, and of their obligations to protect the privacy and security of all protected health information.

1.7 To place only students/residents who have satisfactorily completed all required prerequisite courses and any other academic requirements and have been recommended by University faculty for placement in such a clinical education experience or internship. Upon request, University will provide Facility with information regarding the student’s/resident’s experience and/or academic background prior to placement, as authorized by the student/resident.

1.8 To inform the students/residents that they must adhere to the administrative policies and procedures of the Facility.

1.9 To inform the students/residents that they must comply with the health requirements of the Facility and supply the Facility with any required documentation.

1.10 To assure that a criminal background check is completed on all students/residents to be placed with the Facility. Upon request, University shall make available to the Facility a background check report for all student/resident participants, as well as a detailed description of the various components of the
University’s comprehensive background check process.

1.11 To inform the students/residents that they may be required to undergo a drug test pursuant to the Facility’s policies and practices, and that the cost of any drug test will be paid by the student/resident, if not the Facility.

II. THE FACILITY AGREES:

2.1 To collaborate with the University in the selection of learning assignments which meet the educational needs of the students/residents.

2.2 To supervise and instruct the students/residents during the experience. Upon request, the Facility shall provide vitae of persons supervising or instructing students/residents to the University.

2.3 To conduct student/resident performance evaluations as directed by the University.

2.4 To notify the University immediately if a student/resident is not performing satisfactorily. The Facility will follow any oral notice or communication made under this paragraph with a written communication.

2.5 If interns or clinical education students/residents or are required by Facility to undergo a drug test, Facility shall provide University with notice and explanation of any positive or unacceptable drug test results. If students/residents are required by Facility to undergo a drug test, Facility shall obtain advance authorization from students/residents permitting Facility to notify and explain to University any positive or unacceptable drug test result.

2.6 To provide the students/residents with appropriate office space, equipment, and resources, including access to the Facility’s physical and/or online library, to carry out their assigned duties and learning objectives.

2.7 To orient students/residents to the Facility and its conduct and performance policies, procedures, rules, and regulations.

2.8 To supply the University with copies of any policies or procedures with which the students/residents will be expected to comply.

2.9 To notify the University prior to student/resident placement in the Facility of any health and fitness related requirements, including medical insurance coverage, immunization record, physical exam, and/or drug testing.

2.10 To maintain throughout the term of this Agreement all licenses, permits, certificates, and accredited statuses held at the time of execution of this Agreement, which are applicable to performance of this Agreement.

2.11 To maintain a positive, respectful, and adequately resourced learning environment so that sound educational experiences can occur (see Exhibit B).

III. THE UNIVERSITY AND THE FACILITY AGREE:

3.1 That the number of students/residents placed in the Facility, the duration, and the timing of the experience shall be mutually agreed upon.

3.2 To collaborate in identifying specific experience objectives and learning activities for each student/resident placed in the Facility.

3.3 To follow termination procedures outlined in the University’s applicable program guidelines or instruction manual in the event a student/resident placement is terminated prior to its intended conclusion.

3.4 That the Facility may exclude from participation any student/resident
whose performance is determined to be detrimental to the Facility’s clients; who violates established Facility policies, procedures and/or ethics codes; or whose performance is otherwise unsatisfactory, including any student/resident who is unable to maintain compatible working relationships with Facility employees, or whose health status precludes their regular attendance and successful completion of the experience.

3.5 In the event a student is exposed to an infectious or environmental hazard or other occupational injury (i.e. needle stick) while at the Facility, the Facility will provide such emergency care as is provided its employees, including, where applicable: examination and evaluation by Facility’s emergency department or other appropriate facility as soon as possible after the injury; emergency medical care immediately following the injury as necessary; initiation of the HBV, Hepatitis C (HCV), and HIV protocol as necessary; and HIV counseling and appropriate testing as necessary. In the event that the Facility does not have the resources to provide such emergency care, the Facility will refer such student to the nearest emergency facility. The student will be responsible for any charges thus generated.

3.6 That the University is primarily responsible for the educational program, academic affairs, and the assessment of assigned University students.

3.7 That the University is primarily responsible for the appointment and assignment of faculty members with responsibility for the teaching of assigned University students.

3.8 That the Facility recognizes that, in order for University to maintain accreditation for certain departments/programs, a representative from the applicable accrediting council/organization may need to observe a student/resident providing services under this Agreement. Facility shall allow the representative access to its facility provided that University, student/resident, and the applicable accrediting council/organization take reasonable steps to ensure appropriate professional conduct related to protected health information and ensures that the representative is held to the same standards of patient privacy rules/expectations as the student/resident and University.

IV. LIABILITY

4.1 Each party shall be responsible for claims, losses, damages, and expenses, which may arise out of negligent or wrongful acts or omissions of that party or its agents or employees, acting within the scope of their duties in the performance of this Agreement.

4.2 The tort liability of the University is as set out in chapter 32-12.2 of the North Dakota Century Code and is subject to the conditions and limitations contained therein. Nothing herein shall preclude the State of North Dakota from asserting against third parties any defenses to liability it may have under North Dakota law or be construed to create a basis for a claim or suit when none would otherwise exist.

4.3 Facility agrees to inform University in the event either an investigation or claim arises out of patient or client care services performed by a University student/resident and shall provide University with reasonable access to
information involving such student/resident in any investigation or claim. Facility shall notify University of the disposition of any such investigation or claim.

V. TERM AND TERMINATION OF AGREEMENT
5.1 This Agreement shall be effective beginning the date of execution by the parties and shall remain in effect for five (5) years from the date of execution. Either party may terminate this Agreement without cause at any time upon 60 days written notice to the other party.
5.2 In the event that the Facility terminates this Agreement, the Facility agrees that no students/residents participating in an ongoing internship or clinical education experience will be denied the opportunity to complete the affiliation, even when the effective date of termination occurs prior to the completion date of the internship or clinical education experience. In such an event, all applicable provisions of this Agreement, including the right to terminate any student/resident, shall remain in force until the end of the internship or clinical education experience.
5.3 The University may terminate this Agreement effective upon delivery of written notice to the Facility, or at such later date as may be stated in the notice, if any license, permit, certificate or accreditation required by law, rule or regulation, or by the terms of this Agreement, is for any reason denied, removed, suspended, or not renewed.

VI. NONDISCRIMINATION
The University and the Facility agree that in the performance of this contract there will be no discrimination in violation of the law or the policies of the University of North Dakota. Therefore, there will be no discrimination on the basis of race, color, sex, religion, sexual orientation, gender identity, genetic information, age, national origin, the presence of any mental or physical disability, political belief or affiliation, status with respect to marriage or public assistance, or status as a veteran.

VII. APPLICABLE LAW
This Agreement is governed by the laws of the State of North Dakota.

VIII. ASSIGNMENT
Neither party may assign or otherwise transfer or delegate any right or duty, without the express written consent of the other party.

IX. NOTICES
All notices or other communications purporting to exercise or otherwise affect rights and duties under this Agreement shall be given by registered or certified mail, addressed to the parties as indicated below, and are complete on the date mailed.

UNIVERSITY:  
University of North Dakota  
School of Medicine & Health Sciences  
Office of Education & Faculty

FACILITY:
Enter Facility Info
Affairs
501 N. Columbia Rd, Stop 9037
Grand Forks ND  58202

The provisions of this section do not supersede any statutes or rules of court regarding notice of claims or service of process. In the event of a conflict between this section and any statutes or rules of court, the statutes or rules of court govern.

X. MODIFICATION
This Agreement may not be waived, altered, modified, supplemented, or amended in any manner except by written agreement signed by both parties.

XI. SEVERABILITY
If any term or provision of this Agreement is declared by a court having jurisdiction to be illegal or unenforceable, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties are to be construed and enforced as if the contract did not contain that term or provision.

XII. MERGER
This Agreement constitutes the entire agreement between the parties. There is no understanding, agreements, or representations, oral or written, not specified within this Agreement.

XIII. CONSIDERATION
Under the terms of this Agreement, neither party is obligated to make any payments of any kind to the other party.

XIV. WAIVER
The failure of either party to exercise any of its rights under this Agreement for a breach thereof shall not be deemed to be a waiver of such rights, and no waiver by either party, whether written or oral, express or implied, of any rights under, or arising from, the Agreement shall be binding on any subsequent occasion; and no concession by either party shall be treated as an implied modification of the Agreement unless specifically agreed in writing.

XV. INDEPENDENT CONTRACTORS
The parties are independent contractors and shall not act as an agent for the other party, nor shall either party be deemed to be an employee of the other party for any purpose whatsoever. Neither of the parties shall have any authority, either express or implied, to enter any agreement, incur any obligations on the other party’s behalf, nor commit the other party in any manner whatsoever without the other party’s express prior written consent. Any promotional business representation by either party of the other shall be approved in advance.
Authorized Signatures

APPROVED FOR:  
Enter Facility Name  

APPROVED FOR:  
University of North Dakota

By: __________________________  
Facility Representative Name/Title  

By: __________________________  
Thomas Mohr, PT, Ph.D.  
Associate Dean for Health Sciences

Date: __________________________

By: __________________________  
Facility Representative Name/Title  

By: __________________________  
Thomas M. DiLorenzo, Ph.D.  
UND Provost and Vice President for Academic Affairs

Date: __________________________
EXHIBIT A: Clinical Education Departments/Programs Covered Under this Affiliation Agreement at the University of North Dakota (www.und.edu)

College of Arts and Sciences:
- Communication Sciences and Disorders, 701-777-3234
- Music Therapy, 701-777-2836
- Psychology, 701-777-3451

College of Education & Human Development:
- Counseling Psychology & Community Services, 701-777-3738
- Kinesiology and Public Health Education, 701-777-4324

College of Nursing and Professional Disciplines:
- Nursing, 701-777-4555
- Nutrition & Dietetics, 701-777-0849
- Social Work, 701-777-2669

School of Medicine and Health Sciences:
- Occupational Therapy, 701-777-2218
- Physical Therapy, 701-777-2831
- Physician Assistant, 701-777-2344
- Medical Laboratory Science, 701-777-2628
- Division of Sports Medicine, 701-777-3886
- Graduate Medical Education, 701-293-4107
- Northeast Campus, Grand Forks, 701-777-3406
- Northwest Campus, Minot, 701-858-6774
- Southeast Campus, Fargo, 701-293-4107
- Southwest Campus, Bismarck, 701-751-9579
EXHIBIT B: TEACHER-LEARNER EXPECTATIONS

The UNIVERSITY holds in high regard professional behaviors and attitudes, including altruism, integrity, respect for others and a commitment to excellence. Effective learning is best fostered in an environment of mutual respect between teachers and learners. In the context of medical education the term "teacher" is used broadly to include peers, resident physicians, full-time and volunteer faculty members, clinical preceptors, nurses and ancillary support staff, as well as others from whom students learn.

GUIDING PRINCIPLES:

**Duty:** Medical educators have a duty not only to convey the knowledge and skills required for delivering the profession's standard of care but also to instill the values and attitudes required for preserving the medical profession's social contract with its patients.

**Integrity:** Learning environments that are conducive to conveying professional values must be based on integrity. Students and residents learn professionalism by observing and emulating role models who epitomize authentic professional values and attitudes.

**Respect:** Respect for every individual is fundamental to the ethic of medicine. Mutual respect is essential for nurturing that ethic. Teachers have a special obligation to ensure that students and residents are always treated respectfully.

RESPONSIBILITIES OF TEACHERS AND LEARNERS:

**Teachers should:**
- Treat students fairly and respectfully
- Maintain high professional standards in all interactions
- Be prepared and on time
- Provide relevant and timely information
- Provide explicit learning and behavioral expectations early in a course
- Provide timely, focused, accurate and constructive feedback on a regular basis and thoughtful and timely evaluations at the end of a course
- Display honesty, integrity and compassion
- Practice insightful (Socratic) questioning, which stimulates learning and self-discovery and avoid overly aggressive questioning which may be perceived as hurtful, humiliating, degrading or punitive
- Solicit feedback from students regarding their perception of their educational experiences
- Encourage students who experience mistreatment or who witness unprofessional behavior to report the facts immediately

**Students should:**
- Be courteous of teachers and fellow students
- Be prepared and on time
- Be active, enthusiastic, curious learners
- Demonstrate professional behavior in all settings
- Recognize that not all learning stems from formal and structured activities
- Recognize their responsibility to establish learning objectives and to participate as an active learner
- Demonstrate a commitment to life-long learning, a practice that is essential to the profession of medicine
- Recognize personal limitations and seek help as needed
- Display honesty, integrity and compassion
- Recognize the privileges and responsibilities coming from the opportunity to work with
patients in clinical settings
- Recognize the duty to place patient welfare above their own
- Recognize and respect patients’ rights to privacy
- Solicit feedback on their performance and recognize that criticism is not synonymous with “abuse”

**Relationships between Teachers and Students**
Students and teachers should recognize the special nature of the teacher-learner relationship, which is in part defined by professional role modeling, mentorship, and supervision. Because of the special nature of this relationship, students and teachers should strive to develop their relationship to one characterized by mutual trust, acceptance and confidence. They should both recognize the potential for conflict of interest and respect appropriate boundaries.
POLICIES

MEDICAL LABORATORY SCIENCE PROGRAM

(UNDERGRADUATE)
MODIFICATIONS TO POLICY

- The Medical Laboratory Science Professional and Academic Standards Committee reserve the right to make modifications to the MLS policies.

- Policies take effect on the date of approval by the Committee.

- Notification of the new policies will be posted on the MLS website within five working days of their approval.
Pre-Medical Laboratory Science Curriculum and Requirements  
(Pre-Professional/Pre-MLS)

Requirements

1. Prior to admission to the professional curriculum (junior year), a minimum of 55 semester credits from approved colleges or universities are required. Included in these credits must be the following. For additional information, please contact your advisor.

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*Additional essential studies requirements are included in the junior year curriculum plan.

2. Prospective students should review the UND MLS Essential Function Requirements that are listed in this handbook and on the MLS website at [http://www.med.und.edu/mls](http://www.med.und.edu/mls). The student must verify in writing that they meet these requirements before entrance into the professional program.

3. Prospective students need to be aware that they must pass a background check before acceptance into the professional curriculum with an update completed before entrance into the final professional year. Failure to pass the background check may deny the student entrance into summer practicum and completion of the required curriculum. The background check will be only accepted from a UND School of Medicine and Health Sciences approved company. The background check must be completed before final admission to the professional program. Concerns about this policy can be discussed with the UND MLS department chair or clinical education coordinator.

4. A maximum of two science courses can be repeated before entrance into the professional curriculum. If more than two science courses have been repeated prior to the application to the professional program (junior year), a petition for review must be generated by the prospective student to be given to the Medical Laboratory Science Professional and Academic Standards committee. The committee will determine if the application will be considered for entrance into the professional program.

5. A maximum of one letter grade of D is allowed to remain on a transcript for one math or science course, other than a MLS course (see below), during the entire pre and professional MLS curriculum.

6. No letter grade of D will be allowed to remain on a transcript for any MLS course. The course must be repeated and a grade of C must be achieved.

7. Application and acceptance to the University of North Dakota is different than the application process of the MLS professional program. Acceptance (admission) to the University of North Dakota does not mean acceptance into the MLS professional program.
8. A maximum of one MLS course can be repeated before entrance into the professional curriculum. If more than one MLS course has been repeated prior to the application to the professional program (junior year), a petition to review must be generated by the prospective student to be given to the Medical Laboratory Science Professional & Academic Standards Committee.

Professional Curriculum for Medical Laboratory Science
(BS-MLS, 2+2, 3+1, 4+1, Western College Alliance Programs)

I. Admission Criteria to the MLS Professional Curriculum (Junior and Clinical Years):
Admission is on a competitive basis. Applicants to the professional program must meet the following criteria in order to be eligible to submit an application*

A. Cumulative GPA of 2.8 on a scale of 4.0.
B. No more than two repeated math, or science courses in the pre-professional curriculum.
C. No more than one repeated MLS course, which includes hematology, parasitology, medical microbiology, immunology and molecular courses.
D. No more than one letter grade of D in any math or science course in the pre-professional curriculum.
E. No letter grade of D in any MLS course, which includes hematology, parasitology, immunology, medical microbiology, and molecular courses.
F. Two semesters of the junior year must be on campus unless the student holds a prior BS or BA degree, has earned CLT or MLT certification, is a member of a Western College Alliance for MLS (WCAMLS) college/university, or is a student in the Mayo Cohort Project.
G. A minimum of 55 credits (semester) or equivalent, must be completed before entrance into the professional curriculum (final two years).
H. Sufficient coursework must be completed prior to acceptance into the professional program. If more than 35 credits must be taken in the 1st year of the professional curriculum (junior year), full admission into the professional program will not occur.
I. All previous college transcripts must be submitted officially to the UND Office of Admissions. Transfer credit verification must be on the UND transcript by April 1st prior to the entrance to the following summer session (final clinical year). If all transfer credits are not at UND by this date the student will lose full admission status and admission into the MLS summer session (beginning of the final clinical year).
J. Verification of completion of coursework may also be required by the UND student advisor if the transfer credits have not yet been placed on the official UND transcript at the time of application. Admission to the professional program will be denied if the applicant does not comply with the verification within 2 weeks of the request.
K. If the student has previously been terminated from a MLT/CLT or MT/MLS program, he/she will not be allowed to apply for entrance into the UND professional program.
L. If a student falsifies their application for admission to the MLS program they will become ineligible for the final clinical year.
M. Application must be made before May 15th for UND students and November 1st for Western College Alliance Students. An application submitted after these dates must petition for acceptance by the Medical Laboratory Science Professional & Academic Standards Committee*.

