Ozarks Technical Community College
Diagnostic Medical Sonography
Technical Standards

The Associate of Applied Science in Diagnostic Medical Sonography student must be able to perform essential functions. If the student's ability to perform essential functions depends on utilization of accommodation, it should be noted that students must request accommodation from the Disability Support Services (DSS) department.

The request must be accompanied by appropriate medical or psychological/psychiatric documentation to support the request. Contact the DSS, located in the Information Commons on the main Ozarks Technical Community College Springfield campus at 417-447-8189 for further information.

All students must possess the following abilities, with or without accommodation:

Essential Function	Technical Standard	Examples of Necessary Activities (not all-inclusive)
Critical Thinking Skills	1.) Critical thinking and problem-solving skills necessary to make sound decisions in the classroom, lab, clinical settings, and during exams	1.) Make appropriate decisions as it pertains to patient care and medical emergencies. 2.) Anticipate the needs of the patient or other healthcare workers. 3.) Apply logic and gathered data to draw valid conclusions. 4.) Adapt scanning techniques (positioning and technical) used for image acquisition and assessment based on the situation being faced.
Physical/Gross Motor Skills	1.) Gross motor skills that allow for personal movement. 2.) Stamina that allows for standing, sitting, walking, bending (at the waist or knees) and staying on task for long periods of time 3.) Strength sufficient to assist in ambulating, transferring and positioning a patient safely.	1.) Push mobile sonographic equipment between departments and to patient rooms. 2.) Administer CPR as needed. 3.) Stand and/or sit for extended periods of time while performing sonographic examinations and other responsibilities of the job (including walking, standing, or being upright continuously for 8-12 hours). 4.) Reach to full arm extension for extended periods of time to obtain required images. 5.) Push, pull, and transport a patient in a bed or wheelchair.

Essential Function	Technical Standard	Examples of Necessary Activities (not all-inclusive)
		6.) Lift, slide, or move patient for proper positioning on stretcher (with or without help). 7.) Lift patients and objects over 50 lbs. at both waist level and below (with or without help).
Physical/Fine Motor Skills	1.) Fine motor skills in both hands to allow for dexterity necessary for precise manipulation of hands and fingers. 2.) Hand-eye coordination to allow for precise movement.	1.) Full use of both hands (simultaneous use of), wrists, and shoulders to hold and manipulate the transducer, type on a keyboard and adjust machine controls and monitor. 2.) Grip the transducer for extended periods of time (often exceeding 30-minute intervals) 3.) Press, angle, and slide the transducer to obtain required images. 4.) Use eye-hand coordination to perform sonographic exams and make equipment adjustments.
Communication Ability	1.) Written and verbal communication sufficient to accurately communicate with patients and other professionals.	1.) Able to read, write, and comprehend the English language. 2.) Speak clearly, concisely, and use correct vocabulary and grammar when communicating with patients, family members, the public, and other members of the healthcare team. 3.) Explain examinations and procedures to patients and respond to patients' questions and concerns. 4.) Present oral summary of the ultrasound examination. 5.) Write and type accurate information related to the patient's condition and the procedure. 6.) Write summary of ultrasound examination as well as preliminary reports. 7.) Communicate effectively and maintain safety in high-pressure situations, while being able to adapt to the dynamic nature of patient care environments
Interpersonal Skills	1.) Skills sufficient to interact with individuals, families,	1.) Maintain effective working relationships and rapport with patients, peers, the

Essential Function	Technical Standard	Examples of Necessary Activities (not all-inclusive)
	and groups from a variety of social, emotional, cultural and intellectual backgrounds. 2.) Demonstrate therapeutic communication, sympathy and empathy in all communications.	public, sonographers, faculty, and college personnel. 2.) Effectively function as part of the healthcare team providing care to patients. 3.) Respect and cultural competency should be demonstrated to patients whose appearance, condition, beliefs, and values differ from the individual. 4.) Adapt to change and be able to focus and function in an environment with multiple extraneous stimuli. 5.) Embody concern, compassion, sympathy, and empathy where appropriate.
Sensory Skills – Visual Ability	1. Visual ability sufficient for observing patient physical assessment and/or treating of patient. Ability to discriminate between subtle change in density (black or gray) of a color in low light and ability to discern color variations. If corrective lenses are required, they must be worn during all lab and clinical assignments.	1.) Accurately read patient ID bracelet and other pertinent materials for safe patient care and professional practice. (charts, orders, etc). 2.) Identify normal and abnormal anatomical structures of diagnostic procedures. 3.) Observe and recognize patient distress. 4.) Identify subtle tissue variations (shades of gray) in real time and static image display. 5.) Observe variance of hue of colors (red, blue) in real time. 6.) Adjust various equipment settings to create optimal images. 7.) Work in a dimly lit room watching a monitor for long periods of time. 8.) Perform safety checks on the equipment.
Sensory Skills – Hearing Ability	1. Auditory ability sufficient to recognize and respond as necessary in a variety of medical situations and environments. If corrective hearing devices are required, they must be worn during all lab and clinical assignments.	1) Listen and distinguish Doppler flow patterns. 2) Listen and follow verbal directions from physicians, supervisors, and other medical personnel to acquire pertinent information and orders. 3) Accurately perceive and interpret sound through a telephone. 4) Be able to hear low whispers from patients, calls for help, overhead pages, and malfunction alerts.

Essential Function	Technical Standard	Examples of Necessary Activities (not all-inclusive)
		5) Listen and document medical history from the patient. 6) Use a stethoscope to take pressures and hear blood flow.
Sensory Skills – Olfactory Ability	1.) Olfactory senses (smell) sufficient for continuity of patient care.	1.) Tolerance for smells and odors that may be strong or considered malodorous due to infection, ulcers, gangrene, and other pathologic processes present.
Sensory Skills – Tactile Skills	1.) Sufficient tactile skills to assess the patient through touch.	1.) Interpret feedback from the sense of touch is critical in patient assessment such as such as warmth/coldness of as extremity, arterial pulse points, superficial masses, etc.
Numerical Ability	1.) Students must possess the skills necessary to perform basic mathematical operations. 2.) Evaluate numerical trends and implications.	1.) Perform addition, subtraction, multiplication, and division as required. 2.) Convert between decimals and fractions. 3.) Understand the changes in vital signs based on numbers displayed. 4.) Apply physics principles to perform sonographic and Doppler examinations. 5.) Understand QC/QA related to machines and examinations. 6.) Perform measurements and calculations according to protocols.
Professional Attitude and Demeanor	1.) Ability to present professional appearance and attitude. 2.) Implement measures to maintain own physical and mental health and emotional stability.	1.) Maintain poise and self-control in stressful situations. 2.) Demonstrate personal integrity, civility, and mutual respect. 3.) Make independent decisions and accept a high level of responsibility. 4.) Accept constructive feedback in the academic/clinical settings to improve performance.