MLT ESSENTIAL FUNCTIONS
(Technical/Academic Standards)

Purpose: To provide the applicant/student with a clear understanding of the demands required of the student/graduate of the MLT Program based on the tasks performed by the clinical laboratorian.

Essential Observational Requirements for the Clinical Laboratory Sciences

The MLT student must be able to:

- observe laboratory demonstrations in which biologicals (i.e., body fluids, culture materials, tissue sections, and cellular specimens) are tested for their biochemical, hematological, immunological, microbiological, and histochemical components.
- characterize the color, odor, clarity, and viscosity of biologicals, reagents, or chemical reaction products.
- employ a clinical grade binocular microscope to discriminate among fine structural and color (hue, shading and intensity) differences of microscopic specimens.
- read and comprehend text, numbers, and graphs displayed in print and on a video monitor.

Essential Movement Requirements for the Clinical Laboratory Sciences

The MLT student must be able to:

- move freely and safely about a laboratory.
- reach laboratory benchtops and shelves, patients lying in hospital beds or patients seated in specimen collection furniture.
- travel to numerous clinical laboratory sites for practical experience.
- perform moderately taxing continuous physical work, often requiring prolonged sitting, over several hours.
- maneuver phlebotomy and culture acquisition equipment to safely collect valid laboratory specimens from patients.
- control laboratory equipment (i.e., pipettes, inoculating loops, test tubes) and adjust instruments to perform laboratory procedures.
- use an electronic keyboard (i.e., 101-key IBM computer keyboard) to operate laboratory instruments and to calculate, record, evaluate, and transmit laboratory information.

Essential Intellectual Requirements for the Clinical Laboratory Sciences

The MLT student must:

- possess these intellectual skills: comprehension, measurement, mathematical calculation, reasoning, integration, analysis comparison, self-expression, and criticism.
- be able to exercise sufficient judgment to recognize and correct performance deviations.

Essential Communication Requirements for the Clinical Laboratory Sciences

The MLT student must be able to:

- read and comprehend technical and professional materials (i.e., textbooks, magazine and journal articles, handbooks, and instruction manuals).
- follow verbal and written instructions in order to correctly and independently perform laboratory test procedures.
- clearly instruct patients prior to specimen collections.
- effectively, confidentially, and sensitively converse with patients regarding laboratory tests.
- communicate with faculty members, fellow students, staff and other health care professionals verbally and in a recorded format (writing, typing, graphics, or telecommunication).
- independently prepare papers, prepare laboratory reports and take paper, computer and laboratory practical examinations.

Essential Behavioral Requirements for the Clinical Laboratory Sciences

The MLT student must:

- be able to manage the use of time and be able to systematize actions in order to complete professional and technical tasks within realistic constraints.
- possess the emotional health necessary to effectively employ intellect and exercise appropriate judgment.
- be able to provide professional and technical services while experiencing the stresses of task-related uncertainty (i.e., ambiguous test ordering, ambivalent test interpretation), emergent demands (i.e., "stat" test orders), and a distracting environment (i.e., high noise levels, crowding, complex visual stimuli).
- be flexible and creative and adapt to professional and technical change.
- recognize potentially hazardous materials, equipment, and situations and proceed safely in order to minimize risk of injury to patients, self, and nearby individuals.
- adapt to working with unpleasant biologicals.
- support and promote the activities of fellow students and of health care professionals. Promotion of peers helps furnish a team approach to learning, task completion, problem solving and patient care.
- be honest, compassionate, ethical and responsible. The student must be forthright about errors and uncertainty. The student must be able to critically evaluate his/her own performance, accept constructive criticism, and look for ways to improve (i.e., participate in enriched educational activities). The student must be able to evaluate the performance of fellow students and tactfully offer constructive comments.

Reference: Fritisma, G.A., Fiorella, B.J., and Murphy, M., **Essential Requirements for Clinical Laboratory Science,** Clinical Laboratory Science, Vol. 9, No. 1, Jan/Feb 1996, p. 40-43.