N. The Medical Laboratory Science Professional and Academic Standards Committee may require an interview for admission.

O. Application and acceptance to the University of North Dakota is different than the application process of the MLS professional program. Acceptance (admission) to the University of North Dakota does not mean acceptance into the MLS professional program. All students must be officially admitted to the University of North Dakota prior to the 1st day of the final clinical year or they will not be allowed to continue in the program.

P. If a UND student fails a MLS 300 level course, the repeat course must be in the same format as was originally taken (on campus or distance).

Q. If a student earns less than or equal to a 2.0 GPA for a junior year semester, even though they have a cumulative GPA of 2.8, he/she will be removed from full admission status and entrance into the following summer session.

R. Admission is on a competitive basis, the application will be scored on a numerical scale related to the following criteria: Overall GPA, prerequisite science GPA, repeated courses, number of credits completed, assessment of writing sample and scientific passage.

S. When a student is registered in 300 and 400 level MLS courses, a specific tuition is assessed.

T. If a student is not accepted into the MLS professional program, he/she may reapply the following year for admission consideration.

U. Any student may be subject to a drugs of abuse screen during their final clinical year curriculum. Any student who tests positive for drugs of abuse will be removed from the program and will not be able to complete the required courses to earn a BS or certificate in Medical Laboratory Science.

V. Prospective students need to be aware that they must pass a background check before final acceptance into the final clinical year of the curriculum. Failure to pass the background check may deny the student entrance into summer practicum and completion of the required curriculum. The background check will be only accepted from a UND School of Medicine and Health Sciences approved company. The background check must be completed before final admission to the professional program. A renewal of the background check may be required before the student enters the final clinical year. Concerns about this policy can be discussed with the UND MLS program director or clinical education coordinator.

* A petition to review admission status can be generated by the student to the Medical Laboratory Science Professional and Academic Standards Committee. The petition can be found on the MLS website and in Appendix X of this handbook.
II. **Final Clinical Year Admission Additional Admission Requirements**

On Campus Summer Session (UND, UND 4+1, Western College Alliance and MLT/CLT Students)*:

All spring semester grades will be reviewed within 72 hours of release. Notification to the student will be made if they are no longer eligible for the final clinical year curriculum.

All previous policies for admission under Section I apply.

A. All prerequisite courses must be completed before acceptance into the final clinical year of the program. Verification of completion may be requested by the UND student advisor. Failure to obtain this verification will be cause for dismissal from the final clinical year program.

B. If the student is on a probationary status within the MLS program, a signed statement of understanding, generated by the MLS program director, concerning the probationary requirements to be met by the student, must be in the student’s file in the MLS program office within 2 weeks of the start of the final clinical year.

C. Any student may be subject to a drugs of abuse screen during their final clinical year curriculum. Any student who tests positive for drugs of abuse will be removed from the program and will not be able to complete the required courses to earn a BS or certificate in Medical Laboratory Science.

* A petition to review admission status can be generated by the student to the Medical Laboratory Science Professional and Academic Standards Committee. The petition can be found on the MLS website and in Appendix X of this handbook.

II. **Application Review Process**:

A. The application process consists of a review of five primary areas:

1. Curriculum review of the pre-requisite coursework.
2. Interview process (if requested).
3. References.
4. Written Statements
5. Assessment of scientific passage.

B. The science GPA, along with the MLS program GPA, and the number of prerequisites completed before the professional program, will be included in the ranking of the applications.

C. Priority for admission will be based on GPA, number of repeated courses and amount of required credits completed. Interviews may be added at the request of the Medical Laboratory Science Professional and Academic Standards Committee.

D. A maximum of 75 students will be admitted into the senior year (professional curriculum). This number includes UND and WCAMLS students and does not include Mayo cohort or categorical students.

E. A ranked alternate list will be established and moved into the full admission group if openings appear within the maximum of 75 students.

Exceptions for acceptance and continuance may be made by completing a professional and academic petition form and submitting it to the Medical Laboratory Science Professional and Academic Standards Committee.
petition form can be found at http://www.med.und.edu/MLS or in Appendix X of this handbook.

III. Critical Competencies:
Many course syllabi have critical competencies. Each critical competency must be successfully completed. If a critical competency is not met, dismissal from the UND MLS program will occur, depending on remediation protocol and probationary status policies related to the student.

IV. MLS Tuition:
When a student is registered in MLS 300 (junior) or MLS 400 (senior) curriculum level courses, a specific MLS tuition is assessed. Specific information may be obtained by contacting the MLS office at marybeth.mcguigan@med.und.edu or 701-777-2634.

V. Clinical Site Selection for students in the traditional, WCAMLS, and 4+1 curriculum plans:
A. Applicants to the program must submit their application to the program by the previously specified dates prior to the clinical experience to be eligible for the first round of clinical site selection.
B. Applicants to the program must submit their first, second, and third choice of clinical site selection at the time of application to the professional program. A student admitted to the professional program is not guaranteed the site of their first, second, or third choice.
C. Clinical site selection by the student is made by choosing from the current list of clinical sites found at http://med.und.edu/MLS
D. Request for a clinical site not found on the current list of clinical sites must be made in writing to the MLS clinical education coordinator, prior to the November 1 cutoff date. First priority of clinical site selection will be from the current list of clinical sites.
E. If more students have applied for a clinical site than there are positions available, the clinical assignment will be determined by a lottery. The clinical site placement will be based on sites available at the time of the lottery.
F. Students are NOT allowed to contact clinical sites without the direction of the MLS clinical education coordinator.
G. Students on the alternate list will only be awarded a clinical site upon advancement into the full admission status. The clinical site placement will be based on sites available at that time.
H. If a student declines a clinical site assignment made by the UND Medical Laboratory Science program, the program is not obliged to find another clinical affiliate location.

VI. General Policies:
A. Students are expected to attend 100% of all MLS classes.
B. Students are expected to complete lessons, assignments, quizzes, and exams according to the course schedule, syllabus and/or calendar. If an emergency or illness occurs that prohibits the students from accomplishing the above, it is the student’s responsibility to contact the instructor (in person or by telephone, voicemail or email) prior to the absence.
C. It is the student’s responsibility to read and obtain notes or course materials from other students after an absence. Each instructor reserves the right to determine how they will incorporate lessons, assignments, quizzes, and/or exams not completed into the student’s final grade.

D. It is the instructor’s decision to allow or not allow any make-up of lessons, laboratory experiences, assignments, quizzes and/or exams.

E. Student class attendance will be verified by the completion of class assignments or participation evaluation. Class attendance records may be reviewed as part of determining the affective portion of the student’s evaluation which counts in their overall grade according to the instructor’s discretion. If an absence is lengthy, the student may not receive credit and must repeat the course the next time it is offered.

F. Tardiness will not be tolerated and will be reflected on affective evaluation forms. Each instructor will inform the student how tardiness will be incorporated into the course grade. Promptness is also expected following breaks in either lecture or laboratory experiences.

G. Format of make-up exams may differ from the original exam delivered in class. The format of the make-up exam will be determined by the course instructor.

H. Use of any electronic devices is not allowed during any quiz or exam both in lecture and laboratory experiences (except approved calculators) unless approved by the instructor of the course.

I. Cell phones must be turned off during all lectures, quizzes, exams and laboratory experiences.

VII. Incomplete Grades:
A. UND Incomplete Grade Policy: http://www.und.nodak.edu/dept/registrar/catalogs/catalog/ugdept/more.htm#IncompletePolicy

It is expected that students will complete all requirements for a course during the time frame of the course. For reasons beyond a student’s control, and upon request by the student or on behalf of the student, an incomplete grade may be assigned by the instructor when there is reasonable certainty the student will successfully complete the course without retaking it. The mark “I,” Incomplete, will be assigned only to the student who has been in attendance and has satisfactory work up to a time within four weeks of the close of the semester, including the examination period, and whose work is incomplete for reasons satisfactory to his/her instructor.

Incomplete grades will convert to a grade of “F” if a grade is not submitted by the instructor to the Office of the Registrar on or before the deadline written on the “Report of Incomplete Grade” form.
The instructor of the course and the dean of the college offering the course for undergraduates must approve and sign the “Report of Incomplete Grade” form for any extension of incomplete beyond the default date listed in the “UND Schedule of Courses for Each Semester.” An incomplete grade must be changed by 12 calendar months from the ending date of the class. It is the student’s responsibility to contact their instructor about an incomplete grade posted on their final grade report.

An “I” may be converted as indicated above but cannot be expunged from the record. Students may not register in courses in which they currently hold grades of incomplete, except for courses that allow repeated enrollment. A student will not be allowed to graduate with an unconverted incomplete grade on their academic record.

B. **MLS Program Incomplete Grade Policy (Including UND’s Policy):**

1. It is the responsibility of the student to contact the instructor and request consideration for an Incomplete grade to be assigned.
2. It is the responsibility of the student to inform the instructor that they have finished the course.
3. It is the responsibility of the student to finish all requirements of the course specified by the instructor by the published date for removal of incomplete grades. Each semester the UND Office of the Registrar assigns a specific date that all incomplete grades must be removed and grade assigned. A date is also assigned for work to be submitted to the instructor in order to remove the incomplete grade. These dates can be found online each semester at: [http://www.und.nodak.edu/dept/registrar/index.htm](http://www.und.nodak.edu/dept/registrar/index.htm).
4. It is the responsibility of the student to contact the instructor to request an extended incomplete. This date can be no later than 12 calendar months after the end of the course. Extenuating circumstances must be given to the instructor before consideration for an extension will be granted.
5. An incomplete must be converted to a letter grade prior to repeating the course.

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 interfere with your summer practicum or clinical experience and may require a delay in completion of the program as determined by the Medical Laboratory Science Professional and Academic Standards Committee.

IX. **Electronic Communications Policy (UND Email Account and Blackboard):**

A. All students taking MLS courses will be assigned a UND email account. It’s the student’s responsibility to monitor this account. All communication initiated from instructors and program officials will be made using this e-mail account.

B. Guidelines for combining e-mail accounts can be found on the MLS website.

C. Return e-mails: Instructors have five working days to return e-mails. If the student has not heard back from an instructor within five working days, it is appropriate to inquire about receipt of the e-mail.
D. All communications from the student must be in a professional and courteous tone.

E. Grading of assignments and exams in distance courses using Blackboard: Students should allow ten working days for assignments to be graded and posted on Blackboard. If the student has not seen a grade under the tools section of the course room after ten working days, it is appropriate to inquire about the receipt of the assignment/exam.

F. Any quiz or exam that requires a proctor MUST be monitored by a proctor, with signatures required before and after the quiz/exam. If a quiz/exam has been lost by electronic communication, fax or regular mail, verification of successful completion of the exam will be needed from the proctor. Any missing work, lost by apparent electronic or regular mail error will have makeup options determined by the instructor.

G. All programmable electronic devices (including I-Pods and phones) are not allowed during any quiz or exam taken by the student. This includes those taken in either the lecture or laboratory experiences. All cell phones must be turned off during all lectures, quizzes, exams, or laboratory experiences.

X. **Probation Status:**

A. Probation status is determined by the Medical Laboratory Science Professional and Academic Standards Committee.

B. The student may be placed on probation at any time due to breach of policy as determined by the Medical Laboratory Science Professional and Academic Standards Committee during the MLS professional program.

C. If a student is accepted into the professional program and does not have a 2.8 GPA they will be placed on probation.

D. A student will be placed on probation within the MLS program if the student is allowed to continue in the program but has not fulfilled all the requirements for admission to the professional program (either junior or senior years).

E. The student remains on probation until a written notification is signed by both the student and the department chair, discussing the release from probation status.

F. If a student does not meet the criteria for continuance as stated in the probation letter the student may not be allowed to progress in the program. The student must reapply for acceptance into the program in writing to the Medical Laboratory Science Professional and Academic Standards Committee.

XI. **Professional and Ethical Policies:**

A. Students suspected of cheating or dry labbing (not doing the lab tests and making up false results) will be counseled by the department chair with the intent to clarify the rules and responsibilities of the student.

B. Any proven evidence of cheating, dry labbing, or inappropriate behavior will result in a determination of the disciplinary action for the student by the Medical Laboratory Science Professional and Academic Standards Committee as to the student’s status in the MLS professional program.

C. Additional consequences may occur as deemed appropriate by the UND Code of Student Life (available on the UND website), and/or by an Academic Dean at UND.
D. Any proven evidence of cheating on exams or deliberate falsifying laboratory results/dry labbing in any manner will not be tolerated by the MLS program. Dismissal from the program will be determined by the Medical Laboratory Science Professional and Academic Standards Committee.

XII. **Dismissal Policies:** Pre professional and professional curriculum students:
The following are grounds for dismissal from the program at any time:
A. Any proven evidence of cheating on exams or deliberate falsifying laboratory results/dry labbing in any manner. Cheating on exams includes taking quizzes or exams without proctor knowledge and verification.
B. Disregard for the patient's right to confidentiality and privacy.
C. Disregard for laboratory policies including safety policies.
D. Consistently displaying inaccurate work, careless attitude, lack of professionalism and failure or inability to adhere to program policies.
E. Critical competencies in the laboratory must be successfully completed. If a critical competency is not met, dismissal from the UND MLS professional program (junior or senior year) will occur.
F. Dismissal as deemed appropriate by the UND Code of Student Life.
G. Additional dismissal policies related to the Summer Practicum and the Clinical Affiliation can be found in the specific policy section of this handbook.

XIV. **Distance Courses:**
A. **Proctor:**
   1. Each semester the student is enrolled in a distance course, the student’s proctor information must be registered using the information located at: [http://pathology.med.und.nodak.edu/proctor/stlogin.cfm](http://pathology.med.und.nodak.edu/proctor/stlogin.cfm)
   2. This information will be kept confidential. It is necessary to update database information, send exams to proctor, etc.
   3. 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.
   4. Proctors and their supervisory role will be verified for authenticity.
   5. Falsification of proctor information will be grounds for dismissal from the program.
   6. The MLS program reserves the right to have the student locate an alternate proctor and to approve/disapprove all proctors.

B. **Communications:**
   1. E-mail communication: Instructors will have five working days to answer e-mail. If a student has not heard back from an instructor within five working days, it is appropriate to inquire about receipt of the e-mail.
   2. All communication from the student must be in a professional and courteous tone. Lack of courteous communications will be reflected in the affective grading of the student.
   3. It is the student’s responsibility to check their UND email account, no other email account will be used.

XV. **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. 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.

B. The Medical Laboratory Science program 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.

XVI. **National Certification Exam Eligibility:**
The issuing of a baccalaureate degree, certificate or categorical certificate in MLS from the University of North Dakota is NOT contingent upon the student’s passing any type of external certification or licensure examination.

XVII. **Student Complaints and Resolutions:**
Complaints:
Formal Student complaints (not grievances) related to the MLS program must be submitted in writing to the MLS department chair. The MLS department chair will investigate the complaint, determine the resolution, and communicate to the complainant within ten working days of receipt of the formal complaint. All records related to student complaints will be kept in the MLS department chair’s office.

Grievances:
A. Discuss the problem with the instructor or affiliate site coordinator. If the issue remains unresolved to the student’s satisfaction…

B. Discuss the problem with the UND clinical education coordinator (if applicable). If the issue remains unresolved to the student’s satisfaction…

C. Present a written document concerning the problem with the MLS department chair. If the issue remains unresolved to the student’s satisfaction…

D. Present a written document concerning the problem to the Medical Laboratory Science Professional and Academic Grievance committee chair. If the issue remains unresolved to the student’s satisfaction…

E. The issue may be brought to the UND School of Medicine and Health Sciences. The procedure for presenting a formal grievance is located in Appendix VIII of this handbook, on the UND MLS website and at the UND School of Medicine and Health Science’s website.

XVIII. **Background Check Policy:**
A. It is the policy of the Medical Laboratory Science Program at the University of North Dakota that background checks be performed on all MLS curriculum plan students unless they have a prior background check done at their clinical affiliate. The School of Medicine and Health Sciences requires that the background checks be completed by a specific approved agency. Background checks performed by other agencies will not be accepted by the University of North Dakota School of Medicine and Health Sciences. The fee for the background check is approximately **$45.00 and the student is responsible for this fee.** The background check will not be processed without payment. The background
check will be performed at admission to the Professional program (junior year) and a renewal may be required before going to a clinical affiliate.

B. Once the background check is completed the results will be released to both the student and the UND clinical education coordinator of the Medical Laboratory Science Program. The clinical education coordinator will forward the results of the background check to the clinical site at which the student has been placed. Failure to pass the background check will initiate the UND School of Medicine and Health Sciences (SMHS) background check failure policy. The policy is located in the appendix of this document and on the SMHS website. A failure of the background check may result in the student not being accepted into the MLS Professional Program. Students who do not complete the background check at time of application will not be formally accepted until the background check has been completed.

1. Information related to when and where to complete the approved background check will be forwarded to the student along at the time of the provisional acceptance into the professional curriculum or final clinical year, depending on the curriculum plan of the student. You will be required to provide identifying information as well as payment for the background check upon entering this web site.

