

## Technical Standards

Technical standards are defined as the student's ability to accomplish the essential requirements of employment in the Sonography profession or participation in a DMS program. Technical standards for the DMS program include all nonacademic criteria and must be based on tasks performed by a sonographer. They also provide students with an understanding of physical demands required by the program and the profession. This is a requirement of the Commission on Accreditation of Allied Health Education Programs (CAAHEP). All students in the DMS program must possess the following abilities to successfully attain the skills needed to practice in the sonography profession.

Students may be dismissed from the program if program leadership and faculty determine that the student is unable to meet these essential abilities even when reasonable accommodations are made.

### **Communication Ability**

1. Sufficient hearing to assess patient needs and identify equipment signals.
2. Sufficient vocalization skills to instruct a patient relative to sonographic maneuvers and obtain a health history.
3. Communicate effectively, verbally and nonverbally, with patients and other healthcare professionals to explain procedures, give instructions, and give and obtain information.
4. Understand verbal instructions and patient needs.

### **Visual Acuity**

1. Identify 16 shades of gray from the gray scale provided.
2. Distinguish between the colors of green, blue, black, red and yellow on the color bar provided.
3. Sufficient vision to observe patients, manipulate sonographic equipment, and evaluate image quality.
4. View and evaluate recorded images for the purpose of identifying proper protocol, procedural sequencing, technical qualities and identification of pathophysiology.

### **Physical Ability**

1. Sufficient gross motor coordination to exert up to 20 pounds of force occasionally, 10 pounds of force frequently, and/or a negligible amount of force constantly to move objects.
2. Sufficient fine motor coordination to hold simultaneously a transducer and input data on a sonographic control panel.
3. Work standing on his/her feet 80% of the time.
4. Use both hands, wrists, and shoulders to maintain prolonged arm positions necessary for scanning and perform fine motor skills.
5. Lift more than 50 pounds routinely.

6. Transport, move, and/or lift patients from a wheelchair or stretcher to the examination table or patient bed, and physically assist patients into proper positions for examination.
7. Push, pull, bend and stoop routinely to move and adjust sonographic equipment and perform studies.
8. Use senses (vision, hearing, and touch) to adequately view sonograms, including color distinctions; distinguish audible sounds; perform eye/hand coordination skills required in sonographic examinations; and recognize changes in patient's condition and needs.
9. Work in a semi-darkened room for prolonged periods of time.
10. Be physically capable of carrying out all assigned duties of a sonographer and deliver patient care.

### **Environmental Requirements**

The work involves risks or discomforts that require special safety precautions, working with sharps (needles, razor blades, scalpels, etc.), chemicals and infectious disease. Employees may be required to use protective clothing or gear such as masks, goggles, and gloves.

### **Intellectual Requirements**

1. Organize and accurately perform the individual steps in a sonographic procedure in the proper sequence according to established standards.
2. Follow directions effectively and work closely with members of the healthcare community.
3. Apply problem-solving skills to help optimize patient care and produce the best diagnostic information possible.
4. Essential judgment skills to include: the ability to identify, assess, and comprehend conditions surrounding patient situations for the purpose of problem solving and coming to appropriate conclusions and/or courses of action.
5. Essential neurological functions to include: the ability to use the senses of seeing, hearing, touch, and smell to make correct judgments regarding patient conditions for the purpose of demonstrating competence in the practice of Sonography and patient care. Behaviors that demonstrate essential neurological functions include, but are not limited to, observation, listening, understanding relationships, writing, and psychomotor abilities.
6. Essential intellectual/conceptual skills to include: the ability to measure, calculate, analyze, synthesize, and evaluate to engage competently in the safe practice of Sonography.

### **Emotional Requirements**

1. Provide physical and emotional support to the patient during sonographic procedures.
2. Interact compassionately and effectively with the sick and/or the injured.
3. Handle stressful situations related to technical and procedural standards and patient care situations.
4. Adapt to changing environments and be able to prioritize tasks.
5. Project an image of professionalism.

6. Demonstrate a high level of compassion for others, a motivation to serve, integrity, and a consciousness of social values.
7. Interact positively with people from all levels of society and all ethnic and religious backgrounds.
8. Essential emotional coping skills to include: the ability to demonstrate the mental health necessary to safely engage in the practice of Sonography as determined by professional standards of practice.