



Medical Laboratory Science Program Technical Standards

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status or sexual orientation.

In adhering to this policy, the University abides by the Americans with Disabilities Act, Section 504 of the Rehabilitation Act of 1973, the Minnesota Human Rights Act and other applicable statutes and regulations relating to equality of opportunity. The MLS Program encourages all qualified individuals to apply for admission to the Bachelor of Science in Medical Laboratory Science.

The MLS Program curriculum, leading to eligibility for certification and licensure as a MLS practitioner, requires students to engage in diverse, complex and specific experiences critical to the acquisition and practice of essential laboratory professional skills and functions. Unique combinations of cognitive, affective, psychomotor, physical, and social abilities are required to satisfactorily perform these functions. In addition to being essential to the successful completion of the requirements of the BS degree, these functions are necessary to ensure the health and safety of patients, self, fellow students, faculty and other healthcare providers.

The Technical Standards are knowledge, skill, and attitude/behavioral requirements necessary for successful admission and continuance by students for the MLS program. They are also necessary to acquire or demonstrate competence in a discipline as complex as diagnostic laboratory medicine. The National Accrediting Agency for Clinical Laboratory Sciences (<http://www.naacls.org>) requires that the Technical Standards (also called Essential Functions), required for admission to and continuance in the MLS program, be made available to prospective students and to the public.

The student must be able to meet the following Technical Standards to be admitted to and to continue enrollment in the MLS Program in addition to the academic conduct set forth by the University Student Code of Conduct:

- *Locomotion and Gross Motor Skills*—Students must
 - move freely from one location to another in physical settings of the student classrooms and laboratories, medical laboratories and healthcare facilities
 - operate equipment in the laboratory or healthcare facility and must be able to lift and move objects of at least 20 pounds
- *Fine Motor Skills*—Students must
 - demonstrate sufficient coordination to allow delicate and controlled manipulations of specimens, instruments, and tools
 - demonstrate the ability to safely grasp and release small objects (e.g., test tubes, microscope slides); perform fine movements such as the ability to twist and turn dials/knobs (e.g., for a microscope, balance, or spectrophotometer); and manipulate other laboratory materials (e.g., reagents and pipettes) in order to successfully complete tasks
- *Communication Skills*—Students must
 - communicate effectively and sensitively in written and spoken English
 - comprehend and respond to both formal and colloquial English, by person-to-person, telephone, and written communication
 - appropriately assess nonverbal as well as verbal communication with other students, faculty, staff, patients, family and other professionals
 - Communicate respectfully and in a productive manner even in stressful conditions
- *Visual Acuity and Sensory*—Students must

- identify and distinguish objects macroscopically and microscopically
- read charts, graphs, and instrument scales as well as discern fine details of texture and color
- demonstrate sufficient depth perception and spatial awareness to perform laboratory tasks efficiently and safely
- discern fine details of structure, texture and color
- demonstrate sense of touch and temperature discrimination sufficient to perform laboratory testing
- *Cognitive Application Skills* — Students must
 - apply knowledge, skills, and values learned from previous coursework and life experiences to new situations
 - measure, calculate, reason, analyze, integrate and synthesize information
 - apply theory to practice and test performance to ensure quality outcomes
 - demonstrate sufficient cognitive (mental) abilities and effective learning techniques to assimilate the detailed and complex information presented in the MLS curriculum
 - learn through a variety of modalities including, but not limited to, classroom instruction; small group, team and collaborative activities; individual study; preparation and presentation of reports; application of theory to clinical practice, and use of computer technology
 - demonstrate capacity to perform these problem-solving skills in a timely fashion
 - comprehend three-dimensional relationships and to understand the spatial relationships of structures
- *Safety*— Students must
 - work safely with mechanical, electrical, thermal, chemical, radiologic, and biological hazards
 - follow prescribed guidelines for working with hazards
 - recognize and respond to safety issues appropriately
 - recognize emergency situations and take appropriate actions
- *Stability*— Students must
 - possess the psychological health required for full use of abilities and respond to others in a collegial and respectful manner
 - recognize emergency situations and take appropriate actions
 - maintain mature, sensitive, respectful, and effective relationships with patients, students, faculty, staff and other professionals under all circumstances, including highly stressful situations
 - demonstrate emotional stability to function effectively under stress and to adapt to an environment that may change rapidly without warning and in unpredictable ways
- *Affective (valuing) Skills*— Students must
 - show respect for self and others and project an image of professionalism, including appearance, dress, and self-confidence
 - demonstrate complete personal integrity and honesty
 - adhere to appropriate professional deportment
 - know that his or her values, attitudes, beliefs, emotions, and experiences affect personal perceptions and relationships with others
 - examine and correct personal behavior when it interferes with productive individual or team relationships
 - possess skills and experience necessary for effective and harmonious relationships in diverse academic and work environments
 - demonstrate the physical and emotional stamina and capacity to function in a professional manner in the hospital, classroom and laboratory settings, including settings that may involve heavy workloads, long hours and stressful situations
 - tolerate physically and mentally taxing workloads and long work hours, to function effectively under stress, and to display flexibility and adaptability to changing environments
 - contribute to collaborative, constructive learning environments
 - respond to and accept constructive feedback from others; and take personal responsibility for making appropriate positive changes
 - adapt to changing environments, display flexibility, and learn to function in the face

of uncertainties inherent in the clinical laboratory and medical practice

- *Professional skills*— Students must
 - follow written and verbal directions
 - work independently and with others as directed and under time constraints
 - maintain composure under stressful situations or during heavy workload
 - prioritize requests and work concurrently on at least two different tasks
 - maintain alertness and concentration during a normal work period
 - learn and abide by professional standards of practice
 - possess attributes that include compassion, empathy, altruism, integrity, honesty, responsibility and tolerance
 - engage in patient care delivery in all settings and deliver care to all patient populations including but not limited to children, adolescents, adults, individuals with disabilities, medically compromised patients and vulnerable children or adults
 - accept responsibility for learning, exercising good judgment, and promptly complete all responsibilities efficiently and accurately
 - take corrective action based on instructor or preceptor feedback and guidance

Students with documented disabilities who may require accommodations to meet these Technical Standards should contact the Disability Resource Center for assistance.

Reference citation: (accessed August 17, 2011 – updated May 16, 2017).

1. Details Report for: 29-2011 Medical and Clinical Laboratory Technologists. O*Net Online (US Department of Labor, Employment and Training Administration), 2010.
<http://www.onetonline.org/link/details/29-2011.00>
2. National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) <http://www.naacls.org>