2. The student needs to be able to pay electronically.

C. If the student is also a current employee at the clinical affiliation site, a background check acceptable to the employment/clinical affiliate site may be acceptable. The UND MLT/ Mayo Cohort/Categorical coordinator will determine acceptability.

D. Positive Background Check:
If a background check identifies any discrepancy, the discrepancy will be reviewed by the SMHS Background Check Committee.

IXX. Health Insurance
Students are responsible for having a health insurance policy throughout their final professional year and UND program officials will complete verification of this policy.

Students are responsible for payment of health-related bills that occur, including needlesticks or bloodborne/airborne pathogen exposure.

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

XXI. MLT/CLT Additional Policies

a. MLT’s or CLT’s who are not ASCP certified or equivalent 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:
   - Generalist experience must be from within the past seven years.
   - Generalist experience must include working in all four major areas of MLS (Immunohematology, Microbiology, Hematology, and Clinical Chemistry). (Included in Appendix I)
   - Eligibility will be determined by reviewing the student’s competency checklist and past work experience.
   - Final determination of eligibility will be made by the Mayo Cohort coordinator and/or committee decision.

d. The final comprehensive exam will be given during the last semester of the program. If the student does not pass the exam with an overall score of 70% or better, a second exam containing different questions, will be given. The intent of the comprehensive exam is to inform the student of any weaknesses in didactic areas before taking the national board certification.

e. **Competency Checklist:**
   - Completion of this checklist is required by all students prior to starting their senior semesters.
   - 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.
   - 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.
SUMMER PRACTICUM ADDITIONAL POLICIES

I. General Policies:
   A. All prior coursework requirements must be completed by the student before the summer session begins. See general admission section for guidelines.
   B. Refund of Institutional Charges:
      1. A student who withdraws from the University under normal conditions and after the beginning of instruction will be granted a refund of tuition/fees in accordance with federal regulations and North Dakota State Board of Higher Education policy 830.2.
      2. Institutional charges shall be refunded according to a schedule approved by the chancellor that provides for a percentage refund, which approximates the amount the institution must return to the Title IV Financial Aid Programs.
      3. A student must withdraw officially from the university within the stated refund period to be eligible for a refund of tuition and fees. No refund will be made to a student who is suspended, dismissed, or expelled for breach of discipline. More detailed information is available at http://www.und.edu/dept/studentaccounts/html/withdrawl.htm

II. Attendance:
   A. Class Hours: Summer Practicum hours are Monday through Friday, 8:00-6:00p.m. Labs or group sessions may be scheduled between 6:00-9:00p.m. The exact class hours will be determined by each course instructor.
   B. Attendance in ALL scheduled class time is mandatory.
   C. There are no days off allowed during scheduled class time. If there is an emergency or illness that prohibits the student from attending class, it is the student’s responsibility to contact the instructor who is teaching at that time and/or leave a message before class begins.
   D. If the student knows of an expected absence, i.e. wedding etc., an absence form must be completed by the student and submitted to the Summer Practicum coordinator for consideration of approval. This form is available on the MLS website.
   E. If an absence occurs, it is the student’s responsibility to read, obtain notes from other students, and catch-up with the rest of the class. It is NOT the responsibility of the instructor for one-on-one tutoring of the missed content or supplying missed information or notes.
   F. Laboratory experiences will NOT be available for make-up.
   G. Each instructor will determine how to incorporate missed quizzes, exams and/or laboratory assignments into the student’s final grade.
   H. If a student misses an excessive amount of work, the instructor will contact the Medical Laboratory Science Professional and Academic Standards Committee to determine probationary and/or termination status in the Summer Practicum experience for the student. In the case of the student’s termination from the Summer Practicum experience the student must reapply for the following Summer Practicum and admission into the final clinical year. A new clinical affiliation assignment will be made on acceptance into the following year.
III. **Remediation:**

If a student receives a “D” or “F” grade in a MLS 472, 473, 474, 477, 477L, 478, 479, 487, 489, 487, 489, including MLS 471 Clinical Chemistry I, and/or does not successfully complete a single critical objective within a course, the following rules apply:

A. **FOR A STUDENT NOT ON PRIOR PROBATION:**
   1. The student is placed on probation for the remainder of the clinical year.
   2. The student must meet with the course instructor and the Summer Practicum Coordinator to determine the plan for remediation. A written plan will be developed by the instructor for the criteria the student must meet to be able to earn a grade of “C” in the course. The written plan will be signed by the instructor, summer practicum coordinator, and the student.
   3. If unusual circumstances arise, a student may petition the Medical Laboratory Science Professional Academic Standards Committee. The committee will abide by the UND’s Code of Student Life.
   4. A maximum of a grade of “C” may be earned in the course with remediation.

B. **FOR A STUDENT CURRENTLY ON PROBATION:**
   1. The student is dismissed from the MLS Program and continuance in the program.
   2. To reapply to the program the following year, the student must petition the Medical Laboratory Science Professional Academic Standards Committee.
   3. If unusual circumstances arise, a student may appeal by petition to the Medical Laboratory Science Professional and Academic Standards Committee for consideration. The committee will abide by the UND’s Code of Student Life.

IV. **Summer Comprehensive Exam Policy:**

A. **IF THE STUDENT IS NOT ON PROBATION:** If the student does not pass the first attempt at the Summer Comprehensive Exam with at least a 70% or higher, the student must do the following:
   1. On the specified date, a review of questions the student missed must be completed by the individual student before they leave the summer practicum. Additional information on the date of this review will be announced before the exam.
   2. Take a second exam (which will not contain the same questions as the first exam) and pass with a 70% or higher and must be completed before the last day to drop/add in the fall semester. See UND dates and deadlines for the last day to drop.
   3. The student will be placed on probation for the remainder of the final clinical year coursework if they do not pass the second exam.

B. **IF THE STUDENT IS CURRENTLY ON PROBATION:** If a student does not pass the first attempt of the Summer Comprehensive Exams with at least a 70% or higher, the student must do the following:
   1. On the specified date, a review of questions the student missed must be completed by the individual student before they leave the summer practicum. Additional information on the date of this review will be announced before the exam.
2. Take a second exam (which will not contain the same questions as the first exam) and pass with a 70% or higher and must be completed before the last day to drop/add in the fall semester.

3. The student will be dismissed from the program if they do not pass the second exam. To reapply to the program the following year, the student must petition the Medical Laboratory Science Professional and Academic Standards Committee by November 1.

V. **Student Request for Excessive Help in the Laboratory:**

Example: Student refuses to follow directions by themselves and requests assistance from the faculty *repeatedly*.

A. If a Summer practicum faculty member believes that the student is not taking responsibility for their own learning or is reckless in following directions, either written or verbal, the faculty will clarify to the student a maximum of two times that this is considered excessive help. The faculty will document each warning in writing.

B. Upon the third warning, the faculty member will submit the documentation to the Medical Laboratory Science Professional and Academic Standards Committee. The committee will determine the appropriate action, which could include dismissal from the summer practicum and dismissal from the program.

VI. **Dismissal from the Summer Practicum:**

All dismissal policies from the general program policies apply to this section including the following:

A. **FOR A STUDENT NOT ON PRIOR PROBATION** in the summer practicum:
   1. A maximum of one remediation during the Summer Session is allowed.
   2. Any subsequent failure in any course (grade “D” or “F”) or failure of a critical objective will require the student to withdraw from the summer practicum and resubmit an application for consideration for admission to the summer practicum for the following year by November 1.

B. **FOR THE STUDENT ON PRIOR PROBATION:**

Any failure in any course (grade of “D” or “F”) or failure of a critical objective will require the student to withdraw from the summer practicum and submit an application for consideration for admission into the summer practicum for the following year by November 1.

C. **EXTENDED ABSENCE** (with or without probation status)

An extended absence from the Summer Practicum may be grounds for dismissal. The instructor of the course in which the student has had an extended absence will contact the Medical Laboratory Science Professional and Academic Standards Committee to determine probationary and/or termination student in the summer practicum experience for the students.
CLINICAL AFFILIATION
ADDITIONAL POLICIES

I. Attendance:
   A. Sick/Personal Leave Time:
      1. A maximum of five days is granted. It is not recommended that the student use all the personal leave time. Personal leave is only meant to be used when absolutely necessary.
      2. Students should make every effort to schedule personal appointments during hours after their scheduled shift at the clinical affiliate.
      3. Personal time must be taken in a minimum of a four-hour block.
      4. Any personal time that extends beyond one day for each departmental rotation must be made up in that department.
      5. The student may request personal leave time only with the consent of the clinical affiliate site coordinator. Notification must be made at least five days in advance.
   B. Illness Related Absences: In the event of illness the student MUST call the clinical affiliate site, specifically the on-site supervisor directed to be responsible for the student, on the individual day, at least ½ hour before the scheduled arrival time. Probation, followed by termination from the program, will occur for extensive absences past the 5 day maximum. The student must contact their supervisor each day of the absence.
   C. Inclement Weather: In the event of inclement weather the student MUST call the clinical affiliate site, specifically the on-site supervisor directed to be responsible for the student, or the individual day supervisor, at least ½ hour before the scheduled arrival time each day.
   D. Make-Up Time: If the student exceeds more than the total of five days allowed or more than one day in each department rotation, each day in excess must be made up in full. 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. Make-up days may delay graduation and/or certification exam eligibility.
   E. Extended Time Off: If the student needs an extended period of time off, the clinical affiliate site coordinator, the student and the UND clinical affiliation coordinator, will assess the situation and make any appropriate adjustments possible. An alternate clinical affiliation may need to be assigned when space is available for extended absences.

II. Tardiness:
   A. Students are expected to report to their clinical affiliate on time, as scheduled.
   B. Students are expected to stay at the clinical site until dismissed by the bench instructor for the day.
   C. Asking the bench coordinator to be able to leave early is not tolerated and will follow the same protocol as chronic tardiness.
   D. Tardiness will be reflected on the professional attributes section of the performance evaluation form and will be incorporated into the overall grade for each rotation.
E. The time missed for tardiness may be made up at the discretion of the clinical affiliate site coordinator.

F. CHRONIC tardiness will not be tolerated and will be dealt with in the following manner:
- The UND clinical education coordinator will issue a verbal warning to the student. Documentation of this warning will be made in the student’s file.
- If tardiness continues, the UND clinical education coordinator will issue a written warning to the student. The student will be placed on probation and documentation will be made in the student’s file.
- If tardiness continues after the probation status has been issued, termination from the program will occur.

III. Academic Performance
The grades for each course will be determined using the following sources:

<table>
<thead>
<tr>
<th>Cognitive:</th>
<th>Quizzes, Case Study, Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychomotor:</td>
<td>Performance Evaluation</td>
</tr>
<tr>
<td>Affective:</td>
<td>Performance Evaluation</td>
</tr>
</tbody>
</table>

A. Cognitive Performance Evaluation: A satisfactory grade of a C or better must be attained on the accumulation of points for quizzes and exams for each course. Failure to obtain an overall grade of C or better for any course will result in the student being placed on probation for the remainder of the clinical year.

B. Psychomotor/Affective Performance Evaluation: A satisfactory grade of a C or better must be attained on the accumulation of points for the performance evaluation for each course. Failure to obtain an overall grade of a C or better for any course will result in the student being placed on probation for the remainder of the clinical year.

C. Critical Objectives: “Each critical objective in each course must be successfully performed. If any critical objective is not successfully completed, the student MUST remediate the failed critical objective. ANY STUDENT who has failed any critical objective needs to refer to Section V. Remediation for specific guidelines. A failure of any single critical objective if equivalent to failure of the course in total points earned.
1. In the clinical affiliate performance evaluations, the student must receive a 0.15 (3 points in the 5 points scale) to successfully complete each clinical objective. Any score below this in any one critical objective is considered a failing score for the course.

IV. Probation Policy:
A student on probation will be defined as:
- A student that enters the clinical affiliation with a previous standing probation.
- A student who has shown failure to successfully complete and pass one cognitive course or one performance evaluation or one critical objective, as outlined above.
- A student who has lacked professional conduct such as:
  1. Disregard for the patient’s rights to confidentiality and privacy according to HIPAA legislation.
  2. Disregard for good, quality patient care (inconsistent or inaccurate work, consistent careless attitude with patients.)
3. Failure or inability to adhere to Department of MLS clinical affiliation policies).
4. The UND Department of MLS abides by the UND Code of Student Life Handbook which includes the procedure for student dismissal related to academic dishonesty and failure to comply with stated rules relating to substance abuse.

A student on probation may be dismissed from the Medical Laboratory Science program if the student fails a subsequent didactic and/or practical work area. As a result the student will not receive a BS degree or certificate in Medical Laboratory Science, nor be eligible for the ASCP Board of Certification (BOC) examination.

V. Remediation:
Remediation in any cognitive (unit and final exams) or performance (bench) area will be determined by the UND clinical education coordinator.

A. Cognitive Probation Remediation:
Credit may be earned for unsatisfactory cognitive performance by passing a comprehensive written exam in the subject area.

B. Psychomotor/Affective Probation Remediation:
Credit for unsatisfactory performance may be earned by satisfactorily completing one of the following:
1. Additional weeks in the department where the unsatisfactory performance was achieved. Additional clinical experience time will be scheduled at the discretion of the clinical affiliate site coordinator and the UND clinical education coordinator. Documentation of remediation goals and evaluations will be discussed with the UND clinical education coordinator, the site education coordinator, and the student.
2. A complete repetition of the entire departmental rotation may be deemed necessary. This will be completed at the end of the clinical year and a grade of incomplete will be assigned for the specific course until the course requirements are met. The student would not be eligible for graduation or the national certification exam(s) until successful remediation has occurred.
3. If a passing score is achieved, the grade issued will be not higher than a grade of C.
4. The student must be aware that remediation of unsatisfactory performance may occur at their current clinical affiliate site, or at an alternate approved clinical teaching institution.
5. Application for additional weeks or repeat practicum time must be submitted in writing to the UND clinical education coordinator by the student. This application must include goals that identify the adjustments that will be made by the student to achieve a satisfactory performance evaluation.

C. The student will be allowed one remediation total:
1. A student may remediate any one area, either cognitive (examinations) or psychomotor/affective including a single critical objective (clinical/bench performance).
2. The student must successfully complete remediation to continue in the program. Failure to successfully remediate an identified area will result in program dismissal.

3. Upon failure of second cognitive or psychomotor/affective area which includes a single critical objective, the student will be dismissed for the UND MLS program. As a result, the student will not receive a BS degree, or certificate, or be eligible for a national certification examination.

D. Conditions:
A student on probation may remain in the program if all of the following are met:
1. The student continues to successfully complete and pass all subsequent cognitive and performance evaluations and critical objectives.
2. The student resolves the failure with remediation.
3. The student maintains the specific expectation listed on the signed probation letter.

VI. Program Dismissal:
All dismissal/termination policies from the general program policies apply to the clinical practicum. The following are additional grounds for immediate program termination in the clinical affiliation during the final clinical year.

A. Academic Dismissal:
1. A failing score following one successful remediation.
2. Failure to meet probation specifications.

B. Lack of Professional Student Conduct:
1. Disregard for the patient’s rights to confidentiality and privacy according to HIPAA legislation.
2. Disregard for good, quality patient care, inconsistent or inaccurate work, or consistent careless attitude with patients.
3. Failure or inability to adhere to MLS departmental or clinical affiliation policies.
4. The UND MLS program abides by the UND Code of Student Life Handbook which includes the procedure for student dismissal related to academic dishonesty and failure to comply with stated rules relating to substance abuse.

C. Drug Screen:
Any student may be subject to a drugs of abuse screen prior to or during a clinical rotation at a medical center. Any student who tests positive for drugs of abuse will be removed from the clinical experience and will not be able to complete the required courses to earn a BS in Medical Laboratory Science. See Drug Policy, Appendix IX.

VII. Employment Service Work:
A. Students are not responsible for service work in the laboratory. Additionally, a licensed medical laboratory scientist or technician must check all laboratory reports.

B. A student may be offered part-time employment during their clinical practicum. This employment is optional, paid and supervised by the department supervisor. The work must occur outside of the student’s scheduled departmental rotations. Since the work occurs outside of the scheduled academic hours, it therefore does
not fall under any academic jurisdiction. Notification of employment and the average hours per week must be given to the UND’s clinical education coordinator upon commencement of employment.

V. Off-Shift Experience:
   A. During the clinical affiliation, a student may be assigned, as part of their clinical training, a shift that contains equivalent workload such as a pm shift in Immunohematology. Any diversion from the typical day shift must be given approval by the UND’s clinical education coordinator.
   B. If a student is assigned an off-shift experience to observe protocol and workload managing skills during these hours, the maximum hours spent by the student on the “off shift” cannot exceed 40 hours within their affiliation. The experience is designed to be an enrichment exercise that will help the student understand the entire workload of a clinical laboratory and aid in their management knowledge. Specific objectives and evaluations for this experience are included in MLS 485 Clinical Urinalysis II.

MAYO COHORT PROGRAM
ADDITIONAL POLICIES

1. Proctor Policies:
   a. In addition to the proctor information in the general policies, Mayo proctors forfeit eligibility to enroll in either the UND MLS Cohort program or UND Categoricals. A proctor MUST be a supervisor, education specialist or someone of authority. All closed book exams/quizzes must have proctor supervision unless specified by the course instructor. A statement, signed by the proctor must accompany all exams/quizzes.

2. Additional General Policies:
   a. Students may be assigned additional intensive laboratory experiences beyond the three primary labs scheduled in the senior year. Example: MLS 325L Hematology Laboratory. 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.
   b. MLT’s or CLT’s who are not ASCP certified or equivalent 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 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.
   d. 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:
      * Generalist experience must be from within the past seven years.
      * Generalist experience must include working in all four major areas of MLS (Immunohematology, Microbiology, Hematology, and Clinical Chemistry) (included in Appendix I)
Eligibility will be determined by reviewing the student’s competency checklist and past work experience.

Final determination of eligibility will be made by the Mayo Cohort coordinator and/or committee decision.

e. The final comprehensive exam will be proctored by Sue Lehman or designated.

f. Before initiation of the first course in the student’s program of study, a Mayo application form indicating this activity is required. The student must submit this form, which can be found at: http://med.und.edu/MLS.

g. 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.

h. It is expected that all Mayo Cohort students graduating with a BS MLS degree or MLS certificate take part in the graduation celebration at Mayo Clinic.

3. **Acceptance to Final Clinical Year Policies:**
The following must occur before a Mayo Cohort student is eligible to enroll in the UND MLS 400 level courses:

1. All essential studies requirements must be completed.
2. All other general non-MLS courses must be completed.
3. All MLS 200 and 300 level courses must be completed.

4. **Competency Checklist:**
Completion of this checklist is required by all students prior to starting their senior semesters.

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.

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.

5. **Intensive Laboratory Sessions:**
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 semester at designated dates and starting times. Starting times are usually scheduled to begin around 4:00pm. Intensive labs are taught by UND instructors in the Mayo MLS student laboratory in the Stabile building.

6. **Clinical Intensive Rotations (CIR’s):**
There are four mandatory core clinical rotations (MLS 491, 492, 495, 498). These clinical rotations are taught by Mayo education specialists using a combination of the student lab and Mayo’s clinical labs. CIR’s usually take place over a one to two week period. All CIR’s are only offered on designated dates and starting times.

7. **Abbreviated Clinical Rotations:**
There are two mandatory abbreviated rotations in the areas of phlebotomy and special coagulation. These clinical rotations are taught by Mayo education specialists in their respective laboratories on designated dates and starting times.

8. **Study Guide Courses:**
These mandatory review courses (MLS 480, 481, 483, 484, 485, 488, 494) are always taken in the student’s final semester. Completion of the study guides, quizzes, and exams within these courses will help prepare students for taking their ASCP national board of registry exam.

9. **UND Final Comprehensive Examination:**
   Upon completion of the study guide courses, MLS students are required to take the UND Final Comprehensive Examination.

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**CATEGORICAL CERTIFICATE PROGRAM**

**ADDITIONAL POLICIES**

I. **Admission:**
   A. A baccalaureate degree from a regionally accredited college or university is required.
   B. Completion of twenty semester hours in biology, chemistry and/or medical sciences from an accredited four year institution (24 semester hours recommended).
   C. A sponsoring clinical site is required.

II. **Additional General Policies:**
   For any student accepted into the MLS Categorical Program: If a student receives a single D or F grade in a MLS course, the student:
   1. Will be placed on academic probation for the remainder of their time in the certificate program.
   2. Must retake the course in question and successfully complete it with a passing grade (A, B, or C) to be eligible for the certificate(s). If a student receives a second grade of D or F in a MLS course, either during the same semester following the first failing grade, the student will be terminated from the program.

   While on probation, the student must comply with the following stipulations.
   1. The student must maintain a minimum 2.8 GPA (on a 4.0 scale) each semester.
   2. The student must receive a passing grade (A, B, or C) in all MLS courses.
   3. The student will only be allowed to retake one course.
   4. If a student is terminated from the program, the student will not be eligible for a certificate in any of the four categorical areas and will not be considered as a candidate for readmission to the categorical or any other UND MLS program.

   Failure to comply with any stipulation (1-4) will result in termination from the program.

III. Policies pertaining to the final clinical year of the professional program also apply.
APPENDIX I

SCHOOL OF MEDICINE AND HEALTH SCIENCES

TECHNICAL STANDARDS FOR MATRICULATION, PROGRESSION, AND GRADUATION
Technical Standards for Matriculation, Progression, and Graduation

University of North Dakota
School of Medicine and Health Sciences

A. Overview
The University of North Dakota School of Medicine and Health Sciences (UND SMHS) has a responsibility to society to graduate the best possible healthcare providers. All 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 professional 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 educational 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 standards 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 graduates of the school possess the background to pursue virtually any area of specialty. Thus all students must meet the academic standards and the 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 science 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 healthcare 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, he/she 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 sensitively 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 care profession at the SMHS, students are expected to assess patients using all appropriate evaluation tools, diagnostic maneuvers and procedures perform basic laboratory procedures, and tests, 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, and integrity, respect for others, empathy and 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. He/she 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, University, School of Medicine and Health Sciences, the healthcare program, and the clinical 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. They 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 science program. See individual departmental policies for specific details.

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

If any health sciences applicants or students have a question about whether he or she can meet these standards due to functional limitations from a disability, he or she 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
APPENDIX II

MEDICAL LABORATORY TECHNICIAN
CLINICAL LABORATORY TECHNICIAN

CLINICAL COMPETENCIES

This form must be completed by your current or past laboratory supervisor. Items should be checked in the appropriate column to indicate your performance proficiency. This form must be completed prior to entrance into the senior Summer Program. Return to UND, SOMHS, Department of Medical Laboratory Science, 501 North Columbia Rd. Stop 9037, Grand Forks, ND 58202-9037. Attn: Ruth Paur
COMPETENCY LEVELS
1. The checklist is used to indicate the level of performance the MLT/CLT has achieved for each major area of the laboratory.
2. MLT’s and CLT’s must have a clinical supervisor complete this form by checking the appropriate column (highest level attained) following an assessment of the MLT/CLT’s work history. The clinical supervisor should sign each page to indicate the level of competency.
3. The checklist is meant to indicate minimum competency levels. This does not preclude the student from surpassing the indicated level.
4. The form is to be sent to Chris Triske (address on previous page) and will be evaluated to determine the amount of time and areas of study the MLT/CLT will need to complete during their clinical experience.

<table>
<thead>
<tr>
<th>Levels:</th>
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<tbody>
<tr>
<td>1. Discussed:</td>
<td>Reagents, sample, equipment discussed. Principle explained. (student can explain in their own words)</td>
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<tr>
<td>2. Demonstrated:</td>
<td>Demonstrated by the instructor and observed by the student.</td>
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<tr>
<td>3. Practiced:</td>
<td>Student has practiced and performed under the direct supervision of the instructor.</td>
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<tr>
<td>4. Independent:</td>
<td>Student can perform with little supervision.</td>
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</table>

**EXAMPLE:**
If the MLT/CLT has prepared specimens for culture as part of their job functions a check mark will be placed in Column 4, Independent.
<table>
<thead>
<tr>
<th>Level</th>
<th>Discussed</th>
<th>Demonstrated</th>
<th>Practiced</th>
<th>Independent</th>
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<tbody>
<tr>
<td>Prepare specimens for culture</td>
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<tr>
<td>Prepare culture for send-out</td>
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<tr>
<td>Perform gram stain</td>
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<td>Interpret gram stain/direct</td>
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<td>Interpret gram stain from culture</td>
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<tr>
<td>Recall principles/purpose of routine media</td>
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<td>Recall principles/purpose of non-routine media</td>
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<td>Describe Staph/Strep morphology, biochemical characteristics</td>
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<tr>
<td>Describe Staph/Strep sensitivity patterns</td>
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<td>Describe Neisseria, Haemophilus morphology, biochemical characteristics</td>
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<tr>
<td>Describe Neisseria, Haemophilus sensitivity patterns</td>
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<td>Describe Enterobacteriaceae morphology, biochemical characteristics</td>
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<td>Describe Enterobacteriaceae sensitivity patterns</td>
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<td>Describe gram positive rod morphology basic characteristics</td>
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<td>Discuss gram positive rod sensitivity pattern</td>
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<td>Discuss nonfermentors and unusual gram negative rods</td>
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<td>Describe anaerobe morphology, basic characteristics</td>
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<tr>
<td>Perform and interpret wound cultures</td>
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<td>Perform and interpret blood cultures</td>
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<td>Perform and interpret respiratory cultures</td>
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<td>Perform and interpret GI cultures</td>
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<td>Perform and interpret urine cultures</td>
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<td>Perform and interpret misc. culture</td>
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<td>Perform and interpret anaerobic cultures</td>
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<tr>
<td>Perform and interpret antibiotic susceptibility testing-Kirby Bauer</td>
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<td>Perform and interpret antibiotic susceptibility-MIC</td>
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<td>Perform beta lactamase testing</td>
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<td>Perform MRSA / Vanc resistance testing</td>
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<td>Perform and interpret tube biochemical's</td>
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<td>Perform and interpret routine biochemical testing</td>
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<td>Perform preventive maintenance of equipment</td>
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<td>Demonstrate appropriate corrective maintenance of equipment</td>
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<tr>
<td>Operate automated identification system</td>
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<tr>
<td>Perform and interpret E test</td>
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<td>Perform rapid methods of identification</td>
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<td>Demonstrate QC protocol</td>
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<tr>
<td>Perform and interpret acid fast stain for TB</td>
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<tr>
<td>Differentiate Mycobacterium species</td>
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<td>Identify the diagnostic stage of common human parasites</td>
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<td>Identify common fungus pathogens</td>
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<tr>
<td>Discuss viral cultures</td>
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Signature: ________________________________

Date: ________________________________
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<tr>
<td>Perform procedures on incoming blood components</td>
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<td>Issue blood components</td>
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<td>Discuss proper use of components</td>
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<td>Review proper specimen acceptance</td>
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<tr>
<td>Prepare blood products</td>
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<td>Discuss donor history/physical</td>
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<tr>
<td>Discuss donor phlebotomy</td>
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<tr>
<td>Perform equipment quality assurance</td>
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<tr>
<td>Perform reagent quality assurance</td>
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<td>Perform pediatric draws</td>
</tr>
<tr>
<td>Perform intensive care draws</td>
</tr>
<tr>
<td>Perform blood culture draws</td>
</tr>
<tr>
<td>Discuss protocol for isolation entry</td>
</tr>
<tr>
<td>Demonstrate proper personal protective safety equipment</td>
</tr>
<tr>
<td>Perform send out procedure</td>
</tr>
</tbody>
</table>

Total hours of phlebotomy_________

Number of successful venipunctures: minimum – 50

Syringe: __________ %
Vacutainer: __________ %

Number of finger sticks: minimum – 5 _________

Signature: ________________________________

Date: ________________________________
<table>
<thead>
<tr>
<th>Level</th>
<th>Discussed</th>
<th>Demonstrated</th>
<th>Practiced</th>
<th>Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>II.</td>
<td>III.</td>
<td>IV.</td>
</tr>
<tr>
<td>Perform and interpret latex agglutination test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform and interpret an enzyme immunoassay test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform and interpret an RPR test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observe and interpret a FANA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observe and interpret fl microscopy ID of Group A Beta Strep</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discuss ligase testing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observe PCR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observe a western blot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform a record proper QA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilize proper computer technique</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify problems and corrective action</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observe and Interpret immunofixation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature: ________________________________

Date: ________________________________
APPENDIX III

LABORATORY PERFORMANCE APPRAISAL
MLS PROGRAM
LABORATORY PERFORMANCE APPRAISAL

Instructions for Completion:
1. Complete form at midterm and at the end of each course of study.
2. Assign grade (2-5) to each area of assessment (See below for description of grade).
3. Areas of assessment have an assigned weight.
4. Multiply weight times grade to attain score.
5. Total all scores.
6. Apply score to the conversion scale to obtain student’s letter grade.
7. Comments that will assist the student in performance improvement are encouraged.
8. Review with the student and outline successes and areas for improvement.
9. Instructor and student sign and date.

Description of Grades:
2. Inconsistent in meeting expectations as outlined in course objectives. Requires repeated instruction but continues to strive to improve. May require encouragement to accept responsibility for learning but is able to complete the task at hand.
3. Consistently meets expectations satisfactorily. Requires average instructions and is then able to perform without further directions. Accepts responsibility for learning. Shows dedication to the task at hand. Requires little encouragement and is well prepared.
4. Exceeds expectations outlined in course objectives. Requires limited instruction. Demonstrates dedication and the ability to work independently. Exceeds expectations by accepting responsibility for learning, seeks additional knowledge and consistently completes assigned tasks efficiently and appropriately.
LABORATORY PERFORMANCE APPRAISAL

Student:______________________________________________________________

Evaluation Period:____________________ to ______________________

Clinical Course Name and Number: MLS 492 Clinical Immunohematolgy III

Affective Objectives: Under each category, the student will demonstrate:
1. Communication Skills (Total Weight 10%)

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Weight</th>
<th>Grade</th>
<th>Score (Wt x Gr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Ability to relate to others</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Cooperation</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3 Ability to accept constructive feedback</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4 Total Score: Add lines 1.1 &amp; 1.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

Successes Observed:

Challenges to work on:
2. Attitude and Positivity (Total Weight 25%)

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Weight</th>
<th>Grade</th>
<th>Score (Wt x Gr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Interest in work</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2 Attempt to improve</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3 Persistence and follow-through</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4 Initiative</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5 Punctuality and attendance</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.6 Confidentiality and integrity</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.7 Total Score (Add lines 2.1 &amp; 2.6)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

Successes Observed:

Challenges to work on:

3. Work Performance Skills (Total Weight 65%)

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Weight</th>
<th>Grade</th>
<th>Score (Wt x Gr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Quality of work</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2 Prioritization, organization, neatness, efficiency</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3 Application of knowledge</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 Proper specimen handling</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5 Effective computer usage</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6 Critical thinking/judgment</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.7 Safety in the workplace</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8 Appropriate QC practices</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.9 Effective Instrumentation Interaction</td>
<td>4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Critical Objectives

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
<th>Weight</th>
<th>Grade</th>
<th>Score (Wt x Gr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.10</td>
<td>Perform and interpret results of ABO and Rh testing</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.11</td>
<td>Perform and interpret results of DAT and IAT and crossmatching, maintain blood supply</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.12</td>
<td>Perform and Interpret results of antibody screen and antibody ID</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.13</td>
<td>Perform and interpret results of HDN and transfusion Rx testing</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.14</td>
<td>Evaluate and resolve discrepancies and blood bank problems</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.15</td>
<td>Total Score (Add lines 3.1 &amp; 3.14)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

**Successes Observed:**

**Challenges to work on:**

**Note:** If Score is 0.10 or less for critical objective assessment, please notify the Education Coordinator. The student must attain 0.15 or better. If they do not perform at this level, remediation must occur before the student may successfully pass the rotation.
Grand Total Score: (Add lines 1.4+2.7+3.15) ____ x 100=____(a)

A. Conversion Scale

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Grade %</th>
<th>Letter Grade</th>
<th>Total Score</th>
<th>Grade %</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>100</td>
<td>A</td>
<td>393</td>
<td>84</td>
<td>B</td>
</tr>
<tr>
<td>492</td>
<td>99</td>
<td>A</td>
<td>387</td>
<td>83</td>
<td>B</td>
</tr>
<tr>
<td>485</td>
<td>98</td>
<td>A</td>
<td>380</td>
<td>82</td>
<td>B</td>
</tr>
<tr>
<td>479</td>
<td>97</td>
<td>A</td>
<td>373</td>
<td>81</td>
<td>B</td>
</tr>
<tr>
<td>472</td>
<td>96</td>
<td>A</td>
<td>366</td>
<td>80</td>
<td>B</td>
</tr>
<tr>
<td>466</td>
<td>95</td>
<td>A</td>
<td>359</td>
<td>79</td>
<td>C</td>
</tr>
<tr>
<td>459</td>
<td>94</td>
<td>A</td>
<td>352</td>
<td>78</td>
<td>C</td>
</tr>
<tr>
<td>453</td>
<td>93</td>
<td>A</td>
<td>346</td>
<td>77</td>
<td>C</td>
</tr>
<tr>
<td>446</td>
<td>92</td>
<td>A</td>
<td>339</td>
<td>76</td>
<td>C</td>
</tr>
<tr>
<td>440</td>
<td>91</td>
<td>A</td>
<td>333</td>
<td>75</td>
<td>C</td>
</tr>
<tr>
<td>433</td>
<td>90</td>
<td>A</td>
<td>326</td>
<td>74</td>
<td>C</td>
</tr>
<tr>
<td>427</td>
<td>89</td>
<td>B</td>
<td>320</td>
<td>73</td>
<td>C</td>
</tr>
<tr>
<td>420</td>
<td>88</td>
<td>B</td>
<td>313</td>
<td>72</td>
<td>C</td>
</tr>
<tr>
<td>413</td>
<td>87</td>
<td>B</td>
<td>307</td>
<td>71</td>
<td>C</td>
</tr>
<tr>
<td>406</td>
<td>86</td>
<td>B</td>
<td>300</td>
<td>70</td>
<td>C</td>
</tr>
<tr>
<td>400</td>
<td>85</td>
<td>B</td>
<td>200-299.9</td>
<td>&lt;70</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;200</td>
<td>&lt;60</td>
<td>F</td>
</tr>
</tbody>
</table>

B. Optional: Final Practical Exam = _______% x 0.30 = _______(b1)
Letter Grade from above = __________% x 0.70 = _______(b2)

C. Final Grade % = _______% [= either line (a) or (b1 + b2)]

Total Personal Days off: = __________

Student’s Comments:

Student Signature: _______________________________  Date: __________

Evaluator Signature: _______________________________  Date: __________
APPENDIX IV

MLS SAFETY STANDARDS
REASON FOR STANDARD

This standard establishes safe practices in the MLS student laboratory concerning general safety, infection control, and blood borne pathogen exposure.

SAFETY PROCEDURES

DEFINITIONS

| Standard Precautions (also referred to as Universal Precautions) | • An approach of infection control in which all human blood, body fluids, and human source reagents/controls are considered infectious and should be handled with appropriate protective measures.  
  • Circumstances in which differentiation between body fluid types is difficult or impossible, all shall be considered potentially infectious materials. The intent of Standard Precautions is to protect the patient, to control nosocomial (institution-acquired) infections, and to protect the student. |
|---|---|
| Transmission-Based Precautions | • Precautions used for patients with known or suspected to be infected or colonized with epidemiologically important pathogens.  
  • Airborne-small particles in the air (chicken pox)  
  • Droplet-large droplets spread by coughing, talking, or sneezing (influenza, meningitis, pneumonia,TB)  
  • Contact precautions-skin to skin contact, or contact with surfaces (herpes simplex virus) |
| Engineering controls | • Controls designed to eliminate or minimize exposure to pathogens.  
  • Examples include needleless devices, shielded needle devices, blunt needles, and plastic capillary tubes.  
  • When occupational exposure remains after institution of these controls, use of personal protective equipment is required. |
| Work practice controls | • Required procedures performed in order to minimize the risk of exposure of bloodborne pathogens. |
| Personal Protective Equipment (PPE) | • PPE includes but is not limited to gloves, face shields or masks, eye protection, and fluid resistant lab coats. |
| ENGINEERING CONTROLS | --- |
| Biohazard waste containers for biological | • Specimens of blood or other potentially infectious materials will be placed in a container that prevents leakage during the
specimens | collection, handling, processing, storage, and transport of specimens. The containers will need to have a biohazard label on the container and/or be red in color.

Sharps & Sharps Containers | • Sharps are any object capable of penetrating the skin, including, but not limited to: needles, scalpels, broken glass, broken capillary tubes, and razor blades.  
• Dispose of contaminated sharps in impervious, puncture resistant, rigid containers to eliminate the potential of physical injury.

Safety Devices for Needles | • Needles with safety shields will be used for all phlebotomy procedures.  
• Do not recap a needle.  
• Contaminated needles and other contaminated sharps will not be bent, recapped, removed, sheared or purposely broken. OSHA allows an exception to this if the procedure would require that the contaminated needle 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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE (Personal Protective Equipment) is equipment worn to minimize exposure by creating a barrier between you and a hazard. Personal protective equipment is not a substitute for good engineering, administrative controls, or good work practices. PPE is used in conjunction with these controls to ensure safety and health. Examples of PPE include respirators, gloves, aprons, as well as fall, head, eye and foot protection. PPE is used in conjunction with these controls to ensure safety and health. PPE is not a substitute for good engineering, administrative controls, or good work practices. PPE is used in conjunction with these controls to ensure safety and health. PPE is used in conjunction with these controls to ensure safety and health. PPE is not a substitute for good engineering, administrative controls, or good work practices. PPE is used in conjunction with these controls to ensure safety and health. PPE is merely used to reduce or minimize the exposure or contact to injurious physical, chemical, or biological agents.

Fluid Resistant Laboratory Coats | • A buttoned/snapped laboratory coat is required while in the laboratory.  
• All fluid resistant laboratory coats that become penetrated or splashed by blood or body fluids shall be removed immediately.  
• Fluid resistant laboratory coats will be laundered at the laundry service of the clinical laboratory site or the UND laundry service. Students are not to bring laboratory coats home to be laundered.  
• A name tag is provided and required to be worn on lab coats. No graffiti is allowed, and owner identification should be written on the inside label or collar.

Disposable Gloves | • The student will wear gloves while performing tasks in the student laboratory, and when touching surfaces considered contaminated including telephones, computer terminals, door handles.  
• If gloves are visibly contaminated with blood or body fluid they should be removed and discarded in a biohazard bag, and hands washed before a new pair of gloves are used.  
• Gloves are not to be washed or reused and are to be discarded upon completion of the task.
<table>
<thead>
<tr>
<th>Category</th>
<th>Guidance</th>
</tr>
</thead>
</table>
| Gloves                                    | - Gloves should be replaced when they are torn, punctured, wet or when their ability to function as a barrier is compromised.  
- Hypoallergenic gloves, powder-free gloves or other alternatives will be found for those students allergic to gloves normally provided. |
| Thermal Gloves                            | - Designed to insulate hands from intense heat or cold. Most often used in the student lab while pouring gels for electrophoresis.                                                                         |
| Eye and Facial Barrier Protection         | - Required during tasks in which there is a significant potential for splattering of infectious agents into the eyes, nose, or mouth.  
- This type of exposure may occur during procedures commonly resulting in the generation of droplets, splashing of body fluids, or the generation of tissue or bone chips.  
- To ensure protection of mucous membranes, masks should be worn in conjunction with protective eyewear. |

All personal protective equipment will be removed prior to leaving the work area.

**WORK PRACTICE CONTROLS**

| Infection Control General Guidelines      | - No mouth pipetting in the laboratory, use a safety bulb.  
- No eating, drinking, smoking, applying cosmetics or lip balm, handling contact lenses, gum, or putting anything in one’s mouth while in the laboratories where there is a reasonable likelihood of occupational exposure.  
- 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 and where blood or other potentially infectious materials are present or may be present.  
- Reduce possibility of self-inoculation: keep hands away from mouth, nose eyes and other mucous membranes.  
- Use barrier pads when removing tops from specimens to minimize aerosol production.  
- Never leave a discarded tube or infected material unattended or unlabeled.  
- Keep door closed while in the lab, due to air exchange process.  
- Store book bags on the book rack or outside of the laboratory. |
| Hand Washing Technique                    | - Lather well, ensuring back of hands, between fingers and under nails are scrubbed. Rinse hands under a stream of water for 20 seconds and use a disposable paper towel to turn off faucet.  
- Dispose paper towels in the regular trash.  
- Gloves must be thrown in the red biohazard bags.  
- When provisions of hand washing facilities are not feasible, an appropriate antiseptic hand cleanser / alcohol hand rub can be used. After antiseptic hand cleansers/ alcohol hand rubs are used, the student should wash their hands with soap and water as soon as feasible thereafter. If contamination is visible on the gloves or hands, soap and water must be used to wash
the hands, alcohol hand rubs are not appropriate if hands are visibly contaminated.

<table>
<thead>
<tr>
<th>Hand Washing Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Before and after each patient contact, including phlebotomy</td>
</tr>
<tr>
<td>• After removing gloves or other personal protective equipment</td>
</tr>
<tr>
<td>• After distributing specimens</td>
</tr>
<tr>
<td>• Immediately after accidental contact with blood, body fluids, and contaminated materials.</td>
</tr>
<tr>
<td>• Before leaving the clinical work area</td>
</tr>
<tr>
<td>• Periodically during the day when handling and testing body fluids.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Decontamination Materials Disinfectants</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Bleach Solution containing 500-1000mg/L chlorine. Dilute 1:10 household bleach</td>
</tr>
<tr>
<td>• Commercial disinfectants on the EPA disinfectant registry.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Housekeeping</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All students are to clean and decontaminate their lab space at the end of each session in which they have used blood or body fluid specimens.</td>
</tr>
<tr>
<td>• Reusable glassware contaminated with blood should be immediately placed in a receptacle containing a 10% bleach solution.</td>
</tr>
<tr>
<td>• Return all supplies back to the supply counter.</td>
</tr>
<tr>
<td>• Wash hands before leaving the lab.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disposal - Regular Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Paper towels used for hand washing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disposal - Biological Waste Red-lined Biohazard Bags</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All blood or body fluid contaminated materials</td>
</tr>
<tr>
<td>• All gloves, plastic pipettes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disposal - Biological Sharp</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All needles and lancets</td>
</tr>
<tr>
<td>• Glass slides, tubes, glass pipettes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Broken Glass/Non-contaminated</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cardboard/lined container</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Centrifugation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Inspect tubes for cracks, leave stoppers on the tubes, and avoid filling a tube to the point where the rim becomes wet with potentially contaminated specimen.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spill Clean Up - Biohazard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inform the teaching supervisor immediately.</strong></td>
</tr>
<tr>
<td>• Decontaminate work space as soon as feasible after a spill of blood or body fluid.</td>
</tr>
<tr>
<td>• PPE and double gloves should be worn when doing the clean-up.</td>
</tr>
<tr>
<td>• Saturate the spill with bleach and let sit for five minutes.</td>
</tr>
<tr>
<td>• 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.</td>
</tr>
<tr>
<td>• Contaminated lab coat/laundry should be minimally handled and placed into a biohazard bag.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spill Clean Up - Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chemical spills - Acid/base spill kits are available in the safety cabinet.</td>
</tr>
</tbody>
</table>

**FIRE & CHEMICAL SAFETY**

*Orientation Handbook Undergraduate: Update 5/15*  88
## Fire Safety

- Learn the location of the nearest fire extinguisher, fire pull box and location of all exits. A map of the floor plan with exits is located at the pull box station.
- Do not use Bunsen burners or other flame ignition items in the laboratory.

## Chemical Hazards

- When working with chemicals the student will be informed as to the hazard involved and proper precautions.
- All chemicals will be properly labeled with the specific hazards indicated by the NFPA label.
- Acid solutions should not be diluted in the student laboratory. Always use a safety hood and add acid to water. If a concentrated acid is being transported, a safety bucket should be used.
- Never smell a reagent directly. Vapors should be wafted toward the nose.
- Safety Data Sheets include detailed information on hazardous chemicals and are located in the safety cabinet of the student laboratory.

## National Fire Protection Association (NFP) Coding System

- Department of Transportation requirement for shipping chemicals.
- The system uses a color coded diamond with four quadrants in which numbers are used in the upper three quadrants to signal the degree of emergency health hazard (blue), fire hazard (red), and reactivity hazard (yellow). The bottom quadrant is used to indicate water reactivity, radioactivity, biohazards or other special hazards.
- The emergency hazards are signaled on a numerical scale of 0 to 4, with 0 = no unusual hazard, 1 = minor hazard, 2 = moderate hazard, 3 = severe hazard, and 4 = extreme hazard.

### Diagram

![Diagram of NFPA Coding System]

**Health Hazard (Blue)**
- 4 - Deadly
- 3 - Extreme Danger
- 2 - Hazardous
- 1 - Slightly Hazardous
- 0 - Normal Material

**Fire Hazard - Flash Point (Red)**
- 4 - Below 73°F
- 3 - Below 100°F
- 2 - Below 200°F
- 1 - Above 200°F
- 0 - Will Not Burn

**Specific Hazard (White)**
- OXY - Oxidizer
- ACID - Acid
- ALK - Alkali
- COR - Corrosive
- W - Use No Water
- ▲ - Radiation Hazard

**Reactivity (Yellow)**
- 4 - May Detonate
- 3 - Shock and Heat May Detonate
- 2 - Violent Chemical Change
- 1 - Unstable if Heated
- 0 - Stable
<table>
<thead>
<tr>
<th>Hazard Communication Material Label Samples Adopted by OSHA in 1994</th>
</tr>
</thead>
</table>

- Safety Data Sheets (SDS) Hazard Classifications Information includes 16-Physical, 10-Health indicators.
- Chemical Labeling requirements include: Product Identifier, Supplier Identification, Precautionary, Hazard Pictograms, Signal Word-severity of hazard, Hazard Statements, Precautionary statements.

<table>
<thead>
<tr>
<th>Globally Harmonized System Adopted by OSHA 2012 Required by June 2015</th>
</tr>
</thead>
</table>

- UNITED NATIONS GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS.
<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flame</th>
<th>Exclamation Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Carcinogen</td>
<td>• Flammables</td>
<td>• Irritant (skin and eye)</td>
</tr>
<tr>
<td>• Mutagenicity</td>
<td>• Pyrophorics</td>
<td>• Skin Sensitizer</td>
</tr>
<tr>
<td>• Reproductive Toxicity</td>
<td>• Self-Heating</td>
<td>• Acute Toxicity (harmful)</td>
</tr>
<tr>
<td>• Respiratory Sensitizer</td>
<td>• Emits Flammable Gas</td>
<td>• Narcotic Effects</td>
</tr>
<tr>
<td>• Target Organ Toxicity</td>
<td>• Self-Reactives</td>
<td>• Respiratory Tract</td>
</tr>
<tr>
<td>• Aspiration Toxicity</td>
<td>• Organic Peroxides</td>
<td>Irritant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hazardous to Ozone Layer (Non-Mandatory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gas Cylinder</th>
<th>Corrosion</th>
<th>Exploding Bomb</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Gases Under Pressure</td>
<td>• Skin Corrosion/ Burns</td>
<td>• Explosives</td>
</tr>
<tr>
<td></td>
<td>• Eye Damage</td>
<td>• Self-Reactives</td>
</tr>
<tr>
<td></td>
<td>• Corrosive to Metals</td>
<td>• Organic Peroxides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flame Over Circle</th>
<th>Environment (Non-Mandatory)</th>
<th>Skull and Crossbones</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Oxidizers</td>
<td>• Aquatic Toxicity</td>
<td>• Acute Toxicity (fatal or toxic)</td>
</tr>
</tbody>
</table>
STANDARD: Student Injury Guidelines

UND INCIDENT REPORTING POLICY STATEMENT

All injuries, incidents, or hazards occurring on property owned or controlled by UND or involving UND employees or students while under the direction of the University must be reported to the UND Office of Safety within 24 hours. Incidents do not need to result in an injury or property damage to be reported – near miss incidents must also be reported.

STUDENT BLOODBORNE & BIOLOGICAL EXPOSURE MANAGEMENT

DEFINITIONS

| Bloodborne Pathogens | • Bloodborne pathogens are pathogenic microorganisms that are present in human blood and bodily fluids and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV) – the virus which causes AIDS. |
| Bloodborne Infections | • Infections transmitted by a biohazard injury exposing an individual to blood or high-risk body fluids containing an infectious agent. |
| Hepatitis B Transmission Risk | • The risk of developing clinical hepatitis from a Hepatitis B positive blood is 6-30%.  
  • The risk of Hepatitis B infection is primarily related to the degree of contact with blood and the HBeAg status of the source. |
| Hepatitis C Transmission Risk | • Hepatitis C is not known to transmit efficiently through occupational exposures to blood.  
  • The average incidence of Anti HCV seroconversion after percutaneous exposure from HCV source is 1.8% |
| HIV Transmission Risk | • Average risk of HIV transmission after percutaneous exposure to HIV positive blood is 0.3%.  Risk of infection is increased with exposure to a large quantity of blood from the source person as indicated by:  
  1. A device visibly contaminated with the patient’s blood.  
  2. A procedure involving a needle being placed directly in a vein or artery.  
  3. A deep injury.  
  4. A source person with high viral load, i.e., during initial or end stages of diseases. |
| Hepatitis B Vaccine Requirements | • All students are required to initiate the Hepatitis B vaccination series before working with blood and/or body fluids.  
  • Student’s refusing to receive the vaccine must sign a waiver as to their refusal to receive the vaccine.  
  • After completion of a three vaccine Hepatitis B series, the student may be required by their clinical site to have a titer drawn 1-6 months following to verify immunity.  If not immune, the series should be repeated once and a titer repeated.  If the titer never indicates immunity, the person must be counseled about the risks of Hepatitis B |
### Biological Exposure

| 1. | Exposure to a non-bloodborne infectious pathogen including but not limited to TB, prions, zoonotic transmission to humans. |

### Tasks with Potential Occupational Exposure

| 2. | Use of lancets and needles by students or faculty in obtaining blood samples for educational purposes. |
| 3. | Procedures involving handling tubes of blood, piglets of blood, or other containers with blood and/or blood products. |
| 4. | Cleaning up of a blood or body fluid spill. |
| 5. | Disposal of regulated waste. |

---

**SMHS STUDENT BLOODBORNE & BIOLOGICAL EXPOSURE MANAGEMENT**

Refer to School of Medicine & Health Sciences website for detailed instruction and forms.

### QUICK INFORMATION

**Immediate Care**

*(also includes chemical or toxic exposure)*

| In the event of a needle-stick, sharps injury, or are exposed to the blood or other body fluid of a patient during the course of your work, **immediately follow these steps** (as applicable): |
| - Needle-stick injuries and cuts: wash with soap and water. |
| - Mucous membranes: flush splashes to the nose, mouth, or skin with water for 15 minutes. |
| - Eyes (use Eye Wash station): remove contact lenses, irrigate eyes with a steady stream of clean water, saline, or sterile irrigant for 15 minutes. |
| - Gross Contamination (use Safety Shower): requires immediate removal of contaminated clothing while under the safety shower. |

**Medical Evaluation & Reporting**

| • Report the incident to your supervisor. |
| • Immediately seek medical treatment for evaluation and recommended follow up procedures, within 2 hours. |
| • The student and immediate supervisor must complete the UND SMHS Bloodborne & Biological Exposure “Student Quick Form 1” & “UND Incident Reporting Form 2” within 24 hours. These forms must include signatures of the student, immediate supervisor, and medical provider. |
APPENDIX V

STUDENT DRESS CODE

AND

PROFESSIONAL STANDARDS
Standard:  Student Dress Code, Personal Protective Equipment (PPE), & Professional Standards

Dress Code and PPE in the Student Laboratory
1. **White, fluid resistant** lab coats are required in student laboratories. Students will need to purchase a lab coat prior to starting any labs. These may be purchased at UND during orientation.
2. Disposable gloves are required to be worn in lab. These are provided by UND.
3. Safety glasses or shields are recommended during tasks involving splash hazards. These will also be provided by UND.
4. **Street Clothing:** No shorts or uncovered legs. Dresses and pants should have 1 to 1.5 inch of clearance from the floor.
5. Head garments are considered clothing and should be cleaned and changed immediately if contaminated with biohazard material.
6. Shoes: no open toed, perforated, or canvas fabric shoes. Open heeled shoes with a strap with socks are not considered appropriate. Socks should be worn with all shoes. Ankles should be covered, there should be no skin showing.
7. Students should maintain proper hygiene while in attendance in the summer practicum and at clinical sites. This includes, but is not limited to:
   a. showering/bathing daily
   b. maintaining clean, neat hair
   c. utilizing personal care products (i.e. deodorant, toothpaste)
   d. maintaining clean, odor-free, and appropriate fitting clothing
8. Long hair (beyond chin length) must be tied back away from the face while in the laboratory.
9. Students will not wear fragrance/cologne in the laboratory and should minimize the use of fragrant products, including essential oils.

Professional Standards
1. Keep patient/student sample lab result information confidential.
2. Utilize interpersonal relationship skills when working in the student laboratory.
3. Follow oral and written directions.
4. Comply with the dress code and safety standards.
5. Be on time. There is a large amount of information covered at the beginning of each laboratory.
6. Manage your time effectively in the student laboratory. Lab assignments are designed for the time allotment in the schedule. If you are unable to complete an assignment, extra time is not awarded.
7. Equipment and supplies may have to be shared in the lab. Be willing to share equipment.
8. Be receptive to suggestions from instructors. Ask questions if you do not understand something. Instructors are here to help you become a working scientist.
9. Falsifying lab results/dry labbing is considered cheating in the lab. When assigned to do your own work, do it, do not share the work with a lab partner. The instructor may want you to gain valuable experience in psychomotor and/or problem solving skills. Do not share quiz or test questions.
10. Do not work unsupervised. The laboratory instructor must be present.
11. Headphones (In-ear/Earbud/Clip-On) to listen to music are allowed in the student lab as long as it does not interfere with student performance. For proper communication and safety, students will be required to use the device in one ear only. Devices and cords

Orientation Handbook Undergraduate: Update 5/15 95
must be secured in a way to prevent contamination and safety hazards. Hanging wires are not acceptable. Noise reduction headphones are not allowed.

12. Keep a clean working area. Drawers and cabinet drawers should be kept closed. Chairs/stools should be pushed under the counter when not in use.

13. Work areas must be sanitized and equipment put away prior to leaving the laboratory each day.

14. One should have a conscientious attitude, striving for accurate and precise work while adhering to professional standards addressed above.

Exam and Quiz Standards
1. No talking with other students during the exam.
2. No personal electronic devices are allowed.
3. Keep your eyes on your own paper and protect your answers.
4. If wearing a baseball cap turn the rim to back of head.
5. Do not share quiz or test information with other students.
APPENDIX VI

UND SCHOOL OF MEDICINE AND HEALTH SCIENCES
STUDENT BLOODBORNE & BIOLOGICAL PATHOGEN EXPOSURE MANAGEMENT
Student Bloodborne & Biological Pathogen Exposure Management

Section:
Policy number:
Responsible Office: Vice President for Health Affairs/Dean
Issued: TBD
Latest Review: N/A

POLICY STATEMENT

In the event of a bloodborne or biological pathogen exposure, the School of Medicine and Health Sciences (SMHS) students will follow the SMHS Student Bloodborne and Biological Pathogen Exposure Management Plan. The student’s responsibility is to immediately inform their instructor, clinical site supervisor and / or preceptor. Students are required to comply with the reporting requirements, incur the charges of their bloodborne or biological pathogen exposure testing, and complete follow-up recommendations given by their health care provider.

REASON for POLICY

To provide a clear and concise guide for managing students exposed to bloodborne or biological pathogens during educational activities administered by the University of North Dakota School of Medicine and Health Sciences.

SCOPE of POLICY

This policy applies to:
√ Deans, Directors, and Department Heads
√ Managers and supervisors
√ Students
√ Faculty
√ Staff
Others: ____

WEB SITE REFERENCES

This policy: http://www.med.und.edu/policies/_files/docs/bloodborne-pathogen-exposure-policy-020614.pdf
Policy Office: http://www.med.und.edu/administration/deans-office/index.cfm
Vice President for Health Affairs and Dean: http://www.med.und.edu/administration/deans-office/index.cfm
RELATED INFORMATION

<table>
<thead>
<tr>
<th>UND Incident Reporting &amp; Investigation Instructions</th>
<th><a href="http://und.edu/finance-operations/environmental-health-and-safety/forms.cfm">http://und.edu/finance-operations/environmental-health-and-safety/forms.cfm</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>SMHS Policy Page</td>
<td><a href="http://www.med.und.edu/internal-resources/policies.cfm">http://www.med.und.edu/internal-resources/policies.cfm</a></td>
</tr>
<tr>
<td>The National Clinicians’ Post Exposure Prophylaxis Hotline</td>
<td><a href="http://www.nccc.ucsf.edu/about_nccc/pepline/">http://www.nccc.ucsf.edu/about_nccc/pepline/</a></td>
</tr>
<tr>
<td>Occupational Safety &amp; Health Administration</td>
<td><a href="https://www.osha.gov/">https://www.osha.gov/</a></td>
</tr>
<tr>
<td>Center for Disease Control and Prevention</td>
<td><a href="http://www.cdc.gov/">http://www.cdc.gov/</a></td>
</tr>
</tbody>
</table>

CONTACTS

Specific questions should be directed to the following:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Contact</th>
<th>Telephone/FAX</th>
<th>Office/Dept Email/Web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy clarification</td>
<td>Dean’s Office</td>
<td>(701)777.2514/777.3527</td>
<td><a href="mailto:judy.solberg@med.und.edu">judy.solberg@med.und.edu</a></td>
</tr>
<tr>
<td>SMHS Student Injury</td>
<td>Dean’s Office</td>
<td>(701)777.2514/777.3527</td>
<td><a href="mailto:judy.solberg@med.und.edu">judy.solberg@med.und.edu</a></td>
</tr>
<tr>
<td>Investigation Report</td>
<td>Office of Safety</td>
<td>(701)777.3341</td>
<td><a href="mailto:und.safety@email.und.edu">und.safety@email.und.edu</a></td>
</tr>
<tr>
<td>Sample Transportation</td>
<td>Student Health Services</td>
<td>(701)777.3988</td>
<td><a href="mailto:und.shslab@und.edu">und.shslab@und.edu</a></td>
</tr>
</tbody>
</table>

DEFINITIONS

<table>
<thead>
<tr>
<th>Bloodborne Pathogens</th>
<th>Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other potentially infectious materials/biological pathogens</td>
<td>Include but are not limited to:&lt;br&gt;(1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.&lt;br&gt;(2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and&lt;br&gt;(3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.&lt;br&gt;(4) Airborne pathogens such as tuberculosis (TB).</td>
</tr>
<tr>
<td><strong>Exposure Incident</strong></td>
<td>A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that result from the performance of practice requirements.</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Contaminated</strong></td>
<td>The presence or the reasonably anticipated presence of blood or other potentially infectious material on an item or surface.</td>
</tr>
<tr>
<td><strong>Contaminated Sharps</strong></td>
<td>Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.</td>
</tr>
<tr>
<td><strong>Immediate supervisor</strong></td>
<td>The instructor, clinical site supervisor and/or preceptor with the direct responsibility for the student at the site and time of the incident.</td>
</tr>
<tr>
<td><strong>UND SMHS Program of Enrollment/Program Director</strong></td>
<td>UND SMHS Program Director: Medical Student – Associate Dean of for Student Affairs Health Sciences-Program Directors Graduate Students- Basic Sciences Education Director Undergraduate Students-SMHS Assistant Dean for Education</td>
</tr>
</tbody>
</table>

**PRINCIPLES**

OVERVIEW— The Student Bloodborne & Biological Pathogen Exposure procedure provides management for University of North Dakota SMHS students with occupational blood exposures according to currently recommended guidelines by the US Public Health Services. The procedures below describe the action that must be taken in the event that bloodborne or biological pathogen exposure has occurred. In accordance of UND Section 1: General Safety, Incident Reporting policy, incident reporting of all injuries is required within 24 hours.

Academic instructors who witness the incident, or are immediate supervisors for the student, are responsible for completing UND & SMHS incident reporting forms. This allows for complete reporting and appropriate follow up of any occurrence involving the health and safety of University students.
PROCEDURES

Management of Exposure Incidents
1. Immediate Care
   Immediately
2. Post-Exposure Risk Determination & Medical Evaluation
   Complete within 2 hours
3. Post-Exposure Mandatory Reporting
   Complete within 24 hours
4. Incident Investigation & Report Routing

In accordance with UND Policy, mandatory reporting of incidents is required within 24 hours. The student’s health and safety is of utmost importance in this circumstance and the student must not return to activities until this is complete.

Protocol

1. Post-Exposure-Immediate Care
   If you experienced a needle-stick or sharps injury, or are exposed to the blood or other body fluid of a patient during the course of your work, immediately follow these steps (as applicable):
   - Wash needle-stick injuries and cuts with soap and water.
   - Flush splashes to the nose, mouth, or skin with water for 10 minutes.
   - Eyes-remove contact lenses, irrigate eyes with clean water, saline, or sterile irrigants (be aware of the nearest eyewash station).
   - Report the incident to your immediate supervisor.
   - Immediately seek medical treatment for evaluation and recommended follow up procedures.

2. Post-Exposure - Risk Determination & Medical Evaluation
   - Contact the immediate supervisor (or clinical site education coordinator) to obtain the procedure and forms for appropriate risk assessment and reporting.
   - UND SMHS Program of enrollment must also be contacted as soon as feasible to oversee this evaluation process.
   - The student and immediate supervisor must complete the UND SMHS Bloodborne & Biological Exposure “Student Quick Form 1“ & “UND Incident Reporting Form 2” within 24 hours. These forms must include signatures of the student, immediate supervisor, and medical provider.

The following information is required for risk determination; document “Student Quick Form 1”.
   - Type and amount of fluid (e.g., blood, visibly bloody fluid, other potentially infectious fluid or tissue, and concentrated virus).
   - Type of device causing injury, if applicable.
   - Type and description of exposure (percutaneous, splash, non-intact skin, and bites etc.).

Incident Occurrence on the UND Campus
Medical Evaluation: UND Student Health Hours: Mon-Fri 8am-4:30pm, Tuesday 8am-6pm
After Hours: Altru Emergency Department or Urgent Care
Incident Occurrence at Clinical Affiliation Site

Note: Students must also follow the individual clinical sites guidelines, and the appropriate clinical personnel should be informed of the injury. All follow-up documentation is required.

Medical Evaluation by Primary Care Provider or Emergency Facility

Step One - Evaluate Exposure Source
The student’s immediate supervisor where the incident occurred will take the necessary action to request a source patient (donor of the blood or body fluid exposure) lab test workup for bloodborne or biological pathogens.

- **Bloodborne Pathogen**
  - Assess exposure source status, if applicable.
  - Obtain consent to test blood. If deceased, no consent necessary.
  - Order an exposure work-up in accordance with state statutes, to include but not limited to rapid HIV, Hepatitis B surface Antigen (HBsAg), and antibodies to HCV (anti-HCV).
  - Unknown Source: assess risk of exposed student to HBV, HCV and HIV infection.

- **Airborne Pathogen**
  - Assess exposure source status for tuberculosis (TB) or other potential biological pathogen, if applicable.

Step Two - Evaluate Exposed Person

- **Bloodborne Pathogen**
  - Assess current immunization status.
  - Assess Hepatitis B vaccine and vaccine response status.
  - Assess HBV, HCV, and HIV immune status.
  - Order baseline testing for HIV, HCV, anti-HBs (if applicable).
  - **Draw a 10 mL clot tube of blood, spun and separated. Transport serum on ice to UND Student Health Services for storage. (Address available on Quick Form 1)**

- **Airborne Pathogen**
  - Assess current immunization status.
  - Assess for Tetanus-Diphtheria vaccination (Td) or other airborne pathogen, if applicable.
  - Assess for current tuberculosis screening status, if applicable.
  - Order TB testing, if applicable.
Step Three – Determine for Post Exposure Prophylaxis

### Bloodborne Pathogen

- Factors to consider for post exposure prophylaxis include the type of exposure, type and amount of fluid/tissue, infectious state of the source, and susceptibility of the exposed student.

Prophylaxis should be started as soon as possible after HIV exposure, **preferably within the first hour**.

### Hotline for Medical Providers

- The National Clinicians’ Post Exposure Prophylaxis Hotline.

**PEPline:** 1-888-448-4911 (9am-2am EST)

**Warmline:** 1-800-933-3413

**Perinatal HIV Hotline:** 1-888-448-8765

**Website:** [http://nccc.ucsf.edu/](http://nccc.ucsf.edu/)

Follow appropriate prophylactic treatment, if applicable.
Step Four – Follow-up Care
The student is responsible for obtaining follow-up care from their personal physician as recommended during their evaluation.

3. Post-Exposure Mandatory Reporting

Completion and routing of SMHS Bloodborne & Biological Pathogen Exposure Incident Evaluation & Reporting (Form 1 & 2) are required within 24 hours of the exposure event.

Report Routing

<table>
<thead>
<tr>
<th>Student Quick Form 1</th>
<th>SMHS Deans Office</th>
<th><a href="mailto:judy.solberg@med.und.edu">judy.solberg@med.und.edu</a></th>
</tr>
</thead>
</table>

UND Incident Reporting Form 2
The student’s immediate supervisor must electronically submit this form within 24 hours.
Form 2 is located at UND Campus Safety website: [http://und.edu/finance-operations/environmental-health-and-safety/forms.cfm](http://und.edu/finance-operations/environmental-health-and-safety/forms.cfm).
Click the [SMHS only] button on the bottom of the form to notify appropriate UND contacts.

4. Incident Investigation & Report Routing

The SMHS Program Directors will be required to:
- Investigate the incident (UND Incident Investigation Form 3), verify completion of Forms 1 & 2, verify Student Health has received the student’s blood sample, and route appropriate incident reports to UND Environmental Health & Safety.
- UND SMHS Programs are required to retain a record of the exposure incident for 30 years post-graduation.
### RESPONSIBILITIES

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
</table>
| **Student**                               | ▪ Report the exposure incident  
▪ Seek immediate and follow-up care.  
▪ Complete required reports.  
▪ Route to appropriate contacts. |
| **Immediate Supervisor**                  | Provide assistance to the exposed student to:  
▪ Obtain immediate care and medical evaluation.  
▪ Complete reports within 24 hours.  
▪ Transport the student’s blood sample to UND Student Health Services. |
| **Program Director**                      | ▪ Investigate the exposure incident.  
▪ Verify completion of reports and appropriate routing.  
▪ Verify blood sample arrival at UND Student Health.  
▪ Retain record of the incident. |
| **Chief of Staff, SMHS**                  | ▪ Notify appropriate program directors of incident exposure.  
▪ Forward reports to the appropriate program director for the incident investigation. |
| **Student Health Services**               | ▪ Receive exposed student’s sample and store for 90 days. |

### FORMS

<table>
<thead>
<tr>
<th>Form Description</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMHS Bloodborne &amp; Biological Pathogen Exposure Student Quick Form (Form 1)</td>
<td><a href="http://www.med.und.edu/policies/_files/docs/quick-form-1.pdf">http://www.med.und.edu/policies/_files/docs/quick-form-1.pdf</a></td>
</tr>
<tr>
<td>Student Bloodborne &amp; Biological Pathogen Exposure Release Form (Refusal of Care) (Form 4)</td>
<td><a href="http://www.med.und.edu/policies/_files/docs/refusal-of-care-form.pdf">http://www.med.und.edu/policies/_files/docs/refusal-of-care-form.pdf</a></td>
</tr>
</tbody>
</table>

### REVISION RECORD
APPENDIX VII

BIOHAZARD EXPOSURE CHECKLIST
AND REPORT FORMS
## Student Bloodborne & Biological Pathogen Exposure

### Quick Form 1

**Step One – Immediate Care (within 1 hour of incident)**

- ___ Exposure through a puncture/wound, cleaned with soap and water for 15 minutes.
- ___ Exposure through eye or mucous membrane, flushed with water or saline for 15 minutes.
- ___ Student reports incident to immediate supervisor.
- ___ Student obtains a copy of “Bloodborne & Biological Pathogen Exposure Quick Form 1”.
- ___ Transport to appropriate health care provider is discussed and facilitated with the student’s immediate supervisor.

<table>
<thead>
<tr>
<th>Exposed Student Name and Contact information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Source Patient Name or Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incident Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include type and amount of fluid, type of device if puncture or wound, type and severity of exposure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geographical Location of the Exposure Incident</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Student’s Immediate Supervisor where incident occurred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Information</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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Upon Completion of Page 1
Route to SMHS Dean’s Office, Judy Solberg, judy.solberg@med.und.edu
Step Two- Post Exposure Risk Determination & Medical Evaluation within 2 hours

___ Student has obtained a medical evaluation.
___ Exposure incident has been communicated to UND SMHS.

Step Three- Mandatory Reporting within 24 hours

___ UND Incident Reporting Form (Form 2) completed and electronically submitted by the immediate supervisor.
   Link to Form 2 (Click [SMHS only] button)
   UND Campus Safety Incident Report:
   http://und.edu/finance-operations/environmental-health-and-safety/forms.cfm
___ Lab testing/workup of source patient ordered by immediate supervisor.
   ▪ Lab tests ordered on source: HBsAg, anti-HCV, rapid HIV, or TB.
___ Testing/workup results on source serum reported to the student’s health care provider.
___ Bloodborne Exposure:
   Sample of student serum is drawn, separated, frozen and shipped by the student’s health care provider for storage at UND Student Health Services for 90 days.
   Address: UND Student Health
   Attention: Laboratory Supervisor
   100 McCannel Hall
   2891 2nd Ave. N Stop 9038
   Grand Forks, ND 58202
___ SMHS Bloodborne & Biological Pathogen Exposure Release Form (Refusal of Care) (Form 4) completed by the student, if applicable.

Date of Exposure ______________________

Time of Exposure ______________________
___ Student can assume normal tasks
___ Student unable to assume normal tasks
___ Student requires restrictions

Immediate Supervisor Signature/Date

_______________________________
(Verifying the Incident)

Student Signature/Date

_______________________________
(Verifying the Incident)

HealthCare Provide Signature/Date

_______________________________
(Verifying the Consult)

Upon completion of Page 2, Route to SMHS Dean’s Office, Judy Solberg, judy.solberg@med.und.edu
Student Bloodborne & Biological Pathogen Exposure- RELEASE FORM (Refusal of Care) Form 4

I understand that due to my bloodborne or other potential infectious material exposure I may be at risk of acquiring HIV, HBV, and HCV, or other potential infectious pathogens.

I have been informed that it is the standard procedure after a bloodborne exposure incident to be tested for HIV, HBV, and HCV infection immediately. However, I **decline to be tested for HIV, HBV, and HCV**. I am signing this release form in full recognition and appreciation of the dangers, hazards and risks of not being tested for bloodborne pathogens or other biological infections.

I understand by signing this release, I am releasing and holding harmless the clinical affiliation site ______________________ and the University of North Dakota, their governing boards, officers, employees and agents from any and all liability, claims and actions arising out of this incident.

I recognize that this release means that I am giving up, among other things, the right to take legal action against the clinical affiliation site ______________________ or the University of North Dakota, their governing boards, officers, employees and agents for injuries, damages or losses I may incur. I also understand that this release bind my heirs, executors, administrator, and assigns, as well as myself.

I understand that I may be potentially exposed to a communicable pathogen, I may be a potential hazard to patients, and I may be suspended from a clinical affiliation and/or program.

____________________________________  __________________________
Student Signature                     Date

____________________________________
Student Name (print)

____________________________________  __________________________
Witness Signature                     Date

____________________________________
Witness Name (print)

Route to SMHS Dean’s Office, Judy Solberg, judy.solberg@med.und.edu

Orientation Handbook Undergraduate: Update 5/15
APPENDIX VIII

GRIEVANCE POLICY
Student Grievance Policy

Section: 2
Policy number: 2.17
Responsible Office: Office of Academic and Faculty Affairs
Issued: 02.03.14
Latest Review: N/A

POLICY STATEMENT

Any student enrolled in an academic degree- or certificate-granting program or taking a course(s) at the UND School of Medicine and Health Sciences shall be provided the opportunity to seek redress on decisions made concerning the student's academic performance and/or professional behavior or on decisions made on the basis of any policies or procedures thought by the student to be unfair by initiating an academic grievance.

The term “academic grievance” is defined as: A statement expressing a complaint, resentment, or accusation lodged by a student about an academic circumstance (such as grading, testing, quality of instruction), which is thought by the student to be unfair (UND Code of Student Life).

For purposes of this policy, professional behavior includes any behavioral component of academic performance defined by a profession as necessary for individuals to function as competent, honest, safe, and ethical professionals. Individual programs may further define specific expectations for professional behavior. Therefore, an “academic grievance” at the SMHS may also include: A statement expressing a complaint, resentment or accusation lodged by a student regarding a decision made regarding a student’s professional behavior, which is thought by the student to be unfair.

Any person who believes that he or she is a victim of discrimination, either individually or as a member of a class as defined by the University’s Equal Opportunity/Affirmative Action Policy (UND Code of Student Life), may initiate grievance procedures as outlined in the UND Code of Student Life. If a person brings a grievance in which discrimination is alleged, along with an academic grievance, the discrimination complaint will be dealt with simultaneously.

In all circumstances, it is the responsibility of each student in the School of Medicine and Health Sciences to abide by the policies and procedures of the University of North Dakota as well as those described in the appropriate department or program.
REASON FOR POLICY

As stated in the University of North Dakota Code of Student Life, each undergraduate, graduate, and professional school or college shall have written procedures for academic grievances. The following describes the UND School of Medicine and Health Sciences' grievance policy and procedures as they are to be applied to undergraduate, graduate and professional students enrolled in SMHS programs or taking SMHS courses.

SCOPE OF POLICY

This policy applies to:

√ Deans, Directors, and Department Heads

√ Faculty

√ Managers and supervisors

√ Staff

√ Students

Others:

WEB SITE REFERENCES

This policy: TBD

Policy Office: http://www.med.und.edu/administration/deans-office/index.cfm

Academic and Faculty Affairs: http://www.med.und.edu/administration/academic-affairs/
DEFINITIONS

<table>
<thead>
<tr>
<th>UND</th>
<th>University of North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMHS</td>
<td>School of Medicine and Health Sciences</td>
</tr>
<tr>
<td>Code of Student Life</td>
<td>The purpose of the Code is to provide the rights and responsibilities of all individuals and to ensure fair treatment of all students.</td>
</tr>
<tr>
<td>Academic grievance</td>
<td>A statement expressing a complaint, resentment, or accusation lodged by a student about an academic circumstance (such as grading, testing, quality of instruction), which is thought by the student to be unfair. An academic grievance may also express a complaint, resentment or accusation lodged by a student regarding a decision made regarding a student’s professional behavior, which is thought by the student to be unfair.</td>
</tr>
<tr>
<td>Professional behavior</td>
<td>Any behavioral component of academic performance defined by a profession as necessary for individuals to function as competent, honest, safe and ethical professionals.</td>
</tr>
</tbody>
</table>

RELATED INFORMATION


CONTACTS

Specific questions should be directed to the following:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Contact</th>
<th>Telephone/FA</th>
<th>Office/Dep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy clarification</td>
<td>Dean’s Office</td>
<td>777.2514/777.3527</td>
<td><a href="mailto:judy.solberg@med.und.edu">judy.solberg@med.und.edu</a></td>
</tr>
<tr>
<td>Policy format</td>
<td>Dean’s Office</td>
<td>777.2514/777.3527</td>
<td><a href="mailto:judy.solberg@med.und.edu">judy.solberg@med.und.edu</a></td>
</tr>
</tbody>
</table>

PRINCIPLES

OVERVIEW— Any student enrolled in an academic degree- or certificate-granting program or taking a course(s) at the UND School of Medicine and Health Sciences shall be provided the opportunity to seek redress on decisions made concerning the student’s academic performance and/or professional behavior or on decisions made on the basis of any policies or procedures thought by the student to be unfair by initiating an academic grievance.
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For purposes of this policy, professional behavior includes any behavioral component of academic performance defined by a profession as necessary for individuals to function as competent, honest, safe, and ethical professionals. Individual programs may further define specific expectations for professional behavior. Therefore, an "academic grievance" at the SMHS may also include: A statement expressing a complaint, resentment or accusation lodged by a student regarding a decision made regarding a student’s professional behavior, which is thought by the student to be unfair.

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In all circumstances, it is the responsibility of each student in the School of Medicine and Health Sciences to abide by the policies and procedures of the University of North Dakota as well as those described in the appropriate department or program.

PROCEDURES—All grievances must be initiated by the student within thirty (30) calendar days after notification of the grade or decision the student wishes to grieve. Each step of the grievance process must be initiated by the student within thirty (30) calendar days of the completion of the previous step; response time by the student at each step shall be thirty (30) calendar days unless otherwise stated. After student initiation of each step in the grievance process, the School of Medicine and Health Sciences response will begin within ten (10) calendar days of receipt of the grievance.

1. Any student with a grievance of an academic nature should first bring it to the attention of the appropriate faculty member (course instructor/director, block director or clerkship director). Together the student and faculty member should attempt to resolve the grievance.

2. If the grievance is not resolved to the student’s satisfaction, it may be brought to the department or program level. The grievance should be brought, in writing, to the department chair/program director/assistant or associate dean for preclinical or clinical education, as appropriate for the situation or grievance level. Within thirty (30) calendar days, the chair/director/dean will conduct a review according to the
established departmental/program policy, consulting as appropriate with other faculty, campus deans or staff, and inform the student, in writing, of the decision reached regarding the grievance. The department will retain records of all grievances pursuant to the records retention schedule.

3. If the grievance is not resolved to the student’s satisfaction at the department or program level, the student may file the grievance for review by the School of Medicine and Health Sciences Grievance Committee, according to the following procedures:

   a. A student grieving any academic decision beyond the level of the department or program to the level of the School of Medicine and Health Sciences Grievance Committee must submit, in writing, the required documentation within 30 days of the decision of the department or program. Written documentation must include:

      i. The disputed decision;
      ii. The person(s)/body that made the decision;
      iii. The date the decision was made;
      iv. All efforts made to resolve the dispute informally and formally;
      v. Information directly relevant to the Committee’s review of the grievance;
      vi. Name of any relevant counsel or advisor who may have assisted the student in developing the grievance or may accompany the grievant and provide assistance, if the grievant appears before the committee;
      vii. Any other relevant pertinent evidence or documents, and;
      viii. The desired outcome the student is seeking as a result of the Committee’s deliberations.

      Documentation should be submitted to: Senior Associate Dean for Academic and Faculty Affairs; UND School of Medicine and Health Sciences, 501 North Columbia Road, Stop 9037, Grand Forks, ND, 58202.

   b. Upon receipt of the written grievance, the Senior Associate Dean for Academic and Faculty Affairs will be required to constitute the School of Medicine and Health Sciences Grievance Committee, according to the following procedures:

      i. The selection of members of the School of Medicine and Health Sciences Grievance Committee will be made by drawing names from a faculty pool—excluding faculty from the specific department/program from which the grievance arose. The Senior Associate Dean will draw six (6) faculty names (2 basic science, 2 clinical science, 2 health science) for each grievance and one (1)
student name who will not be from the department/program of the grievant.

ii. If it is determined that a Committee member has an unmanageable conflict of interest that may challenge his or her objectivity in the matter of the academic grievance, recusal may be warranted either by action of the Committee or by the Committee member himself/herself. The grievant may also have the opportunity to challenge no more than one member of the Committee for an unmanageable conflict of interest. In all cases in which a Committee member is recused, another name will be drawn to complete the membership of the Committee.

iii. The committee Chair will be appointed from among the Committee membership by the Senior Associate Dean for Academic and Faculty Affairs.

c. A training session for Committee members will be scheduled by the Office of Academic Affairs. Training will include FERPA, Affirmative Action training, if appropriate, and a review of process. This training will occur before any information is disseminated to the committee.

d. The Committee Chair will identify possible dates for a hearing and organize the hearing time and place. At the hearing, the Committee will consider all pertinent materials, including any new written information from both the grievant and the grievered party, who will both be invited to be present at the hearing along with the Committee.

e. Dissemination of documentation will be completed by the Committee Chair at least ten (10) calendar days prior to hearing. Therefore, any new written information from either the grievant or the grievered party must be submitted no later than ten (10) calendar days prior to the hearing.

f. The grievant will be invited to appear at the hearing to answer questions or to present any relevant information. A person representing the program or department being grieved will also be invited to appear before the committee. The grievant will be permitted to have a lawyer or advisor present at the hearing for assistance. If a lawyer or advisor is to be present, the grievant must notify the Chair of the committee at the time the date for the hearing is established. The lawyer or advisor may not participate in the presentation or discussion but is present as a support for the grievant. The committee hearing is an educational process, not a legal proceeding and does not
follow the procedures of a court of law. The rules of evidence do not apply.

g. Committee members and the grievant may appear via electronic means. If a grievant will be appearing electronically, it is their responsibility to acquire the resources to do so and to notify the Committee Chair of the arrangements at least two (2) business days before the hearing.

h. The Committee Chair will arrange for the hearing to be recorded.

i. Format of the hearing:
   i. The Chair will complete introductions.
   ii. At the beginning of the hearing, the Chair will ask the grievant to state for the record whether the hearing is to be open or closed. The grievant will sign a written statement declaring the hearing open or closed. If the grievant and a person representing the program or department are not present, it is a closed meeting.
   iii. Each party involved in the grievance, including each committee member involved in the hearing, will sign a non-retaliation statement.
   iv. The grievant will give an opening statement regarding the grievance and rationale for his or her position. No witnesses may appear.
   v. The person representing the program or department being grieved will give an opening statement regarding the grievance.
   vi. As a regular order of business, each party present will have thirty (30) minutes for presentation. The Committee may ask questions of the grievant and the person representing the program or department being grieved after both opening statements have concluded.
   vii. The parties involved in the grievance will not address questions/comments to each other. However, they may address their questions to the Chair of the Committee who may ask the questions on their behalf.
   viii. Each party will provide any closing statements.
   ix. The Chair will excuse the parties involved from the meeting along with any advisor present at the conclusion of their presentations and after the Committee’s questions, if any, have been answered.
   x. The Committee will adjourn the hearing and then reconvene where the Committee will be free to discuss the grievance in
j. Post-hearing:

i. No later than fifteen (15) calendar days following the hearing, the Committee will produce a written report of their findings, conclusions, and determination. This report will be based on the testimony heard and the documentation received from the parties involved in the grievance. The Chair is responsible for creating the final report, which all members of the Committee will sign and date with an indication of whether or not they are in agreement with the report’s determination. A minority report can be written. The Chair will notify the grievant and faculty (program/department) of the Committee’s decision and provide each a copy of the final report. The final report must be submitted to the Senior Associate Dean for Academic and Faculty Affairs. In rare circumstances, the Committee's review of an academic grievance may extend beyond 15 days following the hearing.

ii. The record consists of all written documentation received from the parties, the recording of the hearing, and the Committee’s final report.

iii. The office of record for grievance records retention is the Office of Academic Affairs. The record will be retained pursuant to the records retention schedule.

iv. If the grievant chooses to grieve the decision of the Committee to the Dean of the School of Medicine and Health Sciences, the entire record will be forwarded to the Dean for his or her review and decision.

4. If the grievance is not resolved to the grievant’s satisfaction by the School of Medicine and Health Sciences Grievance Committee, the grievant may request resolution from the Dean of the School of Medicine and Health Sciences or the Dean’s designee. Copies of the decision by the Dean will be forwarded to all principal parties within thirty (30) calendar days.

5. Any further pursuance of the grievance by the student beyond the School of Medicine and Health Sciences must be undertaken in accordance with relevant UND policies and procedures.

6. In all stages of the grievance process, it is the responsibility of the grievant to initiate and advance the grievance to the appropriate stage of the process.

*Orientation Handbook Undergraduate Update 5/15*
RESPONSIBILITIES

| Student/grievant  | ● Must follow each step in the “Procedures” section of this document  
|                  | ● Provide information/responses as appropriate  
|                  | ● Appear at the hearing  
|                  | ● Participate in the hearing  
| Senior Associate Dean for Academic and Faculty Affairs | ● Call the SMHS Grievance Committee together  
|                                                           | ● Appoint a chair person  
| Chair of the SMHS Grievance Committee | ● Arrange a hearing date  
|                                             | ● Arrange for the hearing to be recorded  
|                                             | ● Disseminate information prior to hearing  
|                                             | ● Participate in the hearing  
|                                             | ● Create the final report  
| Department/Program | ● Provide information as appropriate  
|                                                                 | ● Participate in the hearing  
| Members of the SMHS Grievance Committee | ● Participate in the hearing  

FORMS

| Open or closed hearing | TBD  
| Flowchart | TBD  
| Non-retaliation Statement | TBD  

REVISION RECORD

02.03.14—FAC approved  
02.03.14—Dean approved

Orientation Handbook Undergraduate Update 5/15
APPENDIX IX

DRUG AND ALCOHOL SCREENING AND EDUCATION PROGRAM POLICY
University of North Dakota School of Medicine and Health Sciences
Drugs and Alcohol Screening and Education Program

Introduction

A career in the medical field can be one of the most exciting and rewarding career options today! These rewards do not come without some personal sacrifice and discipline.

Alcohol and drug related violations can destroy a career in the field of medicine or health sciences. Institutions hiring health care professionals do not look favorably upon applicants with a Minor in Possession conviction, Minor in Consumption conviction, DUI conviction, or abuse of prescription medications. Illegal drug use is strictly forbidden. There is no place in the medical community for this type of activity for the safety of yourself and others, including patients. Because of this, almost everyone who has a career as a health care professional is subject to random drug and alcohol testing. With the interest of safety in mind, medical professionals are held to the highest standards.

A person who is seriously considering becoming a health care professional must be ready and willing to live with rules and restrictions. As a student of the SMHS you are learning to become a health care professional right now. Many of the habits and behaviors you will exhibit now will carry over to the “real world,” which includes being on time, prioritization, communicating, along with alcohol and drug use. Think seriously about your actions every day.

The primary purpose of this program is to educate students within the SMHS regarding the dangers of substance abuse and the consequences of current drug problems. This program also has a substance abuse deterrence and detection function by screening covered students for use of prohibited drugs. Drugs prohibited by the SMHS include those banned by federal, state of North Dakota, and local governments, as well as institution policy. These drugs include illegal, prescription, over-the-counter, experimental, recreational, or other drugs that have a significant effect upon an individuals’ judgment.

Educational Resources

The University of North Dakota is committed to educating and assisting students with drug and alcohol issues. UND programs such as the Health & Wellness Promotion Team Program and the University Counseling Center (UCC) Student Chemical Assessment and Review Program are intended to increase awareness of issues related to substance abuse and other issues impacting the health, well-being and academic success of students. The UCC functions to assist students by anticipating and intervening in situations where substance use/abuse may negatively influence student performance in the University and surrounding community. Individual and group counseling, alcohol use assessment, referral for further evaluation and treatment, and educational programming are important components of this service. Students who are concerned about their own alcohol or drug use and/or about that of others are encouraged to contact the University Counseling Center. When appropriate, students may be referred to off-campus medical providers. More information regarding these services may be obtained by calling the University Counseling Center at (701) 777-2127 or visiting the UCC website.
School of Medicine and Health Sciences Policy

The University of North Dakota School of Medicine and Health Sciences (collectively referred to hereafter as SMHS) is committed to the high medical standard of a drug free workplace. UND prohibits the unlawful or unauthorized manufacture, distribution, dispensation, possession, use, or sale of alcoholic beverages, controlled substances, and illegal drugs on campus. The impairment by alcohol or drugs of any student while participating in an academic function, or as an employee when reporting for work or engaging in work – during normal work hours or other times when required to be at work – is also prohibited. UND students are required to abide by all federal and state laws, local ordinances, State Board of Higher Education policies, and other related requirements regarding the consumption or possession of alcoholic beverages, controlled substances, and illegal drugs.

Our goal is to provide safe and efficient environment for our students, employees, and patients. To achieve this goal, this program’s primary objective is to promote safe operations and healthy life styles through education and deterrence, benefiting those directly involved with UND SMHS, as well as the general public. This program is to also serve as a resource for faculty to follow if suspected drug use were to happen during any portion of the education of SMHS students. All students actively involved in an educational program within the SMHS are required to comply with the provisions of this drug screening program.

The students of the SMHS are subject to the rules of this program as well as conditions of their admission or matriculation in the educational program. Students also are subject to the UND alcohol and drug policy.

The SMHS reserves the right to contact proper law enforcement officials and/or state licensing/certifying boards regarding any matter subject to this policy. Violation of this policy may result in disciplinary action, up to and including dismissal from the academic program.

Guidance for Clinical Faculty

Clinical Faculty or institutions that are providing clinical education to the students of the SMHS (hereafter known as facilities) may encounter a situation when drug use is suspected, they have a student test positive to drug screening, or they have their own facility drug screening and education program. The Clinical education facility should:

- Inform the students that they may be required to undergo a drug test pursuant to the Facility’s policies and practices, and that the cost of any drug test will be paid by the academic program if it is not paid by the facility. If a facility requires a drug test prior to placement of students for clinical education, it is the student’s responsibility for any costs incurred.
- If students participating in clinical education are required by Facility to undergo a drug test, the Facility shall provide University with notice and explanation of any positive or unacceptable drug test.
test results. If students are required by Facility to undergo a drug test, the academic program shall obtain advance authorization from students permitting Facility to notify and explain to SMHS any positive or unacceptable drug test result.

Types of Testing

The SMHS has identified the following areas where drug testing could occur. Although this list is not totally inclusive, students of the SMHS may be subject to the following types of testing:

- Random – SMHS reserves the right to randomly test for drugs and alcohol. Randomization may include all students within the SMHS or within a single educational program. The randomization process will be completed by a collection agency after being given the names of all the students in the SMHS or within a single educational program. The student must produce a specimen within two (2) hours from the time they are notified of a randomized test.

- Reasonable suspicion – students may be required to undergo testing when reasonable suspicion is present. Reasonable suspicion includes, but is not limited to, the following:
  a) displaying violent or unusual confrontational, argumentative or other unusual behavior customarily associated with alcohol or drug use (e.g., glassy eyes, slurred speech);
  b) showing major personality change;
  c) academic performance has deteriorated;
  d) excessive or patterned absenteeism or tardiness;
  e) frequent errors;
  f) has previously had a positive drug screen in combination with any of the above.

- Post-accident or incident including clinic or academic related combination with accident or causing themselves or another student or patient to sustain a personal injury.

- Pre-clinical placement
- During clinical rotations
- Return to clinical rotation or educational program.

In addition, clinical affiliates of the SMHS may have their own institutional drug screening or testing programs. Students of the SMHS are also subject to those clinical affiliates drug screening programs while participating in a clinical rotation or clinical practice.

Testing protocol

Notification to the student for testing will be the responsibility of the SMHS administration, faculty (clinical or full time), or academic staff. Notification will be done in writing using the SMHS drug screening notification form. The basic test to be used for drug screening is urinalysis. Alcohol testing will be done by Breathalyzer. Other types of tests may be utilized to determine the presence of banned substances. Collection of the samples will be done under the direction of a vendor (Global Safety Network or its successor) chosen by the SMHS. Direct observation of sample donation may or may not be done by a SMHS employee.
be done as part of the initial collection process. Direct observation will be done by a person of the same
gender as the student. If a sample is deemed not acceptable to the collection agency, direct observation
of the sample will be the protocol for collection. Samples will be sent to a Substance Abuse and Mental
Health Services Administration (SAMHSA) certified laboratory selected by the vendor. Drug Screens will
be completed to test for a 12 panel drug screen.

Positive results

All drug screens will be verified by a Medical Review Officer (MRO). The MRO will communicate with
students when receiving a positive test. The MRO will then seek clarification of the resulting positive
test. It is the responsibility of the student to supply the MRO with requested documentation or other
information. Positive drug screening results are confidential, except that results will be reported to the
SMHS administration and program director of the student’s academic program.
A positive drug screen will result in disciplinary action that could include but is not limited to:
  • Removal from patient care or access to patients;
  • Development of a written remediation plan to address academic, professional, and personal
    issues of a positive test;
  • Mandatory substance abuse evaluation and proper follow up with substance abuse counselor or
    qualified health care provider agreed upon by the education program and the student involved.
    The substance abuse counselor and/or qualified health care provider shall determine the length
    and manner of counseling. This evaluation will be the fiscal responsibility of the student. The
    student will be allowed to return to the academic program only after documentation of the
    students ability to return by the substance abuse counselor;
  • Follow up screening tests following a positive as determined by the program director or faculty
    of SMHS;
  • Dismissal from the educational program.
If the initial screening result is positive, a secondary laboratory test from the same sample may be
requested by the student to confirm the results of the first test and can be included as part of the appeal
process. This secondary test will be done at a different laboratory than the first and testing of the
second sample will be at the expense of the student.

Failure to report for a random drug screen

If a student fails to report for a drug and alcohol screening test, this will be considered a positive drug
test and the student will be subject to discipline up to and including dismissal from the academic
program.

Appeal of a positive drug screen

Orientation Handbook Undergraduate Update 5/15
Students have the right to appeal a positive drug test. Students who test positive on a drug screen will have 5 business days following the day on which the student is notified of the positive confirmatory test result to submit information in writing to explain the test results. The appeal will then be reviewed by the program director/faculty of the academic program and the student will be notified of the decision in writing. If the student does not agree with the decision of the program director/faculty of the academic program, the appeals process would then proceed to the SMHS Grievance Policy. Appeals to a positive screen should be addressed to:

Associate Dean
Office of Student Affairs and Admissions
UND School of Medicine and Health Sciences
501 N. Columbia Road, Stop 9037
Grand Forks, ND 58202-9037
Tel. (701)777-4214

**SMHS Drug and Alcohol Screening Procedures**

**Reasonable suspicion**

One type of drug testing is commonly referred to as “reasonable suspicion testing.” Reasonable suspicion testing should be considered when a faculty member has a reasonable belief that, subsequent to a specific incident or a series of incidents, a student is or might be using a prohibited drug based on specific physical, behavioral, or performance indicators of probable drug use. If a faculty member or members are considering utilizing a drug screen based on reasonable suspicion, they should contact the program director/chair or SMHS representative responsible for the clinical education of the suspected student. The contact information for those individuals is listed at the end of this policy.

**Factors to Consider**

In making a determination of reasonable suspicion, factors that faculty or administrators should consider include:

- Are there physical signs and symptoms of substance use and/or abuse?
- Is there evidence of banned and/or illegal substance use, possession, sale, or delivery?
- What is the nature and degree of the evidence of wrongdoing?
- When a serious or potentially serious accident or injury has occurred, what was the likely cause of the accident/injury? Is it possible that drug use was a factor in the accident/injury?
- Might there be reasons or alternative explanations for uncharacteristic behavior, for a sudden behavioral change, or for a downward trend in a student’s level of academic or professional performance?

**Seek a Second Opinion**

*Orientation Handbook Undergraduate Update 5/15*
A decision maker should consider consulting with a second faculty member, staff, or employee of the University or clinical site and ask them to review the facts of a situation in order to concur with, or to further question a decision to test a student for the presence of prohibited drugs.

**Notification and Opportunity to Acknowledge, Deny, or Explain the Behavior**

If a student appears to be impaired from drugs or alcohol, a faculty member should not touch the student, unless contact is necessary to protect the faculty member or the student. If safety concerns are present, the faculty member should contact University Police (or local police department for off-campus incidents) for assistance. If possible, the student should not be left alone unless the faculty member feels threatened. The faculty member should not allow the student to continue to attend the educational opportunity for the remainder of the day or to drive him or herself home. The faculty will ask the student if they have been drinking alcohol or taking any drugs and document the student’s answer. When a student is suspected of using prohibited drugs, the individual should be informed that the SMHS has reasonable cause to believe that a prohibited substance is being used and is likely affecting the student’s academic and/or professional performance. The concerns regarding the reasonable suspicion should be documented and presented to the student at the time of the request to be screened.

Upon notification, the suspected student might respond by denying the alleged behavior, by acknowledging the wrongful behavior, or by providing a persuasive explanation for the behavior.

**Proceed to Test**

Following a meeting with the suspected student, if a faculty member continues to have a reasonable belief that prohibited drug use is likely a factor in a student behavior, then the faculty member should proceed to request that the student undergo a drug test immediately or as soon as practical. If the student is participating in clinical rotations, the clinical faculty member should refer to his or her facility’s policies and procedures regarding reasonable suspicion and notify the appropriate UND SMHS administrator (Ex. Program Director, Associate Dean for Student Affairs, etc.) of the results. Faculty members on the campus of UND SMHS should carry out the policies and procedures of the SMHS Drug screening policy. Appointments for the drug or alcohol screen should be made with Global Safety Network at (701)792-9808 or whatever vendor UND is using at the time of the incident and a notification form should be filled out and given to the student.

The faculty should explain that the request to provide a sample for drug or alcohol testing is not a final determination of wrongdoing by the student, rather it is done for the purpose of obtaining additional, objective data that will receive further consideration pursuant to SMHS drug screening policy. Upon request of a reasonable suspicion screen, the student should not be allowed to drive themselves to the testing site.

*Orientation Handbook Undergraduate Update 5/15*
Training
SMHS faculty and administration should be trained to identify drug-affected students who may pose a danger to themselves and/or others. In addition, administrators and faculty should be trained on factors that should guide them in making a determination of reasonable suspicion. Training can be done online. Please contact the academic program director or chair for further information on this.

Random drug and alcohol screening
Randomized drug screening can be done within the SMHS educational programs. Prior to the randomization process, the academic program should communicate with the collection agency to verify location, time, number of selected students, and other pertinent information about the collection process.

The randomization process begins by the academic program giving the collection agency a roster of individuals to be included in the random selection. Each name included in the roster should be accompanied by a unique identification number (Ex. 1022, MLS55, MED227) This number may be made up by the academic home or the collection agency. The randomized drawing of selected students will then be completed by the collection agency. Students selected to be screened will be notified by the Program Director/Faculty member within the academic program. Proper notification paperwork should be filled out at this time.

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APPENDIX X

FORMS
EXCESSIVE HELP IN LABORATORY WARNING

Student’s Name: ________________________________

- It is the student’s responsibility to ask for clarification on any questions that may arise, but it is also the student’s responsibility in the clinical laboratory to take ownership of their learning and to follow directions and procedures.
- It is not the instructor’s responsibility to accomplish the laboratory assignment for the student. The student must learn to follow directions, either verbal or written, because the environment at the clinical affiliate will not allow time for students who cannot think and follow directions or procedures themselves. Because the on-campus summer session is a learning environment, the faculty will give the student two written warnings when they feel that the student is refusing to think or act on their own so that the student will understand when the faculty feel the student is asking for excessive help.
- The MLS policy from the policy manual is listed below:
  Student Requests for Excessive Help in the Laboratory:
  - Example: Student refuses to follow directions by themselves and requests assistance from the faculty repeatedly.
  - If a Summer Session faculty member believes that the student is not taking responsibility for their own learning or is reckless in following directions, either written or verbal, the faculty will clarify to the student a maximum of two times that their questions are considered excessive help. The faculty will document each warning in writing.
  - Upon the third warning, the faculty member will submit the documentation to the Medical Laboratory Science Professional and Academic Standards Committee. The committee will determine the appropriate action, which could include dismissal from the Summer Session.

Warning #1
Instructor: ________________________________ Date ________
Student’s Signature: __________________________ Date ________
Comments from instructor:

Comments from student:

Warning #2
Instructor: ________________________________ Date ________
Student’s Signature: __________________________ Date ________
Comments from instructor:

Comments from student:

Warning #3
Instructor: ________________________________ Date ________
Student’s Signature: __________________________ Date ________
Comments from instructor:

Comments from student:
UNIVERSITY OF NORTH DAKOTA  
DEPARTMENT OF MEDICAL LABORATORY SCIENCE 

Professional and Academic Petition Form

Check Box:  Professional Year #1 ☐  Professional Year #2 ☐  Certificate ☐

Student’s Name: ___________________________   Student ID# _______

Mailing Address: ______________________________________________________

Telephone:_________________   E-mail______________________________

Date of Submission: __________________________

1. What are you seeking by this petition?

2. Discuss the reason(s) for your petition

Note: The Department of Medical Laboratory Science Professional and Academic Standards Committee may request an interview in addition to this petition

Signatures:

_____________________________________________  Date
Student

_____________________________________________  Date
Advisor

The recommendation of the Committee is:

_____________________________________________
Department of Medical Laboratory Science  Date
Professional and Academic Standards Committee Chairperson

Orientation Handbook Undergraduate Update 5/15
I. I have read the Essential Functions and fully understand them. Any questions that I have concerning them and how they apply to me have been answered by program representatives to my satisfactions. It is my belief that I can satisfy each of the Essential Functions based on my existing skills and abilities, or through the use of corrective devices.
I, _______________________ have read, understand, and agree to the statements above.

print name

_________________________________   ____________________________
Signature                                               Date

II. I have read and agree to abide by the University of North Dakota Medical Laboratory Science policies as stated in the UND MLS Orientation Handbook Undergraduate.

_________________________________  ____________________________
Signature                                               Date

III. I give permission to the University of North Dakota to release information from my student files for purposes of job or educational opportunities and/or advancement.

_________________________________   ____________________________
Signature                                               Date

IV. I have read the safety policy. I have been informed about the blood borne pathogens exposure control plan and regulations and policies in the UND Undergraduate Orientation Handbook. I understand them and will abide by them while working in the student laboratories.

_________________________________  ____________________________
Signature                                               Date

V. I understand that in order to learn phlebotomy skills, students and instructors in the MLS program will be performing venipunctures and fingersticks on each other. I give permission for the phlebotomy procedures to occur.

_________________________________  ____________________________
Signature                                               Date

VI. I understand that quizzes and tests are used in future courses and I will not share or copy information from the tests or quizzes with others.

_________________________________  ____________________________
Signature                                               Date

VII. I understand that a group picture and composite pictures of the summer practicum group may be put on the UND website for information purposes and give my permission to post the photo on the webpage.

_________________________________  ____________________________
Signature                                               Date

VIII. I understand that a list of student emails and cell phone numbers will be made available to students if student permission given. I give my permission to share student email and cell phone numbers with other students.

_________________________________  ____________________________
Signature                                               Date

IX. I understand that I may be required to be given a drug screen at any time during the final clinical year.

_________________________________  ____________________________
Signature                                               Date

X. I understand that my criminal background check information and my immunization records may be shared with my clinical affiliate.

_________________________________  ____________________________
Signature                                               Date
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